

FHWA-Indiana Environmental Document
CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM
GENERAL PROJECT INFORMATION

Road No./County:	106th Street and Westfield Boulevard (Blvd), Hamilton County, Indiana
Designation Number(s):	1901895
Project Description/Termini:	Intersection Improvement Project, 8.6 miles east of United States (US) 31, approximately 1,700 feet along 106th Street and 1,410 feet along Westfield Blvd

	Categorical Exclusion, Level 2 – Required Signatories: INDOT DE and/or INDOT ESD
X	Categorical Exclusion, Level 3 – Required Signatories: INDOT ESD
	Categorical Exclusion, Level 4 – Required Signatories: INDOT ESD and FHWA
	Environmental Assessment (EA) – Required Signatories: INDOT ESD and FHWA
	Additional Investigation (AI) – The proposed action included a design change from the original approved environmental document. Required Signatories must include the appropriate environmental approval authority

Approval

_____	_____
INDOT DE Signature and Date	INDOT ESD Signature and Date

FHWA Signature and Date	

Release for Public Involvement

	N/A	ADWP
	_____	December 20, 2023
	INDOT DE Initials and Date	INDOT ESD Initials and Date

Certification of Public Involvement

INDOT Consultant Services Signature and Date

INDOT DE/ESD Reviewer Signature and Date: _____

Name and Organization of CE/EA Preparer: _____

Brook Earl; GAI Consultants, Inc.

Note: Refer to the most current INDOT CE Manual, guidance language, and other ESD resources for further guidance regarding any section of this form.

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Part I – Public Involvement

Every Federal action requires some level of public involvement, providing for early and continuous opportunities throughout the project development process. **The level of public involvement should be commensurate with the proposed action.**

Does the project have a historic bridge processed under the Historic Bridges PA*? Yes No
If No, then:
Opportunity for a Public Hearing Required? Yes No

*A public hearing is required for all historic bridges processed under the Historic Bridges Programmatic Agreement between INDOT, FHWA, SHPO, and the ACHP.

Discuss what public involvement activities (legal notices, letters to affected property owners and residents (i.e. notice of entry), meetings, special purpose meetings, newspaper articles, etc.) have occurred for this project.

Notice of Entry letters were mailed to potentially affected property owners near the project area on August 17, 2021, notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G, page G1.

To meet the public involvement requirements of Section 106, a legal notice of Federal Highway Administration (FHWA)'s finding of "No Adverse Effect" was published in the Indianapolis Star on August 17, 2023, offering the public an opportunity to submit comment pursuant to 36 CFR 800.2(d), 800.3(e), and 800.6(a)(4). The public comment period closed 30 days later on September 18, 2023. The text of the public notice and the affidavit of publication appear in Appendix D, pages D82 to D84. Other than a concurrence letter from the Indiana SHPO, no additional comments were received from consulting parties, and no comments were received from the public.

The project will meet the minimum requirements described in the current Indiana Department of Transportation (INDOT) Public Involvement Manual which requires the project sponsor to offer the public an opportunity to submit comments and/or request a public hearing. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Public Controversy on Environmental Grounds

Discuss public controversy concerning community and/or natural resource impacts, including what is being done during the project to minimize impacts.

At this time, there is no substantial public controversy concerning impacts to the community or to natural resources.

Part II - General Project Identification, Description, and Design Information

Sponsor of the Project: City of Carmel INDOT District: Greenfield

Local Name of the Facility: 106th Street & Westfield Blvd

Funding Source (mark all that apply): Federal State Local Other*

*If other is selected, please identify the funding source: _____

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PURPOSE AND NEED:

The need should describe the specific transportation problem or deficiency that the project will address. The purpose should describe the goal or objective of the project. The solution to the traffic problem should NOT be discussed in this section.

Need:

The overall need for the project derives from the substandard Level of Service (LOS) indicating long delay times at the intersection of 106th Street and Westfield Blvd. The desirable minimum LOS for an approach to the intersection during the typical peak hour or Design Hour is C (LOS C, stable flow, acceptable delays). Currently, during the AM Peak Hour, the 106th Street westbound approach has LOS D (approaching unstable flow). Current conditions are worse for the PM Peak Hour; the Westfield Blvd northbound and southbound approaches have LOS D and the 106th Street eastbound approach has LOS E (unstable flow, intolerable delay). Standard LOS A is considered free-flowing with little to no delay at intersections while LOS F is forced flow with excessive delay (jammed conditions) (Appendix I, page I5).

If no improvements are made to the intersection, future traffic volumes are expected to see LOS D for the northbound Westfield Blvd approach and both eastbound and westbound 106th Street approaches during the AM Peak Hour. During the PM Peak Hour, westbound 106th Street and northbound Westfield Blvd will have LOS D, southbound Westfield Blvd will have LOS E, and eastbound 106th Street will have LOS F. The currently low and declining LOS of the existing intersection presents the primary need for improving the intersection.

The secondary need is the lack of connection to the existing trail system on Westfield Blvd and the north side of 106th Street.

Purpose:

The purpose of this project is to reduce delays at the intersection of 106th Street and Westfield Blvd and improve the LOS of the intersection to at least an LOS of B (good condition) or better. A secondary purpose is to provide access to the existing trail system for the surrounding neighborhoods.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Hamilton Municipality: City of Carmel

Limits of Proposed Work: 1,700 feet along 106th Street and 1,410 feet along Westfield Blvd

Total Work Length: 0.589 Mile(s) Total Work Area: 7.790 Acre(s)

Is an Interstate Access Document (IAD) ¹ required? If yes, when did the FHWA determine engineering and operational acceptance? <i>¹If an IAD is required; a copy of the approved CE/EA document must be submitted to the FHWA with a request for final approval of the IAD.</i>	<table border="1" style="border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 2px;">Yes¹</td> <td style="text-align: center; padding: 2px;">No</td> </tr> <tr> <td style="text-align: center; padding: 2px;"><input type="checkbox"/></td> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td colspan="2" style="padding: 2px;">Date: <u>N/A</u></td> </tr> </table>	Yes ¹	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Date: <u>N/A</u>	
Yes ¹	No						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
Date: <u>N/A</u>							

Describe location of project including township, range, city, county, roads, etc. Existing conditions should include current conditions, current deficiencies, roadway description, surrounding features, etc. Preferred alternative should include the scope of work, anticipated impacts, and how the project will meet the Purpose and Need. Logical termini and independent utility also need discussed.

The City of Carmel and the FHWA intend to proceed with an intersection improvement on 106th Street and Westfield Blvd in the City of Carmel, Hamilton County, Indiana.

Location:

This project is located at the 106th Street and Westfield Blvd intersection, approximately 8.6 miles east of US 31, in Clay Township, Hamilton County, in the City of Carmel, Indiana. Specifically, this project is located in Sections 1, 6, 7, and 12 of Township 17 North, Range 3 and 4 East as shown on the Carmel U.S Geological Survey (USGS) 7.5 Minute Topographic Map (Appendix B, page B2). Project maps and ground-level photographs are provided in Appendix B, pages B1-B27.

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Existing Conditions:

Currently 106th Street and Westfield Blvd form a four-legged right-angle intersection. Two lanes, one in each direction, are present on 106th Street with auxiliary left turn lanes on both approaches at the existing intersection. Westfield Blvd has one lane each direction with auxiliary left turn lanes and exclusive right turn lanes on both approaches.

All roadways forming the subject intersection have two 12-foot-wide-travel lanes while the turn lanes are 11 feet-wide. There are no improved shoulders. Orchard Estates entrances at Valley Drive and Orchard Way have rolled curb and gutter. The northwest corner of the intersection has curb along the right turn lane and around the radius. Orchard Park Presbyterian Church entrance has combined curb and gutter at the entrance. 106th Street is an Urban Major Collector and Westfield Blvd in an Urban Minor Arterial.

The project area is drained through open ditches and culvert pipes. The areas west of Westfield Blvd collect runoff from the area and pass through the detention pond of the Orchard Estates subdivision. The outlet of the pond is to the unnamed tributary of Carmel Creek which crosses under Westfield Blvd north of 106th Street. The areas east of Westfield Blvd are collected with open channels which flow to the unnamed tributary to Carmel Creek.

A multi-use trail is present along the south right of way of 106th Street. It has an asphalt surface and a width of 10 feet east of Westfield Blvd. The trail surface converts to concrete west of Westfield Blvd as it passes in front of the Orchard Park Presbyterian Church and has a 5 foot width before converting back to the 10 foot wide asphalt trail west of the church entrance. Detectible Warning Surfaces are present at the crossing of Westfield Blvd. Push buttons are located on the signal poles for users of the trail but do not meet current ADA standards. There are no pedestrian facilities on Westfield Blvd south of 106th Street or on the east side north of 106th Street. There are no pedestrian facilities on the north side of 106th Street east of Westfield Blvd. There is a 5 foot wide concrete sidewalk on the west side of Westfield Blvd north of 106th Street and the north side of 106th Street west of Westfield Blvd as part of the Orchard Estates subdivision.

The actuated traffic signal at the intersection includes one 5-section signal head and one 3-section signal head for each approach. The 5-section head includes green arrow and yellow arrow sections which indicate when left-turning vehicles are safe to proceed. A 5-section head also has green, yellow, and red ball sections that indicate when through and right-turning vehicles may progress or when all traffic should stop. A 3-section head has only the green, yellow, and red ball sections to indicate movements for the through and right turning vehicles

Preferred Alternative:

The proposed project will construct a dual lane roundabout at the junction of 106th Street and Westfield Blvd to replace the existing signalized four-legged intersection. The roundabout will be centered on the existing centerline of 106th Street and approximately 40 feet east of the existing centerline of Westfield Blvd to minimize right-of-way (ROW) impacts to the church in the southwest quadrant, the subdivision in the northwest quadrant, and to avoid impacts to the Monon Trail. This location also allows the 106th Street approaches and Westfield Blvd approaches to have offset-left alignments with respect to the central island of the roundabout. This promotes greater deflection and thus slower speeds upon approach and entry to the roundabout.

The roundabout will have a 170 foot inscribed diameter and a circulating roadway width of 30 feet bordered at the inside with a low profile rolled curb and gutter. Behind the rolled curb and gutter will be an 8 foot wide truck apron and barrier curb. The unpaved portion of the central island is approximately 45 feet in diameter and will be sodded or landscaped.

Entry and exit lanes on all approaches will vary between 22 and 26 feet wide depending on the angle of the vehicle entering and exiting the roundabout. Semi tractor trailers will utilize both lanes while using the roundabout.

Pedestrian crossings will be provided on all four approaches of the roundabout. Existing pedestrian facilities only cross the south approach of Westfield Blvd. The remaining crossings with connecting sidewalks will provide pedestrians access to the existing multi-use path along the south side of 106th Street and to future sidewalks or trails added to the other legs of the intersection. Westfield Blvd will have added trails on the east side of the road from Timber Heights Drive to the northern limit of the project and on the west side of Westfield Blvd from the passing lane opposite Timber Heights Drive to the northern limit of the project including a pedestrian crossing of Valley Drive. The north side of 106th Street will have a trail from the Orchard Way approach to the first driveway inside the eastern limit of the project. The south side of 106th Street will replace the existing trail and tie into it at the west and east termini of the project. Trails will be Hot Mixed Asphalt (HMA) surfaced and have a width of 10 feet. Most trail lengths will have an 8 foot separation behind the curb and gutter but right of way and retaining walls require that in some locations the trail is adjacent to the curb and gutter.

A multi-use path will be added on Westfield Blvd at the front of the Orchard Park Presbyterian Church. Left turns from the church driveway onto 106th Street will no longer be allowed. Existing vehicles will have to turn right. Those that need to proceed west on

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106th Street will need to complete a U-turn movement in the roundabout.

Existing drainage patterns will be retained as much as possible. The west leg of 106th Street will be collected and combined with drainage from the church property into an existing 36-inch reinforced concrete pipe (RCP) that crosses under 106th Street and enters the Orchard Estates subdivision. The east leg of 106th Street currently drains through a draw across the open lot in the northeast quadrant of the intersection to the unnamed tributary (UNT) of Carmel Creek. A storm sewer system will collect the runoff from the pavement and areas behind the curbs and then utilize the same grassed channel to the creek. The south leg of Westfield Blvd will have drainage collected in a storm sewer system that will outlet to a detention basin in the southeast corner and will ultimately outlet to the grass swale in the northeast quadrant. Westfield Blvd north of 106th Street will be drained by a storm sewer system that will outlet directly to the UNT of Carmel Creek that flows under this leg of the intersection.

This project requires one relocation of an owner-occupied dwelling. The City of Carmel acquired the property on March 30, 2023, and recorded it on March 31, 2023. The relocation is due to the shifting of the intersection to the east and would not disrupt community cohesion or create a physical barrier. The relocation is situated in this quadrant due to the need to provide connectivity to the existing trail and a 4(f) property to the west, forcing the shift of the existing intersection to this quadrant. The relocation will facilitate the continued connectivity of the Carmel Parks and Recreation trail.

Due to the scope of work, disruptions to traffic will occur. The Maintenance of Traffic (MOT) for this project will involve a road closure with the use of a detour. Please refer to the MOT section for more details.

Based on the above information, the preferred alternative will meet the purpose and need by improving the LOS to B after the construction year of 2024 by reducing the control delay to less than 15 seconds and maintaining a LOS C (delay < 25 seconds) or better through the Design Year of 2044. New trails will provide pedestrians access to the existing multi-use paths.

Logical Termini/Independent Utility:

Every effort will be made to avoid, minimize, and/or mitigate environmental impacts during this intersection improvement project. This project demonstrates independent utility because it is a stand-alone project that is not dependent on any other planned projects. The project area is localized to the immediate areas surrounding the intersection. The project limits will extend approximately 1,700 feet along 106th Street and 1,410 feet along Westfield Blvd. Westfield Blvd will have added trails on the east side of the road from Timber Heights Drive 830 feet south of 106th Street to the northern limit of the project approximately 670 feet north of 106th Street. The trail on the west side of Westfield Blvd will begin 733 feet south of 106th Street at the passing lane across from Timber Height Drive and continues north with a pedestrian crossing at the roundabout and at Valley Drive to 605 feet north of 106th Street. Existing sidewalk on the north side of 106th Street will be replaced with trail from Orchard Way 450 feet west of Westfield Blvd and trail will continue to a private drive 770 feet east of Westfield Blvd. The existing trail on the south side of 106th Street will be replaced for 1315 feet.

OTHER ALTERNATIVES CONSIDERED:

Provide a header for each alternative. Describe all discarded alternatives, including the No Build Alternative. Explain why each discarded alternative was not selected. Make sure to state how each alternative meets or does not meet the Purpose and Need and why.

The “No Build” Alternative

The “No Build” alternative was considered for this project. This alternative would eliminate any environmental impacts and no expenditure of funds for improvements would be needed. However, this alternative would not meet the purpose and need of the project and was therefore eliminated from further consideration.

The No Build Alternative is not feasible, prudent or practicable because (Mark all that apply)

- It would not correct existing capacity deficiencies;
- It would not correct existing safety hazards;
- It would not correct the existing roadway geometric deficiencies;
- It would not correct existing deteriorated conditions and maintenance problems; or
- It would result in serious impacts to the motoring public and general welfare of the economy.
- Other (Describe):

X

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ROADWAY CHARACTER:

If the proposed action includes multiple roadways, complete and duplicate for each roadway.

Name of Roadway 106th Street
 Functional Classification: Major Collector
 Current ADT: 19,600 VPD (2024) Design Year ADT: 21,500 VPD (2044)
 Design Hour Volume (DHV): 70 Truck Percentage (%) 3
 Designed Speed (mph): 35 Legal Speed (mph): 35

	Existing		Proposed
Number of Lanes:	2		2
Type of Lanes:	Travel and left turn		Dual entry and exit
Pavement Width:	11	ft.	11
Shoulder Width:	N/A	ft.	N/A
Median Width:	N/A	ft.	85
Sidewalk Width:	5	ft.	8

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

Name of Roadway Westfield Blvd
 Functional Classification: Urban Minor Arterial
 Current ADT: 14,800 VPD (2024) Design Year ADT: 16,300 VPD (2044)
 Design Hour Volume (DHV): 1,470 Truck Percentage (%) 2
 Designed Speed (mph): 40 Legal Speed (mph): 40

	Existing		Proposed
Number of Lanes:	3		2
Type of Lanes:	Travel & turn lanes		Travel lanes
Pavement Width:	11	ft.	11
Shoulder Width:	N/A	ft.	N/A
Median Width:	N/A	ft.	85
Sidewalk Width:	5	ft.	8

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

BRIDGES AND/OR SMALL STRUCTURE(S):

If the proposed action includes multiple structures, complete and duplicate for each bridge and/or small structure. Include both existing and proposed bridge(s) and/or small structure(s) in this section.

Structure/NBI Number(s): N/A Sufficiency Rating: N/A
 (Rating, Source of Information)

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	Existing	Proposed
Bridge/Structure Type:		
Number of Spans:		
Weight Restrictions:	ton	ton
Height Restrictions:	ft.	ft.
Curb to Curb Width:	ft.	ft.
Outside to Outside Width:	ft.	ft.
Shoulder Width:	ft.	ft.

Describe impacts and work involving bridge(s), culvert(s), pipe(s), and small structure(s). Provide details for small structure(s): structure number, type, size (length and dia.), location and impacts to water. Use a table if the number of small structures becomes large. If the table exceeds a complete page, put it in the appendix and summarize the information below with a citation to the table.

Three pipes within the project area will be extended in-kind, please see the below table for more details.

Location	Size	Type	Extension
Sta 16+27.30 Rt, "PR-AW-EXIT"	36 inches	Reinforced Concrete Pipe storm sewer	26 feet
Sta 317+92.00 Rt, "PR-BN-EXIT"	21 inches	Reinforced Concrete Pipe culvert	10 feet
Sta 317+95.20 Rt, "PR-BN-EXIT"	24 inches	Reinforced Concrete Pipe culvert	12.5 feet

A storm sewer system will be constructed as part of the project. The storm sewer will collect the runoff from the pavement and areas behind the curbs and then utilize the grassed channel to the creek. The south leg of Westfield Blvd will have drainage collected in a storm sewer system that will outlet to a detention basin in the southeast corner and will ultimately outlet to the grass swale in the northeast quadrant. Westfield Blvd north of 106th Street will be drained by a storm sewer system that will outlet directly to the UNT of Carmel Creek that flows under this leg of the intersection.

No other bridges, culverts, pipes, and small structures are located within the project area.

MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

	Yes	No
Is a temporary bridge proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is a temporary roadway proposed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project involve the use of a detour or require a ramp closure? (describe below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for access by local traffic and so posted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for through-traffic dependent businesses.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made to accommodate any local special events or festivals.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Will the proposed MOT substantially change the environmental consequences of the action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there substantial controversy associated with the proposed method for MOT?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Will the project require a sidewalk, curb ramp, and/or bicycle lane closure? (describe below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provisions will be made for access by pedestrians and/or bicyclist and so posted (describe below).	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discuss closures, detours, and/or facilities (if any) that will be provided for maintenance of traffic. Any known impacts from these temporary measures should be quantified to the extent possible, particularly with respect to properties such as Section 4(f) resources and wetlands. Discuss any pedestrian/bicycle closures. Any local concerns about access and traffic flow should be detailed as well.

The MOT for the project is to construct the project by closing the roadways to through traffic and utilizing a designated detour. The detour will utilize local roads, including N. College Avenue, 116th Street, and Keystone Parkway. This detour will add approximately 4.5 miles to commuter travel and approximately one quarter-hour to travel times. The detour will last approximately 60 calendar days.

The 106th Street trail will need to be closed during reconstruction. The pedestrian detour will include the Monon Trail to 116th Street to Lake Shore Drive which will take you south to 106th Street. All access will be maintained to Orchard Park Presbyterian Church and any homes within the project area.

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The closures/lane restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences and delays will cease upon project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 270,778 (2020) Right-of-Way: \$ 120,000 (2024) Construction: \$ 3,046,251 (2024)

Anticipated Start Date of Construction: Spring of 2024

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	2.06	0.516
Commercial		
Agricultural		
Forest		
Wetlands		
Other: Orchard Park Presbyterian Church	0.269	0.814
Other:		
TOTAL	2.329	1.330

Describe both Permanent and Temporary right-of-way and describe their current use. Typical and Maximum right-of-way widths (existing and proposed) should also be discussed. Any advance acquisition, reacquisition or easements, either known or suspected, and their impacts on the environmental analysis should be discussed.

Existing right-of-way (ROW) extends approximately 10 to 35 feet from the edge of pavement and is utilized for the maintenance of the roadway pavement and roadside ditches. A parcel at the southeast corner of the existing intersection is a residential parcel of 0.524 acres with the home situated very close to the trail on the south side of 106th Street. The preferred alternative could not be satisfactorily designed with sight distance and line of sight while keeping the existing home in place. Relocation and purchase of the parcel were completed at risk in 2023 to allow the project to meet the project letting date. The remaining 1.805 acres of permanent right of way and 1.330 acres of temporary right of way are being purchased at risk by the City of Carmel in 2024.

The advance acquisition of ROW from these isolated properties has independent utility and will not cause any adverse environmental impacts and will not limit the choice of reasonable alternatives or prevent an impartial decision between alternatives. The purchase of ROW within these proposed advanced acquisition parcels in no way restricts the federal agency from moving forward with the preferred alternative. All acquisitions will follow the Uniform Act as required.

The project requires approximately 2.329 acres of permanent ROW from either side of the existing roadways and intersections. This land is currently residential (2.06 acres) and institutional (Orchard Park Presbyterian Church, 0.269 acre) which is required for the road realignment and roundabout construction. The project also requires approximately 1.330 acres of temporary ROW from the same residential areas (0.516 acre) for driveway reconstruction and Institutional (Orchard Park Presbyterian Church, 0.814 acre) use is required for grading.

If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately.

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Part III – Identification and Evaluation of Impacts of the Proposed Action

SECTION A - EARLY COORDINATION:

List the date(s) coordination was sent and all resource agencies that were contacted as a part of the development of this Environmental Study. Also, include the date of their response or indicate that no response was received.

Early coordination letters were sent on June 29, 2021 and July 13, 2021, Appendix C, pages C1-C2.

Agency	Date Sent	Response Received	Appendix Page(s)
Federal Highway Administration (FHWA)	June 29, 2021	No Response Received	N/A
U.S. Fish Wildlife Service (USFWS)	June 29, 2021	July 21, 2021	C21 to C22
Natural Resources Conservation Service (NRCS)	June 29, 2021	July 15, 2021	C20
Department of the Army, Louisville District, Corps of Engineers	June 29, 2021	No Response Received	N/A
National Park Service, Midwest Regional Office	June 29, 2021	No Response Received	N/A
U.S. Department of Housing & Urban Development, Chicago Regional Office	June 29, 2021	No Response Received	N/A
Indiana Geological and Water Survey (IGWS)	June 29, 2021	June 29, 2021	C9 to C11
Indiana Department of Natural Resources, Division of Fish and Wildlife (IDNR-DFW)	June 29, 2021	July 29, 2021	C5 to C6
INDOT Aviation Section	June 29, 2021	July 6, 2021	C19
Indiana Department of Environmental Management (IDEM) Groundwater Section	June 29, 2021	July 2, 2021	C7 to C8
INDOT Greenfield District Environmental Section Manager	June 29, 2021	No Response Received	N/A
INDOT Greenfield District Project Manager	June 29, 2021	No Response Received	N/A
City of Carmel Engineer	June 29, 2021	No Response Received	N/A
City of Carmel Storm Water Administrator	June 29, 2021	No Response Received	N/A
City of Carmel Mayor	June 29, 2021	No Response Received	N/A
City of Carmel Building Commissioner	June 29, 2021	No Response Received	N/A
Hamilton County Surveyor	June 29, 2021	July 15, 2021	C13 to C18
Carmel Clay Parks and Recreation	June 29, 2021	No Response Received	N/A
Indianapolis Metropolitan Planning Organization (IMPO)	June 29, 2021	No Response Received	N/A
Orchard Park Presbyterian Church	June 29, 2021	No Response Received	N/A
Citizens Energy Group	July 13, 2021	July 14, 2021	C12

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All applicable recommendations are included in the *Environmental Commitments* section of this C.E. document.

SECTION B – ECOLOGICAL RESOURCES:

Streams, Rivers, Watercourses & Other Jurisdictional Features

- Federal Wild and Scenic Rivers
- State Natural, Scenic or Recreational Rivers
- Nationwide Rivers Inventory (NRI) listed
- Outstanding Rivers List for Indiana
- Navigable Waterways

Presence

X

Impacts

Yes	No
X	

Total stream(s) in project area: 226 Linear feet Total impacted stream(s): 50 Linear feet

Stream Name	Classification	Total Size in Project Area (linear feet)	Impacted linear feet	Comments (i.e. location, flow direction, likely Water of the US, appendix reference)
UNT to Carmel Creek	perennial	226	50	Flows west to east from Open water pond towards Carmel Creek, Likely Water of the US, Appendix F, page F1-F30

Describe all streams, rivers, watercourses and other jurisdictional features adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if the streams or rivers are listed on any federal or state lists for Indiana. Include if features are likely subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Presence, with impacts

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E, page E1) there two streams within the 0.5-mile search radius. There are zero streams within or adjacent to the project area. That number was updated to one by the site visit on March 12, 2021 and May 19, 2021 by GAI.

Waters Report

A Waters of the US Determination / Wetland Delineation Report was completed for the project on December 27, 2021. Please refer to Appendix F, page F1 for the Waters of the US Determination / Wetland Delineation Report. It was determined that one likely jurisdictional waterway, UNT to Carmel Creek, is within the project area. The US Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

An intermittent UNT connecting to Carmel Creek flows west to east through the north end of the project area and is shown as a solid blue line on the USGS topographic map. UNT to Carmel Creek exhibits a defined bed, bank, and an ordinary high water mark (OHWM) of 4 feet wide and 0.4 feet deep. UNT to Carmel Creek has an upstream drainage area of 0.119 square mile. The stream substrate consists of an artificial stream bed with silt and gravel components. No sinuosity or flow was present within the sampling reach. The stream banks consisted of a narrow riparian zone to the north and a lawn to the south. UNT to Carmel Creek serves as a relief for a retention pond on the west side of 106th Street and would be considered poor quality due to the evidence of chemicals within the stream. UNT to Carmel Creek discharges to Carmel Creek which discharges to White River, a traditional navigable water (TNW). Due to the connection to a TNW, UNT to Carmel Creek would likely be considered a Waters of the U.S.

This stream feature is not a State Waters Designated for Special Protection in Indiana (Designated Salmonid Waters, Outstanding State Resource Waters, or Exceptional Use Streams). The identified stream feature is not on the Indiana Department of Natural Resources Listing of State Natural and Scenic Rivers. The identified stream is not listed on Indiana Department of Natural Resources for Outstanding Rivers in Indiana and is not a USACE Section 10 Waters listed as navigable.

Early Coordination

IDNR-DFW responded on July 29, 2021, with recommendations to avoid or minimize impacts to UNT to Carmel Creek (Appendix C, page C5). IDNR-DFW recommends that no work should be done in the waterway from April 1 through June 30 without prior written approval from the Division of Fish and Wildlife. All applicable IDNR-DFW recommendations are included in the Environmental Commitments section of this CE document.

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Open Water Feature(s)

- Reservoirs
- Lakes
- Farm Ponds
- Retention/Detention Basin
- Storm Water Management Facilities
- Other: _____

Presence

X

Impacts

Yes	No
	X

Describe all open water feature(s) identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are likely subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Presence, no impact

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E, page E1) there are nine open water features within the 0.5-mile search radius. There is one open water feature within or adjacent to the project area, which was confirmed by the site visit on March 12, 2021 and May 19, 2021.

Waters Report

A Waters of the US Determination / Wetland Delineation Report was completed for the project on December 27, 2021. Please refer to Appendix F, page F1 for the Waters of the US Determination / Wetland Delineation Report. It was determined that no likely jurisdictional features are within the project area. The US Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

The open water feature is located adjacent to the eastern quadrant of the project area on the south side of 106th Street. The open water feature is a manmade permanent pond feature that is located within a residential lawn and collects upland drainage from the surrounding land and roadway runoff. The pond was excavated solely in uplands and has no surface water connection to and relatively permanent water (RPW) or TNW was observed. Therefore, the pond would not be considered a Waters of the U.S. No impact is expected.

Wetlands

Presence

X

Impacts

Yes	No
X	

Total wetland area: 0.373 Acre(s) Total wetland area impacted: 0.015 Acre(s)

(If a determination has not been made for non-isolated/isolated wetlands, fill in the total wetland area impacted above.)

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments (i.e. location, likely Water of the US, appendix reference)
Wetland A	PEM	0.33	None	Outside of construction limits (not likely Water of the US) Appendix F pages F1-F30
Wetland B	PEM	0.043	0.015	Southwest corner of the intersection of 106th Street and Westfield Blvd (not likely Water of the US) Appendix F, pages F1-F30

Documentation

ESD Approval Dates

Wetlands (Mark all that apply)

- Wetland Determination
- Wetland Delineation
- USACE Isolated Waters Determination

x
X

N/A
N/A

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Improvements that will not result in any wetland impacts are not practicable because such avoidance would result in (Mark all that apply and explain):

- Substantial adverse impacts to adjacent homes, business or other improved properties;
- Substantially increased project costs;
- Unique engineering, traffic, maintenance, or safety problems;
- Substantial adverse social, economic, or environmental impacts, or
- The project not meeting the identified needs.

X
X
X

Describe all wetlands identified adjacent or within the project area. Include whether or not impacts (both permanent and temporary) will occur to the features identified. Include if features are likely subject to federal or state jurisdiction. Discuss measures to avoid, minimize, and mitigate if impacts will occur.

Presence, with impacts less than one acre

Based on the desktop review, the aerial map of the project area, and the RFI report (Appendix E, page E1) there are twelve wetlands within the 0.5-mile search radius. There are two wetlands within or adjacent to the project area. That number was confirmed by the site visit on March 12, 2021 and May 19, 2021 by GAI.

Waters Report

A Waters of the U.S. Determination / Wetland Delineation Report was completed for the project on December 27, 2021. Please refer to Appendix F, page F1 for the Waters of the U.S. Determination / Wetland Delineation Report. It was determined that Wetland A and Wetland B are not likely jurisdictional but request USACE take jurisdiction. The USACE makes all final determinations regarding jurisdiction.

Wetland A

Wetland A is a 0.33 acre palustrine emergent (PEL) wetland that is located in the southwest portion of the project area. Wetland A was likely formed due to its geomorphic position in a depression area. Vegetation within Wetland A consists of fox sedge (*Carex conjuncta*, FACW), broad-leaf cat-tail (*Typha latifolia*, OBL), and reed canary grass (*Phalaris arundinacea*, FACW), field thistle (*Cirsium discolor*, UPL), compass plant, cutleaf coneflower (*Rudbeckia laciniata*, FACW), green ash saplings (*Fraxinus pennsylvanica*, FACW), white snakeroot (*Ageratina altissima*, FACU), and King's-Cureall (*Oenothera biennis*, FACU). Wetland A likely formed due to the concave depression, high water table, and roadway runoff. Wetland A would be considered poor quality due to the dominance of invasive species and lack of species diversity. Wetland A would not likely be considered a jurisdictional Waters of the U.S. as it has no surface water connection to any likely jurisdictional stream features but would be considered a Waters of the State. Since this wetland does not qualify for an exemption under 327 IAC 17-1-7, it would be considered an Isolated Class III State Regulated Wetland. While the City of Carmel acknowledges that the wetland does not likely meet the definition of a Waters of the U.S. under the Clean Water Act, the City may elect to use the Preliminary Jurisdictional Determination to request USACE take jurisdiction of Wetland A. Wetland A is outside the construction limits and no impacts will occur.

Wetland B

Wetland B is a 0.043 acre wetland that is located in the southwest corner of the intersection of 106th Street and Westfield Blvd. Wetland B is classified as a PEM wetland. Wetland B was likely formed due to its geomorphic position in a depression area and roadway runoff. Vegetation consisted of fox sedge (*Carex conjuncta*, FACW), blue water iris (*Iris brevicaulis*, OBL), white clover (*Trifolium repens*, FACU), red fescue (*Phleum rubra*, FACU), and swamp milkweed (*Asclepias incarnata*, OBL). Wetland B would be considered poor quality as a result of human disturbance due to mowing and the presence of invasive species. Wetland B would not likely be considered a jurisdictional Waters of the U.S. as it has no surface water connection to any likely jurisdictional stream features but would be considered a Waters of the State. Since this wetland does not qualify for an exemption under 327 IAC 17-1-7, it would be considered an Isolated Class III State Regulated Wetland. While the City of Carmel acknowledges that the wetland does not likely meet the definition of a Waters of the U.S. under the Clean Water Act, the City may elect to use the Preliminary Jurisdictional Determination to request USACE take jurisdiction of Wetland B.

Approximately 0.015 acre of temporary impacts will occur to Wetland B for temporary access to the roadway. Wetland A and the portion of Wetland B that will not be impacted will be labeled on the plans as "Do Not Disturb". This is included as a firm commitment in the Environmental Commitments section of this document.

Early Coordination

INDR-DFW responded on June 29, 2021, with standard recommendations to avoid and mitigate the potential impact on wetlands (Appendix C, page C5). All applicable recommendations are included in the Environmental Commitments section of this CE document.

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	<u>Presence</u>	<u>Impacts</u>	
Terrestrial Habitat	<input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

Total terrestrial habitat in project area: 1.60 Acre(s) Total tree clearing: 0.35 Acre(s)

Describe types of terrestrial habitat (i.e. forested, grassland, farmland, lawn, etc) adjacent or within the project area. Include whether or not impacts will occur to habitat identified. Include total terrestrial habitat impacted and total tree clearing that will occur. Discuss measure to avoid, minimize, and mitigate if impacts will occur.

Presence, with impacts

Based on a desktop review, a site visit on March 12, 2021 and May 19 2021 by GAI, the aerial map of the project area (Appendix B, page B3), there are terrestrial habitats present within and adjacent to the project area. Immediately beyond the roadway pavement, areas of maintained grass are present. Dominant species include reed canary grass (*Phalaris arundinacea*), fox sedge (*Carex conjuncta*), and red fescue (*Phleum rubra*). Approximately 1.60 acres of terrestrial habitat will be impacted and approximately 0.35 acre of tree clearing. Any non-wooded construction impacts such as grasses will be re-seeded with either Seed Mixture Floodplain or Seed Mixture U. The detention pond will be reshaped and the original seed mixture will be used.

Early Coordination

IDNR-DFW responded on June 29, 2021, with recommendations to minimize impacts to terrestrial habitat (Appendix C, page C5). They recommend the clearing of brush and trees be minimized within the project area during the inactive season. All applicable IDNR-DFW recommendations are included in the Environmental Commitments section of this CE document.

Protected Species

Federally Listed Bats

Information for Planning and Consultation (IPaC) determination key completed
 Section 7 informal consultation completed (IPaC cannot be completed)
 Section 7 formal consultation Biological Assessment (BA) required

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Determination Received for Listed Bats from USFWS: NE NLAA LAA

Other Species not included in IPaC

Additional federal species found in project area (based on IPaC species list)
 State species (not bird) found in project area (based upon consultation with IDNR)

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Migratory Birds

Known usage or presence of birds (i.e. nests)
 State bird species based upon coordination with IDNR

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discuss IDNR coordination and species identified. Describe USFWS Section 7 consultation and determination received for Indiana bat and northern long-eared bat impacts. Discuss if other federally listed species were identified. If so, include consultation that has occurred and the determination that was received. Discuss if migratory birds have been observed and any impacts.

Based on a desktop review and the RFI report (Appendix E, page E1), completed by GAI on February 23, 2023, the IDNR Hamilton County Endangered, Threatened and Rare (ETR) Species List has been checked. According to the IDNR-DFW early coordination response letter dated July 29, 2021 (Appendix C, page C5), the Natural Heritage Program's Database has been checked to date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity. An INDOT 0.5-mile bat review occurred on March 11, 2021, and indicated no documented sites.

Bats, Programmatic Informal Consultation (i.e. IPaC) – Not Likely to Adversely Affect

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, page C23). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally endangered northern long-eared bat (NLEB) (*Myotis septentrionalis*). The official species list

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generated from IPaC indicated two other candidate species present within the project area: the Monarch butterfly (*Danaus plexippus*) and the Tricolored Bat (*Perimyotis subflavus*). The project qualifies for the most current INDOT/USFWS agreement. The project qualifies for the Range-wide Programmatic Informal Consultation for the Indiana bat and NLEB, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. A pipe inspection occurred on October 27, 2022 and no bats/birds were identified (Appendix I, page I2). A bat box is located adjacent to the Presbyterian Church. An effect determination key was completed on February 24, 2023, and based on the responses provided, the project was found to "Not Likely to Adversely Affect" the Indiana bat and/or the NLEB (Appendix C, page C40). INDOT reviewed and verified the effect finding on February 24, 2022, and requested USFWS's review of the finding. No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. The Avoidance and Minimization Measures (AMM) include the following: General AMM 1, Lighting AMM 1, Lighting AMM 2, Tree AMM 1, Tree AMM 2, Tree AMM 3, and Tree AMM 4. AMMs and/or commitments are included as firm commitments in the Environmental Commitments section of this document.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act, as amended. If new information on endangered species at the site becomes available, or if project plans are changed, USFWS will be contacted for consultation

Geological and Mineral Resources

- Project located within the Indiana Karst Region
- Karst features identified within or adjacent to the project area
- Oil/gas or exploration/abandoned wells identified in the project area

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Date Karst Evaluation reviewed by INDOT EWPO (if applicable): N/A

Discuss if project is located in the Indiana Karst Region and if any karst features have been identified in the project area (from RFI). Discuss response received from IGWS coordination. Discuss if any mines, oil/gas, or exploration/abandoned wells were identified and if impacts will occur. Include discussion of karst study/report was completed and results. (Karst investigation must comply with the current Protection of Karst Features during Planning and Construction guidance and coordinated and reviewed by INDOT EWPO)

Outside karst area

Based on a desktop review and the Indiana Karst Region map, the project is located outside the designated Indiana Karst Region as outlined in the most current Protection of Karst Features during Project Development and Construction. According to the topo map of the project area (Appendix B, page B2), the RFI report (Appendix E, page E1), and there are no karst features identified within or adjacent to the project area. In the early coordination response June 29, 2021, the Indiana Geological and Water Survey (IGWS) did not indicate that karst features exist in the project area (Appendix C, pages C9-C11). IGWS also identified moderate liquefaction potential, floodway, high potential bedrock resource, low potential sand and gravel, and abandoned industrial mineral sand gravel pits. Response from IGWS has been communicated with the designer on June 29, 2021. No impacts are expected.

SECTION C – OTHER RESOURCES

Drinking Water Resources

- Wellhead Protection Area(s)
- Source Water Protection Area(s)
- Water Well(s)
- Urbanized Area Boundary
- Public Water System(s)

	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Wellhead Protection Area(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Source Water Protection Area(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water Well(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Urbanized Area Boundary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Public Water System(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- Is the project located in the St. Joseph Sole Source Aquifer (SSA):
- If Yes, is the FHWA/EPA SSA MOU Applicable?
- If Yes, is a Groundwater Assessment Required?

	Yes	No
Is the project located in the St. Joseph Sole Source Aquifer (SSA):	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If Yes, is the FHWA/EPA SSA MOU Applicable?	<input type="checkbox"/>	<input type="checkbox"/>
If Yes, is a Groundwater Assessment Required?	<input type="checkbox"/>	<input type="checkbox"/>

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Check the appropriate boxes and discuss each topic below. Provide details about impacts and summarize resource-specific coordination responses and any mitigation commitments. Reference responses in the Appendix.

Outside of Sole Source Aquifer (SSA)

The project is located in Hamilton County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/EPA/INDOT Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project, a detailed groundwater assessment is not needed, and no impacts are expected.

Wellhead Protection Area and Source Water

Located in a Wellhead Protection Area and/or Source Water Area

The Indiana Department of Environmental Management's Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on November 2, 2022 by GAI. This project is located within a Wellhead Protection Area and a Source Water Area. In an early coordination letter dated July 2, 2021, IDEM stated the project is located within a Wellhead Protection Area and Source Water Area (Appendix C, page C7). The public operator of the Source water assessment responded on July 14, 2021 that there was no issue with the project as proposed (Appendix C, page C12). The City of Carmel, the responsible party for the Wellhead Protection Area had no response. Neither resource will be affected because existing drainage will remain the same, Best Management Practices to avoid sedimentation, erosion, and contamination will be used, and the total amount of nonpervious area will remain the same or be reduced due to the roundabout design.

Water Wells

No wells present, no impacts

The Indiana Department of Natural Resources Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on November 2, 2022 by GAI. No wells are located near this project. Therefore, no impacts are expected.

Urban Area Boundary

In an Urban Area Boundary Location

Based on a desktop review of INDOT Roadway Inventory and Functional Class Viewer ([Roadway Inventory & Functional Class Viewer](#)) by GAI on November 2, 2022, this project is located in an Urban Area Boundary (UAB), however, no coordination is needed because the project will comply with the requirements of the Construction Storm Water General Permit (CSGP). An early coordination letter was sent on June 29, 2021 to the Storm Water Administrator for the City of Carmel. The MS4 coordinator did not respond within the 30-day time frame. The MS4 coordinator did not respond as of the time of publishing this document.

Public Water System

In a Public Water System Location

Based on a desktop review, a site visit on March 12, 2021 and May 19 2021 by GAI, the aerial map of the project area (Appendix B, page B3), this project is located where there is a public water system. The public water system will not be affected because the design of the project has avoided any substantial impacts to the main water system. Early coordination letters were sent on June 29, 2021 to the City of Carmel with no response.

Floodplains	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Project located within a regulated floodplain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Longitudinal encroachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transverse encroachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Homes located in floodplain within 1000' up/downstream from project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If applicable, indicate the Floodplain Level?

Level 1 Level 2 Level 3 Level 4 Level 5

Use the IDNR Floodway Information Portal to help determine potential impacts. Include floodplain map in appendix. Discuss impacts according to the classification system. If encroachment on a flood plain will occur, coordinate with the Local Flood Plain Administrator during design to insure consistency with the local flood plain planning.

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local newspapers. Please indicate the publication date, name of the paper(s) and the comment period deadline. Include any further Section 106 work which must be completed at a later date, such as mitigation from a MOA or avoidance commitments.

Full Section 106:

The City of Carmel is required to comply with Section 106 of the National Historic Preservation Act of 1966 as amended (a.k.a. Section 106) and its implementing federal regulation, 36 CFR 800, when utilizing federal funds. The following information summarizes the steps taken to identify the cultural resources listed in or eligible for listing in the National Register of Historic Places (NRHP) and the expected impacts the project will have on those resources. The documentation produced during the Section 106 process is found in Appendix D.

Area of Potential Effect (APE):

The APE is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking." [36 CFR § 800.16(d)] The APE was generally drawn to include properties adjacent to and/or within view of the project (Appendix D, page D16).

Coordination with Consulting Parties:

Weintruat & Associates, Inc., acting on behalf of the City of Carmel and FHWA, sent an invitation with instructions for accessing early coordination materials to potential consulting parties on November 30, 2022. Those invited to consult on this project include:

- **Indiana State Historic Preservation Officer (SHPO)**
- Indianapolis Metropolitan Planning Organization
- Hamilton County Historian
- Hamilton County Historical Society/Hamilton County Museum of History
- Hamilton County Genealogy Society
- Carmel Clay Historical Society
- Carmel Historic Preservation Commission
- Hamilton County Board of Commissioners
- Hamilton County Highway Engineer
- Hamilton County Plan Commission
- **City of Carmel, Planning Commission**
- City of Carmel, Street Department
- City of Carmel, Mayor's Office
- **Indiana Landmarks-Central Regional Office**
- **Delaware Nation of Oklahoma**
- Delaware Tribe of Indians, Oklahoma
- **Eastern Shawnee Tribe of Oklahoma**
- Miami Tribe of Oklahoma
- Peoria Tribe of Indians of Oklahoma
- Pokagon Band of Indians of Oklahoma
- Shawnee Tribe

Emails sent the same day provided instructions for accessing the ECL via INSCOPE (<http://erms.indot.in.gov/Section106Documents/>). In addition, the SHPO, a designated consulting party, was sent a paper copy of the ECL. Bolded entities accepted the consulting party's status.

Archaeology:

A Qualified Professional archaeologist for Gray & Pape Inc., performed a records check and then completed a Phase Ia archeological survey for the proposed 106th Street and Westfield Blvd Intersection Improvement Project on January 25 and February 13, 2023. The records check found that one archaeological reconnaissance investigation has been conducted near the project and previously documented archaeological sites are within the project area. Two newly documented archaeological sites were identified 12H1980 and 12H1985 (Appendix D, page D25). Both sites are small, precontact non-diagnostic lithic scatters. They are not eligible for inclusion for the National Register of Historic Places (NRHP) under Criteria A, B, C, or D. No further archaeological investigation is recommended. However, if the project scope changes to include any area outside the current survey limits, further investigations may be required.

Historic Properties:

As a result of Section 106 identification and evaluation effects, a qualified professional (QP) historian for Gray & Pape Inc. prepared a Historic Property Short Report (HPRS). Historians identified two eligible resources located within the APE, Orchard Park

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Neighborhood Historic District and the house located at 10512 Spring Hill Road. The Orchard Park Neighborhood Historic District, which is bounded by the 106th Street to the north, Westfield Blvd to the east, neighboring residential developments to the south, and on the west by the Monon Trail, is recommended eligible for listing under Criterion A as an excellent example of a planned, post-World War II development. The Indiana SHPO concurred with the recommendations of the HPSR on May 16, 2023 (Appendix D, pages D21 to D23).

Effects on the Orchard Park Neighborhood Historic District will be limited to ROW acquisition from the Orchard Park Presbyterian Church totaling 0.27 acre. Work conducted within the eligible district includes the construction of a larger multi-use path along the alignment of an existing sidewalk at the north and east sides of the intersection. A series of 9 young trees are also to be removed, these trees are not original to the planned development and do not contribute to the historic significance. The portion of the ROW being taken for construction currently has a non-historic rain garden and pollinator habitat, leaving no original vegetation or landscaping. As the portion of the new ROW has been significantly altered, any changes will not contribute or detract from the district's historic setting or feeling. Effects on the house at 10512 Spring Hill Drive will be limited since only a small portion of the APE overlaps with one corner of the property. While the property is within the APE, it is not within the project area. Therefore, due to several factors, including the resource's distance from the project area, the fact that the house itself is situated outside the established APE (though the corner of the property overlaps), the presence of dense vegetation and other buildings between the resource and the project area, and that the house's main facades all face away from the project area, there will be no anticipated effects on the historic property (Appendix D, pages D9-D10).

Documentation Findings:

INDOT, on behalf of the FHWA, signed the "No Adverse Effect" finding and approved the Section 106 800.11(e) documentation for the project on August 11, 2023 (Appendix D, pages D4 to D81). Furthermore, it is our understanding that INDOT on behalf of FHWA intends to issue a 'de minimis' finding for the Orchard Park Neighborhood Historic District. The documentation was sent to consulting parties, including the SHPO, on August 14, 2023, and the SHPO concurred with the finding on September 5, 2023 (Appendix D, pages D1 to D3).

Public Involvement:

To meet the public involvement requirements of Section 106, a legal notice of the FHWA finding of "No Adverse Effect" was published in the *Indianapolis Star* on August 17, 2023, offering the public an opportunity to submit comments pursuant to 36 CFR 800.2(d), 800.3(e), and 800.6(a)(4). The public comment period closed 30 days later, on September 18, 2023. The text of the public notice and the affidavit of publication appear in Appendix D, pages D82 to D84. Other than a concurrence letter from the Indiana SHPO, no additional comments were received from consulting parties, and no comments were received from the public.

SECTION E – SECTION 4(f) RESOURCES/ SECTION 6(f) RESOURCES

	<u>Presence</u>	<u>Use</u>	
		<u>Yes</u>	<u>No</u>
Parks and Other Recreational Land			
Publicly owned park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Publicly owned recreation area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (school, state/national forest, bikeway, etc.)	X	<input type="checkbox"/>	X
Wildlife and Waterfowl Refuges			
National Wildlife Refuge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Natural Landmark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Wildlife Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Nature Preserve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic Properties			
Site eligible and/or listed on the NRHP	X	X	<input type="checkbox"/>

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Evaluations
Prepared

Programmatic Section 4(f)	
“De minimis” Impact	X
Individual Section 4(f)	
Any exception included in 23 CFR 774.13	

Discuss Programmatic Section 4(f) and “de minimis” Section 4(f) impacts in the discussion below. Individual Section 4(f) documentation must be included in the appendix and summarized below. Discuss proposed alternatives that satisfy the requirements of Section 4(f). FHWA has identified various exceptions to the requirement for Section 4(f) approval. Refer to 23 CFR § 774.13 – Exceptions.

Presence, no impact, no use
Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned parks, recreation areas, wildlife / waterfowl refuges, and NRHP eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, the aerial map of the project area (Appendix B, page B3), and the RFI report (Appendix E, page E1) there are eight potential 4(f) resources located within the 0.5-mile search radius. By the site visit on March 12, 2021 and May 19, 2021 by GAI, there are two, one trail and one historical church, Section 4(f) resources within or adjacent to the project area. The Carmel Parks and Recreation trail is open to the public, publicly owned, and a transportation resource. This existing multi-use trail is a part of Carmel’s transportation network and the project will help connect to Carmel’s Comprehensive Plan by extending the resource. Therefore the multi-use trail is not protected under Section 4(f).

The historical Orchard Park Presbyterian Church is considered eligible for the NRHP and received a “No Adverse Effect”. The project will have no impacts to the church but will include impacts to the property. The project will require 0.269 acre of permanent and 0.814 acre of temporary ROW from the historical property. The property impacts will include two parking spaces in the small parking lot between the driveway and the main building. The detention basin with the pollinator garden will be regraded. Trees will be cleared along the Westfield Blvd side of the church property. Some small trees will be replanted and a sign explaining the detention basin’s purpose will be relocated. A multi-use path will be added on Westfield Blvd at the front of the church property. Access to the church will remain open to the public. SHPO concurs with INDOT on the Section 106 finding of “No Adverse Effect” on behalf of FHWA dated August 11, 2023. This undertaking will convert property from Orchard Park Neighborhood Historic District, a Section 4(f) historic property, to a transportation use; INDOT, acting on FHWA’s behalf has determined the appropriate Section 106 finding is No Adverse Effect; therefore FHWA hereby intends to issue a “de minimis” finding for the Orchard Park Neighborhood Historic District, pursuant to SAFETEA-LU, thereby satisfying FHWA’s responsibilities under Section 4(f) for this historic property. The June 8, 2020 Memorandum of Understanding between SHPO, INDOT, and FHWA satisfies the notification requirement specified in 23 CFR 774 for this project.

The House at 10512 Spring Hill Drive is recommended as potentially eligible for listing in the NRHP under Criterion C for its architecture as an example of an individually-eligible postwar residence. The house is a notable example of Modern architecture of the period with its ships-prow balcony, planter box, and intact fenestration pattern. While the original garage has been attached to the house via a small wing, it is not intrusive to the overall design of the residence. This undertaking will not convert property from the House at 10512 Spring Hill Road, a Section 4(f) historic property, to a transportation use; INDOT, acting on FHWA’s behalf has determined the appropriate Section 106 finding is No Adverse Effect; therefore no Section 4(f) evaluation is required for the House at 10512 Spring Hill Road.

Section 6(f) Involvement

Presence

Use

Section 6(f) Property

Yes

No

Discuss Section 6(f) resources present or not present. Discuss if any conversion would occur as a result of this project. If conversion will occur, discuss the conversion approval.

No presence or presence, no impact
The U.S. Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was

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created to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) of this Act prohibits conversion of lands purchased with LWCF monies to a non-recreation use. A review of 6(f) properties on the INDOT ESD website revealed a total of ten properties in Hamilton County (Appendix I, page I1). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources.

SECTION F – Air Quality

STIP/TIP and Conformity Status of the Project

Is the project in the most current STIP/TIP? Yes No
 Is the project located in an MPO Area? Yes No
 Is the project in an air quality non-attainment or maintenance area? Yes No
 If Yes, then:
 Is the project in the most current MPO TIP? Yes No
 Is the project exempt from conformity? Yes No
 If No, then:
 Is the project in the Transportation Plan (TP)? Yes No
 Is a hot spot analysis required (CO/PM)? Yes No

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Location in STIP:

Name of MPO (if applicable):

Location in TIP (if applicable):

STIP 2024-2028- Indianapolis Metropolitan Planning Organization (IMPO)

IMPO

Under Des 1901895

Level of MSAT Analysis required?

Level 1a Level 1b Level 2 Level 3 Level 4 Level 5

Describe if the project is listed in the STIP and if it is in a TIP. Describe the attainment status of the county(ies) where the project is located. Indicate whether the project is exempt from a conformity determination. If the project is not exempt, include information about the TP and TIP. Describe if a hot spot analysis is required and the MSAT Level.

Standalone Project or Lead DES number

This project is included in the Fiscal Year (FY) 2024-2027 Indianapolis Metropolitan Planning Organization (IMPO) Transportation Improvement Plan (TIP) which has been directly incorporated into the FY 2024-2028 STIP. (Appendix H, page H1).

Attainment area

This project is located in Hamilton County, which is currently a maintenance area for Ozone, under the 1997 Ozone 8-hour standard which was revoked in 2015 but is being evaluated for conformity due to the February 16, 2018, South Coast Air Quality Management District V. Environmental Protection Agency, Et. Al. Decision. The project’s design concept and scope are accurately reflected in the Transportation Improvement Program (TIP) and incorporated by reference into the STIP. Therefore, the conformity requirements of 40 CFR 93 have been met.

MSAT Level 1a Analysis

This project is of a type qualifying as a categorical exclusion (Group 1) under 23 CFR 771.117(c), or exempt under the Clean Air Act conformity rule under 40 CFR 93.126, and as such, a Mobile Source Air Toxics analysis is not required.

SECTION G - NOISE

Noise

Yes No

Is a noise analysis required in accordance with FHWA regulations and INDOT’s traffic noise policy? Yes No

Date Noise Analysis was approved/technically sufficient by INDOT ESD: _____

Describe if the project is a Type I or Type III project. If it is a Type I project, describe the studies completed to date and if noise impacts were identified. If noise impacts were identified, describe if abatement is feasible and reasonable and include a statement of likelihood.

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Type III Project

This project is a Type III project. In accordance with 23 CFR 772 and the current Indiana Department of Transportation Traffic Noise Analysis Procedure, this action does not require a formal noise analysis.

SECTION H – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

- Will the proposed action comply with the local/regional development patterns for the area?
- Will the proposed action result in substantial impacts to community cohesion?
- Will the proposed action result in substantial impacts to local tax base or property values?
- Will construction activities impact community events (festivals, fairs, etc.)?
- Does the community have an approved transition plan?
If No, are steps being made to advance the community's transition plan?
- Does the project comply with the transition plan? (explain in the discussion below)

Yes	No
X	
	X
	X
	X
X	
X	

Discuss how the project complies with the area's local/regional development patterns; whether the project will impact community cohesion; and impact community events. Discuss how the project conforms with the ADA Transition Plan.

There may be temporary inconveniences associated with construction such as increased travel times, possible construction noise and fugitive dust. There will be no substantial impacts on community cohesion or property values as a result of the project. Furthermore, no permanent or temporary economic effects are expected to result from the proposed project. Acquisition of the additional right-of-way would not appreciably affect the property tax base of Hamilton County. A review of <https://www.fairsandfestivals.net/> an online resource for local fairs and festivals, there are no scheduled festivals or other public events that will be impacted as a result of the project.

As required by the Americans with Disabilities Act (ADA) the City of Carmel has developed an ADA Transportation Plan. This 106th Street and Westfield Blvd roundabout project includes ADA components. The Carmel Parks and Recreation trail is open to the public, publicly owned, and a transportation resource. This existing multi-use trail will be closed to the public with detours established. This project plans to extend this resource and provide access to more residents and users within the community, conforming with the elements of the transition plan.

Public Facilities and Services

Discuss what public facilities and services are present in the project area and impacts (such as MOT) that will occur to them. Include how the impacts have been minimized and what coordination has occurred. Some examples of public facilities and services include health facilities, educational facilities, public and private utilities, emergency services, religious institutions, airports, transportation or public pedestrian and bicycle facilities.

Presence, with impacts

Based on a desktop review, the aerial map of the project area (Appendix B, page B3), and the RFI report (Appendix E, page E1) there are four public facilities within the 0.5-mile search radius. There is one public facility, Orchard Park Presbyterian Church, within the project area, which was confirmed by the site visit on March 12, 2021 and May 19, 2021 by GAI.

An Early Coordination letter was sent to Orchard Park Presbyterian Church on June 29, 2021, no response was received. The City of Carmel continues to coordinate with the church. Impacts to the Orchard Park Presbyterian Church will include two parking spaces in the small parking lot between the driveway and the main building. The detention basin with the pollinator garden will be regraded. Trees will be cleared along the Westfield Blvd side of the church. Some small trees will be replanted and a sign explaining the detention basin's purpose will be relocated. A multi-use path will be added on Westfield Blvd at the front of the church. Left turns from the church driveway onto 106th Street will no longer be allowed. Existing vehicles will have to turn right. Those that need to proceed west on 106th Street will need to complete a U-turn movement in the roundabout.

The 106th Street Trail will be closed to the public during construction with established detours. Carmel Clay Parks and Recreation was sent an Early Coordination Letter on June 29, 2021, with no response.

An early Coordination Letter was sent on June 29, 2021, to the Hamilton County Surveyors Office. Hamilton County responded on July 15, 2021 with recommendations. Hamilton County has two section concerns in the intersection of 106th Street and Westfield

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Blvd. The section corners will be replaced with new section corner monuments. Regulated drainage facilities exist west and north of the intersection. Project coordination for impacts to these facilities need to be conducted through this office. This is included as a firm commitment in the Environmental Commitments section of this document.

It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access.

Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Will the project result in adversely high and disproportionate impacts to EJ populations?

Indicate if EJ issues were identified during project development. If an EJ analysis was not required, discuss why. If an EJ analysis was required, describe how the EJ population was identified. Include if the project has a disproportionately high or adverse effect on EJ populations and explain your reasoning. If yes, describe actions to avoid, minimize and mitigate these effects.

EJ Analysis, EJ Populations

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) An analysis is required for any project with two or more relocations or 0.5 acre of additional permanent right-of-way. The project will require greater than 0.50 acre of new permanent ROW and will have one relocation. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exist and whether there could be disproportionately high and adverse impacts on them. The reference population may be a county, city, or town and is called the community of comparison (COC). In this project, the COC is Carmel, Indiana. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tracts 1110.06 and 1111.04. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the ACS 1-Year Estimates Detailed Tables from the 2020 date range was obtained from the (<https://data.census.gov/cedsci>) on 10/26/2022 by GAI. The data collected for minority and low-income populations within the AC are summarized in the below table.

Table: Minority and Low-Income Data (American Community Survey 5-Year Estimates 2020)

COC and AOC	COC Carmel, Indiana	AC 1 Census Tract 1110.06, Hamilton County, Indiana	AC 2 Census Tract 1111.04, Hamilton County, Indiana
% Minority	21%	19%	12%
125% COC Minority	26.3%	AC < 125% COC	AC < 125% COC
% low income	3%	8%	6%
125% COC Low Income	4%	AC >125% COC	AC >125% COC

AC-1, Census Tract 1110.06 has a percent minority of 19%, which is below 50% and below the 125% COC threshold. AC-2, Census Tract 1111.04 has a percent minority of 12%, which is below 50% and below the 125% COC threshold. Therefore, no minority population of EJ concern exist.

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AC-1, Census Tract 1110.06 has a percent low income of 8%, which is below 50% but above the 125% COC. Therefore, AC-1 has a low-income population of EJ concern. AC-2, Census Tract 1111.04 has a percent low-income of 6% which is below 50% but above the 125% COC threshold. Therefore, AC-2 has a low-income population of EJ concern.

Conclusion

This project requires one relocation of an owner-occupied dwelling. The owner was not a representative of either EJ population mentioned above. The City of Carmel acquired the property on March 30, 2023, and recorded it on March 31, 2023. The relocation is due to the shifting of the intersection to the east and would not disrupt community cohesion or create a physical barrier.

The relocation is situated in this quadrant due to the need to provide connectivity to the existing trail and a 4(f) property to the west, forcing the shift of the existing intersection to this quadrant. The relocation will facilitate the continued connectivity of the Carmel Parks and Recreation trail. This trail is a significant resource for EJ populations in the area. A willing seller negotiated the relocation for a fair market price. The seller does not represent any EJ population as determined by the negotiation for acquisition by the City of Carmel. The City of Carmel, a self-certifying LPA, performed the acquisition of the parcel on its own. The extent of ROW impact was minimized to only the amount needed to construct the project and that which would avoid leaving uneconomic remnants adjacent to the project. ROW acquisition is limited to the area adjacent to the intersection and proposed multi-use pathways.

The MOT for this project will pose only a temporary impact and access to all properties, except the relocation, will be maintained during construction by means of the proposed detour. The detour will utilize local roads, including N. College Avenue, 116th Street, and Keystone Parkway. This detour will add approximately 4.5 miles to commuter travel and approximately one quarter-hour to travel times. The 106th Street trail will need to be closed during reconstruction. The closures/lane restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated, and all inconveniences and delays will cease upon project completion. The detour will last approximately 60 calendar days.

The low-income populations identified in the above table will not experience a disproportionately high and adverse impact from this project as its primary purpose is to reduce delays at the intersection of 106th Street with Westfield Blvd and provide connectivity to the existing trails. The 0.80 acre of ROW will come from parcels within the four quadrants of the intersection. Avoidance alternatives were discarded due to not addressing the purpose and need of the project.

INDOT-Environmental Services Division (ESD) has reviewed the project information along with the Environmental Justice (EJ) Analysis for the above referenced project. With the information provided, the project may require minimal ROW. There will be one relocation. With the information provided, the relocation would not disrupt community cohesion or create a physical barrier. INDOT-ESD would not consider the impacts associated with this project as causing a disproportionately high and adverse effect on minority and/or low-income populations of EJ concern relative to non-EJ populations in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23a. No further EJ Analysis is required.

Relocation of People, Businesses or Farms

Will the proposed action result in the relocation of people, businesses or farms?
Is a BIS or CSRS required?

Yes	No
X	
	X

Number of relocations: Residences: 1 Businesses: Farms: Other:

Discuss any relocations that will occur due to the project. If a BIS or CSRS is required, discuss the results in the discussion below.

Relocations Anticipated

One residential relocation will be required in the southeast quadrant of the existing intersection. All efforts to avoid this relocation were pursued during design but due to the roadway geometrics and inclusion of the existing path in the design the relocation of this parcel was unavoidable. The acquisition and relocation program was conducted in accordance with 49 CFR 24 of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended. Relocation resources are available to all residential and business relocates without discrimination. No person displaced by this project will be required to move from a displaced dwelling unless comparable replacement housing is available to that person.

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SECTION I – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Documentation

Hazardous Materials & Regulated Substances (Mark all that apply)

Red Flag Investigation (RFI)	<input checked="" type="checkbox"/>
Phase I Environmental Site Assessment (Phase I ESA)	<input type="checkbox"/>
Phase II Environmental Site Assessment (Phase II ESA)	<input type="checkbox"/>
Design/Specifications for Remediation required?	<input type="checkbox"/>

Date RFI concurrence by INDOT SAM (if applicable): July 17, 2023

Include a summary of the potential hazardous material concerns found during review. Discuss in depth sites found within, directly adjacent to, or ones that could impact the project area. Refer to current INDOT SAM guidance. If additional documentation (special provisions, pay quantities, etc.) will be needed, include in discussion. Include applicable commitments.

Presence, no impact

Based on a review of GIS and available public records, the RFI was completed on February 23, 2023 by GAI and INDOT SAM provided concurrence on July 17, 2023 (Appendix E, Page E1.) One state cleanup site is located within 0.5 mile of the project area. Two National Pollutant Discharge Elimination System (NPDES) facilities are within 0.5 mile of the project area. None of the hazmat sites identified will impact the project. Further investigation for hazardous material concerns is not required at this time.

Part IV – Permits and Commitments

PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

Nationwide Permit (NWP)	<input type="checkbox"/>
Regional General Permit (RGP)	<input checked="" type="checkbox"/>
Individual Permit (IP)	<input type="checkbox"/>
Other	<input type="checkbox"/>

IN Department of Environmental Management (401/Rule 5)

Nationwide Permit (NWP)	<input type="checkbox"/>
Regional General Permit (RGP)	<input checked="" type="checkbox"/>
Individual Permit (IP)	<input type="checkbox"/>
Isolated Wetlands	<input type="checkbox"/>
Rule 5	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>

IN Department of Natural Resources

Construction in a Floodway	<input type="checkbox"/>
Navigable Waterway Permit	<input type="checkbox"/>
Other	<input type="checkbox"/>

Mitigation Required

US Coast Guard Section 9 Bridge Permit

Others (Please discuss in the discussion below)	<input type="checkbox"/>
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List the permits likely required for the project and summarize why the permits are needed, including permits designated as "Other."

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A Section 401 Water Quality Certification and Section 404 permit for Discharge of Dredge or Fill Material below the Ordinary High-Water Level will be necessary for impacts to waterways and a Construction Stormwater General Permit (CSGP), previously known as Rule 5, will likely be required.

Applicable recommendations provided by resource agencies are included in the Environmental Commitments section of this document. If permits are found to be necessary, the conditions of the permit will be requirements of the project and will supersede these recommendations. It is the responsibility of the project sponsor to identify and obtain all required permits.

ENVIRONMENTAL COMMITMENTS

List all commitments and include the name of agency/organization requesting/requiring the commitment(s). Listed commitments should be numbered.

Firm:

1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately (INDOT ESD and INDOT Greenfield District).
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD).
3. Any work in a wetland area within INDOT's right-of-way or in borrow/waste areas is prohibited unless specifically allowed in the U.S Army Corps of Engineers or IDEM permit (INDOT EWPO).
4. General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs (USFWS).
5. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season (USFWS).
6. Lighting AMM 2: When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable (USFWS).
7. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal (USFWS).
8. Tree Removal AMM 2: Apply time of year restrictions (April 1 through September 30) for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed (USFWS and IDNR).
9. Tree Removal AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits) (USFWS).
10. Tree Removal AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year (USFWS).
11. Wetland A and the portion of Wetland B that will not be impacted will be labeled on the plans as "Do Not Disturb" (INDOT ESD).
12. Please be aware that the county has two section corners in the intersection of 106th Street and Westfield Blvd. Project coordination for impacts to these facilities needs to be conducted through this office (Hamilton County Surveyor).

For Further Consideration:

13. Plant five trees, at least 2 inches in diameter-at-breast height, for each tree which is removed that is ten inches or greater in diameter-at-breast height (IDNR-FWS).

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Appendix A

INDOT Supporting Documentation

Item	Appendix Page
Threshold Chart	A1

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4 ¹
Section 106	Falls within guidelines of Minor Projects PA	"No Historic Properties Affected"	"No Adverse Effect"	-	"Adverse Effect" Or Historic Bridge involvement ²
Stream Impacts³	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	USACE Individual 404 Permit ⁴
Wetland Impacts³	No adverse impacts to wetlands	< 0.1 acre	-	< 1.0 acre	≥ 1.0 acre
Right-of-way⁵	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations⁶	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)*	"No Effect", "Not likely to Adversely Affect" (With select AMMs ⁷)	"Not likely to Adversely Affect" (With any AMMs or commitments)	-	"Likely to Adversely Affect"	Project does not fall under Species Specific Programmatic ⁸
Threatened/Endangered Species (Any other species)*	Falls within guidelines of USFWS 2013 Interim Policy or "No Effect"	"Not likely to Adversely Affect"	-	-	"Likely to Adversely Affect"
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential ⁹
Sole Source Aquifer	No Detailed Groundwater Assessment	-	-	-	Detailed Groundwater Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Section 4(f) Impacts	None	-	-	-	Any ¹⁰
Section 6(f) Impacts	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes ¹¹
Approval Level	Concurrence by DE or ESD	DE or ESD	DE or ESD	DE and/or ESD	DE and/or ESD; and FHWA
<ul style="list-style-type: none"> • District Env. (DE) • Env. Serv. Div. (ESD) • FHWA 					

¹ Coordinate with INDOT Environmental Services Division. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.

² Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.

³ Total permanent impacts to streams (linear feet) and wetlands (acres).

⁴ US Army Corps of Engineers Individual 404 Permit

⁵ Total permanent and temporary right-of-way. This does not include reacquisition of existing apparent right-of-way.

⁶ If any relocations are within an area with a known or suspected Environmental Justice (EJ) or disadvantaged population, or has greater than 5 relocations, a conversation with FHWA, through INDOT ESD, is needed to confirm NEPA classification and outreach plan for the project.

⁷ Avoidance and Mitigation Measures (AMMs) determined by the IPAC determination key to be required that are not tree AMMs, bridge AMMs, or structure AMMs.

⁸ Projects that do not fall under a Species Specific Programmatic and results in a "Likely to Adversely Affect". Other findings can be processed as a lower-level CE.

⁹ Potential for causing a disproportionately high and adverse impact.

¹⁰ Section 4(f) use resulting in an Individual, Programmatic, or *de minimis* evaluation. The only exception is a *de minimis* evaluation for historic properties (Effective January 2, 2020). If a historic property *de minimis* and no other use, mark the *None* column.

¹¹ Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

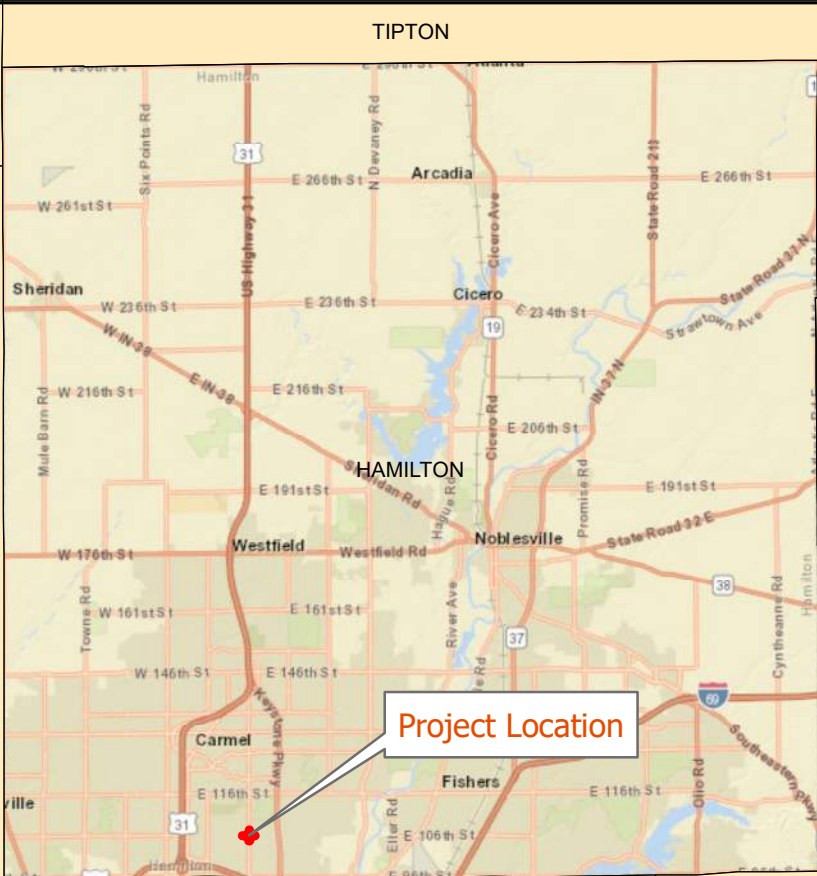
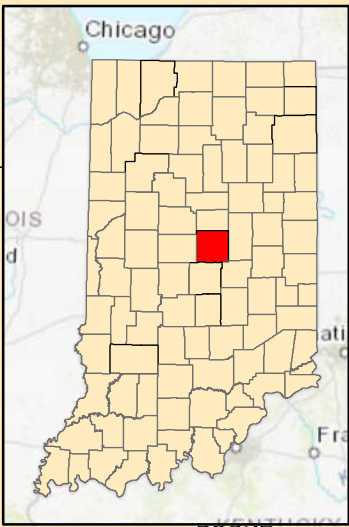
* Includes the threatened/endangered species critical habitat

Note: Substantial public or agency controversy may require a higher-level NEPA document.

Appendix B

Graphics

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HENDRICKS

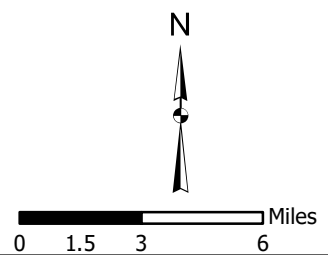
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HANCOCK

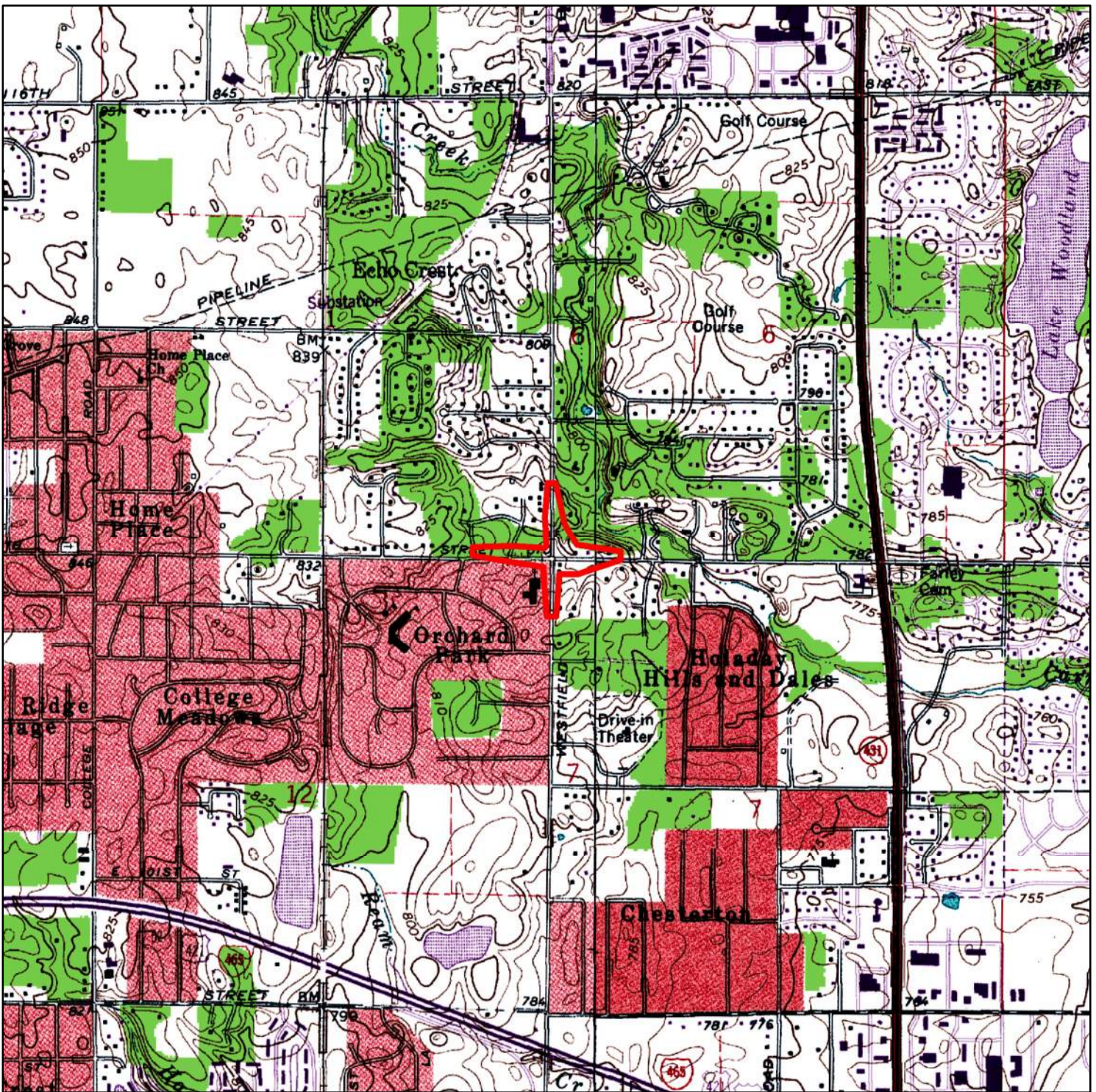
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State Location Map
E. 106th Street & Westfield Blvd.
Intersection Improvement Project
Hamilton County, Indiana
Des No. 1901895



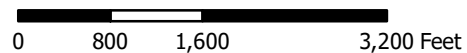
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 Study Area

USGS Topo Map

**E. 106th Street & Westfield Blvd.
Intersection Improvement Project
Hamilton County, Indiana
Des 1901895**



CARMEL USGS 7.5 Minute Topo Map

Service Layer Credits: United States Geological Survey (USGS)



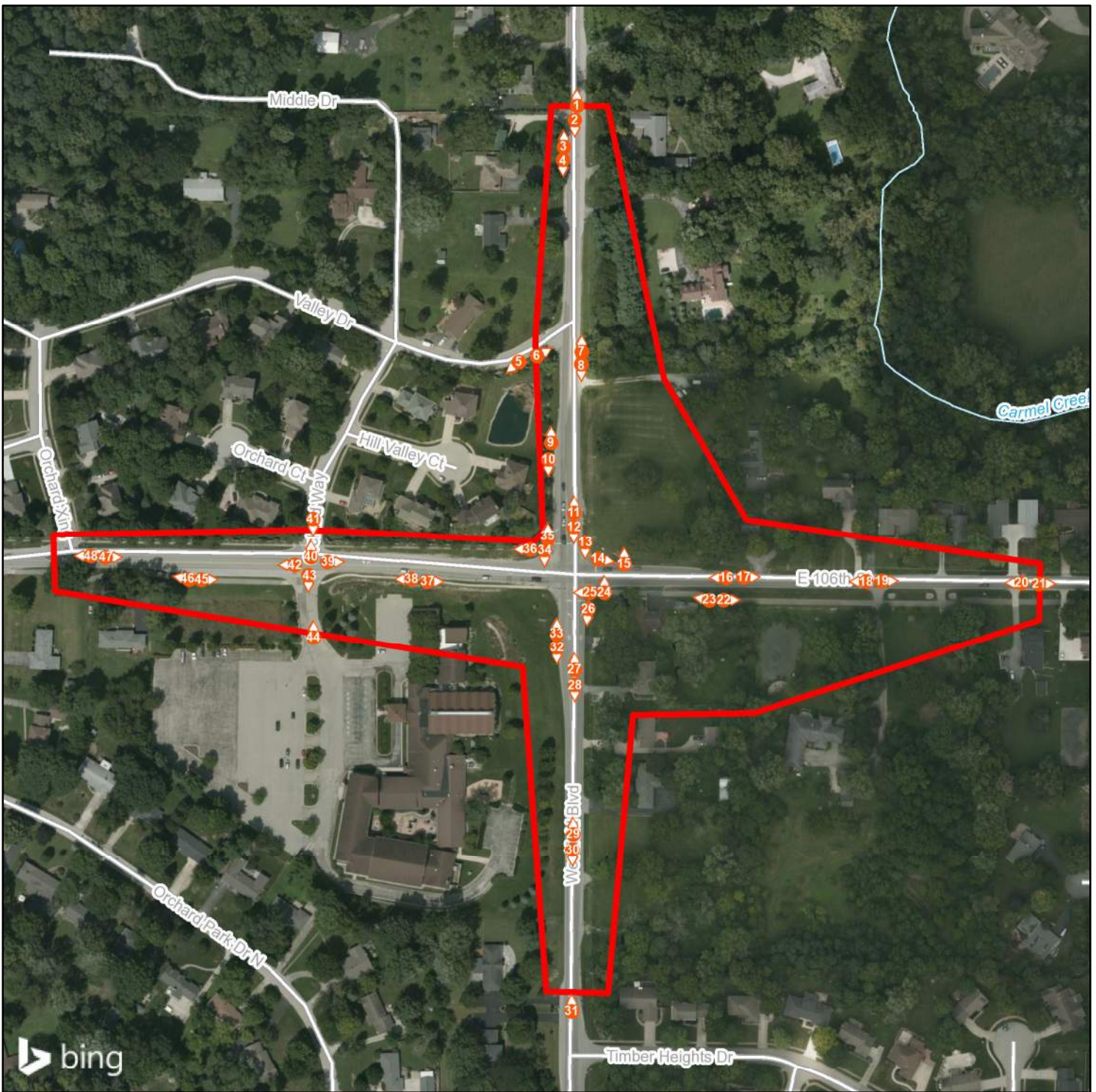







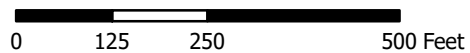


Photo Location Map

**E. 106th Street & Westfield Blvd.
Intersection Improvement Project
Hamilton County, Indiana
Des 1901895**

-  Study Area
-  Photo Point
-  Interstate
-  US Roads
-  State Roads
-  Local Roads
-  Railroad



Service Layer Credits: INDOT
 Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
 © 2021 Microsoft Corporation © 2021 Maxar © CNES (2021) Distribution Airbus DS



Photo 1. Looking north up Westfield Blvd., approximately 0.16 mile north of the 106th Street and Westfield Blvd. intersection.



Photo 2. Looking south down Westfield Blvd., approximately 0.16 mile north of the intersection.



Photo 3. Looking north along the west side of Westfield Blvd., approximately 0.14 mile north of the intersection.



Photo 4. Looking south along the west side of Westfield Blvd., approximately 0.14 mile north of the intersection.



Photo 5. Looking west down Valley Drive toward the addition of Orchard Estates on the westside of Westfield Blvd.



Photo 6. Looking east toward the entrance of Orchard Estates off of Westfield Blvd.



Photo 7. Looking north along the east side of Westfield Blvd., approximately 0.07 mile north of the intersection.



Photo 8. Looking south along the east side of Westfield Blvd., approximately 0.07 mile north of the intersection.



Photo 9. Looking north along the west side of Westfield Blvd., approximately 0.05 mile north of the intersection.

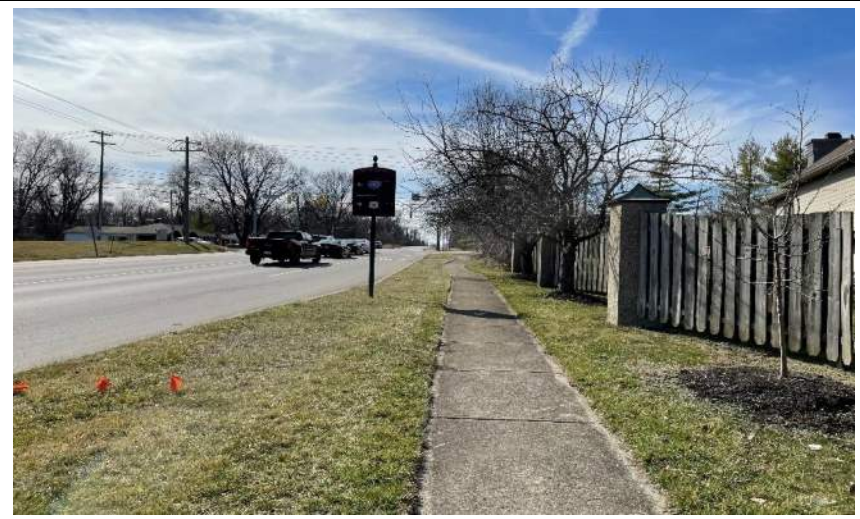


Photo 10. Looking south along the west side of Westfield Blvd., approximately 0.05 mile north of the intersection.



Photo 11. Looking north up Westfield Blvd., just north of the intersection.



Photo 12. Looking south down Westfield Blvd., just north of the intersection.



Photo 13. Looking south from the northeast corner of the intersection.



Photo 14. Looking east from the northeast corner of the intersection.



Photo 15. Looking north from the north side of 106th Street, just east of the intersection.



Photo 16. Looking west down 106th Street, approximately 0.05 mile east of the intersection.



Photo 17. Looking east up 106th Street, approximately 0.05 mile east of the intersection.



Photo 18. Looking west down 106th Street, approximately 0.10 mile east of the intersection.



Photo 19. Looking east up 106th Street, approximately 0.10 mile east of the intersection.



Photo 20. Looking west down 106th Street, approximately 0.14 mile east of the intersection.



Photo 21. Looking east up 106th Street, approximately 0.14 mile east of the intersection.



Photo 22. Looking east along the south side of 106th Street, approximately 0.05 mile east of the intersection.



Photo 23. Looking west along the south side of 106th Street, approximately 0.05 mile east of the intersection.



Photo 24. Looking north toward Westfield Blvd. from the southeast corner of the intersection.



Photo 25. Looking west toward 106th Street from the southeast corner of the intersection.



Photo 26. Looking south down Westfield Blvd. from the southeast corner of the intersection.



Photo 27. Looking north up Westfield Blvd., approximately 0.04 mile south of the intersection.



Photo 28. Looking south down Westfield Blvd., approximately 0.04 mile south of the intersection.



Photo 29. Looking north up Westfield Blvd., approximately 0.09 mile south of the intersection.



Photo 30. Looking south down Westfield Blvd., approximately 0.09 mile south of the intersection.



Photo 31. Looking north up Westfield Blvd., approximately 0.15 mile south of the intersection.



Photo 32. Looking south down Westfield Blvd., approximately 0.02 mile south of the intersection.



Photo 33. Looking northwest from Westfield Blvd., approximately 0.02 mile south of the intersection.



Photo 34. Looking south from the northwest corner of the intersection.



Photo 35. Looking north down Westfield Blvd. from the northwest corner of the intersection.



Photo 36. Looking southwest down 106th Street from the northwest corner of the intersection.



Photo 37. Looking east along the south side of 106th Street, approximately 0.06 mile west of the intersection.



Photo 38. Looking west along the south side of 106th Street, approximately 0.06 mile west of the intersection.



Photo 39. Looking east from the intersection of 106th Street and Orchard Way.



Photo 40. Looking north toward the entrance of the Orchard Estates addition, at the intersection of 106th Street and Orchard Way.



Photo 41. Looking south toward the intersection of 106th Street and Orchard Way.



Photo 42. Looking west from the intersection of 106th Street and Orchard Way.



Photo 43. Looking south from the intersection of 106th Street and Orchard Way, toward the entrance of the Orchard Park Presbyterian Church.



Photo 44. Looking north toward intersection of 106th Street and Orchard Way from the entrance of the Orchard Park Presbyterian Church.



Photo 45. Looking east along the south side of 106th Street, approximately 0.12 mile west of the intersection.



Photo 46. Looking west along the south side of 106th Street, approximately 0.12 mile west of the intersection.



Photo 47. Looking east up 106th Street, approximately 0.16 mile west of the intersection.



Photo 48. Looking west down 106th Street, approximately 0.16 mile west of the intersection.



Photo 1. Looking north up Westfield Blvd., approximately 0.16 mile north of the E. 106th Street and Westfield Blvd. intersection.



Photo 2. Looking south down Westfield Blvd., approximately 0.16 mile north of the intersection.



Photo 3. Looking north along the west side of Westfield Blvd., approximately 0.14 mile north of the intersection.



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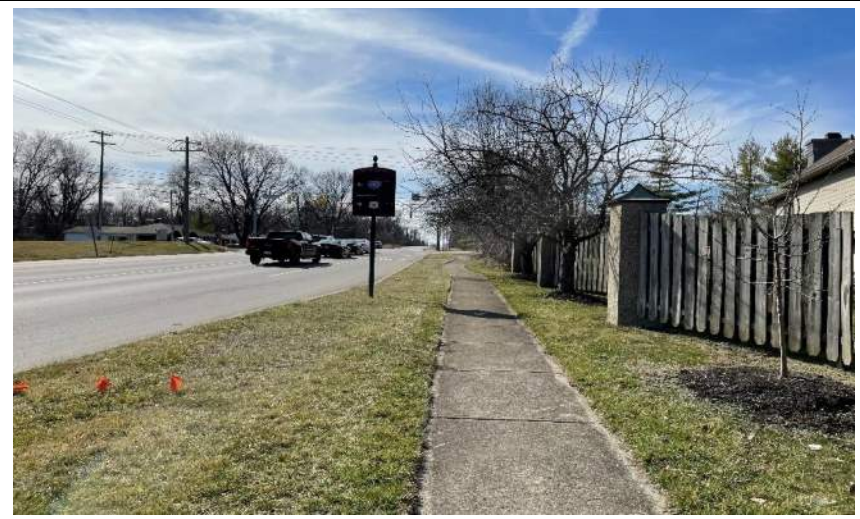


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Photo 11. Looking north up Westfield Blvd., just north of the intersection.



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Photo 13. Looking south from the northeast corner of the intersection.



Photo 14. Looking east from the northeast corner of the intersection.



Photo 15. Looking north from the north side of E. 106th Street, just east of the intersection.



Photo 16. Looking west down E. 106th Street, approximately 0.05 mile east of the intersection.



Photo 17. Looking east up E. 106th Street, approximately 0.05 mile east of the intersection.



Photo 18. Looking west down E. 106th Street, approximately 0.10 mile east of the intersection.



Photo 19. Looking east up E. 106th Street, approximately 0.10 mile east of the intersection.



Photo 20. Looking west down E. 106th Street, approximately 0.14 mile east of the intersection.



Photo 21. Looking east up E. 106th Street, approximately 0.14 mile east of the intersection.



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Photo 24. Looking north toward Westfield Blvd. from the southeast corner of the intersection.



Photo 25. Looking west toward E. 106th Street from the southeast corner of the intersection.



Photo 26. Looking south down Westfield Blvd. from the southeast corner of the intersection.



Photo 27. Looking north up Westfield Blvd., approximately 0.04 mile south of the intersection.



Photo 28. Looking south down Westfield Blvd., approximately 0.04 mile south of the intersection.



Photo 29. Looking north up Westfield Blvd., approximately 0.09 mile south of the intersection.



Photo 30. Looking south down Westfield Blvd., approximately 0.09 mile south of the intersection.



Photo 31. Looking north up Westfield Blvd., approximately 0.15 mile south of the intersection.



Photo 32. Looking south down Westfield Blvd., approximately 0.02 mile south of the intersection.



Photo 33. Looking northwest from Westfield Blvd., approximately 0.02 mile south of the intersection.



Photo 34. Looking south from the northwest corner of the intersection.



Photo 35. Looking north down Westfield Blvd. from the northwest corner of the intersection.



Photo 36. Looking southwest down E. 106th Street from the northwest corner of the intersection.



Photo 37. Looking east along the south side of E. 106th Street, approximately 0.06 mile west of the intersection.



Photo 38. Looking west along the south side of E. 106th Street, approximately 0.06 mile west of the intersection.



Photo 39. Looking east from the intersection of E. 106th Street and Orchard Way.



Photo 40. Looking north toward the entrance of the Orchard Estates addition, at the intersection of E. 106th Street and Orchard Way.



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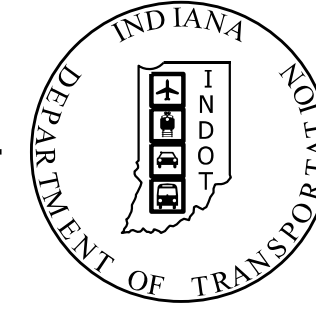
Photo 47. Looking east up E. 106th Street, approximately 0.16 mile west of the intersection.



Photo 48. Looking west down E. 106th Street, approximately 0.16 mile west of the intersection.

PROJECT	DESIGNATION
1901895	1901895
CONTRACT	
R-42285	

INDIANA DEPARTMENT OF TRANSPORTATION



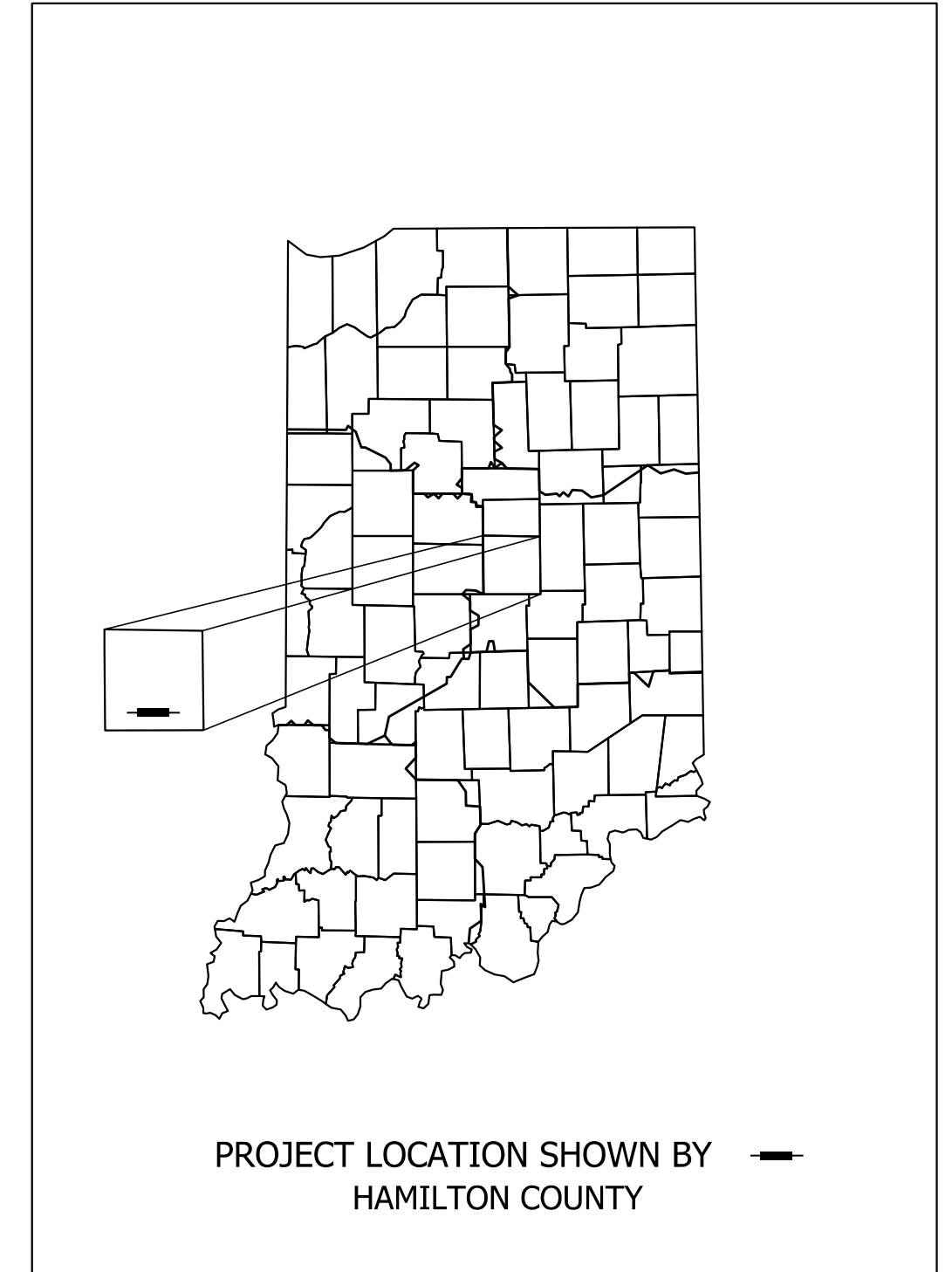
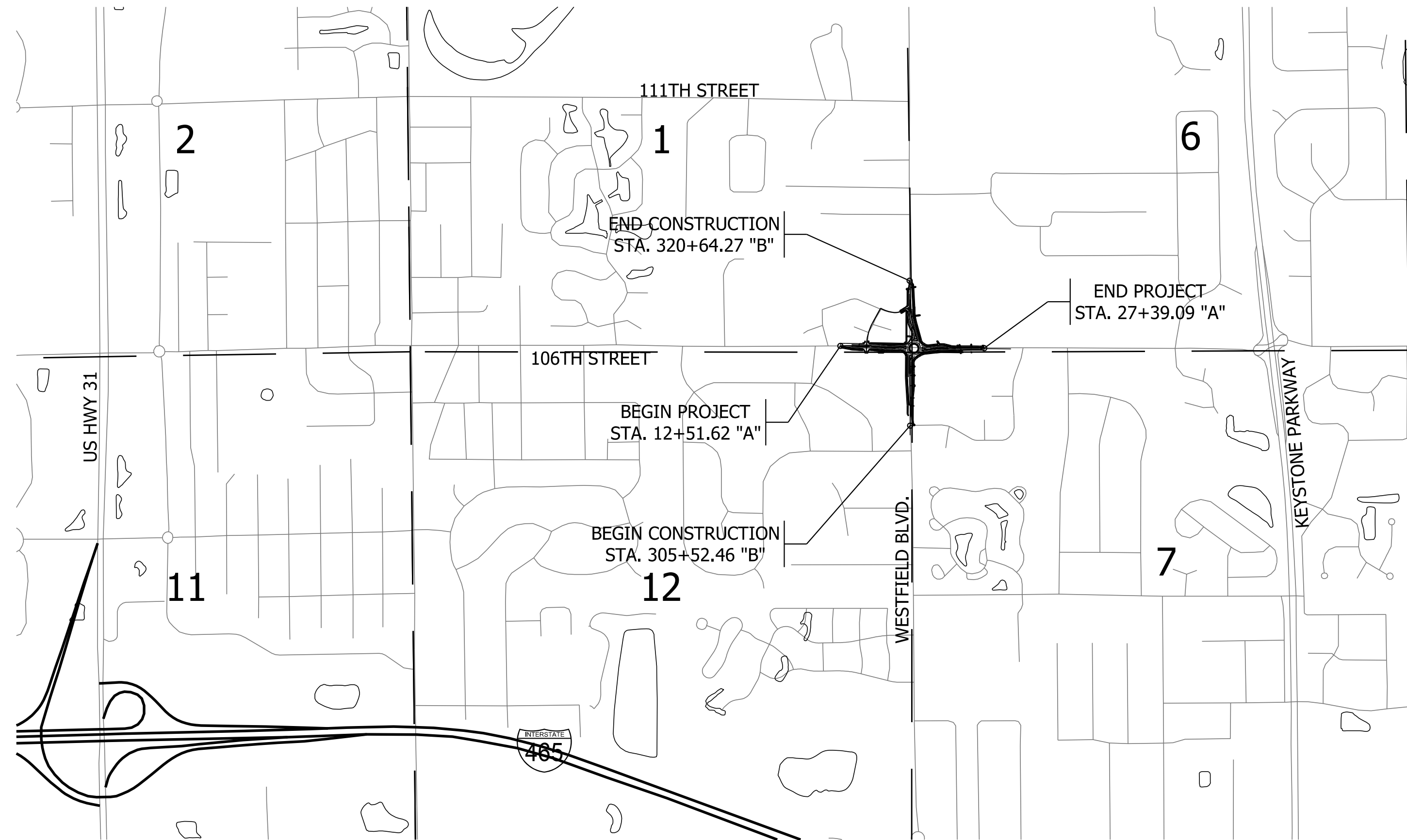
ROAD PLANS

TRAFFIC DATA		West Approach	East Approach	North Approach	South Approach	
		106th Street	106th Street	Westfield Blvd.	Westfield Blvd.	
A.A.D.T.	(2023)	10,485	6,799	3,945	1,869	V.P.D.
A.A.D.T.	(2043)	15,785	11,443	5,362	1,869	V.P.D.
D.H.V.	(2043)	1,910	1,319	700	180	V.P.H.
DIRECTIONAL DISTRIBUTION		73%	69%	77%	51%	%
TRUCKS		0.6%	0.7%	0.3%	0%	A.A.D.T.
		0%	1.4%	0%	0%	D.H.V.

DESIGN DATA					
DESIGN SPEED	40	40	35	30	M.P.H.
PROJECT DESIGN CRITERIA	Reconstruction (Non-Freeway)				
FUNCTIONAL CLASSIFICATION	106th St. & Westfield Blvd.: Major Collector				
RURAL/URBAN	Urban, Suburban				
TERRAIN	Level				
ACCESS CONTROL	None				

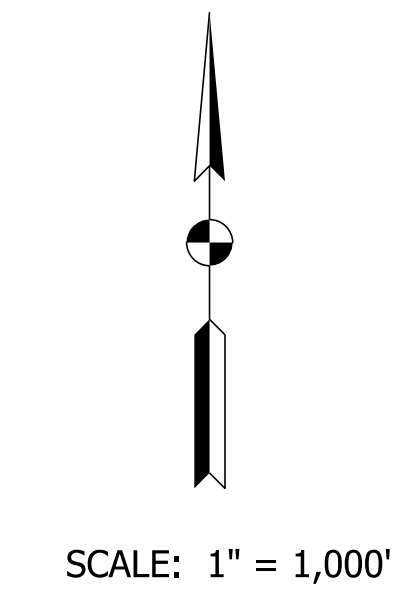
PROJECT NO. 1901895 P.E.
 1901895 R/W
 1901895 CONST.

New Construction Roundabout at Intersection of 106th and Westfield Blvd, 8.6 miles east of US 31 in Sections 1, 6, 7, & 12, T17N, R3E R4E, Clay Township, Hamilton County, Indiana



LATITUDE: \$LATT\$ LONGITUDE: \$LONG\$

GROSS LENGTH: \$GROSS_LENGTH\$ MI.
 NET LENGTH: \$NET_LENGTH\$ MI.
 MAX. GRADE: \$MAX_GRADE\$ %



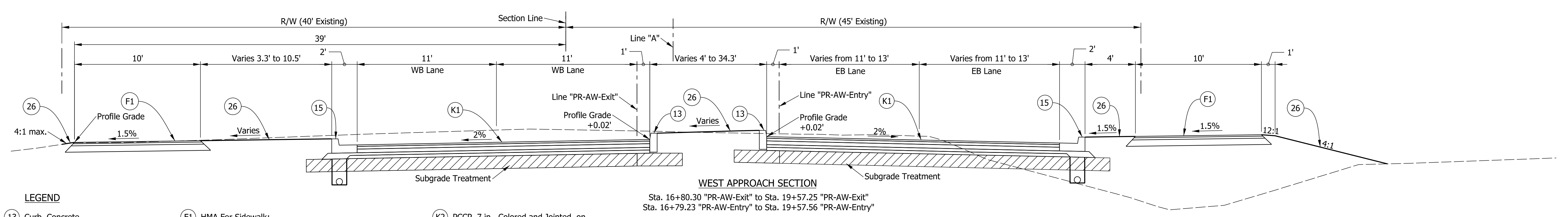
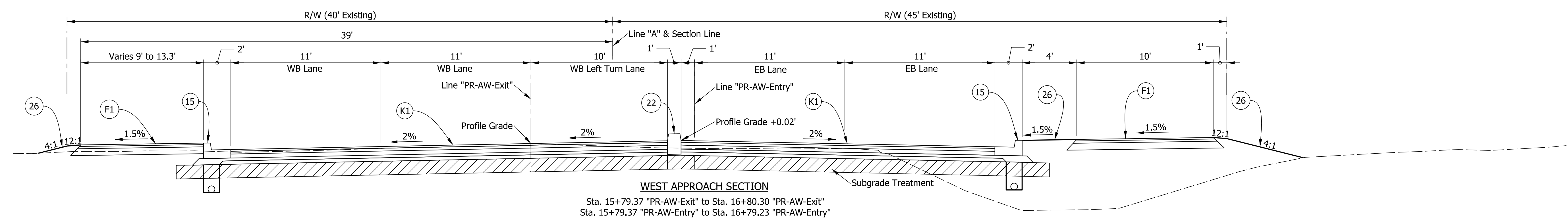
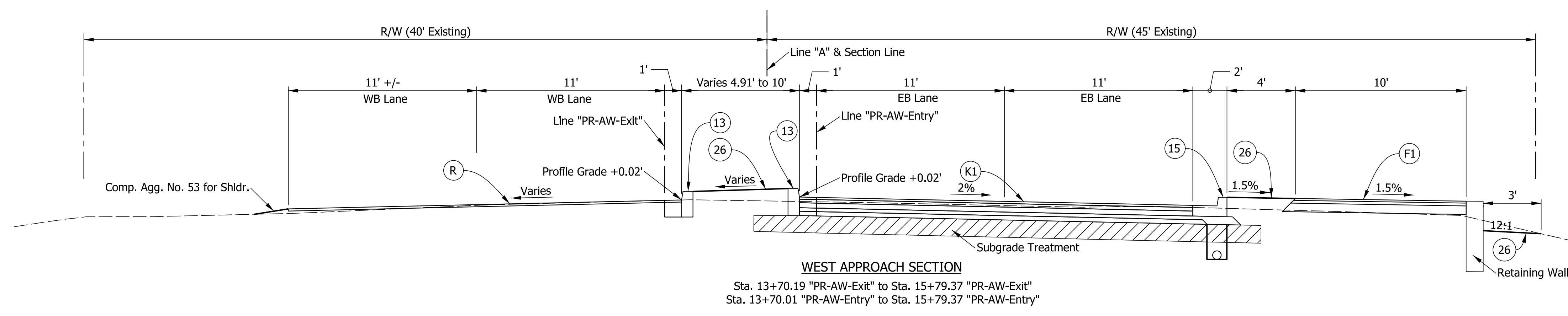
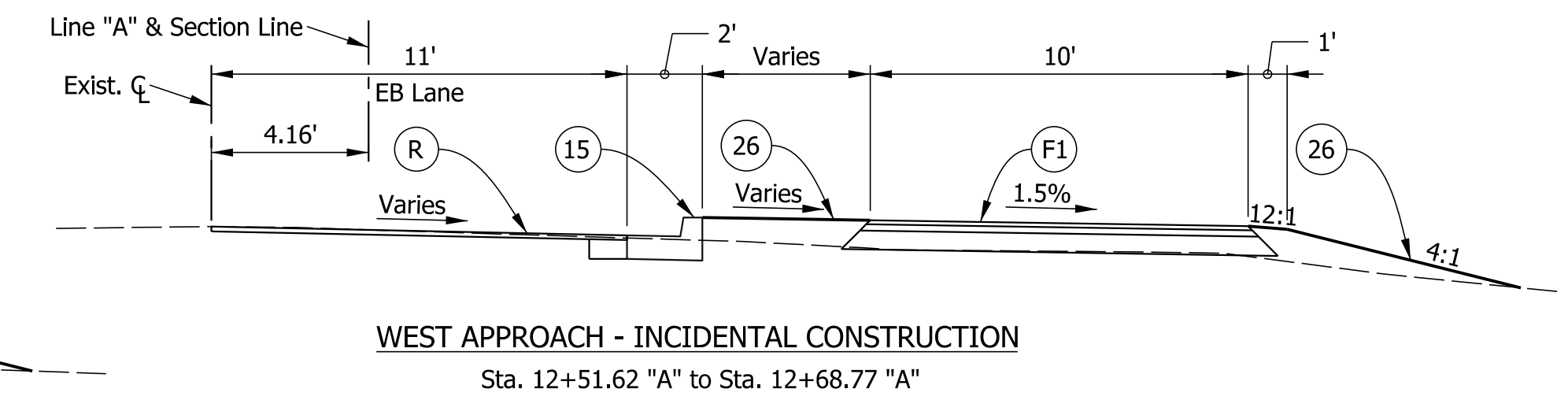
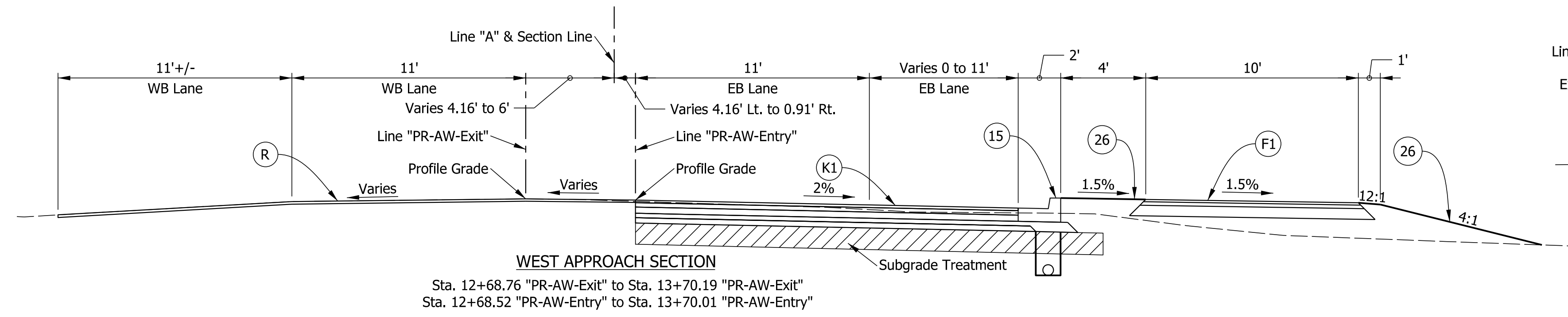
gai consultants
 Indianapolis: 201 North Illinois Street, Suite 1700, Indianapolis, IN 46204
 Fishers: 9998 Crosspoint Boulevard, Suite 110, Indianapolis, IN 46256

INDIANA DEPARTMENT OF TRANSPORTATION
 STANDARD SPECIFICATIONS DATED 2022
 TO BE USED WITH THESE PLANS

PLANS PREPARED BY: GAI Consultants Inc. (317) 570-6800 PHONE NUMBER
 CERTIFIED BY: _____ DATE
 APPROVED FOR LETTING: _____ INDIANA DEPARTMENT OF TRANSPORTATION DATE

DESIGNATION	
1901895	
SURVEY BOOK	SHEETS
	1 of 84
CONTRACT	PROJECT
R-42285	1901895

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- LEGEND**
- (13) Curb, Concrete
 - (15) Curb and Gutter, Concrete, Modified
 - (17) Curb and Gutter, Roll Curb (Truck Apron)
 - (18) Curb and Gutter, Roll Curb
 - (22) Concrete Center Curb, Type D
 - (26) Sodding, Nursery
 - (F) Sidewalk, Concrete, on 4 in. of Compacted Aggregate No. 53
 - (F1) HMA For Sidewalk: 165 #/SY HMA Surface, Type B, 9.5 mm on 275 #/SY HMA Intermediate, Type B, 19.0 mm on 6 in. of Compacted Aggregate No. 53, on Geogrid, IB (As Directed by the Engineer) Subgrade Treatment, Type III
 - (K1) 165 #/SY QC/QA-HMA, 3, 70, Surface, 9.5 mm on 275 #/SY QC/QA-HMA, 3, 64, Intermediate, 19.0 mm on 385 #/SY QC/QA-HMA, 3, 64, Base, 25.0 mm on 250 #/SY QC/QA-HMA, 3, 76, Intermediate, OG 19.0 mm on 330 #/SY QC/QA-HMA, 3, 64, Base, 25.0 mm on Subgrade Treatment, Type IBC
 - (K2) PCCP, 7 in., Colored and Jointed, on 10 in. Compacted Aggregate No. 53, on Subgrade Treatment, Type IBC
 - (R) 165 #/SY QC/QA-HMA, 3, 70, Surface, 9.5 mm on 1.5 in. Asphalt Surface Milling
 - (U) Underdrain

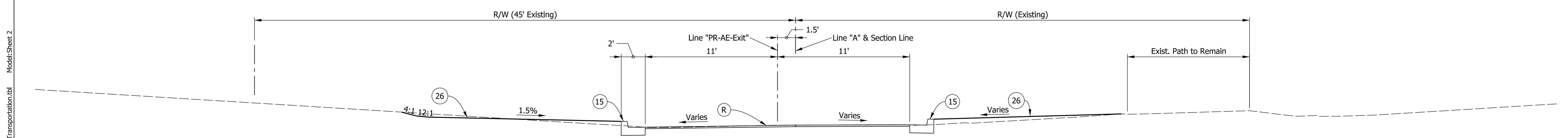
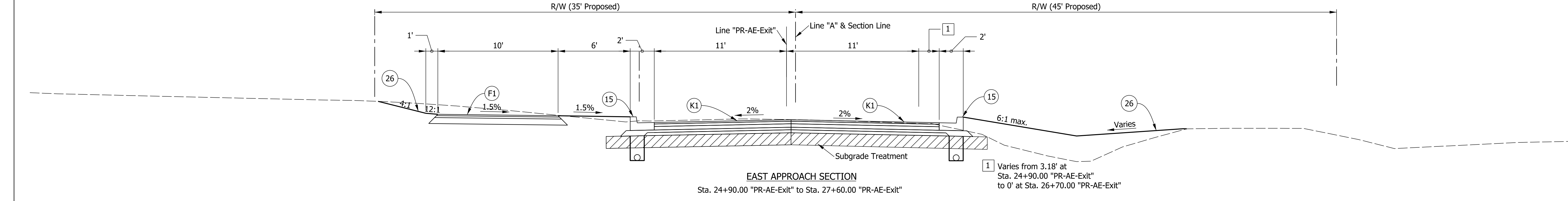
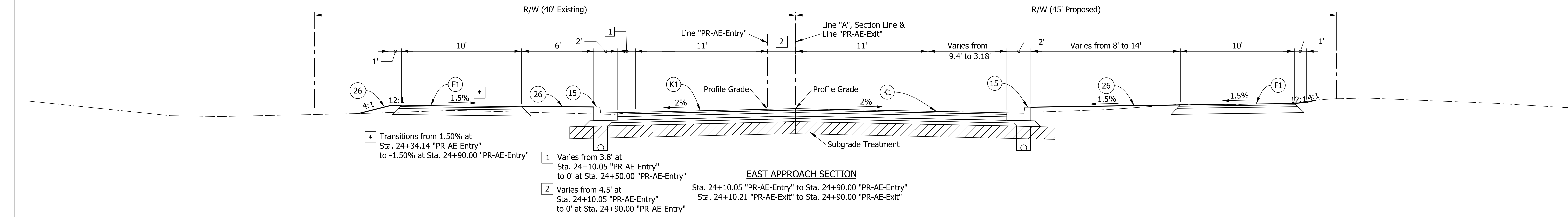
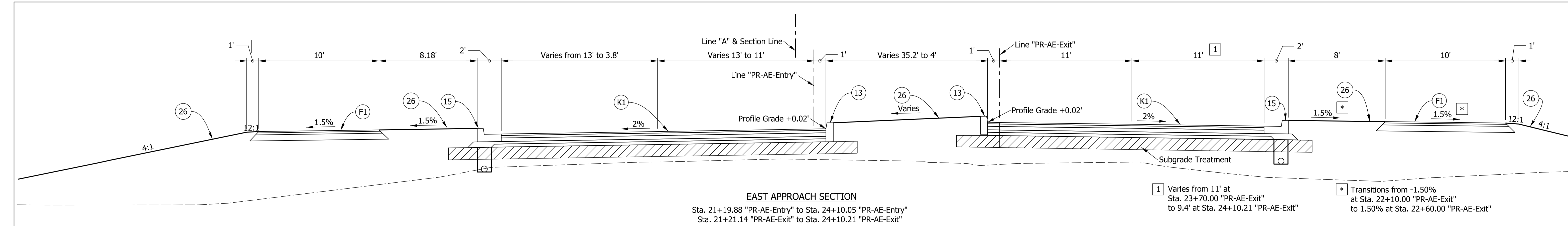


RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JJV	DRAWN: MWM	
CHECKED:	CHECKED: JJV	

INDIANA DEPARTMENT OF TRANSPORTATION	
TYPICAL SECTIONS 106th STREET	

SCALE 1/4" = 1'-0"	BRIDGE FILE
SURVEY BOOK	DESIGNATION 1901895
CONTRACT	SHEETS 3 of 84
	PROJECT

Plc:9/16/2022 1:50:59 PM By: mramm Per: Transportation.tbl Model:Sheet 1



- LEGEND**
- (13) Curb, Concrete
 - (15) Curb and Gutter, Concrete, Modified
 - (17) Curb and Gutter, Roll Curb (Truck Apron)
 - (18) Curb and Gutter, Roll Curb
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 - (K1) 165 #/SY QC/QA-HMA, 3, 70, Surface, 9.5 mm on 275 #/SY QC/QA-HMA, 3, 64, Intermediate, 19.0 mm on 385 #/SY QC/QA-HMA, 3, 64, Base, 25.0 mm on 250 #/SY QC/QA-HMA, 3, 76, Intermediate, OG 19.0 mm on 330 #/SY QC/QA-HMA, 3, 64, Base, 25.0 mm on Subgrade Treatment, Type IBC
 - (K2) PCCP, 7 in., Colored and Jointed, on 10 in. Compacted Aggregate No. 53, on Subgrade Treatment, Type IBC
 - (R) 165 #/SY QC/QA-HMA, 3, 70, Surface, 9.5 mm on 1.5 in. Asphalt Surface Milling
 - (U) Underdrain



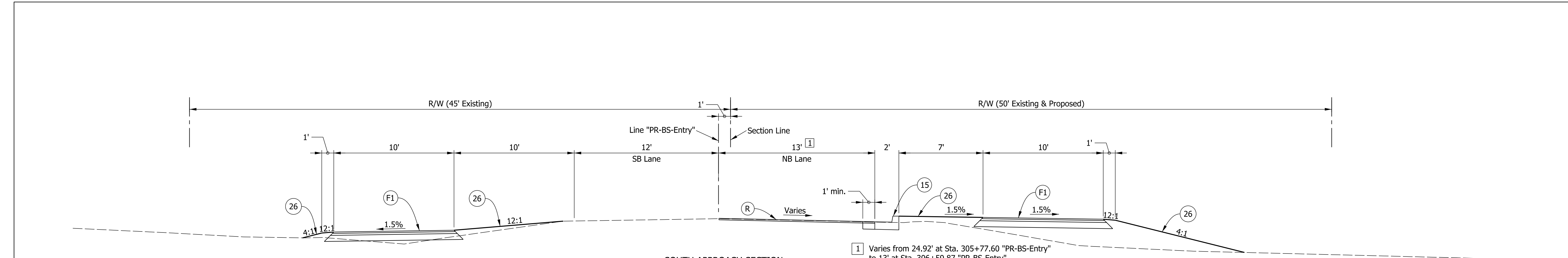
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DESIGNED: JJV	DRAWN: MWM	
CHECKED:	CHECKED: JJV	

INDIANA DEPARTMENT OF TRANSPORTATION

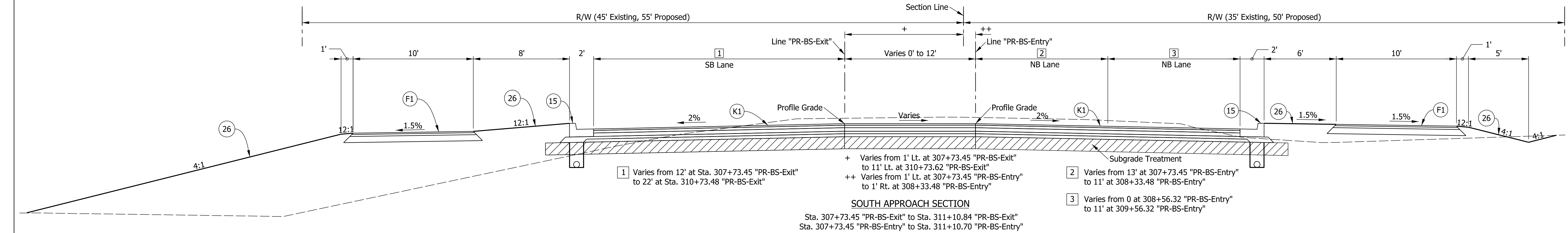
**TYPICAL SECTIONS
106th STREET**

SCALE 1/4" = 1'-0"	BRIDGE FILE
	DESIGNATION 1901895
SURVEY BOOK	SHEETS 4 of 84
CONTRACT	PROJECT

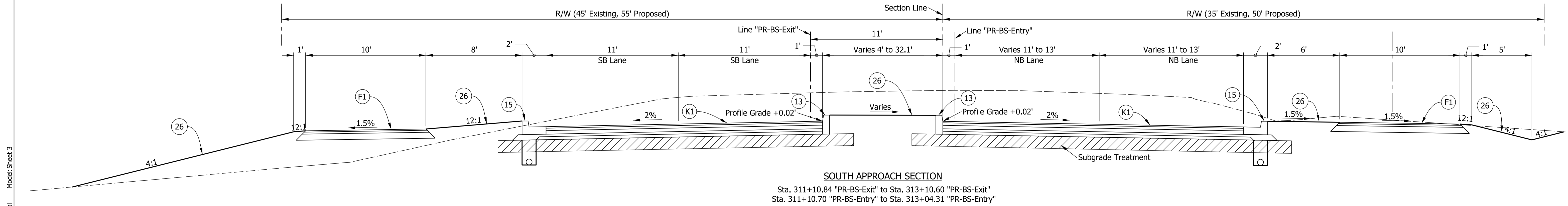
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SOUTH APPROACH SECTION
Sta. 305+52.47 "PR-BS-Entry" to Sta. 307+73.45 "PR-BS-Entry"



SOUTH APPROACH SECTION
Sta. 307+73.45 "PR-BS-Exit" to Sta. 311+10.70 "PR-BS-Entry"



SOUTH APPROACH SECTION
Sta. 311+10.84 "PR-BS-Exit" to Sta. 313+04.31 "PR-BS-Entry"

- LEGEND**
- (13) Curb, Concrete
 - (15) Curb and Gutter, Concrete, Modified
 - (17) Curb and Gutter, Roll Curb (Truck Apron)
 - (18) Curb and Gutter, Roll Curb
 - (22) Concrete Center Curb, Type D
 - (26) Sodding, Nursery
 - (F) Sidewalk, Concrete, on 4 in. of Compacted Aggregate No. 53
 - (F1) HMA For Sidewalk:
165 #/SY HMA Surface, Type B, 9.5 mm on
275 #/SY HMA Intermediate, Type B, 19.0 mm on
6 in. of Compacted Aggregate No. 53, on
Geogrid, IB (As Directed by the Engineer)
Subgrade Treatment, Type III
 - (K1) 165 #/SY QC/QA-HMA, 3, 70, Surface, 9.5 mm on
275 #/SY QC/QA-HMA, 3, 64, Intermediate, 19.0 mm on
385 #/SY QC/QA-HMA, 3, 64, Base, 25.0 mm on
250 #/SY QC/QA-HMA, 3, 76, Intermediate, OG 19.0 mm on
330 #/SY QC/QA-HMA, 3, 64, Base, 25.0 mm on
Subgrade Treatment, Type IBC
 - (K2) PCCP, 7 in., Colored and Jointed, on
10 in. Compacted Aggregate No. 53, on
Subgrade Treatment, Type IBC
 - (R) 165 #/SY QC/QA-HMA, 3, 70, Surface, 9.5 mm on
1.5 in. Asphalt Surface Milling
 - (U) Underdrain



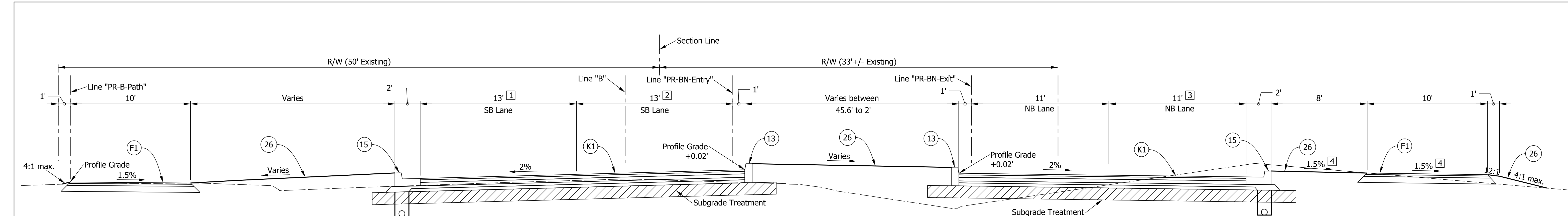
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JJV	DRAWN: MWM	
CHECKED:	CHECKED: JJV	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS
WESTFIELD BOULEVARD**

SCALE 1/4" = 1'-0"	BRIDGE FILE
	DESIGNATION 1901895
SURVEY BOOK	SHEETS 5 of 84
CONTRACT	PROJECT

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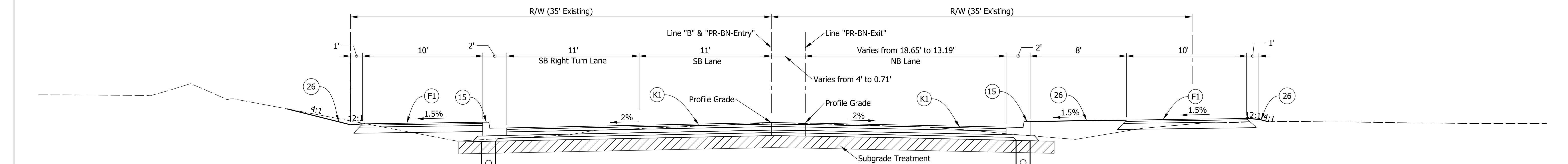
NORTH APPROACH SECTION
 Sta. 314+54.62 "PR-BN-Entry" to Sta. 319+05.99 "PR-BN-Entry"
 Sta. 314+52.26 "PR-BN-Exit" to Sta. 319+05.97 "PR-BN-Exit"

1 Varies from 13' at 314+54.62 "PR-BN-Entry" to 0' at 317+41.17 "PR-BN-Entry"

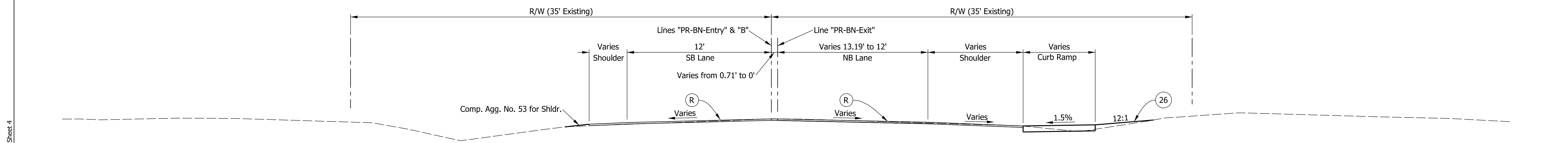
2 Varies from 13' at 317+65.91 "PR-BN-Entry" to 11' at 318+40.51 "PR-BN-Entry"

3 Varies from 11' at 314+54.62 "PR-BN-Exit" to 7.65' at 319+05.97 "PR-BN-Exit"

4 Varies from -1.5% at 316+98 "PR-BN-Exit" to +1.5% at 317+15.44 "PR-BN-Exit"



NORTH APPROACH SECTION
 Sta. 319+05.99 "PR-BN-Entry" to Sta. 320+70.26 "PR-BN-Entry"
 Sta. 319+05.97 "PR-BN-Exit" to Sta. 320+70.25 "PR-BN-Exit"



NORTH APPROACH SECTION
 Sta. 320+70.26 "PR-BN-Entry" to Sta. 321+06.00 "PR-BN-Entry"
 Sta. 320+70.25 "PR-BN-Exit" to Sta. 321+06.00 "PR-BN-Exit"

- LEGEND**
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 - (18) Curb and Gutter, Roll Curb
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 - (R) 165 #/SY QC/QA-HMA, 3, 70, Surface, 9.5 mm on 1.5 in. Asphalt Surface Milling
 - (U) Underdrain



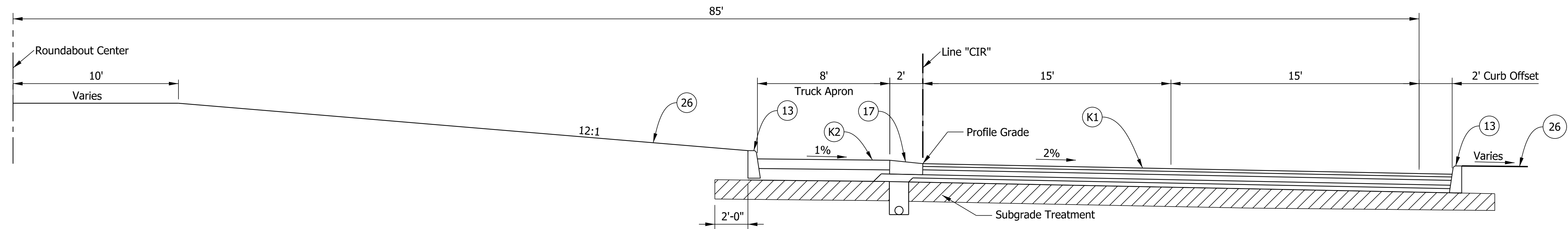
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JJV	DRAWN: MWM	
CHECKED:	CHECKED: JJV	

INDIANA DEPARTMENT OF TRANSPORTATION

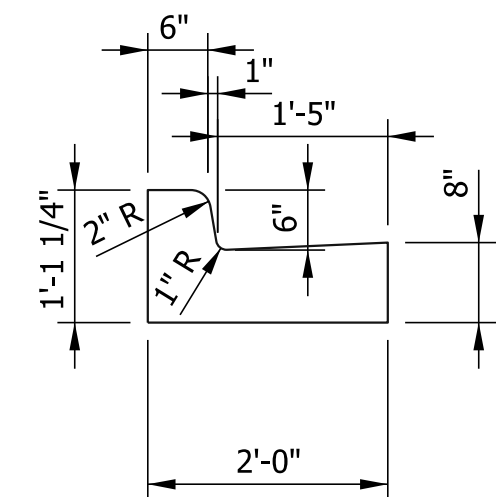
TYPICAL SECTIONS WESTFIELD BOULEVARD

SCALE	BRIDGE FILE
1/4" = 1'-0"	
	DESIGNATION
	1901895
SURVEY BOOK	SHEETS
	6 of 84
CONTRACT	PROJECT

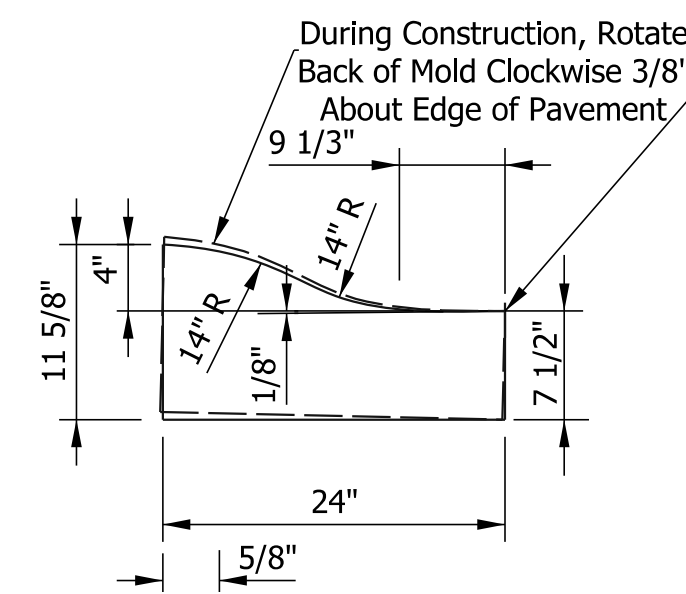
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 By: muramw
 Date: 9/16/2022
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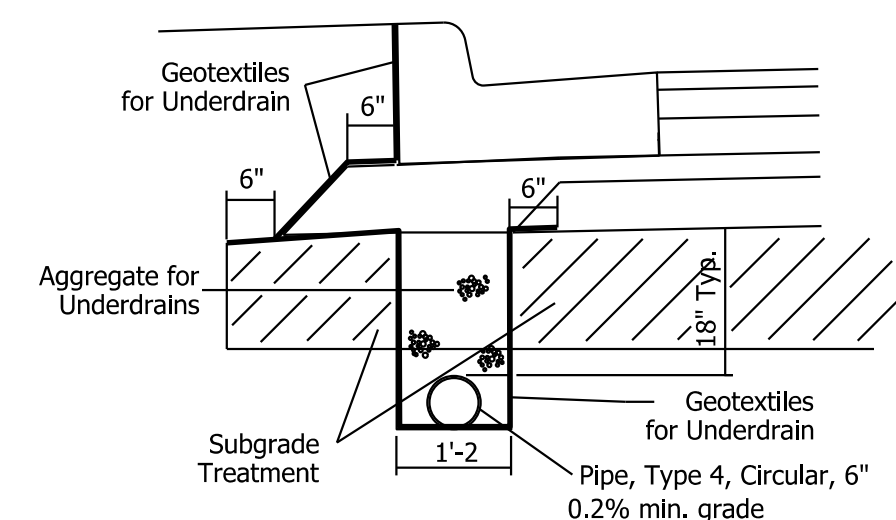
ROUNDABOUT SECTION
Sta. 50+00 "CIR" to Sta. 53+45.58 "CIR"



15 CURB AND GUTTER, CONCRETE, MODIFIED
No Scale



17 ROLL CURB FOR TRUCK APRON
No Scale



UNDERDRAIN DETAIL
No Scale

LEGEND

- 13 Curb, Concrete
- 15 Curb and Gutter, Concrete, Modified
- 17 Curb and Gutter, Roll Curb (Truck Apron)
- 18 Curb and Gutter, Roll Curb
- 22 Concrete Center Curb, Type D
- 26 Sodding, Nursery
- F Sidewalk, Concrete, on 4 in. of Compacted Aggregate No. 53
- F1 HMA For Sidewalk:
165 #/SY HMA Surface, Type B, 9.5 mm on
275 #/SY HMA Intermediate, Type B, 19.0 mm on
6 in. of Compacted Aggregate No. 53, on
Geogrid, IB (As Directed by the Engineer)
Subgrade Treatment, Type III
- K1 165 #/SY QC/QA-HMA, 3, 70, Surface, 9.5 mm on
275 #/SY QC/QA-HMA, 3, 64, Intermediate, 19.0 mm on
385 #/SY QC/QA-HMA, 3, 64, Base, 25.0 mm on
250 #/SY QC/QA-HMA, 3, 76, Intermediate, OG 19.0 mm on
330 #/SY QC/QA-HMA, 3, 64, Base, 25.0 mm on
Subgrade Treatment, Type IBC
- K2 PCCP, 7 in., Colored and Jointed, on
10 in. Compacted Aggregate No. 53, on
Subgrade Treatment, Type IBC
- R 165 #/SY QC/QA-HMA, 3, 70, Surface, 9.5 mm on
1.5 in. Asphalt Surface Milling
- U Underdrain

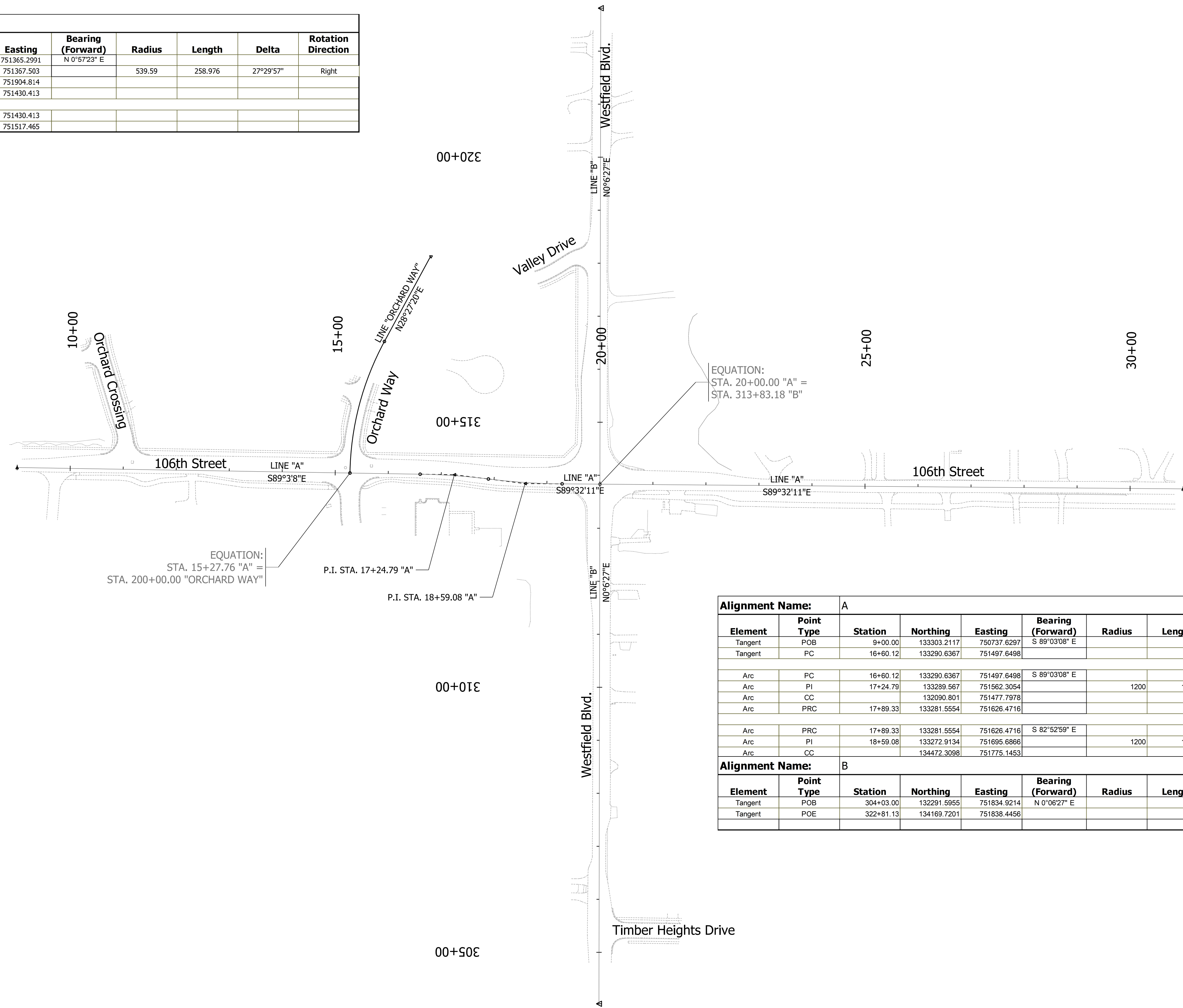


RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: JJV	DRAWN: MWM	
CHECKED:	CHECKED: JJV	

INDIANA DEPARTMENT OF TRANSPORTATION	
TYPICAL SECTIONS ROUNDABOUT & MISCELLANEOUS DETAILS	

SCALE 1/4" = 1'-0"	BRIDGE FILE
	DESIGNATION 1901895
SURVEY BOOK	SHEETS 7 of 84
CONTRACT	PROJECT

Alignment Name: ORCHARD WAY									
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Arc	PC	200+00.00	133292.8266	751365.2991	N 0°57'23" E				
Arc	PI	201+32.03	133424.8402	751367.503		539.59	258.976	27°29'57"	Right
Arc	CC		133283.8199	751904.814					
Arc	PT	202+58.98	133540.9212	751430.413					
Tangent	PT	202+58.98	133540.9212	751430.413					
Tangent	POE	204+41.68	133701.5488	751517.465					



Alignment Name: A									
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Tangent	POB	9+00.00	133303.2117	750737.6297	S 89°03'08" E				
Tangent	PC	16+60.12	133290.6367	751497.6498					
Arc	PC	16+60.12	133290.6367	751497.6498	S 89°03'08" E				
Arc	PI	17+24.79	133289.567	751562.3054		1200	129.204	6°10'09"	Right
Arc	CC		132090.801	751477.7978					
Arc	PRC	17+89.33	133281.5554	751626.4716					
Arc	PRC	17+89.33	133281.5554	751626.4716	S 82°52'59" E				
Arc	PI	18+59.08	133272.9134	751695.6866		1200	139.348	6°39'12"	Left
Arc	CC		134472.3098	751775.1453					

Alignment Name: B									
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Tangent	POB	304+03.00	132291.5955	751834.9214	N 0°06'27" E				
Tangent	POE	322+81.13	134169.7201	751838.4456					



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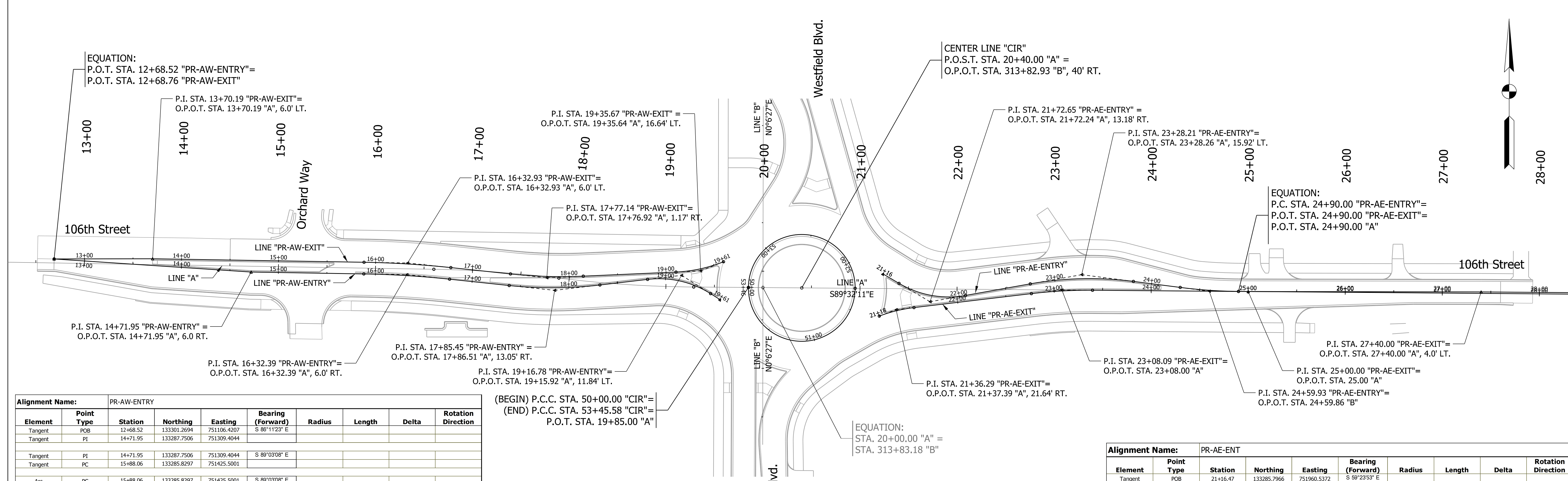


RECOMMENDED FOR APPROVAL _____ DATE _____
 DESIGN ENGINEER _____
 DESIGNED: _____ DRAWN: _____
 CHECKED: _____ CHECKED: _____

INDIANA
DEPARTMENT OF TRANSPORTATION

GEOMETRIC TIES
"A", "B", & "ORCHARD WAY"

SCALE 1"=100'	BRIDGE FILE
	DESIGNATION 1901895
SURVEY BOOK	SHEETS 8 of 84
CONTRACT	PROJECT



Alignment Name:		PR-AW-ENTRY							
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Tangent	POB	12+68.52	133301.2694	751106.4207	S 88°11'23" E				
Tangent	PI	14+71.95	133287.7506	751309.4044					
Tangent	PC	15+88.06	133285.8297	751425.5001	S 89°03'08" E				
Arc	PC	15+88.06	133285.8297	751425.5001	S 89°03'08" E				
Arc	PI	16+32.39	133285.0963	751469.8229		994	88.599	5°06'25"	Right
Arc	CC	132291.9657	751409.056						
Arc	PT	16+76.66	133280.4205	751513.9044					
Tangent	PT	16+76.66	133280.4205	751513.9044	S 83°56'42" E				
Tangent	PC	17+38.43	133273.9048	751575.3306	S 83°56'42" E				
Arc	PC	17+38.43	133273.9048	751575.3306	S 83°56'42" E				
Arc	PI	17+85.45	133268.9456	751622.0832		420	93.64	12°46'27"	Left
Arc	CC	133691.5617	751619.6327						
Arc	PT	18+32.07	133274.4466	751668.7752					
Tangent	PT	18+32.07	133274.4466	751668.7752	N 83°16'50" E				
Tangent	PC	18+81.49	133280.2285	751717.8509					
Arc	PC	18+81.49	133280.2285	751717.8509	N 83°16'50" E				
Arc	PI	19+16.78	133284.3582	751752.9037		100	67.861	38°52'52"	Right
Arc	CC	133180.9154	751729.5514						
Arc	PT	19+49.35	133265.5701	751782.7828					
Tangent	PT	19+49.35	133265.5701	751782.7828	S 57°50'17" E				
Tangent	POE	19+60.97	133259.3862	751792.6172					

Alignment Name:		PR-AW-EXIT							
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Tangent	POB	12+68.76	133301.2694	751106.4207	N 89°54'29" E				
Tangent	PI	13+70.19	133301.4324	751207.8563					
Tangent	PC	15+88.06	133297.828	751425.6986	S 89°03'08" E				
Arc	PC	15+88.06	133297.828	751425.6986	S 89°03'08" E				
Arc	PI	16+32.93	133297.0858	751470.5555		1006	89.669	5°06'25"	Right
Arc	CC	132291.9657	751409.056						
Arc	PT	16+77.73	133292.3535	751515.1702					
Tangent	PT	16+77.73	133292.3535	751515.1702	S 83°56'42" E				
Tangent	PC	17+39.50	133285.8379	751576.5963					
Arc	PC	17+39.50	133285.8379	751576.5963	S 83°56'42" E				
Arc	PI	17+77.14	133281.8684	751614.0183		500	75.122	8°36'30"	Left
Arc	CC	133783.0485	751629.337						
Arc	PT	18+14.63	133283.545	751651.6129					
Tangent	PT	18+14.63	133283.545	751651.6129	N 87°28'47" E				
Tangent	PC	19+10.26	133287.8059	751747.1573					
Arc	PC	19+10.26	133287.8059	751747.1573	N 87°28'47" E				
Arc	PI	19+35.67	133288.9378	751772.5385		150	50.335	19°13'36"	Left
Arc	CC	133437.6569	751740.4745						
Arc	PT	19+60.60	133298.3647	751796.1312					

Alignment Name:		CIR							
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Arc	PC	50+00.00	133271.8934	751821.7588	N 0°27'49" E				
Arc	CC		133271.4484	751876.757		55	172.788	180°00'00"	Left
Arc	PCC	51+72.79	133271.0035	751931.7552					
Arc	PCC	51+72.79	133271.0035	751931.7552	S 0°27'49" W				
Arc	CC		133271.4485	751876.757		55	172.788	180°00'00"	Left
Arc	PT	53+45.58	133271.8935	751821.7588					

Alignment Name:		PR-AE-ENT							
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Tangent	POB	21+16.47	133285.7966	751960.5372	S 59°23'53" E				
Tangent	PC	21+35.55	133276.0832	751976.9604					
Arc	PC	21+35.55	133276.0832	751976.9604	S 59°23'53" E				
Arc	PI	21+72.65	133257.199	752008.8892		100	71.044	40°42'18"	Left
Arc	CC	133362.1556	752027.8675						
Arc	PT	22+06.59	133263.7063	752045.4094					
Tangent	PT	22+06.59	133263.7063	752045.4094	N 79°53'49" E				
Tangent	PC	22+74.44	133275.6085	752112.2081					
Arc	PC	22+74.44	133275.6085	752112.2081	N 79°53'49" E				
Arc	PI	23+28.21	133285.0399	752165.1393		350	106.696	17°27'59"	Right
Arc	CC	132931.0357	752173.6046						
Arc	PT	23+81.14	133278.1494	752218.4608					
Tangent	PT	23+81.14	133278.1494	752218.4608	S 82°38'12" E				
Tangent	PC	24+29.79	133271.9147	752266.7071					
Arc	PC	24+29.79	133271.9147	752266.7071	S 82°38'12" E				
Arc	PI	24+59.93	133268.0516	752296.6009		500	60.212	6°53'59"	Left
Arc	CC	133767.7914	752330.7875						
Arc	PT	24+90.00	133267.8077	752326.7423					
Tangent	PT	24+90.00	133267.8077	752326.7423	S 89°32'11" E				
Tangent	POE	31+00.00	133262.8725	752936.7246					

Alignment Name:		PR-AE-EXIT							
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Arc	PC	21+17.76	133242.4172	751956.6456	N 69°08'36" E				
Arc	PI	21+36.29	133249.0172	751973.9686		150	36.888	14°05'25"	Right
Arc	CC	133102.2461	752010.0503						
Arc	PT	21+54.64	133251.2013	751992.3772					
Tangent	PT	21+54.64	133251.2013	751992.3772	N 83°14'01" E				
Tangent	PC	22+76.50	133265.5584	752113.3835					
Arc	PC	22+76.50	133265.5584	752113.3835	N 83°14'01" E				
Arc	PI	23+08.09	133269.2802	752144.7518		500	63.093	7°13'48"	Right
Arc	CC	132769.041	752172.2939						
Arc	PT	23+39.59	133269.0246	752176.3391					
Tangent	PT	23+39.59	133269.0246	752176.3391	S 89°32'11" E				
Tangent	PI	25+00.00	133267.2268	752336.7419					
Tangent	PI	25+00.00	133267.2268	752336.7419	S 89°53'40" E				
Tangent	PI	27+40.00	133267.2851	752576.7462					
Tangent	PI	27+40.00	133267.2851	752576.7462	S 89°32'11" E				
Tangent	POE	31+00.00	133264.3725	752936.7344					

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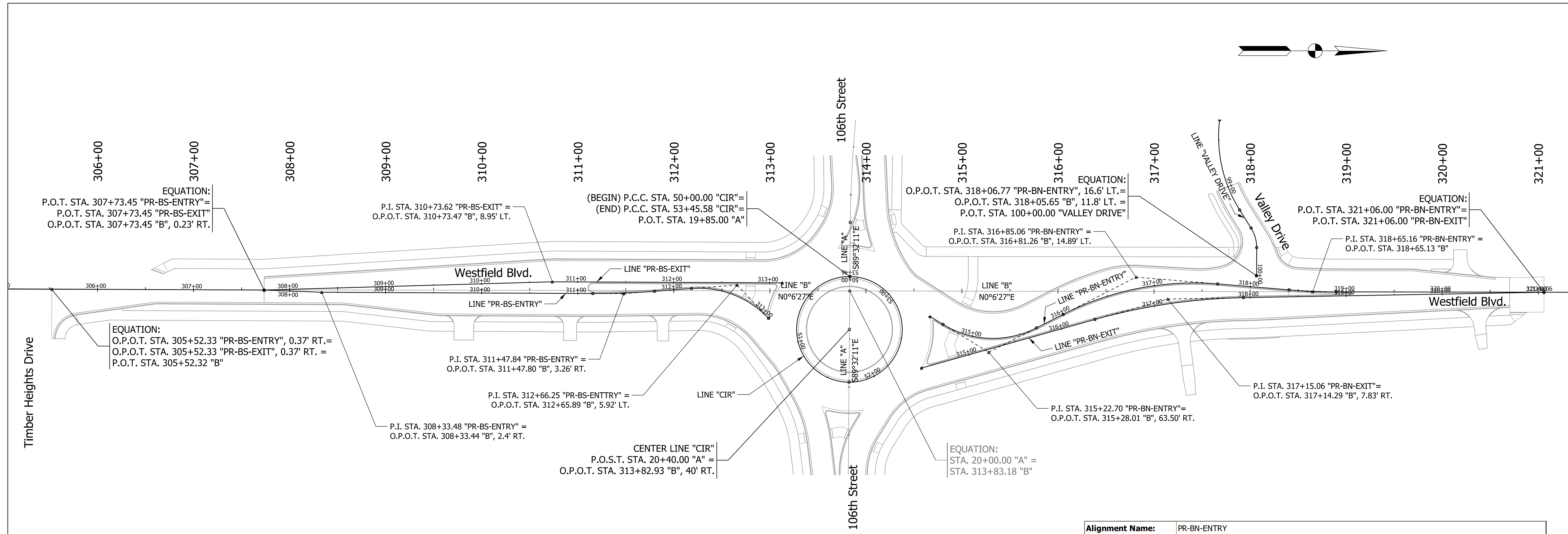
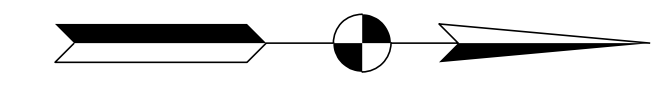
DESIGNED: _____ DRAWN: _____

CHECKED: _____ CHECKED: _____

INDIANA
DEPARTMENT OF TRANSPORTATION

GEOMETRIC TIES
LINES "A", "PR-AE-ENTRY", "PR-AW-ENTRY",
"PR-AE-EXIT", "PR-AW-EXIT", "CIR"

SCALE 1"=50'	BRIDGE FILE
	DESIGNATION 1901895
SURVEY BOOK	SHEETS 9 of 84
CONTRACT	PROJECT



Alignment Name: PR-BS-ENTRY									
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Tangent	POB	307+73.45	132662.042	751835.8534	N 2°10'22" E				
Tangent	PI	308+33.48	132722.0321	751838.1294					
Tangent	PI	308+33.48	132722.0321	751838.1294	N 0°15'49" E				
Tangent	PC	311+15.70	133004.246	751839.4276					
Arc	PC	311+15.70	133004.246	751839.4276	N 0°15'49" E	800	64.252	4°36'06"	Left
Arc	PI	311+47.84	133036.389	751839.5755					
Arc	CC	311+47.84	133007.9261	751039.4361					
Arc	PT	311+79.95	133068.4401	751837.1441					
Tangent	PT	311+79.95	133068.4401	751837.1441	N 4°20'17" W				
Tangent	PC	312+18.58	133106.9546	751834.2224					
Arc	PC	312+18.58	133106.9546	751834.2224	N 4°20'17" W	100	88.977	50°58'49"	Right
Arc	PI	312+66.25	133154.4944	751830.616					
Arc	CC	312+66.25	133114.5189	751933.9359					
Arc	PT	313+07.55	133187.2268	751865.2805					

Alignment Name: PR-BS-EXIT									
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Tangent	POB	304+50.00	132338.9939	751834.3655	N 0°15'49" E				
Tangent	PI	307+73.45	132662.042	751835.8534					
Tangent	PI	307+73.45	132662.042	751835.8534	N 1°38'44" W				
Tangent	PI	310+73.62	132962.0948	751827.2336					
Tangent	PI	310+73.62	132962.0948	751827.2336	N 0°15'49" E				
Tangent	POE	313+13.12	133201.589	751828.3353					

Alignment Name: CIR									
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Arc	PC	50+00.00	133271.8934	751821.7588	N 0°27'49" E				
Arc	CC		NaN	NaN		55	172.788	180°00'00"	Left
Arc	CC		133271.4484	751876.757					
Arc	PCC	51+72.79	133271.0035	751931.7552					
Arc	PCC	51+72.79	133271.0035	751931.7552	S 0°27'49" W	55	172.788	180°00'00"	Left
Arc	CC		NaN	NaN					
Arc	CC		133271.4485	751876.757					
Arc	PT	53+45.58	133271.8935	751821.7588					

Alignment Name: VALLEY DRIVE									
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Arc	PC	96+80.06	133702.0162	751517.652	S 61°32'39" E				
Arc	PI	97+55.44	133666.1	751583.9234					
Arc	CC		134052.4684	751707.5815					
Arc	PCC	98+29.06	133656.8628	751658.7335					
Arc	PCC	98+29.06	133656.8628	751658.7335	S 82°57'39" E	143.15	97.937	39°11'57"	Left
Arc	PI	98+80.03	133650.6163	751709.3215					
Arc	CC		133798.9338	751676.2759					
Arc	PT	99+27.00	133677.7482	751752.4728					
Tangent	PT	99+27.00	133677.7482	751752.4728	N 57°50'24" E				
Tangent	PC	99+49.27	133689.6052	751771.3306					
Arc	PC	99+49.27	133689.6052	751771.3306	N 57°50'24" E	38	21.386	32°14'44"	Right
Arc	PI	99+60.26	133695.4522	751780.6297					
Arc	CC		133657.4358	751791.5575					
Arc	PT	99+70.66	133695.4358	751791.6142					
Tangent	PT	99+70.66	133695.4358	751791.6142	S 89°54'52" E				
Tangent	POE	100+00.00	133695.392	751620.9553					

Alignment Name: PR-BN-ENTRY									
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Tangent	POB	314+51.22	133355.394	751863.4103	N 31°17'11" E				
Tangent	PC	314+66.96	133368.8502	751871.5874					
Arc	PC	314+66.96	133368.8502	751871.5874	N 31°17'11" E				
Arc	PI	315+22.70	133416.4831	751900.533		100	101.699	58°16'08"	Left
Arc	CC		133420.7816	751786.129					
Arc	PT	315+68.66	133466.1538	751875.2434					
Tangent	PT	315+68.66	133466.1538	751875.2434	N 28°58'58" W				
Tangent	PC	315+99.83	133493.9272	751861.1027					
Arc	PC	315+99.83	133493.9272	751861.1027	N 28°58'58" W				
Arc	PI	316+85.06	133569.8771	751822.4331		300	166.079	31°43'08"	Right
Arc	CC		133630.0437	752128.4457					
Arc	PT	317+65.91	133654.8136	751829.4701					
Tangent	PT	317+65.91	133654.8136	751829.4701	N 4°44'10" E				
Tangent	PC	318+40.51	133729.1588	751835.6295					
Arc	PC	318+40.51	133729.1588	751835.6295	N 4°44'10" E				
Arc	PI	318+65.16	133753.7272	751837.665		610	49.278	4°37'43"	Left
Arc	CC		133779.5244	751227.7123					
Arc	PT	318+89.79	133778.3798	751837.7113					
Tangent	PT	318+89.79	133778.3798	751837.7113	N 0°06'27" E				
Tangent	POE	322+81.13	134169.7201	751838.4456					

Alignment Name: PR-BN-EXIT									
Element	Point Type	Station	Northing	Easting	Bearing (Forward)	Radius	Length	Delta	Rotation Direction
Tangent	POB	314+48.61	133346.2803	751917.0707	N 15°38'40" W				
Tangent	PC	316+36.24	133526.966	751866.4709					
Arc	PC	316+36.24	133526.966	751866.4709	N 15°38'40" W				
Arc	PI	317+15.06	133602.8637	751845.2162		615	156.781	14°36'23"	Right
Arc	CC		133692.8121	752458.6871					
Arc	PT	317+93.02	133681.6684	751843.788					
Tangent	PT	317+93.02	133681.6684	751843.788	N 1°02'18" W				
Tangent	POE	321+06.00	133994.5925	751838.117					

Model: Sheet 3
 By: murramw
 Date: 1:51:54 PM
 Date: 9/16/2022



RECOMMENDED FOR APPROVAL _____ DATE _____

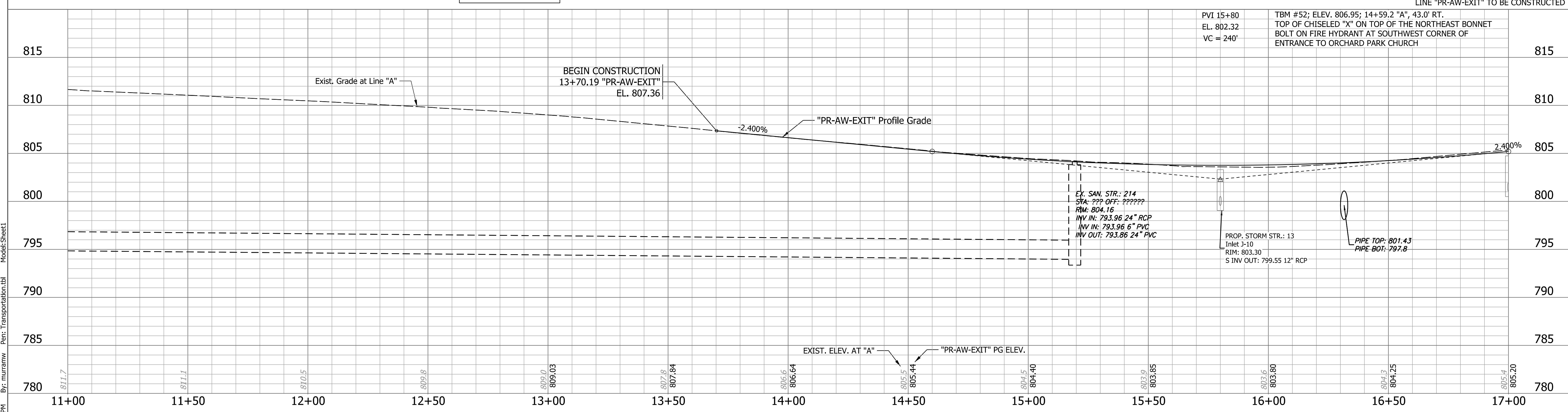
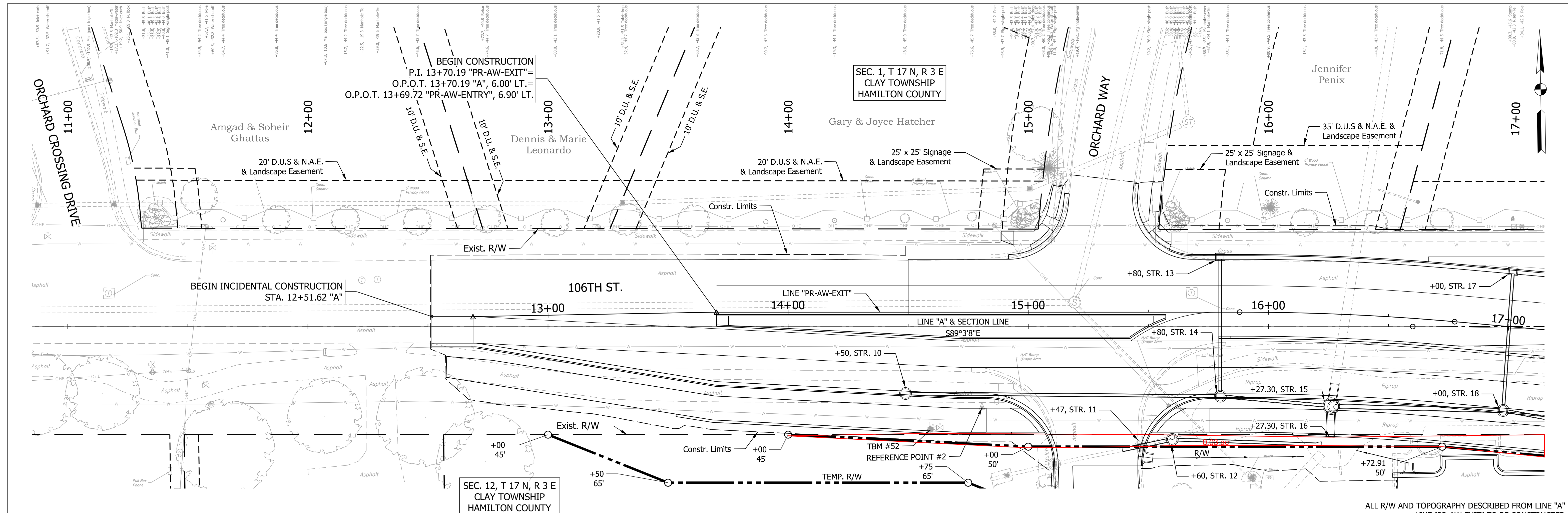
DESIGNED: _____ DRAWN: _____

CHECKED: _____ CHECKED: _____

INDIANA
DEPARTMENT OF TRANSPORTATION

GEOMETRIC TIES
LINES "B", "PR-BN-ENTRY", "PR-BS-ENTRY",
"PR-BN-EXIT", "PR-BS-EXIT", "CIR" & "VALLEY DRIVE"

SCALE	BRIDGE FILE
1"=50'	
	DESIGNATION
	1901895
SURVEY BOOK	SHEETS
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CONTRACT	PROJECT



Plc:9/16/2022 3:03:44 PM By: murramw Pen: Transportation.tbl Model:Sheet

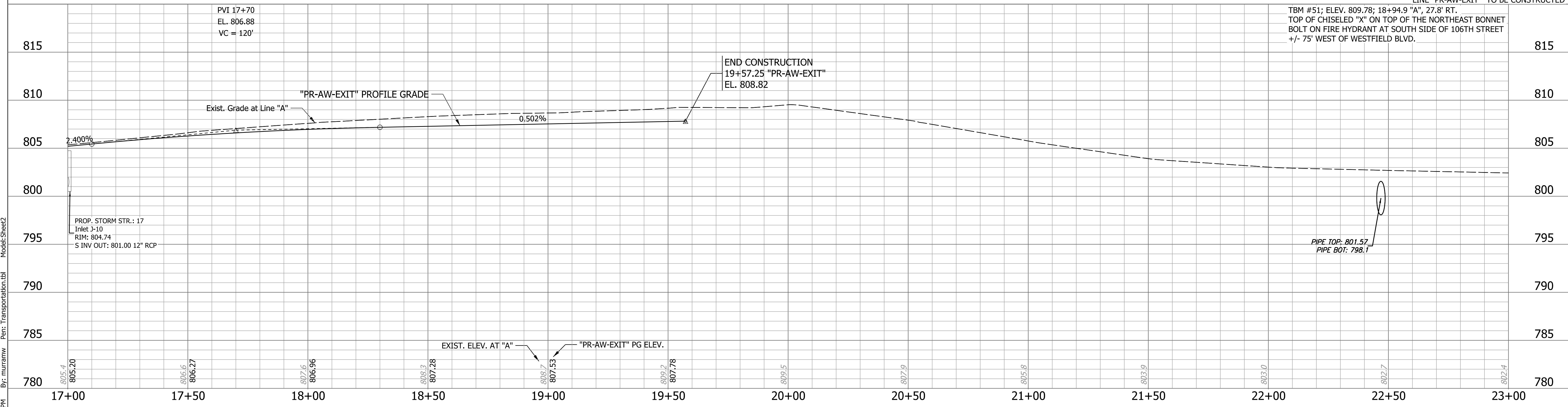
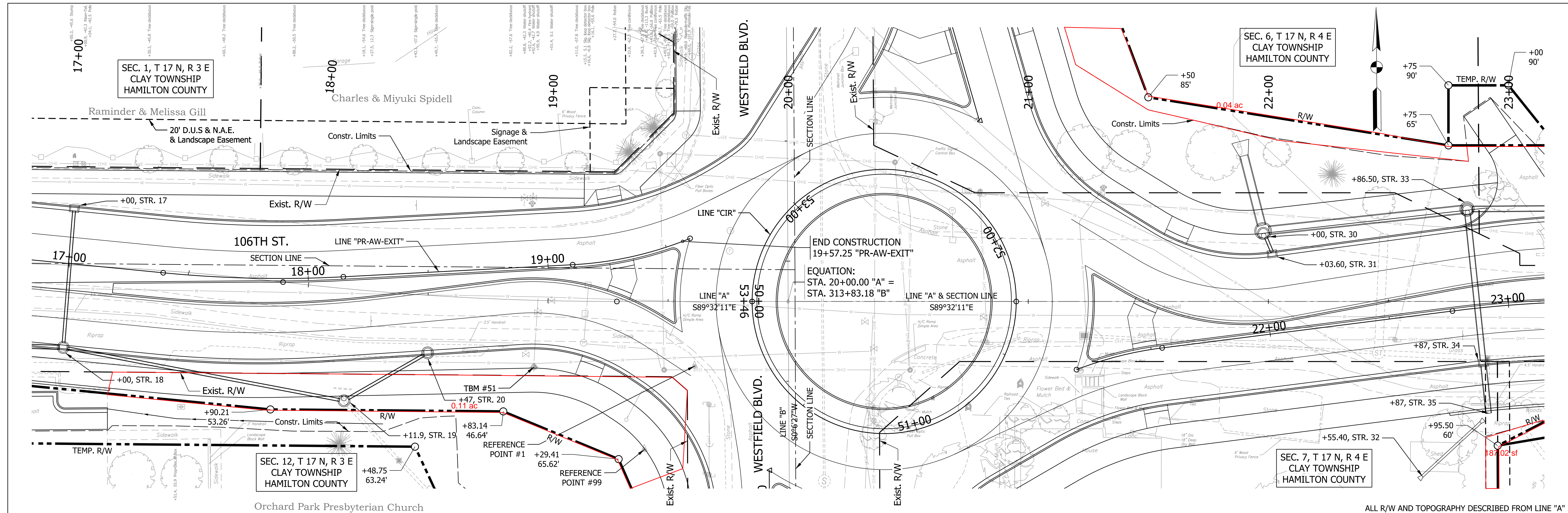


RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED:	DRAWN:	
CHECKED:	CHECKED:	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
LINES "A" & "PR-AW-EXIT"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
1" = 5'	1901895
SURVEY BOOK	SHEETS
	11 of 84
CONTRACT	PROJECT



Model: Sheet2
 By: murramw Pen: Transportation.tbl
 3:03:46 PM
 Date: 9/16/2022

RECOMMENDED FOR APPROVAL _____

DESIGNED: _____ DRAWN: _____

CHECKED: _____ CHECKED: _____

DESIGN ENGINEER DATE

INDIANA
 DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
 LINES "A" & "PR-AW-EXIT"

HORIZONTAL SCALE 1" = 20'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1901895
SURVEY BOOK	SHEETS 12 of 84
CONTRACT	PROJECT

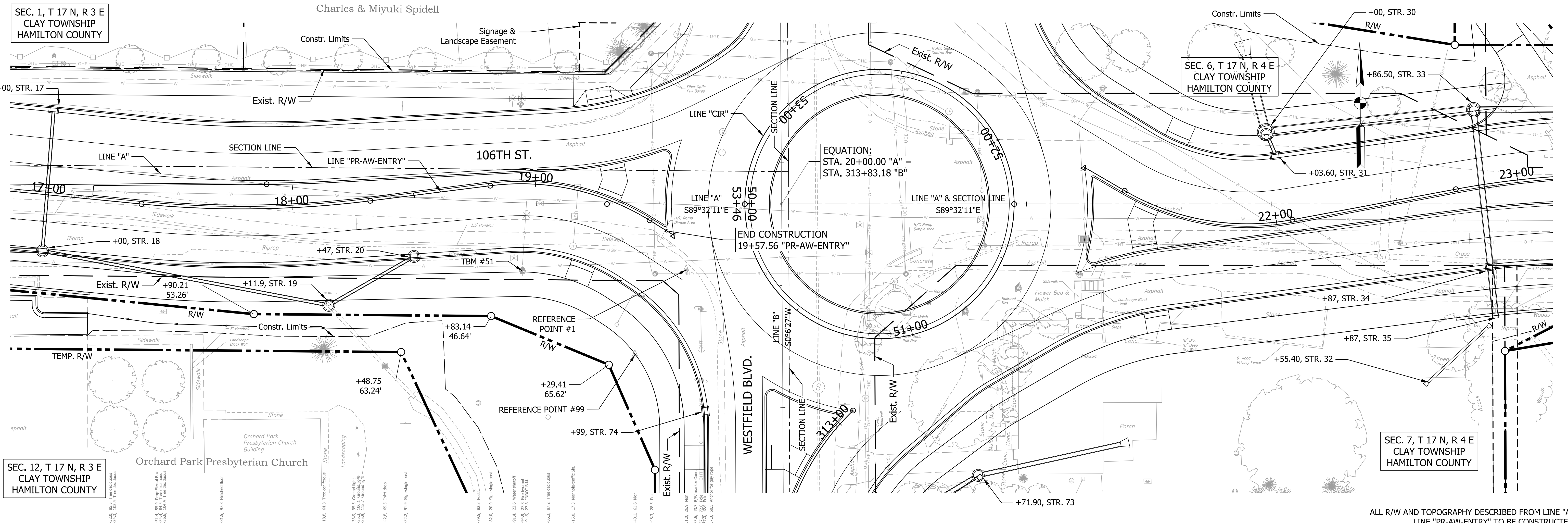
SEC. 1, T 17 N, R 3 E
CLAY TOWNSHIP
HAMILTON COUNTY

Charles & Miyuki Spidell

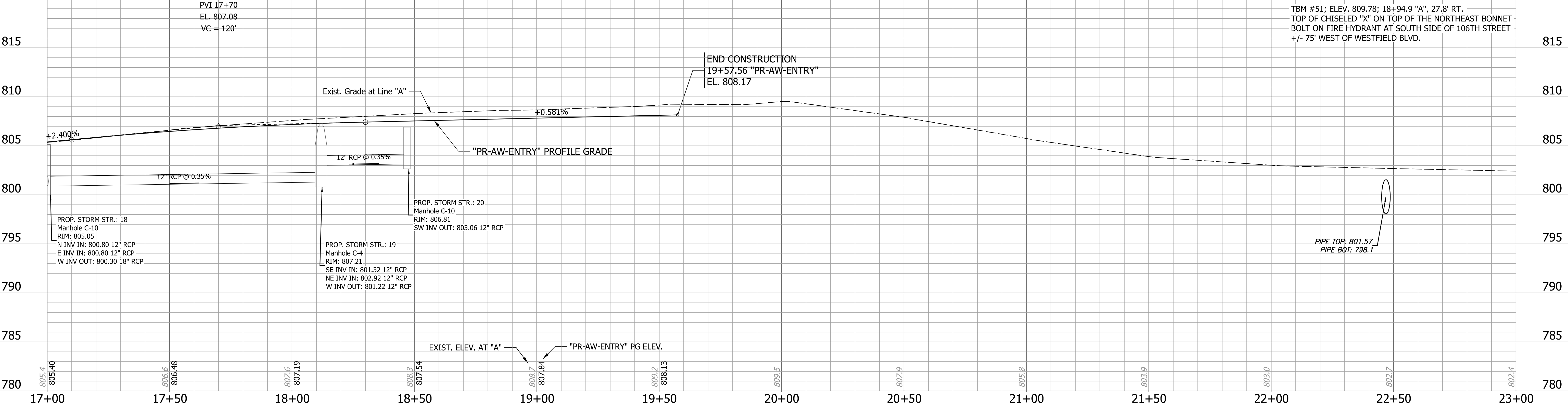
SEC. 6, T 17 N, R 4 E
CLAY TOWNSHIP
HAMILTON COUNTY

SEC. 7, T 17 N, R 4 E
CLAY TOWNSHIP
HAMILTON COUNTY

SEC. 12, T 17 N, R 3 E
CLAY TOWNSHIP
HAMILTON COUNTY



ALL R/W AND TOPOGRAPHY DESCRIBED FROM LINE "A" LINE "PR-AW-ENTRY" TO BE CONSTRUCTED



Model:Sheet2
By: murramw Pen: Transportation.tbl
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Plot:9/16/2022

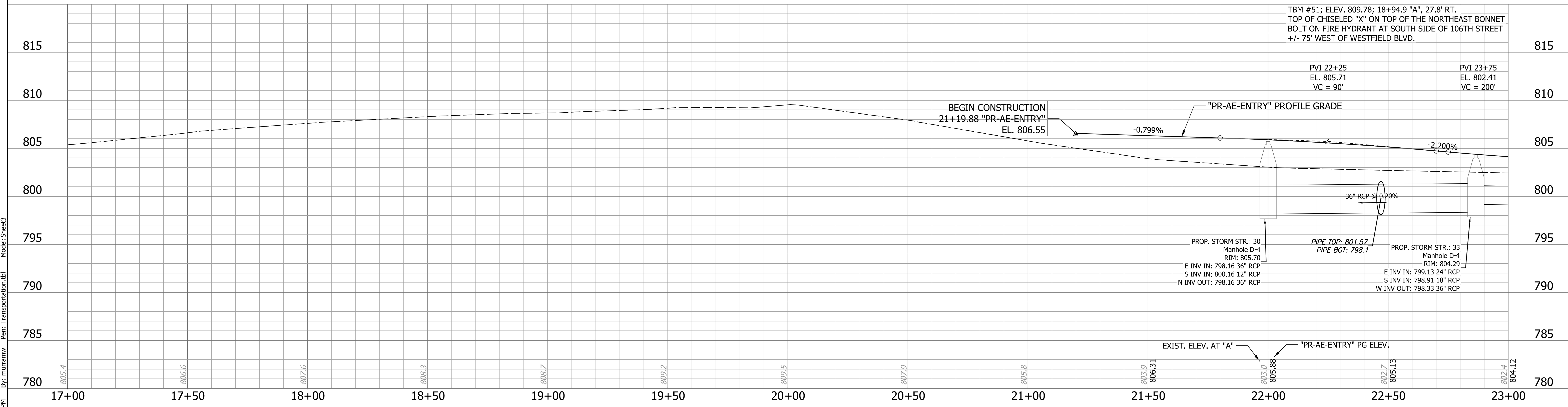
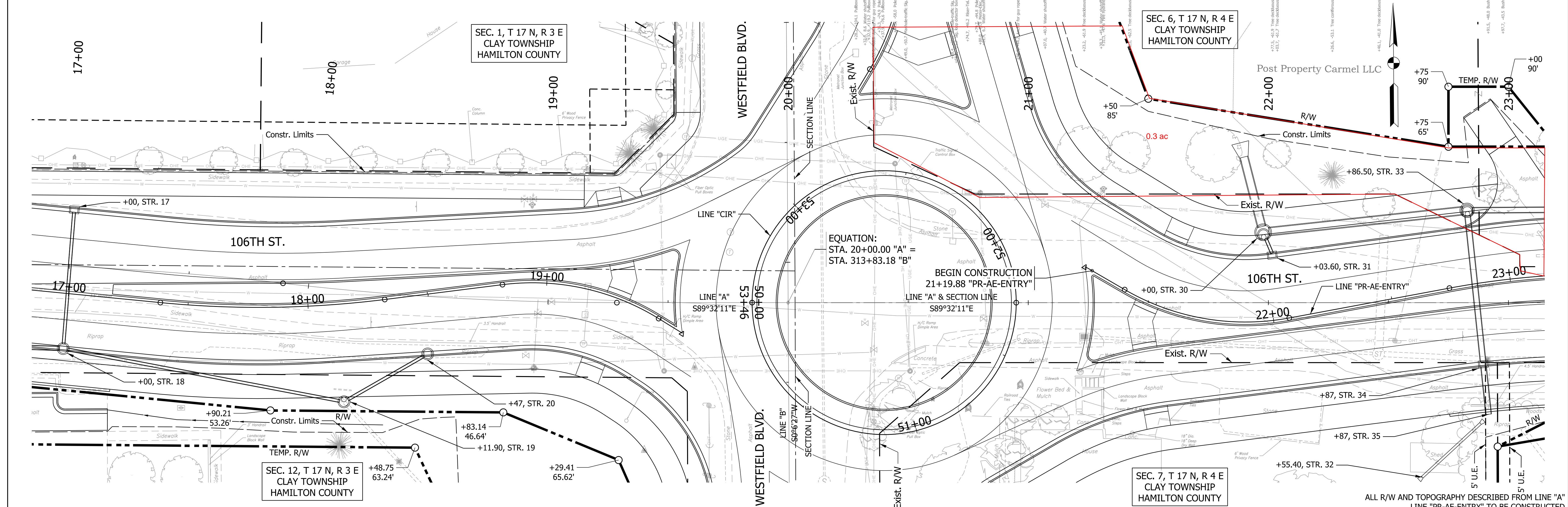


RECOMMENDED FOR APPROVAL _____
DESIGNED: _____ DRAWN: _____
CHECKED: _____ CHECKED: _____

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
LINES "A" & "PR-AW-ENTRY"

HORIZONTAL SCALE 1" = 20'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1901895
SURVEY BOOK	SHEETS 14 of 84
CONTRACT	PROJECT



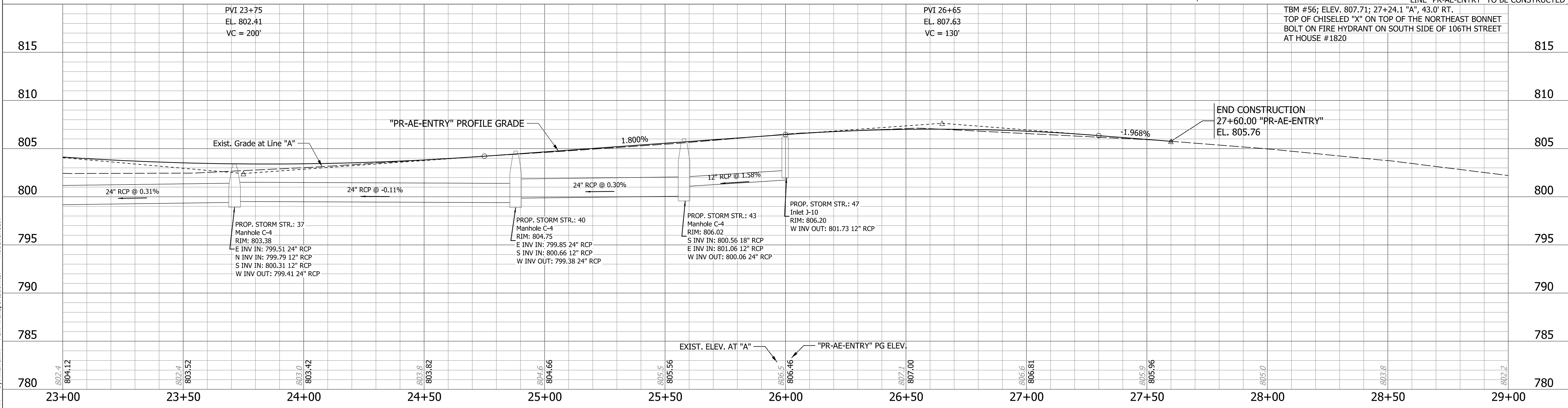
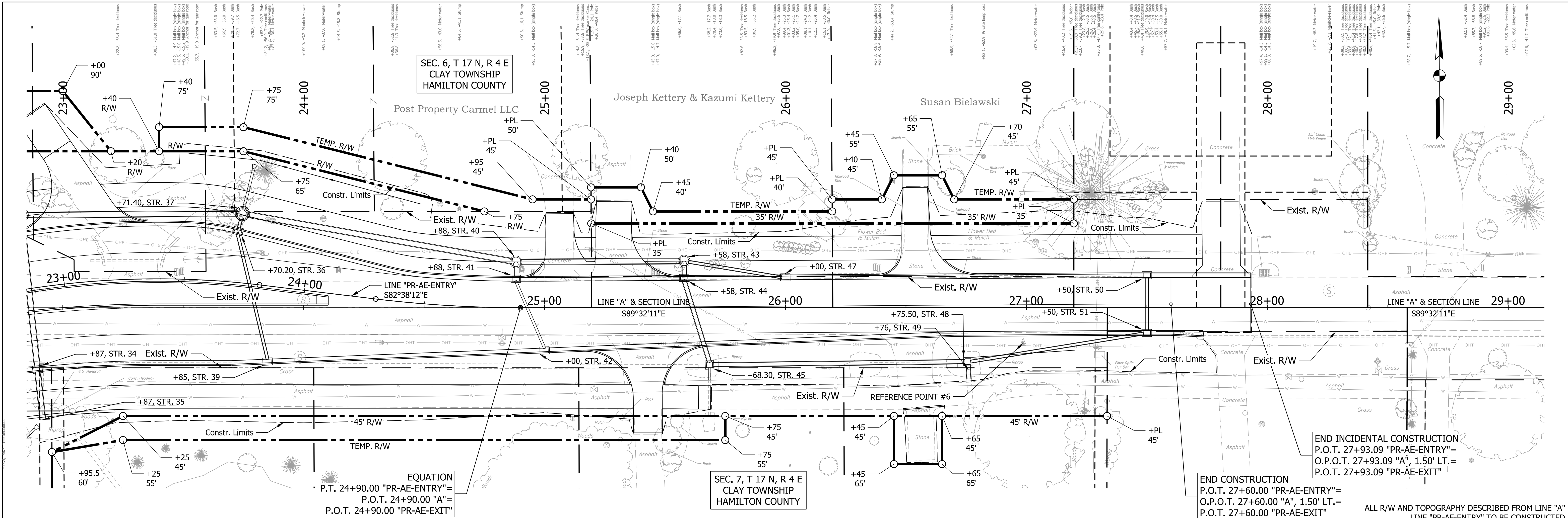
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Date: 9/16/2022

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

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
LINES "A" & "PR-AE-ENTRY"

HORIZONTAL SCALE 1" = 20'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1901895
SURVEY BOOK	SHEETS 15 of 84
CONTRACT	PROJECT



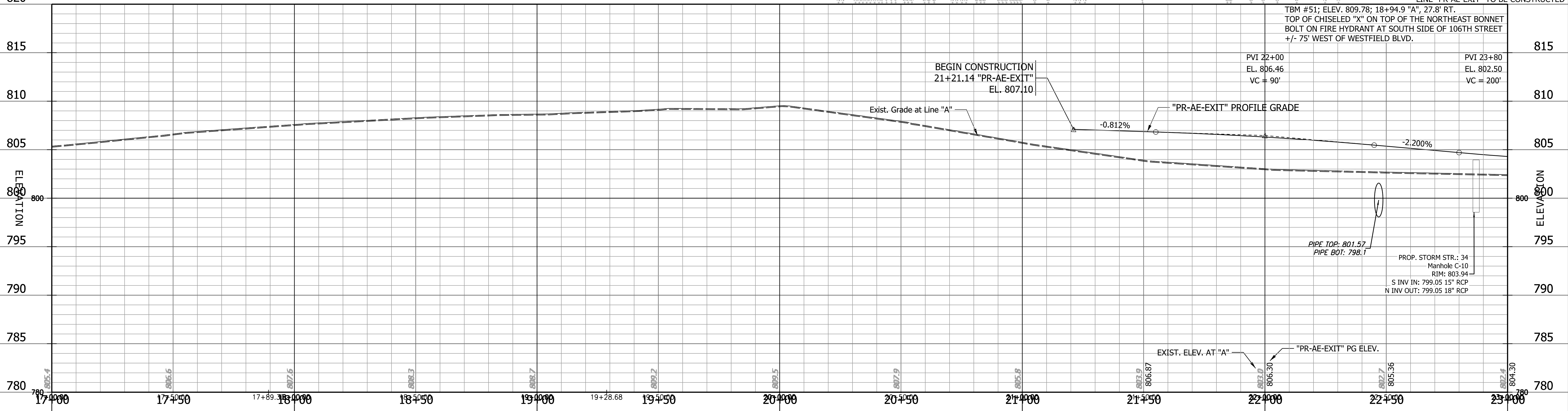
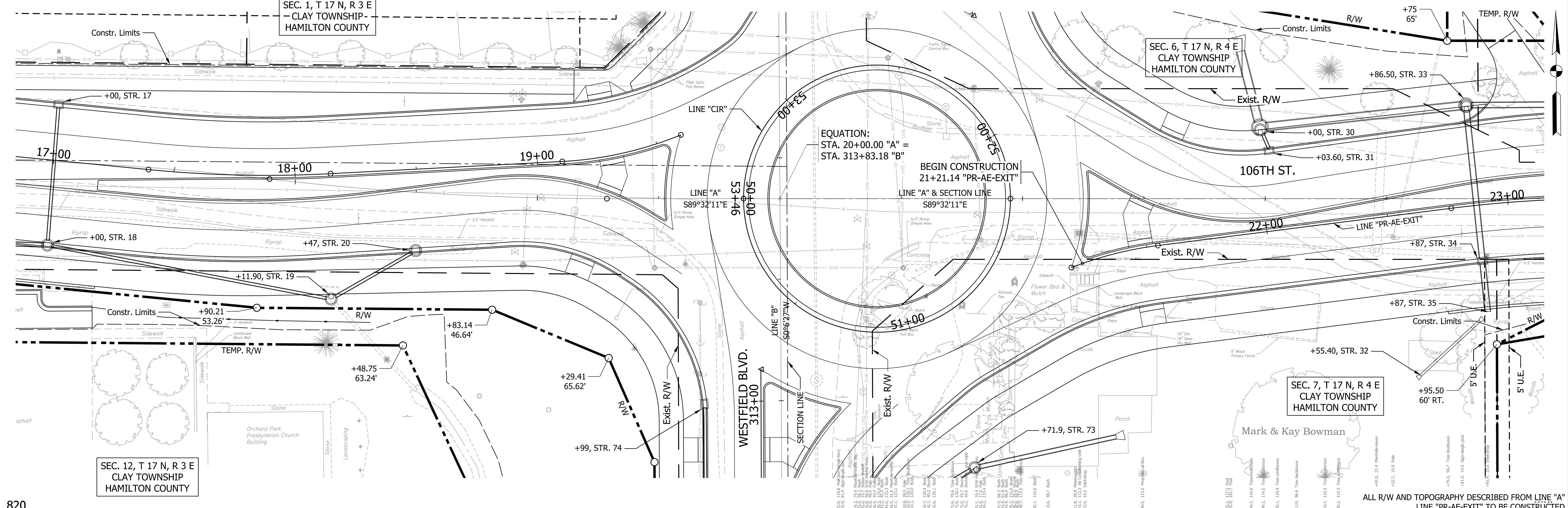
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	DESIGNED: _____ DRAWN: _____ CHECKED: _____ CHECKED: _____	PLAN AND PROFILE LINES "A" & "PR-AE-ENTRY"	BRIDGE FILE _____ DESIGNATION 1901895 SHEETS 16 of 84 PROJECT _____

SEC. 1, T 17 N, R 3 E
-CLAY TOWNSHIP-
HAMILTON COUNTY

SEC. 6, T 17 N, R 4 E
CLAY TOWNSHIP
HAMILTON COUNTY

SEC. 7, T 17 N, R 4 E
CLAY TOWNSHIP
HAMILTON COUNTY

SEC. 12, T 17 N, R 3 E
CLAY TOWNSHIP
HAMILTON COUNTY



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

INDIANA
DEPARTMENT OF TRANSPORTATION

 PLAN AND PROFILE
LINES "A" & "PR-AE-EXIT"

HORIZONTAL SCALE 1" = 20'	BRIDGE FILE
VERTICAL SCALE 1" = 5'	DESIGNATION 1901895
SURVEY BOOK	SHEETS 17 of 84
CONTRACT	PROJECT