

Indiana Department of Transportation

County Putnam Route US 231 Des. No. 1700121 & 2001579

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

Road No./County:	United States Highway (US) 231 (also locally known as Jackson Street, Washington Street, and Bloomington Street) / Putnam County
Designation Number:	1700121 (roadway work) and 2001579 (water line relocation)
Project Description/Termini:	Road Rehabilitation Project / Along US 231, beginning approximately 0.03 mile south of the US 231/State Road (SR) 240 Intersection and extending north to approximately 0.01 mile north of the US 231/Frazier Street Intersection, for a total length of approximately 1.57 miles.

After completing this form, I conclude that this project qualifies for the following type of Categorical Exclusion (FHWA must review/approve if Level 4 CE):

<input type="checkbox"/>	Categorical Exclusion, Level 2 – The proposed action meets the criteria for Categorical Exclusion Manual Level 2 - table 1, CE Level Thresholds. Required Signatories: ESM (Environmental Scoping Manager)
<input type="checkbox"/>	Categorical Exclusion, Level 3 – The proposed action meets the criteria for Categorical Exclusion Manual Level 3 - table 1, CE Level Thresholds. Required Signatories: ESM, ES (Environmental Services Division)
<input checked="" type="checkbox"/>	Categorical Exclusion, Level 4 – The proposed action meets the criteria for Categorical Exclusion Manual Level 4 - table 1, CE Level Thresholds. Required Signatories: ESM, ES, FHWA
<input type="checkbox"/>	Environmental Assessment (EA) – EAs require a separate FONSI. Additional research and documentation is necessary to determine the effects on the environment. Required Signatories: ES, FHWA

Note: For documents prepared by or for Environmental Services Division, it is not necessary for the ESM of the district in which the project is located to release for public involvement or sign for approval.

Approval

_____	_____	_____	_____
ESM Signature	Date	ES Signature	Date
_____	_____	_____	_____
FHWA Signature	Date		

Release for Public Involvement

<u>N/A</u>	_____	<u>REB</u>	<u>4-5-2021</u>
ESM Initials	Date	ES Initials	Date

Certification of Public Involvement

_____ Date _____
Office of Public Involvement

Note: Do not approve until after Section 106 public involvement and all other environmental requirements have been satisfied.

INDOT ESD/District
Env. Reviewer Signature: _____ Date: _____

Name and Organization of CE/EA Preparer: Jaime Byerly / RQAW Corporation

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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*? 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.

Remarks: Notice of Entry for Survey or Investigation Letters
Public Information Meeting
Section 106

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Section 4(f)

The project will result in a *de minimis* finding for Robe Ann Park. A legal notice offering the public an opportunity to submit comments on the *de minimis* finding was advertised in the *Banner Graphic* on September 25, 2020. The public was given 30 days to submit comments. No comments were received. See the legal notice and legal notice affidavit in Appendix F, page F-5.

Opportunity for a Public Hearing

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 comment 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

Will the project involve substantial controversy concerning community and/or natural resource impacts? Yes No

Remarks:

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

Sponsor of the Project: INDOT INDOT District: Crawfordsville
Local Name of the Facility: US 231 (also known locally as Jackson Street, Washington Street, and Bloomington Street)

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

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

PURPOSE AND NEED:

Describe the transportation problem that the project will address. The solution to the traffic problem should NOT be discussed in this section. (Refer to the CE Manual, Section IV.B.2. Purpose and Need)

Need

The need for the project is due to the condition rating of the existing pavement and poor storm water drainage along US 231 between SR 240 north to Frazier Street. Overall, the condition rating of US 231 is "poor." From the beginning of the project north to Washington Street, there is fatigue cracking in the wheel path and near the curb line, and reflective cracking from the underlying concrete and age hardening of the asphalt surface material. From Washington Street north to the at-grade railroad crossing, there is severe pavement distress due to an old deteriorating water line utility. Furthermore, the existing storm water drainage system gets overwhelmed during heavy rain events, resulting in poor drainage with ponding. The pavement has been patched on a regular basis due to utility line failures. Recent maintenance paving activities have improved the pavement, but fatigue cracking and pumping of the subgrade material has been evident since maintenance work was completed in 2017 approximately. From the at-grade railroad crossing north to the end of the project, there is fatigue cracking in the wheel path. Some of the existing sidewalks and curb ramps within the project area are deteriorated and do not meet current American with Disabilities Act (ADA) criteria.

Purpose

The purpose of the project is to improve the pavement condition to "good" and improve roadway drainage conditions along US 231 between SR 240 north to Frazier Street. Another desirable outcome is to improve ADA facilities within the project area, as needed.

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US 231 Road Rehabilitation Date: April 5, 2021

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PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Putnam Municipality: City of Greencastle

Limits of Proposed Work: The project limits are along US 231 and begin approximately 0.03 mile south of the US 231/SR 240 Intersection and extend north to approximately 0.01 mile north of the US 231/Frazier Street Intersection, for a total length of approximately 1.57 miles.

Total Work Length: 1.57 Mile(s) Total Work Area: 10.5 Acre(s)

Is an Interchange Modification Study / Interchange Justification Study (IMS/IJS) required? Yes No
If yes, when did the FHWA grant a conditional approval for this project? Date: [checkmark]

1If an IMS or IJS is required; a copy of the approved CE/EA document must be submitted to the FHWA with a request for final approval of the IMS/IJS.

In the remarks box below, describe existing conditions, provide in detail the scope of work for the project, including the preferred alternative. Include a discussion of logical termini. Discuss any major issues for the project and how the project will improve safety or roadway deficiencies if these are issues.

Location

The Federal Highway Administration (FHWA) and the INDOT Crawfordsville District propose to proceed with a road rehabilitation project located on US 231, known locally as Jackson Street, Washington Street, and Bloomington Street through the City of Greencastle in Putnam County, Indiana. The project limits are along US 231 and begin approximately 0.03 mile south of the US 231/SR 240 Intersection and extend north to approximately 0.01 mile north of the US 231/Frazier Street Intersection, for a total length of approximately 1.57 miles. The project is within Greencastle Township, Sections 16, 21, and 28 of Township 14 North, and Range 4 West of the Greencastle U.S. Geological Survey (USGS) Quadrangle. The project area is in a developed area surrounded commercial, residential, recreational (Robe Ann Park), and educational (DePauw University) properties (Appendix B, pages B-1 to B-6).

Existing Conditions

US 231 is functionally classified as an Other Principal Arterial. Within the project area, US 231 consists of two 12-foot wide travel lanes (one northbound and one southbound) with 1 to 2-foot wide curb offsets, and 4.75-foot wide paved shoulders. Eleven-foot wide right and left turn lanes are present at intersecting roadways. On the north approach to Elizabeth Street, an existing 12-foot wide right turn lane with 1-foot wide paved shoulder is present. Sidewalks are present within the project area and vary in width from 4 to 10 feet. An at-grade railroad crossing is located within the northern project area. Existing drainage is primarily conveyed by curb and gutter sections that drain into an enclosed storm sewer system. An underground public water utility line is located below the roadway pavement from south of the at-grade railroad crossing through the downtown area. The existing right-of-way width along US 231 is approximately 30 feet from the roadway centerline (Appendix B, pages B-3 to B-6).

Preferred Alternative

The preferred alternative is divided into three sections: Section 1 extends from approximately 0.03 mile south of SR 240 north to the Washington Street/Bloomington Street Intersection, Section 2 extends from the Washington Street/Bloomington Street Intersection west and north to approximately 100 feet north of Shadowlawn Avenue, and Section 3 extends approximately 100 feet north of Shadowlawn Avenue to approximately 0.01 mile north of Frazier Street (Appendix B, pages B-15 to B-76).

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Section 1 involves minor structural overlay of the pavement. Associated work includes:

- Milling the existing pavement 2 inches and overlaying with 4 inches of pavement which will result in pavement that is 2 inches above the existing grade.
- Replacing the curb and gutters.
- Modifying curb ramps that do not meeting current ADA standards.
- Regrading driveway approaches.
- Replacing sidewalks that are currently adjacent to the back of the curb.
- Removing three trees within Robe Ann Park, and removing trees within the grass buffer (lawn between the back of the curb and sidewalk) along Bloomington Street that would not likely survive curb replacement.
- Avoiding drainage structures along Bloomington Street except to adjust casting elevations.
- Avoiding the stamped concrete at the US 231/Anderson Street Intersection. Full-depth pavement replacement will occur adjacent to this intersection to properly tie in pavement elevations.

Section 2 involves full depth replacement of the pavement. Associated work includes:

- Replacing the curbs and gutters at current locations.
- Replacing the storm sewer and installing new inlets.
- Modifying all curb ramps that do not meet current ADA standards.
- Replacing sidewalks that are currently adjacent to the back of curb.
- Replacing and moving the underground public water utility line to outside of the roadway and below the grass buffer (Des. Number 2001579). Due to constructability concerns, the water line may be relocated under the parking lane between Franklin Street and Indiana Street. Any sidewalk replacement will be minimized and in-kind.
- Replacing disturbed trees within the grass buffer and sidewalk tree grates with the same species and variety.

Section 2 also involves work around the courthouse square. Associated work includes:

- Removing the crosswalks in the center of the block (west and south of the Putnam County Courthouse).
- Maintaining the concrete wall along the inside edge of Jackson and Washington Streets, near the courthouse. Any work to the concrete wall will be minimized and replaced in-kind.
- Improving the midblock crosswalk on Washington Street to current ADA standards.
- Replacing the concrete sidewalks up to the commercial buildings along the west side of Jackson Street and the south side of Washington Street.
- Replacing the concrete pavers with matching or similar pavers in the same locations.
- Replacing the trees within the sidewalk tree gates with the same species and variety.

Section 3 involves pavement overlay. Associated work includes:

- Milling the existing pavement 1.5 inches and overlaying with 1.5 inches of pavement with some patching to occur.
- Maintain the existing roadway footprint and elevation grade. There are no curbs present within this section.

The maximum depth of excavation will be up to approximately 10 feet below ground surface (bgs). Approximately 0.15 acre of permanent right-of-way and 0.70 acre of temporary right-of-way will be required for the project. No residences or businesses will be relocated. The estimated project cost is \$6,357,520 (fiscal year [FY] 2022). Construction anticipated to begin in spring of 2022.

Through traffic will be maintained with a detour and local traffic will be maintained with phased construction. It is anticipated that one lane will be kept open for two-way traffic while the other lane is under construction. Southbound US 231 traffic that does not follow an official detour around the City will likely be encouraged to use an established truck route on South Jackson Street. The overlay construction in Section 3 will occur under flagging operations. Access to all

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properties will be maintained during construction (Appendix B, pages B-20 to B-48). Refer to the *Maintenance of Traffic (MOT) During Construction* section of this document for further details on the proposed MOT.

The preferred alternative satisfies the purpose and need of the project by improving the condition of the pavement and drainage issues. Furthermore, sidewalks within the project area will be improved to meet ADA standards, as needed.

Logical Termini and Independent Utility

The termini for the project are logical because the pavement located north and south of the project area do not exhibit the same pavement deficiencies. This project is an independent and complete project because it is not dependent on any other projects to meet its purpose and need.

OTHER ALTERNATIVES CONSIDERED:

Describe all discarded alternatives, including the Do-Nothing Alternative and an explanation of why each discarded alternative was not selected.

Do Nothing Alternative

This alternative would not involve any improvements to the existing roadway or drainage conditions. This alternative would not require additional permanent or temporary right-of-way, not involve any cost, and would not result in any impacts to the surrounding environment. The Do Nothing Alternative would not address the deteriorating condition of the existing pavement and poor drainage within the project area. As such, this alternative was dismissed from further consideration because it would not address the purpose and need of the project.

Hot Mix Asphalt (HMA) Overlay

This alternative would involve sealing the pavement from water infiltration only. This alternative would not address the pavement fatigue and deeper distresses in the asphalt or drainage issues along Washington and Jackson Streets. The anticipated design life will be less than the typical span of the preferred alternative. As such, this alternative was not selected because it would not address the purpose and need of the project.

No other alternatives were considered.

The Do Nothing 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)

✓

ROADWAY CHARACTER:

US 231 (The project will not involve any work to the intersecting roadways.)

Functional Classification:	<u>Other Principal Arterial</u>				
Current ADT:	<u>9,160 to 14,130</u>	<u>VPD (2017)</u>	Design Year ADT:	<u>9,820 to 19,920</u>	<u>VPD (2042)</u>
Design Hour Volume (DHV):	<u>9.66 to 12.38</u>	<u>Truck Percentage (%)</u>		<u>6.67 to 8.96</u>	
Designed Speed (mph):	<u>30 to 40</u>	<u>Legal Speed (mph):</u>		<u>30 to 40</u>	

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	Existing	Proposed
Number of Lanes:	2 to 4	2 to 4
Type of Lanes:	Two 12-foot wide travel lanes One 11-foot wide left turn lane (intersecting roadways) One 11-foot wide right turn lane (intersecting roadways) One 12-foot wide right turn lane (Elizabeth Street)	Two 12-foot wide travel lanes One 11-foot wide left turn lane (intersecting roadways) One 11-foot wide right turn lane (intersecting roadways) One 12-foot wide right turn lane (Elizabeth Street)
Pavement Width:	46	46
Shoulder Width:	4.75 (Elizabeth Street)	4.75 (Elizabeth Street)
Median Width:	0	0
Sidewalk Width:	4 to 10	4 to 10

Setting: Urban Suburban Rural
 Topography: Level Rolling Hilly

DESIGN CRITERIA FOR BRIDGES:

Structure/NBI Number(s): Not applicable (N/A) Sufficiency Rating: N/A
(Rating, Source of Information)

	Existing	Proposed
Bridge Type:	N/A	N/A
Number of Spans:	N/A	N/A
Weight Restrictions:	N/A	N/A
Height Restrictions:	N/A	N/A
Curb to Curb Width:	N/A	N/A
Outside to Outside Width:	N/A	N/A
Shoulder Width:	N/A	N/A
Length of Channel Work:	N/A	N/A

Describe bridges and structures; provide specific location information for small structures.

Remarks: Bridges are not located within the project area. Several small structures associated with curb inlets, gutters, sewer manholes, an enclosed sewer system, and underground public water utility line are within the project area. Drainage structures along Bloomington Street will not be impacted except to adjust casting elevations. Throughout the rest of the project area, the project will replace the curb and gutters at current locations, replace the storm sewer, install new inlets, and replace/relocate the underground public water line. The project will not impact any jurisdictional waterways (Appendix B, pages B-15 to B-76).

Will the structure be rehabilitated or replaced as part of the project? Yes No N/A
If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

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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 in remarks)	<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"/>

Remarks:

MOT
 Through traffic will be maintained with a detour and local traffic will be maintained with phased construction. It is anticipated that one lane will be kept open for two-way traffic while the other lane is under construction. Southbound traffic that does not follow an official detour around the City will likely be encouraged to use an established truck route on South Jackson Street. The overlay construction in Section 3 will occur under flagging operations (Appendix B, pages B-20 to B-48). Access to all properties will be maintained during construction.

RQAW will coordinate the construction schedule with the City of Greencastle and other stakeholders regarding any DePauw University events, delayed school start on Mondays, heavier vehicle traffic on Fridays due to the football season, first Friday of the month courthouse square events, and increased use of US 231 by farm equipment during harvest season. This will be reflected in the Unique Special Provisions for the contract.

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

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 165,933 (2018) Right-of-Way: \$ 450,000 (2020) Construction: \$ 5,741,587 (2022)

Anticipated Start Date of Construction: Spring of 2022

Date project incorporated into STIP July 2, 2019 in the fiscal year (FY) 2020 to 2024 INDOT Statewide Transportation Improvement Program (STIP) (Appendix G, page G-1).

Is the project in an MPO Area? Yes No
 If yes,

Name of MPO N/A

Location of Project in TIP N/A

Date of incorporation by reference into the STIP N/A

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RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.01	0.08
Commercial	0.14	0.40
Agricultural	0	0
Forest	0	0
Wetlands	0	0
Other: Recreational (Robe Ann Park)	0	0.17
Other: Government (Putnam County Court House)	0	0.05
TOTAL	0.15	0.70

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 or reacquisition, either known or suspected, and there impacts on the environmental analysis should be discussed.

Remarks:

Right-of-way

The current existing right-of-way along US 231 is approximately 30 feet from the roadway centerline; the proposed right-of-way along US 231 will still be approximately 30 feet from the roadway centerline.

The project will require approximately 0.15 acre of permanent right-of-way. Of the proposed permanent right-of-way, approximately 0.01 acre will be from residential land (consisting of maintained lawn and pavement) and 0.14 acre will be from commercial land (consisting of maintained lawn and pavement). The project will require approximately 0.70 acre of temporary right-of-way for grading and driveway reconstruction. Of the proposed temporary right-of-way, approximately 0.08 acre will be from residential land (consisting of maintained lawn and pavement), 0.40 acre will be from commercial land (consisting of maintained lawn and pavement), 0.17 acre will be from Robe Ann Park (consisting of maintained lawn and pavement), and 0.05 acre will be from the Putnam County Court House (consisting of maintained lawn and pavement).

Please note the early coordination letter stated that 0.20 acre of permanent and 1.6 acres of temporary right-of-way would be needed (Appendix C, pages C-1 to C-3). However, after the project design was refined, it was determined less permanent and temporary right-of-way were needed.

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

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

SECTION A – ECOLOGICAL RESOURCES

	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Streams, Rivers, Watercourses & Jurisdictional Ditches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Federal Wild and Scenic Rivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State Natural, Scenic or Recreational Rivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nationwide Rivers Inventory (NRI) listed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Outstanding Rivers List for Indiana
Navigable Waterways

Remarks:

Streams, Rivers, Watercourses and Jurisdictional Ditches
 Per a desktop review, field visits conducted on August 10, 2018, August 29, 2018, and April 22, 2019 by RQAW, aerial map of the project area (Appendix B, pages B-3 to B-6), USGS topographic map (Appendix B, page B-2), and the water resources map in the Red Flag Investigation (RFI) report (Appendix E, page E-15), there are 19 stream segments located within the 0.50 mile search radius. There are no stream segments located within or adjacent to the project area. Impacts are not expected.

Early Coordination
 Early coordination letters were sent to the Indiana Department of Natural Resources (IDNR) Division of Fish and Wildlife and the Indiana Department of Environmental Management (IDEM) on March 13, 2020. Because the project does not qualify for the Interim Policy, an early coordination letter was sent to the U.S. Fish and Wildlife Service (USFWS) on June 25, 2020 (Appendix C, pages C-1 to C-3). The automatic generated response letter from IDEM was received on March 13, 2020; however, the response did not contain project specific comments (Appendix C, pages C-4 to C-13). The IDNR Division of Fish and Wildlife responded to early coordination efforts on April 9, 2020 with recommendations to avoid or minimize impacts to streams (Appendix C, pages C-18 to C-20). However, these recommendations do not apply since streams are not located within or adjacent to the project area. The USFWS responded to early coordination efforts on July 21, 2020 with standard recommendations to avoid or minimize impacts to streams (Appendix C, pages C-27 and C-28). However, these recommendations do not apply since streams are not located within or adjacent to the project area.

All applicable agency recommendations are included in the *Environmental Commitments* section of this Categorical Exclusion (CE) document.

Other Surface Waters

- Reservoirs
- Lakes
- Farm Ponds
- Detention Basins
- Storm Water Management Facilities
- Other: _____

<u>Presence</u>	<u>Impacts</u>	
	<u>Yes</u>	<u>No</u>

Remarks:

Other Surface Waters
 Per a desktop review, field visits conducted on August 10, 2018, August 29, 2018, and April 22, 2019 by RQAW, aerial map of the project area (Appendix B, pages B-3 to B-6), USGS topographic map (Appendix B, page B-2), and the water resources map in the RFI report (Appendix E, page E-15), there are 13 lakes located within the 0.50 mile search radius (11 mapped and two unmapped). There are no other surface waters located within or adjacent to the project area. Impacts are not expected.

Early Coordination
 The automatic generated response letter from IDEM was received on March 13, 2020; however, the response did not contain project specific comments (Appendix C, pages C-4 to C-13). The IDNR Division of Fish and Wildlife responded to early coordination efforts on April 9, 2020 with recommendations to avoid or minimize impacts to stormwater, streams, and terrestrial habitat only. Recommendations regarding other surface waters were not provided (Appendix C, pages C-18 to C-20). The USFWS responded to early coordination efforts on July 21, 2020 with standard recommendation to avoid or minimize impacts to streams and

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terrestrial habitat only. Recommendations regarding other surface waters were not provided (Appendix C, pages C-27 and C-28).

All applicable agency recommendations are included in the *Environmental Commitments* section of this CE document.

Presence **Impacts**

Yes No

Wetlands

Total wetland area: N/A acre(s) Total wetland area impacted: N/A 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
N/A				

	<u>Documentation</u>	<u>ES Approval Dates</u>
Wetlands (Mark all that apply)		
Wetland Determination	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A
Wetland Delineation	<input type="checkbox"/>	<input type="checkbox"/>
USACE Isolated Waters Determination	<input type="checkbox"/>	<input type="checkbox"/>
Mitigation Plan	<input type="checkbox"/>	<input type="checkbox"/>

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.

Measures to avoid, minimize, and mitigate wetland impacts need to be discussed in the remarks box.

Remarks: **Wetlands**

Per review of the National Wetlands Inventory (NWI) online mapper (<https://www.fws.gov/wetlands/data/mapper.html>), accessed on November 30, 2020 by RQAW, field visits conducted on August 10, 2018, August 29, 2018, and April 22, 2019 by RQAW, USGS topographic map (Appendix B, page B-2), and the water resources map in the RFI report (Appendix E, page E-15), there are 10 NWI wetlands located within the 0.50 mile search radius. There are no wetlands located within or adjacent to the project area. Impacts are not expected.

Early Coordination

The automatic generated response letter from IDEM was received on March 13, 2020; however, the response did not contain project specific comments (Appendix C, pages C-4 to C-13). The IDNR Division of Fish and Wildlife responded to early coordination efforts on April 9, 2020 with recommendations to avoid or minimize impacts to stormwater, streams, and terrestrial habitat only. Recommendations regarding wetlands were not provided (Appendix C, pages C-18 to C-20). The USFWS responded to early coordination efforts on July 21, 2020 with standard recommendation to avoid or minimize impacts to streams and terrestrial habitat only. Recommendations regarding wetlands were not provided (Appendix C, pages C-27 and C-28).

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All applicable agency recommendations are included in the *Environmental Commitments* section of this CE document.

	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Terrestrial Habitat	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Unique or High Quality Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Use the remarks box to identify each type of habitat and the acres impacted (i.e. forested, grassland, farmland, lawn, etc).

Remarks: **Terrestrial Habitat**
 Per a desktop review, field visits conducted on August 10, 2018 and April 22, 2019 by RQAW, and aerial map of the project area (Appendix B, pages B-3 to B-6), terrestrial habitat is present within the project area and consists of maintained lawn and ornamental trees. Dominant vegetation included sugar maple (*Acer saccharum*), tulip tree (*Liriodendron tulipifera*), honey locust (*Gleditsia triacanthos*), Bradford pear (*Pyrus calleryana*), tall fescue (*Schedonorus arundinaceus*), white clover (*Trifolium repens*), Kentucky bluegrass (*Poa pratensis*), and great ragweed (*Ambrosia trifida*).

The project will permanently impact approximately 0.01 acre of residential land (consisting of maintained lawn and pavement) and 0.14 acre of commercial land (consisting of maintained lawn and pavement). Approximately 0.65 acre of trees within the construction limits will be cleared during the inactive bat season (October 1 through March 31). Because a Construction in a Floodway Permit will not be required, mitigation is not anticipated. Avoidance of the trees would not be practicable because the trees are in the way of construction activities required for the roadway and underground water line. If the trees are not removed, the project would not be able to be properly constructed.

Early Coordination
 The automatic generated response letter from IDEM was received on March 13, 2020; however, the response did not contain project specific comments (Appendix C, pages C-4 to C-13). The IDNR Division of Fish and Wildlife responded to early coordination efforts on April 9, 2020 with recommendations to avoid or minimize impacts to terrestrial habitat. Recommendations generally include revegetating disturbed areas and minimizing tree removal, especially trees in an urban environment, and brush clearing (Appendix C, pages C-18 to C-20). The USFWS responded to early coordination efforts on July 21, 2020 with standard recommendation to avoid or minimize impacts to terrestrial habitat. Recommendations generally include not clearing trees or understory outside construction limits (Appendix C, pages C-27 and C-28).

All applicable agency recommendations are included in the *Environmental Commitments* section of this CE document.

If there are high incidences of animal movements observed in the project area, or if bridges and other areas appear to be the sole corridor for animal movement, consideration of utilizing wildlife crossings should be taken.

	Yes	No
Karst		
Is the proposed project located within or adjacent to the potential Karst Area of Indiana?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are karst features located within or adjacent to the footprint of the proposed project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If yes, will the project impact any of these karst features?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Use the remarks box to identify any karst features within the project area. (Karst investigation must comply with the Karst MOU, dated October 13, 1993)

Remarks: **Karst**
 Per a desktop review, the project is located within the designated karst region of Indiana, as outlined in the October 13, 1993 Memorandum of Understanding (MOU). Per the USGS topographic map (Appendix B, page B-2) and the water resources map in the RFI report (Appendix E, page E-15), there is one mapped karst feature (cave entrance) adjacent to the project area.

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In their early coordination response, dated March 16, 2020, the Indiana Geological Survey (IGS) indicated there is a potential for karst features within the project area. The IGS also stated the project area is located within an area with high liquefaction potential, floodway, high bedrock resource potential, low sand and gravel resource potential, and petroleum exploration wells (Appendix C, pages C-14 to C-16). This information was communicated with the project designer on October 28, 2020.

Because karst features were not observed during the field visits and because of the limited scope of work, impacts to karst features are not expected. In an e-mail dated September 26, 2020, the INDOT Ecology and Waterway Permitting concurred that the project is not likely to impact karst features (Appendix H, pages H-23 and H-24). A karst study is not required.

	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Threatened or Endangered Species			
Within the known range of any federal species	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Any critical habitat identified within project area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Federal species found in project area (based upon informal consultation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State species found in project area (based upon consultation with IDNR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is Section 7 formal consultation required for this action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Remarks: Per a desktop review and the RFI report concurred by INDOT Site Assessment & Management on August 30, 2019 (Appendix E, pages E-1 to E-20), the IDNR Endangered, Threatened and Rare (ETR) Species List has been checked (Appendix E, pages E-19 and E-20). The highlighted species on the list reflect the federal and state identified ETR species located within Putnam County. Per the IDNR Division of Fish and Wildlife early coordination response letter dated April 9, 2020, the Natural Heritage Program's database has been checked, and Robe Ann Park, a Land and Water Conservation Fund site, is within 0.50 mile of the project area (Appendix C, pages C-18 to C-20). Refer to *Section D—Section 4(f) Resources/Section 6(f) Resources* of this CE document for details concerning Robe Ann Park.

Indiana Bat and Northern Long-eared Bat

Project information was submitted through the USFWS Information for Planning and Consultation (IPaC) portal (<https://ecos.fws.gov/ipac/>) on November 23, 2020 by RQAW and an official species list was generated. The project area is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (*Myotis septentrionalis*). No additional species were found within or adjacent to the project area other than the Indiana bat and northern long-eared bat (Appendix C, pages C-29 to C-34).

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and the USFWS. An effect determination key was completed on June 30, 2020 by RQAW and based on the responses provided, the project was found to *May Affect, Not Likely to Adversely Affect* the Indiana bat and northern long-eared bat (Appendix C, pages C-36 to C-48). INDOT Greenfield District reviewed and verified the effect finding and requested USFWS review of the finding on June 30, 2020 (Appendix C, page C-35). No response was received from the USFWS within the 14-day review period; therefore, it was concluded the USFWS concurs with the finding. AMMs are included as firm commitments in the *Environmental Commitments* section of this document.

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The project is located inside the designated karst region of Indiana. Karst areas may include additional habitat for bats; as such, an Avoidance and Minimization Measure (AMM) is included as a firm commitment in the *Environmental Commitments* section of this document. Hibernacula AMM 1: For projects located within karst areas, on-site personnel will use best management practices, secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula. Where practicable, a 300-foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography.

Because tree clearing will exceed 0.50 acre, the project does not qualify for the *USFWS Interim Policy for the Review of Highway Transportation Projects in Indiana dated May 29, 2013*. An early coordination letter was sent to the USFWS on June 25, 2020 (Appendix C, pages C-1 to C-3). The USFWS responded to early coordination efforts on July 21, 2020 and stated the USFWS does not have any other comments on the project as currently proposed. The e-mail also listed several standard recommendations (Appendix C, pages C-27 and C-28).

This precludes the need for further consultation on the project under Section 7 of the Endangered Species Act of 1973, as amended. If new information on endangered species at the site becomes available, or if project plans are changed, the USFWS will be contacted for consultation.

SECTION B – OTHER RESOURCES

Drinking Water Resources

- Wellhead Protection Area
- Public Water System(s)
- Residential Well(s)
- Source Water Protection Area(s)
- Sole Source Aquifer (SSA)

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

If a SSA is present, answer the following:

- Is the Project in the St. Joseph Aquifer System?
- Is the FHWA/EPA SSA MOU Applicable?
- Initial Groundwater Assessment Required?
- Detailed Groundwater Assessment Required?

	<u>Yes</u>	<u>No</u>
Is the Project in the St. Joseph Aquifer System?	<input type="checkbox"/>	<input type="checkbox"/>
Is the FHWA/EPA SSA MOU Applicable?	<input type="checkbox"/>	<input type="checkbox"/>
Initial Groundwater Assessment Required?	<input type="checkbox"/>	<input type="checkbox"/>
Detailed Groundwater Assessment Required?	<input type="checkbox"/>	<input type="checkbox"/>

Remarks:

Sole Source Aquifer
 The project is located within Putnam County which is not located within the Saint Joseph Sole Source Aquifer, the only legally designated sole source aquifer in Indiana. Therefore, the FHWA/Environmental Protection Agency (EPA) Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project. A detailed groundwater assessment is not needed. Impacts are not expected.

Wellhead Protection Area and Source Water Area
 Per review of the IDEM Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>), accessed on November 30, 2020 by RQAW, the project is not located within a Wellhead Protection Area or Source Water Area. Impacts are not expected.

Water Wells
 Per review of the IDNR Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>), accessed on November 30, 2020 by RQAW, the nearest water well (unspecified) is mapped adjacent to the

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project area and has a static water level of 40 feet. The maximum depth of excavation will be up to approximately 10 feet bgs. Per the designer, residential water wells are not within the project area. Impacts are not expected. If it is determined during the right-of-way phase that water wells are affected, a cost to cure will likely be included in the appraisal to restore the wells.

Urban Area Boundary
Per review of the INDOT Municipal Separate Storm Sewer System (MS4) website (<https://entapps.indot.in.gov/MS4/>), accessed on November 30, 2020 by RQAW, and the urbanized area boundary map in the RFI report (Appendix E, page E-16), the project area is within an Urbanized Area Boundary (UAB) location. An early coordination letter was sent to the City of Greencastle MS4 Coordinator on March 13, 2020 (Appendix C, pages C-1 to C-3). The MS4 Coordinator did not respond to the early coordination letter. Impacts are not expected.

Public Water Systems
Per coordination with the designer, an underground public water utility line is located below the roadway pavement from south of the at-grade railroad crossing through the downtown area. Per the designer, the public water utility line will be temporarily impacted due to its replacement and relocation. An early coordination letter was sent to the City of Greencastle Department of Public Works (DPW) on March 13, 2020 (Appendix C, pages C-1 to C-3). The City of Greencastle DPW did not respond to the early coordination letter.

	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Flood Plains			
Longitudinal Encroachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transverse Encroachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project located within a regulated floodplain	<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"/>

Discuss impacts according to classification system described in the "Procedural Manual for Preparing Environmental Studies".

Remarks: **Floodplains**
Per review of the IDNR Indiana Floodway Information Portal website (<https://dnrmmaps.dnr.in.gov/appsphp/fdms/>), accessed on November 30, 2020 by RQAW, and the water resources map in the RFI report (Appendix E, page E-15), the project area is not located within a regulatory floodplain as determined by approved IDNR floodplain maps. Therefore, the project does not fall within the guidelines for the implementation of 23 CFR 650, 23 CFR 771, and 44 CFR. Impacts are not expected.

	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Farmland			
Agricultural Lands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prime Farmland (per NRCS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Points (from Section VII of CPA-106/AD-1006* <u>N/A</u>)			
<i>*If 160 or greater, see CE Manual for guidance.</i>			

See CE Manual for guidance to determine which NRCS form is appropriate for your project.

Remarks: **Farmland**
Early coordination was sent to the Natural Resources Conservation Service (NRCS) on March 13, 2020 (Appendix C, pages C-1 to C-3). Per a desktop review, field visits conducted on August 10, 2018 and April 22, 2019 by RQAW, an aerial map of the project area (Appendix B, pages B-3 to B-6), and coordination with the NRCS (Appendix C, page C-26), there is no land that meets the definition of farmland under the Farmland Protection Policy Act (FPPA) within or adjacent to the project area. The requirements of the FPPA do not apply. Impacts are not expected.

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SECTION C – CULTURAL RESOURCES

	Category	Type	INDOT Approval Dates	N/A
Minor Projects PA Clearance				<input checked="" type="checkbox"/>

Eligible and/or Listed Resource Present

Results of Research

Archaeology	
NRHP Buildings/Site(s)	<input checked="" type="checkbox"/>
NRHP District(s)	<input checked="" type="checkbox"/>
NRHP Bridge(s)	

Project Effect

No Historic Properties Affected No Adverse Effect Adverse Effect

Documentation Prepared

Documentation (mark all that apply)

		ES/FHWA Approval Date(s)	SHPO Approval Date(s)
Historic Properties Short Report			
Historic Property Report	<input checked="" type="checkbox"/>	July 11, 2019	August 14, 2019
Archaeological Records Check/ Review	<input checked="" type="checkbox"/>	July 11, 2019	August 14, 2019
Archaeological Phase Ia Survey Report	<input checked="" type="checkbox"/>	July 11, 2019	August 14, 2019
Archaeological Phase Ic Survey Report			
Archaeological Phase II Investigation Report			
Archaeological Phase III Data Recovery			
APE, Eligibility and Effect Determination	<input checked="" type="checkbox"/>	October 23, 2020	November 20, 2020
800.11 Documentation	<input checked="" type="checkbox"/>	October 23, 2020	November 20, 2020

MOA Signature Dates (List all signatories)

Memorandum of Agreement (MOA)

Describe all efforts to document cultural resources, including a detailed summary of the Section 106 process, using the categories outlined in the remarks box. The completion of the Section 106 process requires that a Legal Notice be published in local newspapers. Please indicate the publication date, name of paper(s) and the comment period deadline. Likewise include any further Section 106 work which must be completed at a later date, such as mitigation or deep trenching.

Remarks:

Area of Potential Effect (APE)

The APE is the area in which the proposed project may cause alterations in the character or use of historic resources. The APE for this project is an irregular polygon. Most of the APE extends one property from the project area (approximately 110 feet from either side of the roadway). The APE is wider (approximately 180 feet from the roadway) where additional project impacts may occur and where views to the project are increased by open viewsheds (Appendix D, pages D-22 and D-23).

Coordination with Consulting Parties

Early coordination was initiated with potential consulting parties on March 4, 2019, by RQAW. The early coordination letter was either mailed or e-mailed and invited agencies or individuals to be consulting parties (Appendix D, pages D-29 to D-33). Early coordination was initiated with tribal contacts by the INDOT Cultural Resources Office (CRO) on March 4, 2019 (Appendix D, pages D-34 and D-35). The following is a list of organizations and individuals that were sent early coordination letters. Those who indicated they wished to be consulting parties are in bold. [Note: The Indiana State Historic Preservation Officer (SHPO) is an automatic

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consulting party. The FHWA is the federal agency undertaking the project with INDOT acting on behalf of the FHWA]. See the list of consulting parties in Appendix D, pages D-26 and D-27, and consulting parties' correspondence in Appendix D, pages D-36 to D-42.

Section 106 Consulting Parties	Date of Response(s)
1. Indiana Landmarks Western Regional Office	April 30, 2020
2. Putnam County Museum Executive Director	August 9, 2019 (verbal acceptance)
3. Heritage Preservation Society of Putnam County	March 11, 2019 and March 12, 2019
4. Putnam County Historian	No response received
5. Putnam County Historical Society	No response received
6. Putnam County Auditor	No response received
7. Putnam County Board of Commissioner Members	No responses received
8. Putnam County Highway Supervisor	No response received
9. Greencastle Mayor	March 4, 2019
10. Main Street Greencastle, Inc.	March 8, 2019
11. Greencastle Superintendent, Department of Public Works	No response received
12. Greencastle City Council Members	No responses received
13. West Central Indiana Economic Development District, Inc.	No response received
14. Eastern Shawnee Tribe of Oklahoma	No response received
15. Forest County Potawatomi Community	May 22, 2020 and June 19, 2020
16. Miami Tribe of Oklahoma	March 19, 2019
17. Peoria Tribe of Indians of Oklahoma	No response received
18. Pokagon Band of Potawatomi Indians	No response received
19. Greencastle School Corporation (sent on July 16, 2019)	No response received
20. DePauw University (sent on July 16, 2019)	No response received
21. *Greencastle Parks and Recreation Department (owner of Robe Ann Park) (sent on July 16, 2019)	No response received

*Per INDOT's Section 106 guidance, it is suggested that owners of recommended historic resources be invited to become consulting parties. As such, the owner of Robe Ann Park (Greencastle Parks and Recreation Department) was e-mailed the early coordination letter and HPR on July 16, 2019.

In an e-mail dated March 4, 2019, the Mayor of Greencastle agreed to be a consulting party. The mayor noted the two National Register of Historic Places (NRHP) districts within the project area are the Eastern Enlargement Historic District and the Courthouse Square Historic District. The mayor stated a resurfacing project should not have an adverse impact on any historic resources since this roadway has been resurfaced several times. The mayor also noted the new sidewalks installed between Bloomington Street and Vine Street were part of a Stellar Communities project (Appendix D, page D-36).

In a letter dated March 19, 2019, the Miami Tribe of Oklahoma agreed to be a consulting party and offered no objection to the project at that time (Appendix D, page D-40). Additional consulting party responses were received but did not provide content regarding historic properties (Appendix D, pages D-37 to D-39).

In a letter dated April 4, 2019, the Indiana SHPO recommended inviting the Greencastle Community School Corporation and DePauw University to be consulting parties due to the potential for disruption of traffic to and from their facilities (Appendix D, pages D-41 and D-42). The Greencastle Community School Corporation and DePauw University were e-mailed the early coordination letter and Historic Property Report (HPR) on July 16, 2019. The Indiana SHPO also indicated it would be advisable to consider whether the APE boundaries should be adjusted based on whether the official detour or unofficial detours could result in increased traffic

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in areas where there might be historic buildings or districts. Refer to additional correspondence regarding the APE below and in the *Historic Properties* discussion.

Consulting party meeting invitation letters and e-mails were sent to consulting parties on April 23, 2020 (Appendix D, pages D-52 to D-64). Prior to the consulting party meeting, an e-mail invitation, dated May 4, 2020, was sent to consulting parties notifying them the meeting will be held virtually through an online meeting platform due to COVID-19 health concerns (Appendix D, pages D-66 and D-67). On May 8, 2020, the agenda and preliminary design plans were electronically provided to consulting parties (Appendix D, pages D-68 and D-69).

The consulting party meeting was held virtually on May 11, 2020 via an online meeting platform. The meeting began at 1:30 pm and ended at 3:30 pm. The meeting discussed the purpose and need, existing conditions, preliminary alternative, maintenance of traffic, previous Section 106 process, historic resources within the APE, and potential effects to the historic properties. The consulting party meeting minutes were provided to the consulting parties for review and comment on May 20, 2020. Generally, attendees concurred with the preliminary finding of *No Adverse Effect* for Robe Ann Park, Eastern Enlargement Historic District, and the Courthouse Square Historic District (Appendix D, pages D-70 to D-83).

Archaeology

An Indiana Archaeological Short Report was completed by a qualified professional from Cultural Resource Analysis (Curran, 2019) (Appendix D, pages D-97 to D-99). The reconnaissance identified no archaeological resources within the project area, and it was recommended the project be allowed to proceed. The archaeological report was sent to the Indiana SHPO on July 16, 2019. In a letter dated August 14, 2019, the Indiana SHPO concurred with the findings of the archaeological report (Appendix D, pages D-49 to D-51).

Historic Properties

The APE was investigated for the existence of any historic properties and/or structures by a qualified professional from RQAW on April 19, 2019. Per the field visit and associated documentary research, the historian identified three properties as listed in, or eligible for, the NRHP:

- **Robe Ann Park (IHSSI Number 133-250-69053):** The property is eligible for listing in the NRHP under Criterion A because it is associated with community and recreational development in Greencastle. The park is located south of the Eastern Enlargement Historic District and east of Bloomington Street (Appendix B, page B-3).
- **Courthouse Square Historic District (NR-0656):** The historic district was listed in the NRHP in 1984 under Criteria A and C in the areas of community planning and development and architecture. The historic district is located around the Putnam County Courthouse roughly bounded by Franklin Street to the north, College Avenue to the east, Walnut Street to the south, and Market Street to the west (Appendix B, page B-3).
- **Eastern Enlargement Historic District (NR-2230):** The historic district was listed in the NRHP in 2011 under Criteria A and C in the areas of community planning and development and architecture. The historic district is roughly bounded by Franklin Street to the north, Wood Street to the east, rear parcel lines of properties on the south side of Anderson Street to the south, and College Street to the west (Appendix B, page B-3).

The HPR was completed by a qualified professional from RQAW (Boot, 2020) (Appendix D, pages D-95 and D-96). The HPR was sent to consulting parties, including the Indiana SHPO, on July 16, 2019 (Appendix D, pages D-43 to D-47). The HPR was sent to tribal contacts by the INDOT CRO on July 16, 2019 (Appendix D, page D-48). A weblink to the HPR was also provided.

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In a letter dated August 14, 2019, the Indiana SHPO concurred with the recommendations of the HPR. The Indiana SHPO staff also concurred with the APE described in the HPR but continued suggesting establishing an APE for detoured traffic (Appendix D, pages D-49 to D-51). In response, the maintenance of traffic was subsequently discussed during the Section 106 process, particularly during the consulting party meeting that took place on May 11, 2020. Refer to *Section 6. Summary of Consulting Parties and Public Views* of the 800.11 documentation for more information regarding the consulting party meeting (Appendix D, pages D-16 to D-20).

The Indiana SHPO letter also requested additional information to assess the project's effects. As such, a consulting party letter was completed by a qualified professional from RQAW. The consulting party letter was sent to consulting parties, including the Indiana SHPO on April 23, 2020 (Appendix D, pages D-52 to D-64). The letter noted an increase to the northern project limits, minor changes in the scope of work, and the identification of a stone drainage structure with the APE. In addition, the consulting parties (including representatives from FHWA and INDOT) were invited to attend a consulting party meeting on May 11, 2020.

In an e-mail dated May 20, 2020, additional information regarding the stone drainage structure within the Eastern Enlargement Historic District and consulting parties meeting minutes were sent to consulting parties (Appendix D, pages D-70 to D-83). In a letter dated May 26, 2020, the Indiana SHPO commented on several items (Appendix D, pages D-86 to D-91). The Indiana SHPO clarified INDOT's request for Dual Review which extended the comment period for the previous subject matter until June 25, 2020. The Indiana SHPO commented on the consulting party meeting minutes and concurred with the revised APE and that no further archaeological investigations are necessary. The Indiana SHPO commented on Robe Ann Park, including removal of three trees within the park would not likely adversely affect the historic park. The Indiana SHPO commented on the Eastern Enlargement Historic District, including removal of trees along Bloomington Street or replacement of concrete steps in the southeast quadrant of the Bloomington Street/Washington Street would not likely adversely affect the district. The Indiana SHPO commented on the stone drainage structure within the Eastern Enlargement Historic District and recommended documentation of the structure if it becomes visible during excavation. As such, INDOT will implement a Unique Special Provision in the bid documentation to cover the historic documentation by a qualified historian. The documentation will include photographing as much of the exterior and/or interior of the drainage structure, sketching the location of the drainage structure on a plan, and measuring/sketching the cross section of the exterior and/or interior of the drainage structure. Three copies of each of these items (photographs, location plan, cross section sketch, and dimensions) will be recorded on archival gold CDs or DVDs. The archival gold CDs or DVDs will be presented to the Indiana SHPO, the Indiana State Archives, and one or more Putnam County public or not-for-profit entities that are willing to retain the CD or DVD indefinitely for the benefit of researchers. Please see the response letter from the Indiana SHPO, dated May 26, 2020, specifying the documentation requirements (Appendix D, pages D-86 to D-91). The Indiana SHPO commented on the Courthouse Square Historic District, including sidewalk replacement and possible removal of overhead signage and of mid-block pedestrian crosswalks leading to the courthouse would not likely adversely affect the historic district.

In an e-mail dated June 19, 2020, the Forest County Potawatomi Community offered a finding of no historic properties affected (Appendix D, pages D-92 and D-93).

Documentation, Findings

The 800.11 documentation for the *No Adverse Effect* Section 106 finding was signed by INDOT CRO, on behalf of FHWA, on October 23, 2020 (Appendix D, pages D-1 to D-4). The 800.11 documentation was sent to consulting parties, including the Indiana SHPO, on October 26, 2020. In a letter dated November 20, 2020,

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the Indiana SHPO concurred with the *No Adverse Effect* Section 106 finding (Appendix D, pages D-102 to D-104).

In the letter dated November 20, 2020, the Indiana SHPO also indicated a Certificate of Approval will not be necessary and issued a Director's Letter of Clearance per state code. However, the Director's Letter of Clearance is not affirmed until after 15 days after the issuance of the determination (November 20, 2020) and no interested person requests a Certificate of Approval from the Review Board. No interested person requested a Certificate of Approval.

Public Involvement

To meet the public involvement requirements of Section 106, a legal notice of the FHWA's finding of *No Adverse Effect* was published in the *Banner Graphic* on October 30, 2020. The legal notice offered 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 November 30, 2020. Refer to the public notice and the affidavit of publication in Appendix D, page D-101. No public comments were received. The Section 106 process has been completed and the responsibilities of the FHWA under Section 106 have been fulfilled.

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

Section 4(f) Involvement (mark all that apply)

Parks & Other Recreational Land

- Publicly owned park
- Publicly owned recreation area
- Other (school, state/national forest, bikeway, etc.)

Presence

✓

Use

Yes	No
	✓

Evaluations Prepared

- Programmatic Section 4(f)*
- "De minimis" Impact*
- Individual Section 4(f)

✓

FHWA Approval date

--

Wildlife & Waterfowl Refuges

- National Wildlife Refuge
- National Natural Landmark
- State Wildlife Area
- State Nature Preserve

Presence

Use

Yes	No

Evaluations Prepared

- Programmatic Section 4(f)*
- "De minimis" Impact*
- Individual Section 4(f)

FHWA Approval date

--

Historic Properties

- Sites eligible and/or listed on the NRHP

Presence

✓

Use

Yes	No
✓	

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**Evaluations
Prepared**

Programmatic Section 4(f)*
"De minimis" Impact*
Individual Section 4(f)

✓

**FHWA
Approval date**

**FHWA approval of the environmental document also serves as approval of any Section 4f Programmatic and/or De minimis evaluation(s) discussed below.*

Discuss Programmatic Section 4(f) and "de minimis" Section 4(f) impacts in the remarks box below. Individual Section 4(f) documentation must be separate Draft and Final documents. For further discussions on Programmatic, "de minimis" and Individual Section 4(f) evaluations please refer to the "Procedural Manual for the Preparation of Environmental Studies". Discuss proposed alternatives that satisfy the requirements of Section 4(f).

Remarks:

Section 4(f) Resources

Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally transportation facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned parks, recreational 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.

Per a desktop review, field visits conducted on August 10, 2018, April 19, 2019, and April 22, 2019 by RQAW, aerial map of the project area (Appendix B, pages B-4 to B-6), the infrastructure map in the RFI report (Appendix E, page E-14), and the APE maps in the 800.11 documentation (Appendix D, pages D-22 and D-23), there are 26 potential Section 4(f) resources located within the 0.50 mile search radius (five schools, six recreational facilities, 11 trail segments, one managed land, and three historic resources). Nine Section 4(f) resources are located within or adjacent to the project area:

- **DePauw University:** This is a school located adjacent to the project area.
- **Robe Ann Park (IHSSI Number 133-250-69053):** This a historic resource recommended eligible for the NRHP located adjacent to the project area. This is also a recreational facility and managed land.
- **Five planned trail segments:** These recreational features are planned and located within/adjacent to the project area.
- **Courthouse Square Historic District (NR-0656):** This is a historic resource listed in the NRHP located within the project area.
- **Eastern Enlargement Historic District (NR-2230):** This is a historic resource listed in the NRHP located within the project area.

DePauw University: The main entrance to the school is located at the US 231/Anderson Street Intersection (Appendix B, page B-5). The school is on privately owned land; as such, DePauw University is not a Section 4(f) resource. There are stamped concrete pavers at the US 231/Andersen Street Intersection; the pavers will not be impacted. Access to DePauw University will be maintained during construction. An early coordination letter was sent to the university on March 13, 2020 (Appendix C, pages C-1 to C-3). The university did not respond to the early coordination letter. Section 4(f) analysis is not required.

A Memorandum of Understanding (MOU) regarding Section 4(f) was executed between FHWA, INDOT, and SHPO in June 2020. The MOU stipulates that FHWA intends to determine Section 4(f) *de minimis* use on historic properties for projects in which SHPO has concurred with a finding of *No Adverse Effect* or *No Historic Properties Affected*. As such, FHWA will not have to individually approve each Section 4(f) *de minimis* determination on historic properties through CE document review except in the case of National Historic Landmarks. Because this project will result in a *de minimis* finding for the Eastern Enlargement Historic District

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and because the SHPO concurred with the *No Adverse Effect* Section 106 finding, the MOU regarding Section 4(f) applies to this project.

Robe Ann Park (IHSSI # 133-250-69053): The park is along the east side of US 231 between Tennessee Street and Anderson Street and is located south of the Eastern Enlargement Historic District and east of Bloomington Street (Appendix B, page B-3 and Appendix D, pages D-22 and D-23). The park is publicly owned and managed by the City of Greencastle and is also recommended eligible for the NRHP. The approximately 35-acre park has entrances from US 231, Tennessee Street, Wood Street, and Anderson Street. The western half of the park includes numerous mature trees, concrete drives and walks, small stone pedestrian bridges, and a log cabin. The eastern half of the park includes a swimming pool, tennis courts, skate park, softball diamond, and playgrounds.

Recreational Impacts

Approximately 0.17 acre of temporary right-of-way will be needed from Robe Ann Park. A portion of the temporary right-of-way is along the western park boundary and the east side of US 231. Here, the temporary right-of-way will be needed for grading purposes to replace approximately 650 linear feet of the existing 3-foot wide sidewalk. The existing sidewalk will be widened to 4 feet wide and upgraded to meet current ADA standards. The widened sidewalk will be within existing US 231 right-of-way. Up to three trees (one alive silver maple, one damaged elm, and one dead ash) will be removed within the temporary right-of-way and will not be replaced. Curb ramp work will also take place at the US 231/Tennessee Street Intersection. Here, temporary right-of-way will be needed to upgrade the curb ramp in the northeast quadrant of the intersection to meet current ADA standards. Temporary right-of-way is also needed at the US 231 entrance to the park which contains two approximately 3-foot wide sidewalks and two curb ramps (one north and south of the entrance drive) and mowed grass. Here, the temporary right-of-way is needed to replace both curb ramps and upgrade them to meet current ADA standards, replace the existing 3-foot wide sidewalk segments in-kind, connect both upgraded curb ramps to the sidewalks, and reconstruct the park access drive. Two stone columns are located just east of the US 231 entrance drive right-of-way limits and will not be impacted. Permanent right-of-way will not be needed from Robe Ann Park. Access to Robe Ann Park will be maintained during construction.

Because this project will require land from Robe Ann Park, a publicly owned Section 4(f) resource, coordination with the Official with Jurisdiction (OWJ) is required. The OWJ is the official(s) of an agency or agencies that own and/or administer the property in question and who are empowered to represent the agency on matters related to the property. For this project, the OWJ is the City of Greencastle Parks and Recreation Department.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) amendment to the Section 4(f) requirements allows the U.S. Department of Transportation to determine that certain uses of Section 4(f) land would not have an adverse effect on the protected resource. A *de minimis* impact involves the use of Section 4(f) property that is generally minor in nature. A *de minimis* impact is one that, after considering avoidance, minimization, mitigation, and enhancement measures, results in no adverse effect to the activities, features, or attributes qualifying the resource for protection under Section 4(f). Because the project will result in the removal of up to three trees and will not replace the trees, a *de minimis* finding is applicable. To make a *de minimis* finding, the FHWA must receive written concurrence from the OWJ agreeing with the below conditions:

1. The transportation use of the Section 4(f) property does not adversely affect the activities, features, and attributes that qualify Robe Ann Park for protection under Section 4(f).

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2. The public will be afforded an opportunity to review and comment on the effects of the project on Robe Ann Park via a public notice that will be published in a local newspaper. The public will be afforded 30 days to comment on the project.
3. The City of Greencastle, who has jurisdiction over Robe Ann Park, has been informed about the intent to have the FHWA make a *de minimis* finding.

In a letter dated August 24, 2020 and signed on August 31, 2020, the OWJ agreed with the above three conditions (Appendix H, pages H-20 to H-22). A legal notice offering the public an opportunity to submit comments on the *de minimis* finding was advertised in the *Banner Graphic* on September 25, 2020. The public was given 30 days to submit comments. No comments were received. Refer to the legal notice and legal notice affidavit in Appendix F, page F-5. FHWA's approval of this CE document constitutes approval of the *de minimis* finding.

Historic Impacts

Impacts along the western boundary are limited to the existing right-of-way and temporary right-of-way for sidewalk reconstruction and curb ramp modification. Permanent right-of-way will not be needed. The project will mill the pavement 2 inches in depth and overlay with a depth of 4 inches of pavement, replace the curb and gutters, modify curb ramps at the park entrance, reconstruct the deteriorated sidewalks, and remove three trees. The stone steps in front of the Caretaker's house will be salvaged and reset at their current location. The concrete steps leading into Robe Ann Park, and the dry-stacked stone retaining wall will be avoided. The concrete steps and dry-stacked stone retaining wall will be marked as *Do Not Disturb* on the design plans.

The project will temporarily occupy land from Robe Ann Park, a Section 4(f) historic resource. The temporary occupancy does not constitute a Section 4(f) use because all the below conditions listed in 23 CFR 774.13(d) are satisfied:

1. Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and;
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

INDOT CRO determined the appropriate Section 106 finding is *No Adverse Effect*; the temporary occupancy will not constitute a Section 4(f) use for Robe Ann Park because all the above conditions listed in 23 CFR 774.13(d) are satisfied (Appendix D, pages D-1 to D-4). The Indiana SHPO is the OWJ for historic resources. In a letter dated November 20, 2020, the Indiana SHPO concurred with the *No Adverse Effect* Section 106 finding (Appendix D, pages D-102 to D-104). The FHWA's responsibilities under Section 4(f) have been satisfied for this historic property.

Five planned trail segments:

1. **L&R Railroad Trail:** This planned segment is currently within a railroad bed on privately owned land (Appendix B, page B-4). The segment is outside construction limits for the project.

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2. **Shadowlawn Path (Jackson Street to Greencastle/Fillmore segment):** This planned segment is currently within a maintained lawn adjacent to US 231 and along the south side of Shadowlawn Avenue on land owned by the City of Greencastle (Appendix B, page B-4). The segment is within construction limits in order to replace pavement at full depth.
3. **Downtown University (North/South Downtown Connector segment):** This planned segment is along the south side of US 231 between Jackson Street and Locust Street on land owned by the City of Greencastle (Appendix B, page B-4). The segment is currently a widened sidewalk for store access south of US 231 between Jackson Street and Vine Street and a narrower sidewalk south of US 231 between Vine Street and Locust Street. The segment is within construction limits in order to replace and relocated the underground waterline.
4. **Downtown University (Robe Ann Park/DePauw University segment):** This planned segment is adjacent to US 231 and along the south side of Hanna Street (northwest of Robe Ann Park) on privately owned land (Appendix B, page B-5). The segment is currently an existing sidewalk. The segment is within construction limits in order to mill and resurface the pavement.
5. **Campus Link Trail (Zinc Mill Apartments to US 231 segment):** This planned segment is adjacent to the south side of SR 240 and currently within a maintained lawn on land owned by the City of Greencastle (Appendix B, page B-6). The segment is within construction limits in order to mill and resurface the pavement. Per the Greencastle Parks and Recreation Master Plan, there appears to be funding for this trail through INDOT TEA-21 TE grant. Land where trail would extend is outside the project area.

The project will not alter the project area to prevent any of these planned trails from being constructed in the future. In an e-mail dated July 22, 2020, INDOT Environmental Services Division concurred there would not be a Section 4(f) use of the five planned trails (Appendix H, pages H-17 to H-19). An early coordination letter was sent to Peoples Pathways, the managing entity of the five planned trails, on March 13, 2020 (Appendix C, pages C-1 to C-3). People Pathways did not respond to early coordination letter.

Courthouse Square Historic District (NR-0656): The historic district is located around the Putnam County Courthouse roughly bounded by Franklin Street to the north, College Avenue to the east, Walnut Street to the south, and Market Street to the west (Appendix B, page B-3 and Appendix D, pages D-22 and D-23). The historic district was listed in the NRHP in 1984 under Criteria A and C in the areas of community planning and development and architecture.

Impacts will be primarily limited to the existing right-of-way. Minor amounts of temporary right-of-way are anticipated from the historic district for curb and gutter replacement and curb ramp modification. The project will replace the pavement in full depth, replace the curb and gutters at current locations, replace the storm sewer and install new inlets, replace drive entrances, modify curb ramps that do not meet current ADA standards, and replace trees within the sidewalk tree grates. The project will maintain the short retaining wall around the courthouse while replacing the curb and gutter, removing the crosswalks in the center blocks of Jackson Street and Washington Street, providing ADA-compliant access to the courthouse via the middle of Indiana Street block with an ADA-compliant crosswalk at the Washington Street/Indiana Street Intersection, and replacing concrete pavers with matching or similar pavers in the same locations. The ornamental lights and other landscape amenities such as benches, planters, and trash receptacles around the courthouse square and along Washington Street are anticipated to be salvaged and reset following construction or provided to the City for relocation.

The project will temporarily occupy land from the Courthouse Historic District, a Section 4(f) historic resource. The temporary occupancy does not constitute a Section 4(f) use because all the above conditions listed in 23 CFR 774.13(d) are satisfied (as discussed in the Robe Ann Park discussion).

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INDOT CRO determined the appropriate Section 106 finding is *No Adverse Effect*; the temporary occupancy will not constitute a Section 4(f) use for the Courthouse Historic District because all the above conditions listed in 23 CFR 774.13(d) are satisfied (Appendix D, pages D-1 to D-4). In a letter dated November 20, 2020, the Indiana SHPO concurred with the *No Adverse Effect* Section 106 finding and temporary occupancy determination (Appendix D, pages D-102 to D-104). The FHWA's responsibilities under Section 4(f) have been satisfied for this historic property.

Eastern Enlargement Historic District (NR-2230): The historic district is roughly bounded by East Franklin Street to the north, Wood Street to the east, rear parcel lines of properties on the south side of Anderson Street to the south, and College Street to the west (Appendix B, page B-3 and Appendix D, pages D-22 and D-23). The historic district was listed in the NRHP in 2011 under Criteria A and C in the areas of community planning and development and architecture.

Impacts will be primarily limited to the existing right-of-way. Minor amounts of temporary and permanent right-of-way are anticipated from the historic district for curb ramp modification and driveway approach reconstruction. Along Bloomington Street, the project will mill the pavement 2 inches in depth and overlay with a depth of 4 inches of pavement, reconstruct drive approaches, replace the curb, modify curb ramps, and remove trees within the grass buffer along Bloomington Street that would not likely survive curb replacement. The stamped concrete at the US 231/Anderson Street Intersection will be avoided. Along Bloomington Street, drainage structures will not be impacted except to adjust casting elevations. The concrete steps in the southeast quadrant of the Bloomington Street/Washington Street Intersection may be replaced in-kind. The stone sidewalk above the steps will not be impacted. Along Washington Street, the project will replace the pavement in full depth, reconstruct drive approaches, replace the curb and gutters at current locations, replace the storm sewer and install new inlets, modify curb ramps that do not meet current ADA standards, and move the water line out of the roadway. The project will replace sidewalk and trees in-kind as needed to move the water line out of the roadway (location to be determined). The stone drainage structure below Washington Street, east of Locust Street, is anticipated to be avoided, if possible. Mitigation efforts will commence if the structure is encountered during construction. Refer to *Summary of Consulting Parties and Public Views* of the 800.11 documentation for more information.

The project will permanently convert land from the Eastern Enlargement Historic District, a Section 4(f) historic resource, to a transportation use. INDOT CRO determined the appropriate Section 106 finding is *No Adverse Effect*; therefore, FHWA intends to issue a *de minimis* finding for the Eastern Enlargement Historic District pursuant to SAFETEA-LU (Appendix D, pages D-1 to D-4). In a letter dated November 20, 2020, the Indiana SHPO concurred with the *No Adverse Effect* Section 106 and *de minimis* findings (Appendix D, pages D-102 to D-104). A legal notice offering the public an opportunity to submit comments on the *de minimis* finding was advertised in the *Banner Graphic* on October 30, 2020. The public was given 30 days to submit comments. No comments were received. See the legal notice and legal notice affidavit in Appendix D, page D-101. The FHWA's responsibilities under Section 4(f) have been satisfied for this historic property.

Section 6(f) Involvement

Presence

Use

Section 6(f) Property

Yes

No

Discuss proposed alternatives that satisfy the requirements of Section 6(f). Discuss any Section 6(f) involvement.

Remarks:

Section 6(f) Resources
 The U.S. Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was 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.

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Per review of the LWCF website property list provide by the IDNR Division of Outdoor Recreation, dated July 2020, there are 14 LWCF properties within Putnam County (Appendix H, page H-1). One property, Robe Ann Park, is within the project area (Appendix B, page B-3).

An early coordination letter was sent to the IDNR Division of Outdoor Recreation on March 13, 2020 (Appendix C, pages C-1 to C-3). In their early coordination response, dated May 5, 2020, the IDNR Division of Outdoor Recreation stated if there is no taking of property [permanent right-of-way] and only temporary right-of-way is needed, there would not be Section 6(f)3 conversion of Robe Ann Park (Appendix C, pages C-21 to C-24). Approximately 0.17 acre of temporary right-of-way will be needed from Robe Ann Park. No permanent right-of-way will be needed from Robe Ann Park. Access to Robe Ann Park will always be maintained during construction. Refer to *Section D – Section 4(f) Resources* for a more detailed discussion of impacts.

An early coordination letter was sent to the National Park Service on March 13, 2020 (Appendix C, pages C-1 to C-3). In their early coordination letter response, dated April 28, 2020, the National Park Service asked for verification the five trail segments identified in the Red Flag Investigation were not funded with Federal monies (i.e. LWCF) or similar grants. If Federal monies were used or plan to be used on these trails or segments of trails, then additional follow up may be necessary. The National Park Service also noted that Robe Ann Park may have had federal dollars used during its development, but the project is unlikely to have an impact on the park itself (Appendix C, page C-25). In an e-mail dated September 29, 2020, the IDNR Division of Outdoor Recreation confirmed the five trail segments were not funded with LWCF funding (Appendix C, pages C-21 to C-24). Impacts are not expected.

SECTION E – Air Quality

Air Quality

Conformity Status of the Project

	Yes	No
Is the project in an air quality non-attainment or maintenance area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If YES, then:		
Is the project in the most current MPO TIP?	<input type="checkbox"/>	<input type="checkbox"/>
Is the project exempt from conformity?	<input type="checkbox"/>	<input type="checkbox"/>
If the project is NOT exempt from conformity, then:		
Is the project in the Transportation Plan (TP)?	<input type="checkbox"/>	<input type="checkbox"/>
Is a hot spot analysis required (CO/PM)?	<input type="checkbox"/>	<input type="checkbox"/>

Level of MSAT Analysis required?

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

Remarks:

STIP/TIP
 The project is included in the FY 2020 to 2024 INDOT Statewide Transportation Improvement Program (STIP) (Appendix G, page G-1).

Attainment Status
 The project is Putnam County which is currently in attainment for all criteria pollutants per the IDEM Office of Air Quality website (https://www.in.gov/idem/airquality/files/nonattainment_areas_map.pdf) and EPA Green Book (<https://www.epa.gov/green-book>), both accessed on November 30, 2020 by RQAW. Therefore, the conformity procedures of 40 CFR Part 93 do not apply.

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Mobile Source Air Toxics (MSAT)

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 F - NOISE

Noise

Yes **No**

Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy?

No **Yes/ Date**

ES Review of Noise Analysis		

Remarks:

Type III Project

The project is a Type III project. In accordance with 23 CFR 772 and the current *INDOT Traffic Noise Analysis Procedure*, this action does not require a formal noise analysis.

SECTION G – 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 remarks box)

Yes	No
✓	
	✓
	✓
	✓
✓	
✓	

Remarks:

Regional, Community and Neighborhood Factors

The project will comply with the local/regional development patterns for the area. The project is not anticipated to result in substantial impacts to community cohesion because it will not change access to properties within the area or divide existing communities. Replacing sidewalks and curb ramps to meet current ADA criteria will increase cohesion. The proposed project is not expected to negatively impact the surrounding community or cause negative economic impacts to the surrounding area. Therefore, the project will have minimal or no negative impacts to the community or local economy.

There are several businesses within the project area. Access to all properties will be maintained during construction. Per the Fairs and Festivals website (www.fairsandfestivals.net), accessed on November 23, 2020 by RQAW, two fairs or festivals are currently scheduled within a 10-mile radius of zip code 46135 (project area). These, or any future fairs/festivals that may be planned, are unlikely to be impacted by the project since traffic can utilize US 231 or the detour during construction.

RQAW will coordinate the construction schedule with the City of Greencastle and other stakeholders regarding any DePauw University events, delayed school start on Mondays, heavier vehicle traffic on Fridays due to the football season, first Friday of the month courthouse square events, and increased use of US 231 by farm equipment during harvest season. This will be reflected in the Unique Special Provisions for the contract.

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Per the City of Greencastle, Indiana website (<https://cityofgreencastle.com/wp-content/uploads/2016/08/ADA-Transition-Plan-scan1.pdf>), accessed on November 30, 2020 by RQAW, the City of Greencastle has an approved ADA Transition Plan, dated 2012. The project will comply with the ADA Transition Plan via replacing existing sidewalks and curb ramps that do not meet current ADA standards.

Indirect and Cumulative Impacts

Will the proposed action result in substantial indirect or cumulative impacts?

Yes No

Remarks:

Indirect and Cumulative Impacts
Indirect impacts are effects caused by the action and are later in time, or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate. Cumulative impacts affect the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions.

Due to the scope of the project and limited impacts, it is not expected to result in any substantial indirect or cumulative impacts. The improvement of the roadway will allow for better travel of vehicles along US 231 within the project area. Replacing sidewalks and curb ramps to meet current ADA standards will increase cohesion. The project is not expected to increase development in the area beyond what may already planned. The project will not add capacity to the existing roadway network or provide additional access to any currently undeveloped area.

Public Facilities & Services

Will the proposed action result in substantial impacts on health and educational facilities, public and private utilities, emergency services, religious institutions, airports, public transportation or pedestrian and bicycle facilities? *Discuss how the maintenance of traffic will affect public facilities and services.*

Yes No

Remarks:

Public Facilities and Services
Per a desktop review, field visits conducted on August 10, 2018 and April 22, 2019 by RQAW, aerial map of the project area (Appendix B, pages B-3 to B-6), and the infrastructure map in the RFI report (Appendix E, page E-14), there are 46 public facilities and services located within the 0.50 mile search radius (14 churches, four cemeteries, five schools, six recreational facilities, 11 trail segments, and six pipeline segments). Twelve public facilities are located within or adjacent to the project area (three churches, one school, one recreational facility, five trail segments, and two pipeline segments). Per Google Maps, there does not appear to be any hospitals or public transportation stations located within the 0.50 mile search radius.

Per Google Maps, the Greencastle Police Department is located within the project area at the US 231/New York Street Intersection (Appendix B, page B-4). Permanent or temporary right-of-way will not be needed from the Greencastle Police Department. Access to the police department will always be maintained during construction. The Greencastle Fire Department is located outside the project area at the Poplar Street/Indiana Street Intersection. Impacts are not expected because the fire department is outside the project construction limits.

Saint Paul the Apostle Church, Saint Andrew’s Episcopal Church, and Cornerstone Baptist Church are adjacent to the project area (Appendix B, pages B-4 and B-5). Saint Paul the Apostle Church is along the south side of US 231 between College Avenue and Spring Street. Permanent or temporary right-of-way will not be needed from Saint Paul the Apostle Church. Saint Andrew’s Episcopal Church is along the west side of US 231 between Anderson Street and Seminary Street. Permanent or temporary right-of-way will not be needed from Saint Andrew’s Episcopal Church. Cornerstone Baptist Church is along the west side of US 231 between Anderson Street and Seminary Street (just south of Saint Andrew’s Episcopal Church). Permanent or temporary right-

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of-way will not be needed from Cornerstone Baptist Church. Access to the churches will always be maintained during construction. Early coordination letters were sent to each church on March 13, 2020 (Appendix C, pages C-1 to C-3). None of the churches responded to the early coordination letter.

The main entrance to DePauw University is located at the US 231/Anderson Street Intersection (Appendix B, page B-5). There are stamped concrete pavers at the US 231/Andersen Street Intersection; the pavers will not be impacted. An early coordination letter was sent to the university on March 13, 2020 (Appendix C, pages C-1 to C-3). The university did not respond to the early coordination letter. RQAW will coordinate the construction schedule with the City of Greencastle and other stakeholders regarding any DePauw University events. This will be reflected in the Unique Special Provisions for the contract.

Robe Ann Park is adjacent to the project area. Refer to *Section D – Section 4(f) Resources* for a detailed discussion.

Five trail segments, one under development and four planned, are within the project area. Refer to *Section D – Section 4(f) Resources / Section 6(f) Resources* of this CE document for a detailed discussion.

Two pipeline segments, both associated with Indiana Gas Company, are within the project area. One segment runs parallel with the Washington Street (US 231) portion and one segment crosses the southern project area. Utility coordination has been initiated and is ongoing.

The Putnam County Airport is within 3.80 miles of the project area. An early coordination letter was sent to the INDOT Office of Aviation on March 13, 2020 (Appendix C, pages C-1 to C-3). Per the INDOT Office of Aviation early coordination response e-mail, dated March 16, 2020, if any object, obstruction, or equipment will exceed 100 feet in height, further coordination will be required (Appendix C, page C-17). Per the designer, the project will not involve any object, obstruction, or equipment taller than 100 feet. Additional coordination is not needed.

An underground public water utility line is located below the roadway pavement from south of the at-grade railroad crossing through the downtown area. Per the designer, the public water utility line will be temporarily impacted due to its replacement and relocation. Utility coordination has been initiated and is ongoing.

Early Coordination

Early coordination letters were also sent to the Putnam County Council Members, Putnam County Board of Commissioners, Putnam County Surveyor’s Office, Putnam County Highway Department, City of Greencastle Mayor’s Office, City of Greencastle Department of Public Works, City of Greencastle Park Board, and People Pathways on March 13, 2020 (Appendix C, pages C-1 to C-3). These organizations did not respond to the early coordination letter.

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 limits access. The Cornerstone Baptist Church, Saint Paul the Apostle Church, and Saint Andrew’s Episcopal Church will also be notified 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?
 Does the project require an EJ analysis?

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

If YES, then:

Are any EJ populations located within the project area?
 Will the project result in adversely high or disproportionate impacts to EJ populations?

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

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Remarks: **Environmental Justice**
 Under FHWA Order 6640.23A, FHWA and INDOT, 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 CE Manual*, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.50 acre of additional permanent right-of-way. This project will have fewer than two relocations and will require less than 0.50 acre of additional permanent right-of-way; therefore, an EJ analysis is not required.

Relocation of People, Businesses or Farms

Will the proposed action result in the relocation of people, businesses or farms?	Yes	No
Is a Business Information Survey (BIS) required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is a Conceptual Stage Relocation Study (CSRS) required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Has utility relocation coordination been initiated for this project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Number of relocations: Residences: 0 Businesses: 0 Farms: 0 Other: 0

If a BIS or CSRS is required, discuss the results in the remarks box.

Remarks: **Relocation of People, Businesses, or Farms**
 No relocations of people, businesses, or farms will take place because of this project.

Utilities
 Several utilities are present within the project area (e.g. gas lines, underground electric facilities, aboveground electric poles, underground communication lines), some of which will be temporarily impacted for relocation. An underground public water utility line is located below the roadway pavement from south of the at-grade railroad crossing through the downtown area. Per the designer, the public water utility line will be temporarily impacted due to its replacement and relocation. Utility coordination has been initiated for the project and is ongoing.

SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Documentation

Hazardous Materials & Regulated Substances (Mark all that apply)

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

	No	Yes/ Date
ES Review of Investigations		August 30, 2019

Include a summary of findings for each investigation.

Remarks: **Hazardous Materials and Regulated Substances**
 Per review of geographic information system (GIS) and available public records, a RFI report was approved by INDOT Site Assessment & Management on August 30, 2019 (Appendix E, pages E-1 to E-20). Fifty-four hazardous material concern sites are located within the 0.50 mile search radius (four Resource Conservation and Recovery Act [RCRA] Generator sites, four State Cleanup sites, 14 underground storage tanks [USTs], one Voluntary Remediation Program site, 15 leaking underground storage tanks [LUSTs], one Waste Transfer Station, six Brownfields sites, three Institutional Controls sites, and six National Pollutant Discharge Elimination [NPDES] Facilities).

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There are four RCRA Generator sites located within the 0.50 mile search radius. Per the approved RFI, the project will not impact any RCRA site (Appendix E, page E-5).

There are four State Cleanup sites located within the 0.50 mile search radius. Per the approved RFI, three State Cleanup sites could impact the project (Appendix E, pages E-6 and E-7).

1. Branagin Oil Company Incorporated (600 North Indiana Street, Agency Interest [AI] Number 59881) is located approximately 0.03 mile east of the project area along Shadowlawn Avenue. This site is also a mapped UST. The site is a former bulk petroleum storage facility. Multiple releases and clean-up activities have occurred at the site; however, the most recent occurred in 1992 and involved a release of approximately 4,700 gallons of diesel fuel. It does not appear as though the incident has received closure and there appears to have been a seasonal groundwater flow northwest towards the project area. A Phase II Environmental Site Assessment (ESA), which includes the analysis for lead, is recommended.
2. DePauw University Site (302 Washington Street, AI Number 60825) is located adjacent to the project area in the southeast quadrant of the US 231 (Washington Street)/Spring Street Intersection. The site is a former gas station that operated between 1936 and 1975. Petroleum contamination was encountered during redevelopment activities completed in 1999. The impacts were encountered in the vicinity of the former UST cavity and it appears as though approximately 120 yards of impacted soil was removed from the site. It does not appear as though the extent of contamination has been determined. A Phase II ESA, which includes the analysis for lead, is recommended.
3. Castle Tire (506 South Bloomington Street, AI Number 60874) is in the northwest quadrant of the US 231 (Bloomington Street)/Block Avenue Intersection. The site is an active automotive service facility. IDEM issued a Completion of Independent Closure Process determination for the site on July 5, 2013. Low level soil and groundwater contamination appears to remain on-site in the vicinity of the 2003 excavation. A Phase II ESA, which includes the analysis for lead, is recommended.

There are 14 USTs located within the 0.50 mile search radius. Per the approved RFI, three USTs could impact the project (Appendix E, page E-6).

1. Jack Bumgardner/Reece Oil (202 North Jackson Street, AI Number 59382) is in the northwest quadrant of the US 231 (Jackson Street)/Columbia Street Intersection. The site appears to have been a former gas station. Per the IDEM Virtual File Cabinet (VFC), three USTs were removed from the site in December 1988. A Phase II ESA, which includes the analysis for lead, is recommended.
2. Putnam Motor Incorporated (118 North Indiana Street, AI Number 59064) is in the southwest quadrant of the Indiana Street/Columbia Street Intersection. Per the IDEM VFC, a UST is located within City right-of-way and records indicate that the UST was filled with an inert material and removed from service in December 1988. A Phase II ESA, which includes the analysis for lead, is recommended.
3. Michael D. Baker (416 South Bloomington Street, AI Number 60299) is located adjacent to the project area, south of the Maple Avenue/US 231 (Bloomington Street) Intersection. The site may have been a former gas station pre-1980. Per the IDEM VFC, four steel USTs, which were installed in 1954, were filled in-place in September 1978. No other investigation has ever been conducted on this property. A Phase II ESA, including sampling for lead, is recommended.

There is one Voluntary Remediation Program site located within the 0.50 mile search radius. Per the approved RFI, the Voluntary Remediation Program site could impact the project (Appendix E, page E-7).

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1. Indiana Gas Company Incorporated (AI Number 61214) is in the southwest quadrant of the US 231 (Bloomington Street)/SR 240 Intersection. The site is also a mapped Institutional Controls site. Low levels of soil and groundwater contamination remain on the site. An Environmental Restrictive Covenant (ERC) was recorded on the property on December 14, 2006. Lead concentrations for the site are above the RCRA 20x rule. A Phase II ESA, including sampling for lead, is recommended. Coordination will be conducted with IDEM before further site activities occur.

There are 15 LUSTs located within the 0.50 mile search radius. Per the approved RFI, six LUSTs could impact the project (Appendix E, pages E-7 and E-8).

1. Greencastle Shell (701 North Jackson Street, AI Number 60004) is in the northeast quadrant of the US 231/New York Street Intersection. The site is an active gas station. Petroleum contamination remains in the soil and groundwater and extends off-site beneath US 231 (Jackson Street). If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary.
2. James Watson (610 North Jackson Street, AI Number 60534) is in the northwest quadrant of the US 231 (Jackson Street)/New York Street Intersection. The site is an active laundromat and possibly the location of a former automotive repair shop. Per the IDEM VFC, a release (possibly gasoline) was reported to IDEM in December 1990 following UST removal activities. The IDEM issued an Initial Site Characterization Request, dated October 20, 2006, requesting a subsurface investigation be performed. No investigation has been conducted on this property. A Phase II ESA is recommended. If groundwater monitoring wells are encountered in the project area, they should be maintained in place. If they cannot be maintained, then the contractor must contact the INDOT Project Manager who will notify the INDOT Permits Group. The INDOT Permits Group will notify the permit holder that the well must be removed prior to construction. The permit holder is responsible for coordination with IDEM and the INDOT Permits Group for replacement or relocation of the well. If a property owner cannot be found in connection with the monitoring well, then well abandonment will be included in the project contract. All well abandonment activities must be completed by an Indiana Licensed Well Driller in accordance with IAC 312-13-10. Regardless of whether the well is abandoned by the contractor or the property owner, a record of well abandonment, including the well driller's license number, must be provided to the INDOT Project Manager once the well has been abandoned.
3. HP #6/Jackson Street Marathon (405 North Jackson Street, AI Number 59991) is in the northeast quadrant of the US 231 (Jackson Street)/Jacob Street Intersection. The site is an active gas station. This site is also a mapped Institutional Controls Site. Per the IDEM VFC, multiple releases have occurred at this site. IDEM issued a No Further Action Determination Pursuant to RISC Guidance on October 25, 2006, following the recording of an ERC on the deed of the property. Residual contamination remains on-site and likely extends into the right-of-way of US 231 (Jackson Street). If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper removal and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with IDEM before further site activities occur.
4. Query's 66 Service (306 East Washington Street, AI Number 59014) is in the southwest quadrant of the US 231 (Washington Street)/Locus Street Intersection. The site is a former gas station. Per the VFC, IDEM issued an NFA Determination for the site on September 28, 2007. Per the letter, residual contamination remains at the site. If excavation occurs in this area, it is possible that petroleum contamination will be encountered. Proper removal and disposal of soil and/or groundwater may be necessary.
5. Clark Oil & Refining #0894 (404 East Washington Street, AI Number 58654) is in the southeast quadrant of the US 231 (Washington Street)/Locust Street Intersection. The site is a former gas

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station. The site is also a mapped Institutional Controls site. Per the IDEM VFC, an NFA Determination Pursuant to Remediation Closure Guide, issued by IDEM on December 14, 2018, contamination remains in the area surrounding the site. An ERC was placed on the property on November 13, 2018. Groundwater flow in the area is to the north. Groundwater depths range from between approximately 5 to 21 feet bgs. Due to the presence of residual petroleum contamination, if excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper removal, transport, and disposal of soil and/or groundwater will be necessary. Coordination will be conducted with IDEM before further site activities occur.

6. Greencastle Wash & Fill (705 South Bloomington Street, AI Number 59022) is in the northeast quadrant of the US 231 (Bloomington Street)/SR 240 Intersection. The site is an active gas station. Per the IDEM VFC, IDEM issued an NFA for the site on May 19, 1999; however, the remaining contamination at the site was never delineated or investigated. A Phase II ESA is recommended.

There is one Waste Transfer Station site located within the 0.50 mile search radius. Per the approved RFI, the Waste Transfer Station site will not impact the project (Appendix E, page E-8).

There are six Brownfield sites located within the 0.50 mile search radius. Per the approved RFI, two Brownfield sites could impact the project (Appendix E, page E-8).

1. Beck's Produce Stand 4050017 (431 Bloomington Street, AI Number 61504), also listed as Clearwater Garden 4070453 (Tennessee Street and US 231, AI Number 61111), is in the northeast quadrant of the US 231 (Bloomington Street)/Tennessee Street Intersection. The site is a former gas station and has been used primarily as a flower and vegetable stand since. There is residual petroleum related contamination in the soil near the northeast portion of the property. Per correspondence, dated February 13, 2006, it was stated that a Phase II will need to be conducted prior to selling the property. However, the IDEM VFC did not contain any information regarding a Phase II or the current site conditions. A Phase II ESA, including sampling for lead, is recommended. Coordination will be conducted with IDEM before further site activities occur.
2. Harding Radiator Shop 4110905 (406 Maple Avenue, AI Number 103560) is adjacent to the project area, west of the US 231 (Bloomington Street)/Maple Street Intersection. The site is a former auto repair shop. No investigation has been conducted on this property. A Phase II ESA is recommended.

There are three Institutional Controls sites located within the 0.50 mile search radius. Per the approved RFI, the project may impact all three Institutional Controls sites (Appendix E, pages E-8 and E-9). See previous discussions on HP #6 Jackson Street Marathon (405 North Jackson Street, AI Number 59991), Clark Oil & Refining #0894 (404 East Washington Street, AI Number 58654), and Indiana Gas Company Incorporated (AI Number 61214).

There are six NPDES Facilities located within the 0.50 mile search radius. Per the approved RFI, the project will not impact any NPDES Facilities (Appendix E, page E-9).

There are several monitoring wells documented in the design plans. As such, a commitment regarding construction activities and monitoring wells is included in the *Environmental Commitments* section of this CE document.

An additional search of GIS and available public records conducted by RQAW on December 8, 2020 did not indicate any additional hazardous material concerns within the 0.50 mile search radius.

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SECTION I – PERMITS CHECKLIST

Permits (mark all that apply) Likely Required

Army Corps of Engineers (404/Section10 Permit)	
Individual Permit (IP)	<input type="checkbox"/>
Nationwide Permit (NWP)	<input type="checkbox"/>
Regional General Permit (RGP)	<input type="checkbox"/>
Pre-Construction Notification (PCN)	<input type="checkbox"/>
Other	<input type="checkbox"/>
Wetland Mitigation required	<input type="checkbox"/>
Stream Mitigation required	<input type="checkbox"/>
IDEM	
Section 401 WQC	<input type="checkbox"/>
Isolated Wetlands determination	<input type="checkbox"/>
Rule 5	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>
Wetland Mitigation required	<input type="checkbox"/>
Stream Mitigation required	<input type="checkbox"/>
IDNR	
Construction in a Floodway	<input type="checkbox"/>
Navigable Waterway Permit	<input type="checkbox"/>
Lake Preservation Permit	<input type="checkbox"/>
Other	<input type="checkbox"/>
Mitigation Required	<input type="checkbox"/>
US Coast Guard Section 9 Bridge Permit	
Others (Please discuss in the remarks box below)	
	<input type="checkbox"/>

Remarks: **Permits**
 The total area of land disturbance is approximately 10.5 acres. Because the project will result in one acre or more of land disturbance, an IDEM Rule 5 Notice of Intent will be required.

 Per the IDNR Division of Fish and Wildlife early coordination response letter, dated April 9, 2020, the project will not require formal approval for construction in a floodway under the Flood Control Act, IC 14-28-1 (Appendix C, pages C-18 to C-20). As such, an IDNR Construction in a Floodway Permit will not be required.

 Applicable recommendations provided by the IDNR Division of Fish and Wildlife and the USFWS are included in the *Environmental Commitments* section of this CE document. If a permit is 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.

SECTION J- ENVIRONMENTAL COMMITMENTS

The following information should be provided below: List all commitments, name of agency/organization requesting the commitment(s) and indicating which are firm and which are for further consideration. The commitments should be numbered.

Remarks: **Firm Commitments**

- If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division and the INDOT District Environmental Section will be contacted immediately. (INDOT Environmental Services Division)
- It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction activity that would block or limit access. (INDOT Environmental Services Division)

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3. The Cornerstone Baptist Church, Saint Paul the Apostle Church, and Saint Andrew's Episcopal Church will be notified at least two weeks prior to any construction that would block or limit access. (INDOT Environmental Services Division)
4. Access to Robe Ann Park will always be maintained during construction. (INDOT Environmental Services Division)
5. If any object, obstruction, or equipment will exceed 100 feet in height, further coordination with the INDOT Office of Aviation will be required due to the proximity of Putnam County Airport (INDOT Office of Aviation)
6. Within Robe Ann Park, the stone steps in front of the Caretaker's house will be salvaged and reset at their current location. (INDOT Cultural Resources Office)
7. There is a stone drainage structure within the Eastern Enlargement Historic District. If the stone drainage structure becomes visible during excavation, INDOT will implement a Unique Special Provision (USP) in the bid documentation to cover the historic documentation by a qualified historian. The documentation will include photographing as much of the exterior and/or interior of the drainage structure, sketching the location of the drainage structure on a plan, and measuring/sketching the cross section of the exterior and interior of the drainage structure. Three copies of each of these items (photographs, location plan, cross section sketch, and dimensions) will be recorded on archival gold CDs or DVDs. The archival gold CDs or DVDs will be presented to the Indiana SHPO, the Indiana State Archives, and one or more Putnam County public or not-for-profit entities that are willing to retain the CD or DVD indefinitely for the benefit of researchers. (Indiana SHPO)
8. RQAW will coordinate the construction schedule with the City of Greencastle and other stakeholders regarding any DePauw University events, delayed school start on Mondays, heavier vehicle traffic on Fridays due to the football season, first Friday of the month courthouse square events, and increased use of US 231 by farm equipment during harvest season. This will be reflected in the Unique Special Provisions for the contract. (INDOT Environmental Services Division)
9. If groundwater monitoring wells are encountered in the project area, they should be maintained in place. If they cannot be maintained, then the contractor must contact the INDOT Project Manager who will notify the INDOT Permits Group. The INDOT Permits Group will notify the permit holder that the well must be removed prior to construction. The permit holder is responsible for coordination with IDEM and the INDOT Permits Group for replacement or relocation of the well. If a property owner cannot be found in connection with the monitoring well, then well abandonment will be included in the project contract. All well abandonment activities must be completed by an Indiana Licensed Well Driller in accordance with IAC 312-13-10. Regardless of whether the well is abandoned by the contractor or the property owner, a record of well abandonment, including the well driller's license number, must be provided to the INDOT Project Manager once the well has been abandoned. (INDOT Environmental Services Division)
10. A State Cleanup/UST site (Branagin Oil Company Incorporated, 600 North Indiana Street, AI Number 59881), is located within the project area. A Phase II ESA, which includes the analysis for lead, is recommended prior to letting. (INDOT Site Assessment & Management)
11. A State Cleanup site (DePauw University Site, 302 Washington Street, AI Number 60825) is located within the project area. A Phase II ESA, which includes the analysis for lead, is recommended prior to letting. (INDOT Site Assessment & Management)
12. A State Cleanup site (Castle Tire, 506 South Bloomington Street, AI Number 60874) is located within the project area. A Phase II ESA, which includes the analysis for lead, is recommended prior to letting. (INDOT Site Assessment & Management)
13. A UST site (Jack Bumgardner/Reece Oil, 202 North Jackson Street, AI Number 59382) is located within the project area. A Phase II ESA, which includes the analysis for lead, is recommended prior to letting. (INDOT Site Assessment & Management)

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14. A UST site (Putnam Motor Incorporated, 118 North Indiana Street, AI Number 59064) is located within the project area. A Phase II ESA, which includes the analysis for lead, is recommended prior to letting. (INDOT Site Assessment & Management)
15. A UST site (Michael D. Baker, 416 South Bloomington Street, AI Number 60299) is located within the project area. A Phase II ESA, including sampling for lead, is recommended prior to letting. (INDOT Site Assessment & Management)
16. A Voluntary Remediation Program/Institutional Controls site (Indiana Gas Company Incorporated, AI Number 61214) is within the project area. A Phase II ESA, including sampling for lead, is recommended prior to letting. Coordination will be conducted with IDEM prior to letting. (INDOT Site Assessment & Management)
17. A LUST site (Greencastle Shell, 701 North Jackson Street, AI Number 60004) is within the project area. If excavation occurs in this area, proper handling, removal, and disposal of soil and/or groundwater will be necessary. (INDOT Site Assessment & Management)
18. A LUST site (James Watson, 610 North Jackson Street, AI Number 60534) is within the project area. A Phase II ESA is recommended prior to letting. (INDOT Site Assessment & Management)
19. A LUST/Institutional Controls site (HP #6/Jackson Street Marathon, 405 North Jackson Street, AI Number 59991) is within the project area. If excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper removal and disposal of soil and/or groundwater may be necessary. Coordination will be conducted with IDEM prior to letting. (INDOT Site Assessment & Management)
20. A LUST site (Query's 66 Service, 306 East Washington Street, AI Number 59014) is within the project area. If excavation occurs in this area, it is possible that petroleum contamination will be encountered. Proper removal and disposal of soil and/or groundwater may be necessary. (INDOT Site Assessment & Management)
21. A LUST/Institutional Controls site (Clark Oil & Refining #0894, 404 East Washington Street, AI Number 58654) is within the project area. Due to the presence of residual petroleum contamination, if excavation occurs in this area, it is likely that petroleum contamination will be encountered. Proper removal, transport, and disposal of soil and/or groundwater will be necessary. Coordination will be conducted with IDEM prior to letting. (INDOT Site Assessment & Management)
22. A LUST site (Greencastle Wash & Fill, 705 South Bloomington Street, AI Number 59022) is within the project area. A Phase II ESA is recommended prior to letting. (INDOT Site Assessment & Management)
23. A Brownfields site (Beck's Produce Stand 4050017, 431 Bloomington Street, AI Number 61504—also listed as Clearwater Garden 4070453, Tennessee Street and US 231, AI Number 61111) is within the project area. A Phase II ESA, including sampling for lead, is recommended prior to letting. Coordination will be conducted with IDEM prior to letting. (INDOT Site Assessment & Management)
24. A Brownfields site (Harding Radiator Shop 4110905, 406 Maple Avenue, AI Number 103560) is within the project area. A Phase II ESA is recommended prior to letting. (INDOT Site Assessment & Management)
25. 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)
26. Hibernacula AMM 1: For projects located within karst areas, on-site personnel will use best management practices, secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula. Where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography. (USFWS)
27. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)

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28. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
29. Tree Removal AMM 2: Apply time of year restrictions 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)
30. 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)
31. 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)
32. The concrete steps leading into Robe Ann Park, and the dry-stacked stone retaining wall will be avoided. The concrete steps and dry-stacked stone retaining wall will be marked as *Do Not Disturb* on the design plans. (INDOT Environmental Services Division)

For Further Consideration Commitments

1. It is recommended to consider a more sustainable approach to stormwater management if upgrades are required. The traditional model of stormwater management aims to drain urban runoff as quickly as possible with the help of channels and pipes, which increases peak flows and costs of stormwater management. This type of solution only transfers flood problems from one section of the basin to another section. A more sustainable approach aims to rebuild the natural water cycle by using storage techniques (retention basins, constructed wetlands, raingardens, etc.), recharging groundwater using infiltration techniques (infiltration basins or trenches, pervious pavement, etc.), and reusing runoff for irrigation elsewhere in the basin. (IDNR Division of Fish and Wildlife)
2. It is recommended avoiding removing urban trees to the greatest extent possible and replacing trees that must be removed. (IDNR Division of Fish and Wildlife)
3. Trees removed in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10 inches dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat sites, however. (IDNR Division of Fish and Wildlife)
4. Certain types of LED lighting can have negative impacts on both human and wildlife health and safety. It is strongly encouraged to visit the International Dark-Sky Association's website to learn more about the potential negative impacts of improperly selected LED lighting systems, if applicable: <http://darksky.org/lighting/led-practical-guide>. (IDNR Division of Fish and Wildlife)

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SECTION K- EARLY COORDINATION

Please list the date coordination was sent and all 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. INDOT and FHWA are automatically considered early coordination participants and should only be listed if a response is received.

Remarks:

Early Coordination

Early coordination letters were sent to agencies on March 13, 2020 (Appendix C, pages C-1 to C-3). An early coordination letter was sent to the USFWS on June 25, 2020. If a response was not received, it was assumed the agency did not feel the project would result in substantial impacts. Refer to responding agency correspondence in Appendix C, pages C-1 to C-48. The below agencies/individuals were contacted during early coordination:

Agency	Date of Response(s)
1. Natural Resources Conservation Service	March 30, 2020
2. Indiana Geological Survey (electronic submission)	March 13, 2020
3. IDNR Division of Fish and Wildlife	April 9, 2020
4. IDEM (electronic submission)	March 13, 2020
5. IDEM Ground Water Section (electronic query)	N/A
6. INDOT Office of Public Involvement	No response received
7. INDOT Office of Aviation	March 16, 2020
8. U.S. Department of Housing and Urban Development	No response received
9. IDNR Division of Outdoor Recreation	May 5, 2020
10. National Park Service, Midwest Regional Office	April 28, 2020
11. Putnam County Council Members	No response received
12. Putnam County Board of Commissioners	No response received
13. Putnam County Surveyor's Office	No response received
14. Putnam County Highway Department	No response received
15. City of Greencastle Mayor's Office	No response received
16. City of Greencastle Department of Public Works	No response received
17. Saint Paul the Apostle Church	No response received
18. Saint Andrew's Episcopal Church	No response received
19. Cornerstone Baptist Church	No response received
20. DePauw University	No response received
21. City of Greencastle Park Board	No response received
22. People Pathways	No response received
23. City of Greencastle MS4 Coordinator	No response received
24. West Central Indiana Economic Development District	No response received
	July 21, 2020 (standard)
	November 23, 2020 (IPaC)
25. U.S. Fish and Wildlife Service	June 30, 2020 (IPaC)

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US 231 Road Rehabilitation Project – Greencastle, Putnam County, Indiana

Appendix A: INDOT Supporting Documentation

Categorical Exclusion Level Thresholds	A-1
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Appendix B: Graphics

General Location Map	B-1
Topographic Map	B-2
Overall Project Area Aerial Map	B-3
Project Area Aerial Photograph Key Maps	B-4
Project Area Photographs	B-7
Preliminary Design Plan Sheets	B-15

Appendix C: Early Coordination

Example Early Coordination Letter (<i>graphics omitted</i>)	C-1
Indiana Department of Environmental Management (IDEM)	
Standard Roadway Construction Response Letter	C-4
Indiana Geological Survey	
Electronic Response	C-14
Indiana Department of Transportation (INDOT)	
Office of Aviation Response E-mail	C-17
Indiana Department of Natural Resources (IDNR)	
Division of Fish and Wildlife Response Letter	C-18
Division of Outdoor Recreation Response E-mail	C-21
National Park Service	
Response E-mail	C-25
Natural Resources Conservation Service (NRCS)	
Response Letter	C-26
U.S. Fish and Wildlife Service (USFWS)	
Early Coordination Response E-mail	C-27
Information for Planning and Consultation (IPaC) Species List Letter	C-29
INDOT District IPaC Coordination E-mail	C-35
IPaC Concurrence Verification Letter	C-36

Appendix D: Section 106 of the National Historic Preservation Act (NHPA)

800.11 Documentation (<i>some graphics omitted</i>)	D-1
Legal Notice and Signed Affidavit	D-101
State Historic Preservation Officer (SHPO) 800.11 Documentation Concurrence Letter	D-102

Appendix E: Red Flag Investigation and Hazardous Materials

Red Flag Investigation (<i>some graphics omitted</i>)	E-1
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Appendix F: Public Involvement

Example Notice of Entry for Survey or Investigation Letter F-1
Public Information Meeting Legal Notice..... F-2
Example Public Information Meeting Invite Letter F-3
Section 4(f) Legal Notice and Affidavit F-5

Appendix G: Air Quality

Statewide Transportation Improvement Program (*relevant pages only*)G-1

Appendix H: Other Information

National Park Service Land and Water Conservation Fund (LWCF) List H-1
Engineer’s Report (*attachments omitted*)..... H-2
Section 4(f) Coordination (*INDOT E-mail regarding Robe Ann Park and planned trails*) H-17
Section 4(f) Coordination (*Official with Jurisdiction Letter regarding Robe Ann Park*) H-20
INDOT ESD Karst Coordination E-mail H-23

Categorical Exclusion

Appendix A

INDOT Supporting Documentation

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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 Impacts	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	Individual 404 Permit
Wetland Impacts	No adverse impacts to wetlands	< 0.1 acre	-	< 1 acre	≥ 1 acre
Right-of-way³	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)	“No Effect”, “Not likely to Adversely Affect” (Without AMMs ⁴ or with AMMs required for all projects ⁵)	“Not likely to Adversely Affect” (With any other AMMs)	-	“Likely to Adversely Affect”	Project does not fall under Species Specific Programmatic
Threatened/Endangered Species (Any other species)	Falls within guidelines of USFWS 2013 Interim Policy	“No Effect”, “Not likely to Adversely Affect”	-	-	“Likely to Adversely Affect”
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential ⁶
Sole Source Aquifer	Detailed Assessment Not Required	-	-	-	Detailed Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Coastal Zone Consistency	Consistent	-	-	-	Not Consistent
National Wild and Scenic River	Not Present	-	-	-	Present
New Alignment	None	-	-	-	Any
Section 4(f) Impacts	None	-	-	-	Any
Section 6(f) Impacts	None	-	-	-	Any
Added Through Lane	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Coast Guard Permit	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes ⁷
Approval Level <ul style="list-style-type: none"> • District Env. Supervisor • Env. Services Division • FHWA 	Concurrence by INDOT District Environmental or Environmental Services	Yes	Yes	Yes Yes	Yes Yes Yes

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

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

³Permanent and/or temporary right-of-way.

⁴AMMs = Avoidance and Mitigation Measures.

⁵AMMs determined by the IPAC decision key to be needed that are listed in the USFWS *User’s Guide for the Range-wide Programmatic Consultation for Indiana bat and Northern long-eared bat* as “required for all projects”.

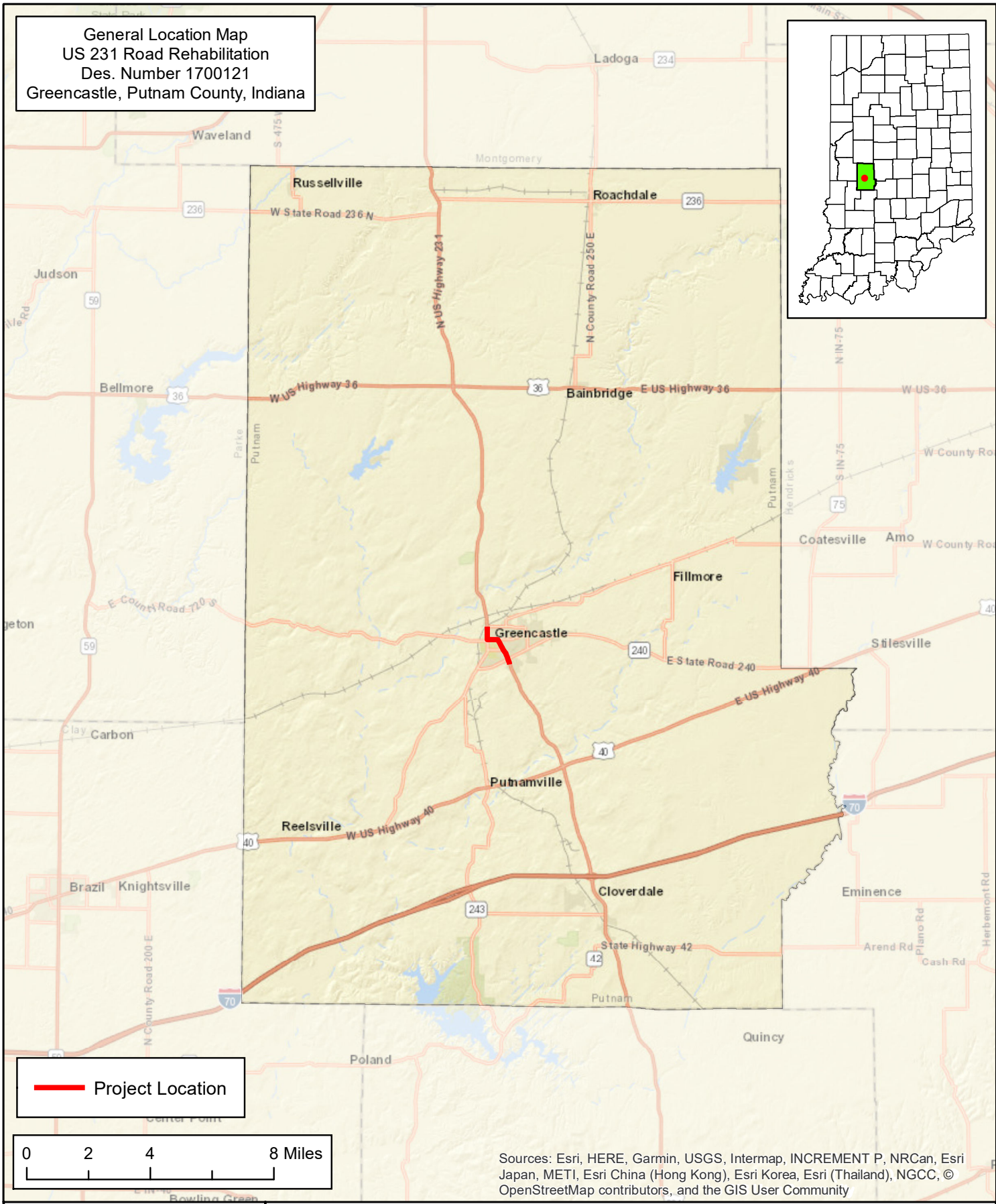
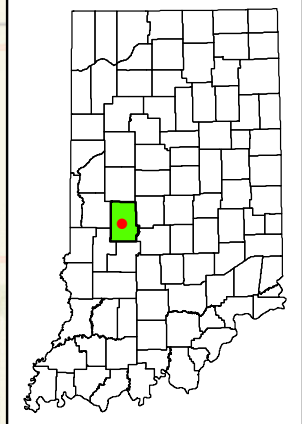
⁶Potential for causing a disproportionately high and adverse impact.


⁷Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

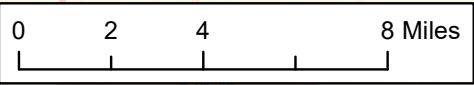
*Substantial public or agency controversy may require a higher-level NEPA document.

Categorical Exclusion
Appendix B
Graphics

General Location Map
 US 231 Road Rehabilitation
 Des. Number 1700121
 Greencastle, Putnam County, Indiana



 Project Location



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



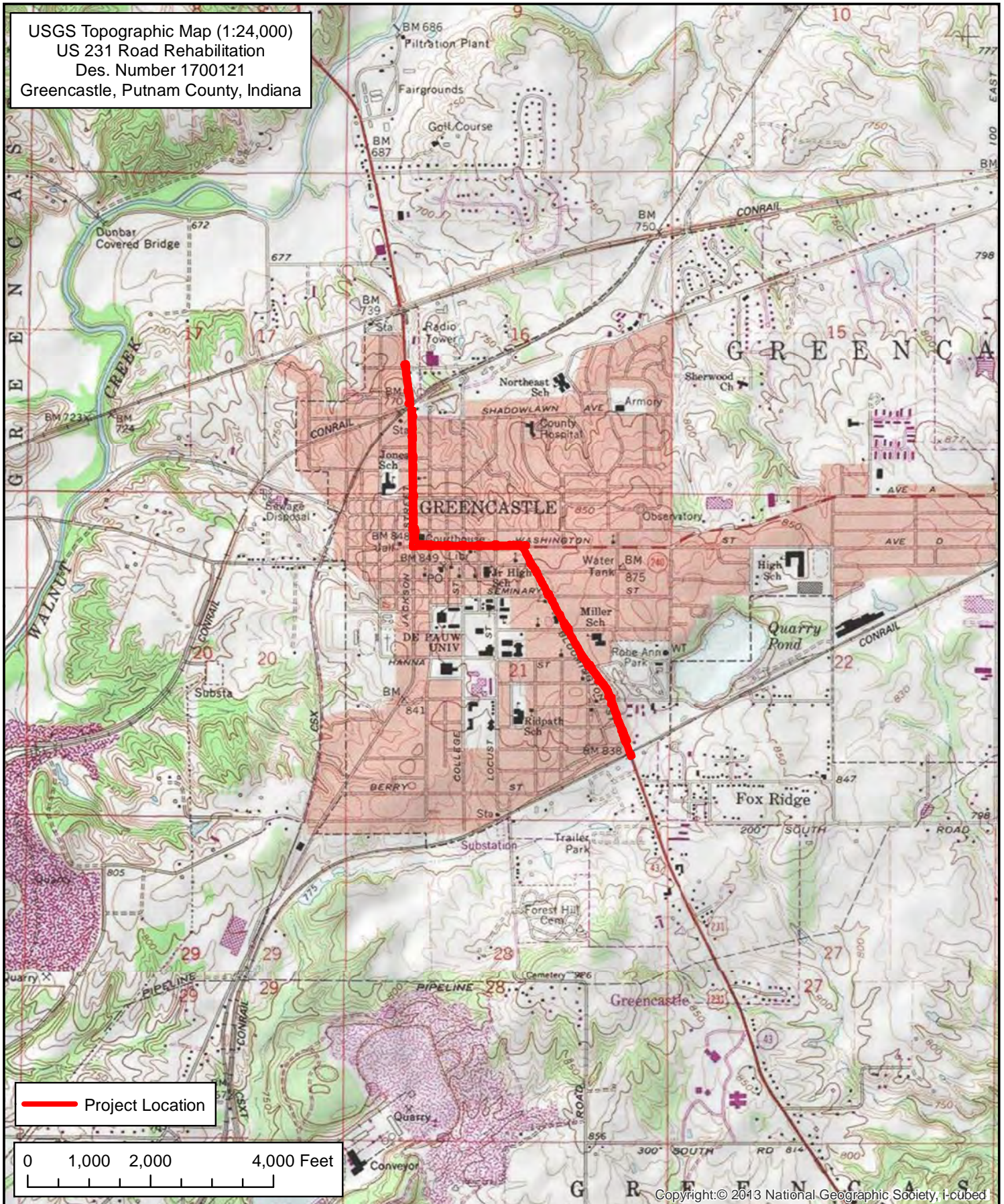
8770 North Street; Suite 110
 Fishers, IN 46038

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

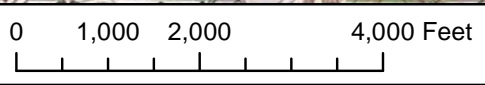
Map Datum: NAD 83
 Map Projection: UTM Zone 16 North



USGS Topographic Map (1:24,000)
 US 231 Road Rehabilitation
 Des. Number 1700121
 Greencastle, Putnam County, Indiana



 Project Location



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8770 North Street, Suite 110
 Fishers, IN 46038

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Topographic Quadrangle obtained from USGS (Greencastle Quadrangle)

Map Datum: NAD 83
 Map Projection: UTM Zone 16 North



Aerial Map (overall project area)
 US 231 Road Rehabilitation
 Des. Number 1700121
 Greencastle, Putnam County, Indiana

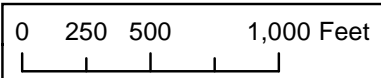


- Construction Limits
- Courthouse Square Historic District
- Eastern Enlargement Historic District
- Robe Ann Park











This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Map Datum: NAD 83
 Map Projection: UTM Zone 16 North



Photograph Location Map (southern project area)
 US 231 Road Rehabilitation
 Des. Number 1700121
 Greencastle, Putnam County, Indiana

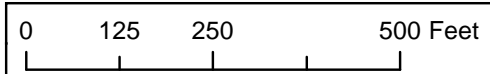


 Photograph Location
 Planned Trail
 Temporary Right-of-way
 Permanent Right-of-way
 Construction Limits
 Courthouse Square Historic District
 Eastern Enlargement Historic District
 Robe Ann Park











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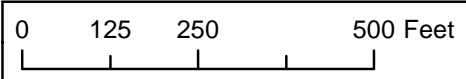
Photograph Location Map (central project area)
 US 231 Road Rehabilitation
 Des. Number 1700121
 Greencastle, Putnam County, Indiana











-  Photograph Location
-  Planned Trail
-  Temporary Right-of-way
-  Permanent Right-of-way
-  Construction Limits
-  Courthouse Square Historic District
-  Eastern Enlargement Historic District
-  Robe Ann Park

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Map Datum: NAD 83
 Map Projection: UTM Zone 16 North



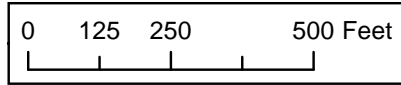
Photograph Location Map (northern project area)
 US 231 Road Rehabilitation
 Des. Number 1700121
 Greencastle, Putnam County, Indiana

-  Photograph Location
-  Planned Trail
-  Temporary Right-of-way
-  Permanent Right-of-way
-  Construction Limits
-  Courthouse Square Historic District
-  Eastern Enlargement Historic District
-  Robe Ann Park



This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Map Datum: NAD 83
 Map Projection: UTM Zone 16 North





1. Looking northwest at SR 240 (Veterans Memorial Highway) and US 231 (Bloomington Street) intersection



2. Looking southeast along US 231 (Bloomington Street) near the intersection of Block Avenue and US 231



3. Looking northwest along US 231 (Bloomington Street) near the intersection of Block Avenue and US 231



4. Looking northwest at Robe-Ann Park from US 231 (Bloomington Street) and Tennessee Street



5. Looking west towards DePauw University from the intersection of US 231 (Bloomington Street) and Anderson Street



6. Looking north along US 231 (Bloomington Street) from the intersection of US 231 (Bloomington Street) and Seminary Street



7. Looking northwest along US 231 (Bloomington Street) from Walnut Street



8. Looking northeast at the intersection of US 231 (Washington Street) and Locust Street



9. Looking west along US 231 (Washington Street) between Spring Street and Locust Street



10. Looking east along sidewalk and US 231 (Washington Street) between Vine Street and College Avenue



11. Looking north at intersection of US 231 (Washington Street) and Vine Street



12. Looking northwest at the intersection of US 231 (Washington Street) and Jackson Street



13. Looking south along US 231 (Jackson Street) between Jacob Street and Liberty Street



14. Looking northwest at the intersection of US 231 (Jackson Street) and Shadowlawn Avenue



15. Looking southwest along US 231 (Jackson Street) from the railroad track north of Shadowlawn Avenue



16. Looking north along US 231 (Jackson Street) from the railroad track north of Shadowlawn Avenue

PROJECT	DESIGNATION
1700121	1700121
CONTRACT	BRIDGE FILE
RS 40573	N/A

INDIANA DEPARTMENT OF TRANSPORTATION



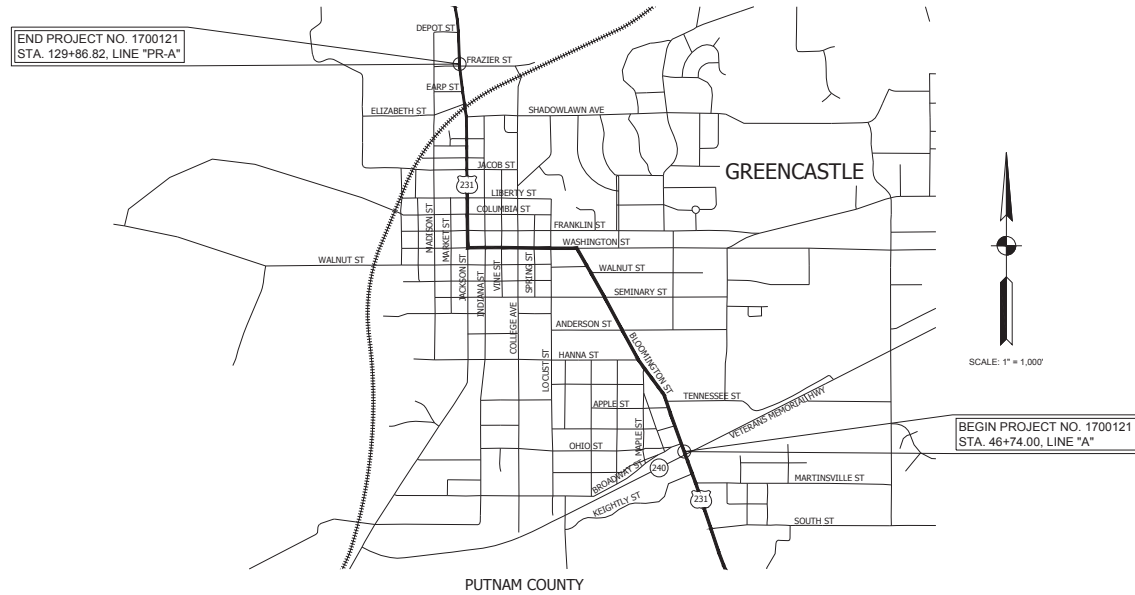
ROAD PLANS

U.S. 231 ROAD REHABILITATION

AT: RP 149+06 TO RP 150+67
 PROJECT NO. 1700121 P.E.
 1700121 R/W
 1700121 CONST.

U.S. 231 ROAD REHABILITATION AND RECONSTRUCTION BEGINNING AT A POINT 0.03 MILES SOUTH OF THE INTERSECTION OF S.R. 240 (SOUTH STREET) EXTENDING NORTHWARD THROUGH THE CITY OF GREENCASTLE TO THE INTERSECTION OF FRAZIER STREET IN SECTIONS 16, 21, & 28, TOWNSHIP 14 NORTH, RANGE 4 WEST IN GREENCASTLE TOWNSHIP, PUTNAM COUNTY, INDIANA.

Gross Length: 1.57 MI.
 Net Length: 1.57 MI.
 Maximum Grade: 6.35 %



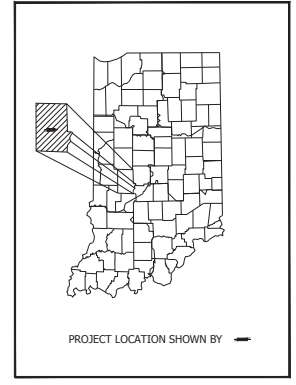
TRAFFIC DATA		STA. 46+74 TO 88+44 LINE "A"
A.A.D.T. (2017)		10,520 V.P.D.
A.A.D.T. (2042)		13,900 V.P.D.
D.I.V. (2042)		9.66 %
DIRECTIONAL DISTRIBUTION		50.43 %
TRUCKS		8.96 % A.A.D.T. 7.98 % D.I.V.

TRAFFIC DATA		STA. 88+44 TO 123+15 LINE "A"
A.A.D.T. (2017)		14,130 V.P.D.
A.A.D.T. (2042)		19,900 V.P.D.
D.I.V. (2042)		12.38 %
DIRECTIONAL DISTRIBUTION		50.17 %
TRUCKS		6.67 % A.A.D.T. 5.32 % D.I.V.

TRAFFIC DATA		STA. 123+15 TO 129+86.82 LINE "PR-A"
A.A.D.T. (2017)		9,180 V.P.D.
A.A.D.T. (2042)		9,800 V.P.D.
D.I.V. (2042)		9.77 %
DIRECTIONAL DISTRIBUTION		49.31 %
TRUCKS		8.05 % A.A.D.T. 4.80 % D.I.V.

DESIGN DATA		STA. 46+74 TO 122+40.00 LINE "A"
DESIGN SPEED		30 M.P.H.
PROJECT DESIGN CRITERIA		4R (RECONSTRUCTION)
FUNCTIONAL CLASSIFICATION		OTHER PRINCIPAL ARTERIAL
TERRAIN		URBAN (BUILT-UP)
ACCESS CONTROL		NONE

DESIGN DATA		STA. 122+40.00 TO 129+86.82 LINE "PR-A"
DESIGN SPEED		40 M.P.H.
PROJECT DESIGN CRITERIA		4R (RECONSTRUCTION)
FUNCTIONAL CLASSIFICATION		OTHER PRINCIPAL ARTERIAL
TERRAIN		URBAN (INTERMEDIATE)
ACCESS CONTROL		NONE



BEGIN: LATITUDE: 39° 38' 04" N LONGITUDE: 86° 51' 10" W
 END: LATITUDE: 39° 39' 08" N LONGITUDE: 86° 51' 57" W

INDIANA DEPARTMENT OF TRANSPORTATION
 STANDARD SPECIFICATIONS DATED 2020
 TO BE USED WITH THESE PLANS.

RQAW
 INTENTIONAL INNOVATION

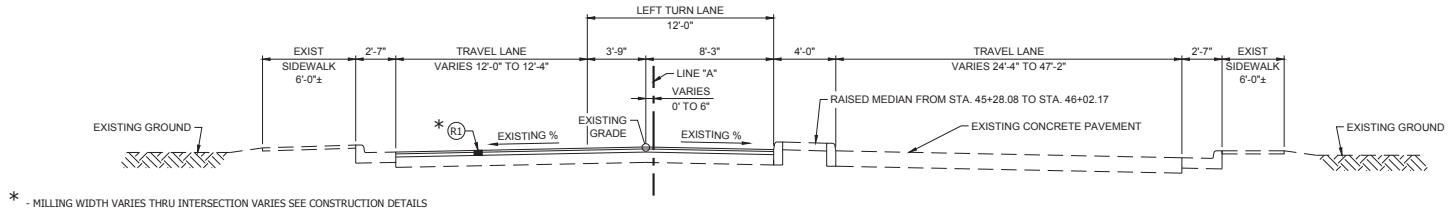
8770 NORTH ST., STE. 110
 FISHERS, IN 46038
 P: 317.588.1798
 F: 317.588.1799
 WWW.RQAW.COM

PLANS PREPARED BY:	RQAW Corporation, Inc.	317-588-1798
		PHONE NUMBER
CERTIFIED BY:		DATE
APPROVED FOR LETTING:		DATE
	INDIANA DEPARTMENT OF TRANSPORTATION	

	BRIDGE FILE
	N/A
	DESIGNATION
	1700121
SURVEY BOOK	SHEET
	1 of 185
CONTRACT	PROJECT
RS 40573	1700121

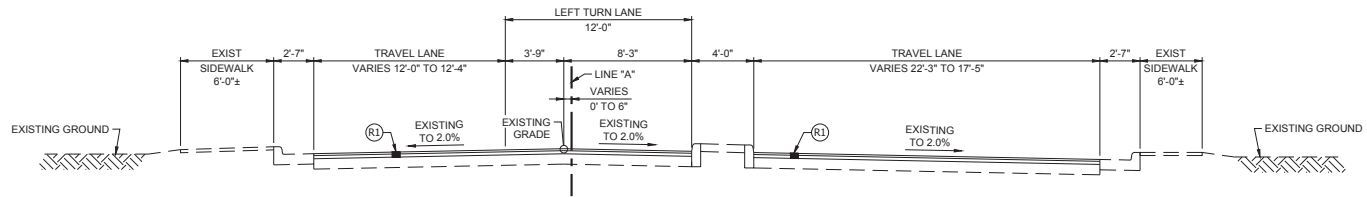
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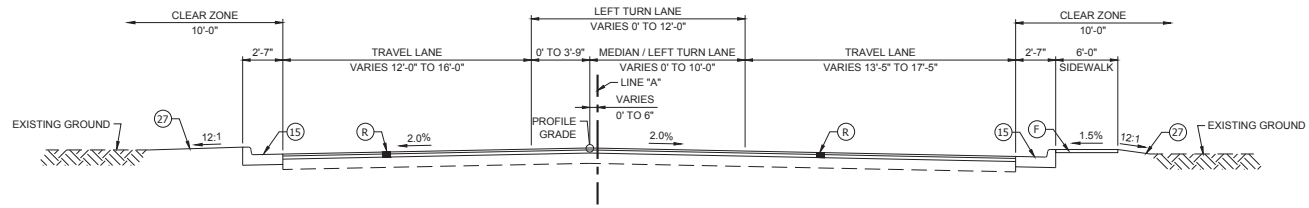
INCIDENTAL TYPICAL SECTION

STA. 43+47.69 TO STA. 46+02.17 "A"



INCIDENTAL TYPICAL SECTION

STA. 46+02.17 TO STA. 46+74 "A"



TYPICAL SECTION

STA. 46+74 TO STA. 49+30 "A"

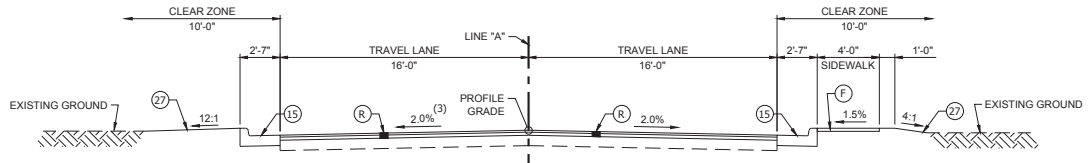
LEGEND	
(15) Combined Concrete Curb & Gutter	(K) Full Depth Pavement
(26) Sodding, Nursery	(U) Underdrain
(27) Seed Mixture, U	(R) Milling, Asphalt 2.0" 4" Resurface
(F) Concrete Sidewalk, 4"	(X) Brick Pavers
(R1) Milling, Asphalt 1.5" 1.5" Resurface	

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: L.L.C.	DRAWN: K.R.U.	
CHECKED: B.C.F.	CHECKED: L.L.C.	

INDIANA DEPARTMENT OF TRANSPORTATION	
PROPOSED TYPICAL CROSS SECTIONS	
U.S. 231	

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	3 OF 185
RS 40573	PROJECT
	1700121

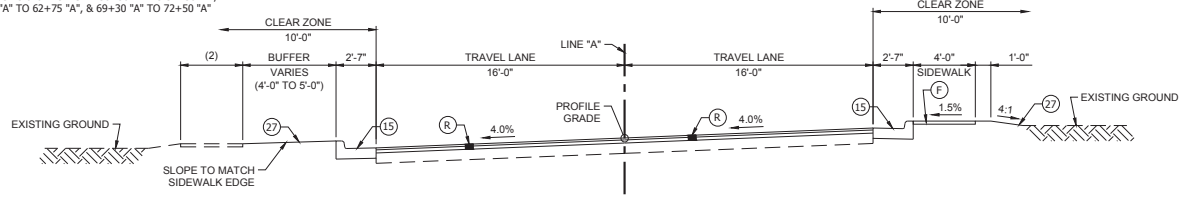
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 EDITOR: JLD
 PLOT DATE: 8/11/2020 10:53:38 AM
 EDITOR: JLD
 PLOT DATE: 8/11/2020 10:53:38 AM



- (1) BUFFER AND SIDEWALK 0'-0" FROM STA. 49+30 "A" TO STA. 54+40.33 "A"
 BUFFER 0'-0" FROM STA. 58+25 "A" TO STA. 62+25 "A"
- (1a) SIDEWALK 6'-0" IN WIDTH FROM STA. 59+99.65 "A" TO STA. 61+67.81 "A"
- (2) EXISTING SIDEWALK NOT TO BE DISTURBED, STA. 53+92.57 "A" TO STA. 54+40.33 "A",
 SEE CONSTRUCTION DETAIL
- (3) CROSS SLOPE OF 3.0% FROM STA. 50+50 "A" TO 51+50 "A",
 58+75 "A" TO 62+75 "A", & 69+30 "A" TO 72+50 "A"

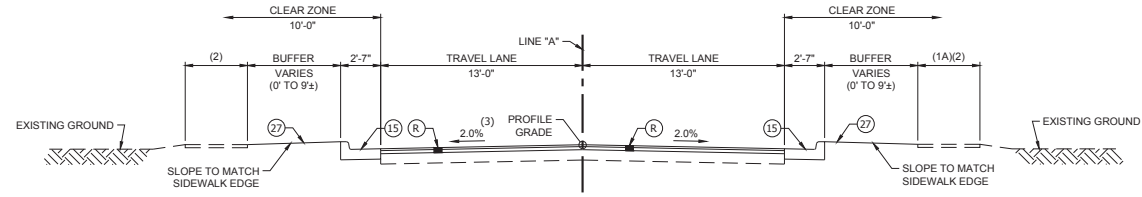
TYPICAL SECTION

STA. 49+30 TO STA. 53+92.57 "A"
 STA. 53+92.57 TO STA. 59+99.65 "A"



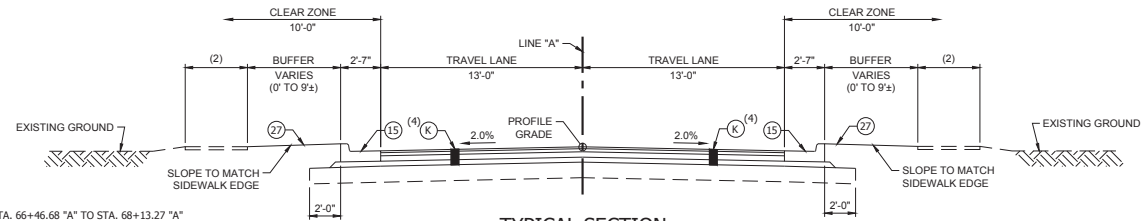
TYPICAL SECTION - SUPERELEVATED

STA. 54+40.33 TO STA. 55+74.82 "A"



TYPICAL SECTION

STA. 59+99.65 TO STA. 65+96.68 "A"



TYPICAL SECTION

STA. 65+96.68 TO STA. 66+46.68 "A"
 STA. 68+13.27 TO STA. 68+63.27 "A"

- (4) PAVING EXCEPTION; STA. 66+46.68 "A" TO STA. 68+13.27 "A"

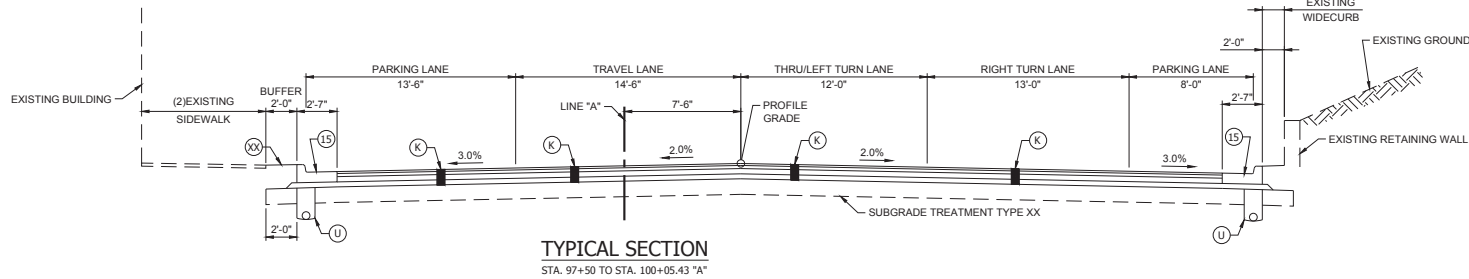
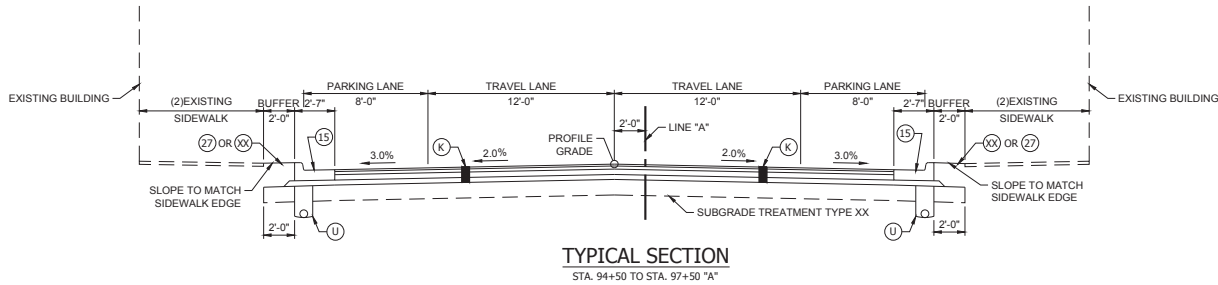
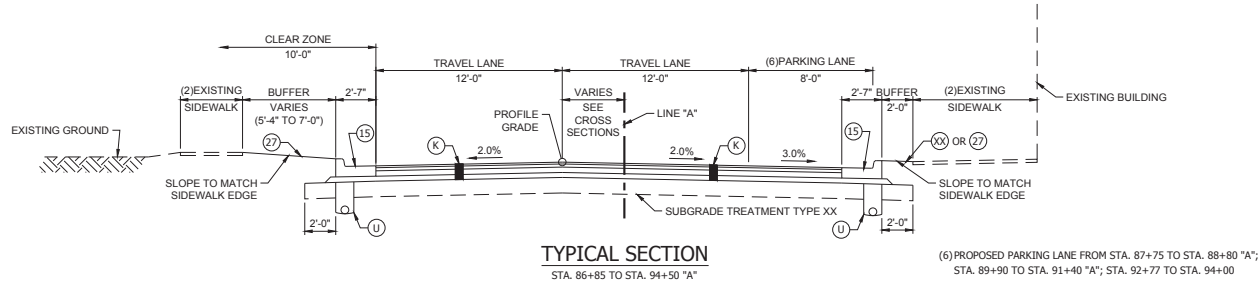
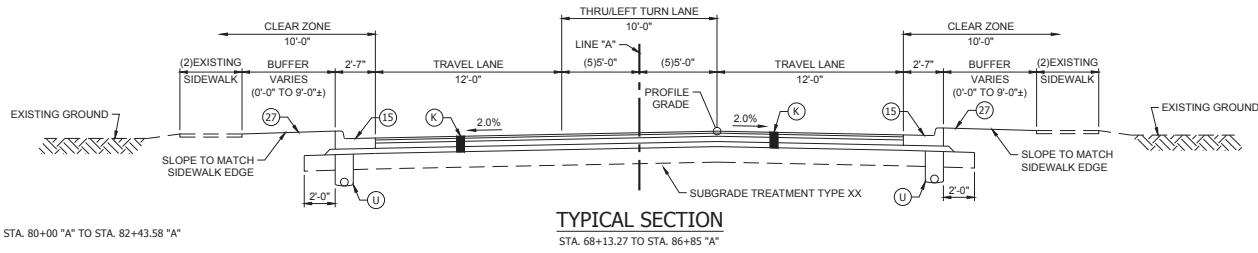
LEGEND	
15 Combined Concrete Curb & Gutter	K Full Depth Pavement
27 Sodding, Nursery	Ⓜ Milling, Asphalt 1.5" 1.5" Resurface
U Seed Mixture, U	Ⓢ Underdrain
F Concrete Sidewalk, 4"	Ⓜ Milling, Asphalt 2.0" 4" Resurface
	Ⓜ Brick Pavers

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: L.L.C.	DRAWN: K.R.U.	
CHECKED: B.C.F.	CHECKED: L.L.C.	

INDIANA DEPARTMENT OF TRANSPORTATION	
PROPOSED TYPICAL CROSS SECTIONS U.S. 231	

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEET
CONTRACT	4 of 185
RS 40573	PROJECT
	1700121

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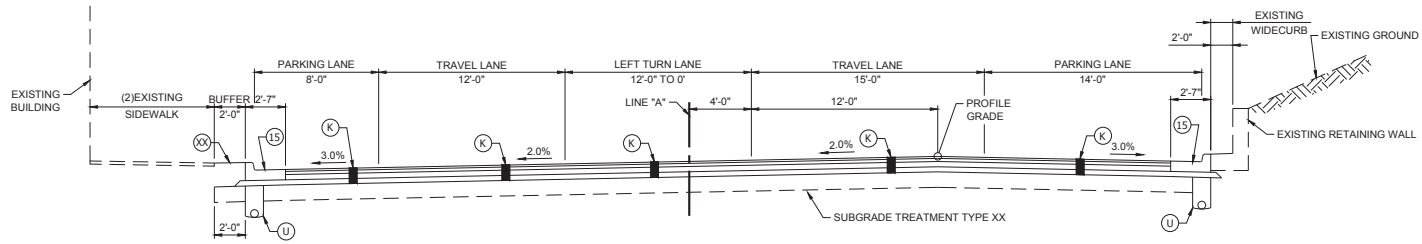


LEGEND	
(15) Combined Concrete Curb & Gutter	(K) Full Depth Pavement
(26) Sodding, Nursery	(U) Underdrain
(27) Seed Mixture, U	(R) Milling, Asphalt 2.0" 4" Resurface
(F) Concrete Sidewalk, 4"	(XX) Brick Pavers
(15) Milling, Asphalt 1.5" 1.5" Resurface	

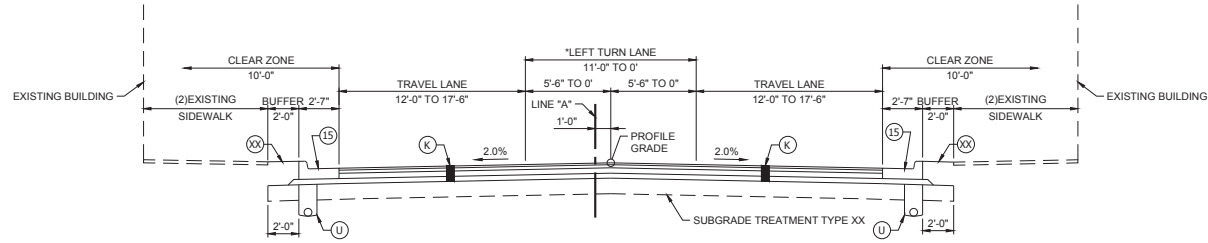
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INDIANA DEPARTMENT OF TRANSPORTATION	
PROPOSED TYPICAL CROSS SECTIONS U.S. 231	

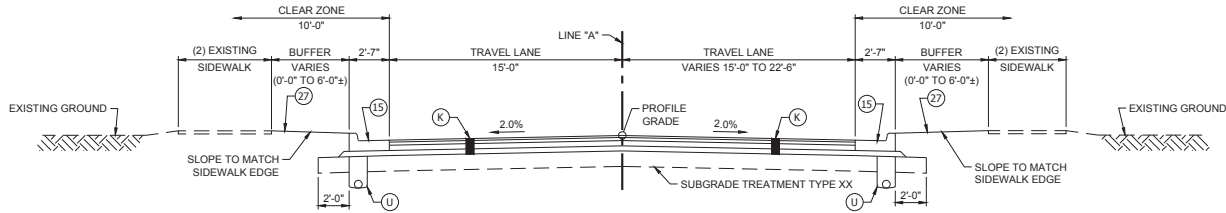
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VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	5 OF 185
RS 40573	PROJECT
	1700121



TYPICAL SECTION
STA. 100+05.43 TO STA. 102+50 "A"

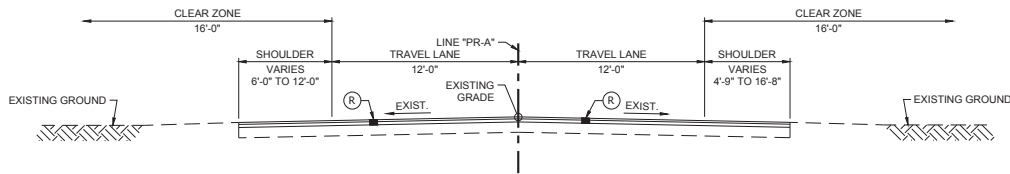


TYPICAL SECTION
STA. 102+50 TO STA. 105+30 "A"



TYPICAL SECTION
STA. 105+30 TO STA. 122+25 "A"

PAVING EXCEPTION - STA. 122+25 TO STA. 123+05.00 "A"
(RAILROAD CROSSING)



TYPICAL SECTION
STA. 123+05.00 "A" TO STA. 129+86.82 "PR-A"

LEGEND	
(15) Combined Concrete Curb & Gutter	(K) Full Depth Pavement
(26) Sodding, Nursery	(R) Milling, Asphalt 1.5" Resurface
(27) Seed Mixture, U	(U) Underdrain
(F) Concrete Sidewalk, 4"	(XX) Brick Pavers
(O) Compacted Agg. No. 53	
(R) Milling, Asphalt 2.0" 4" Resurface	

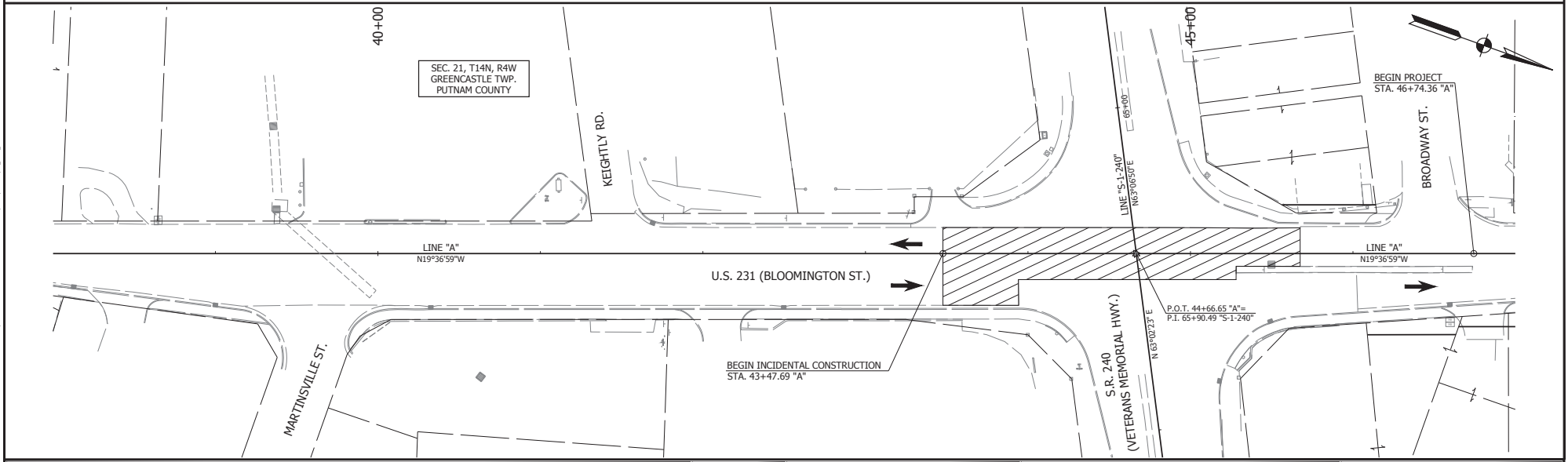
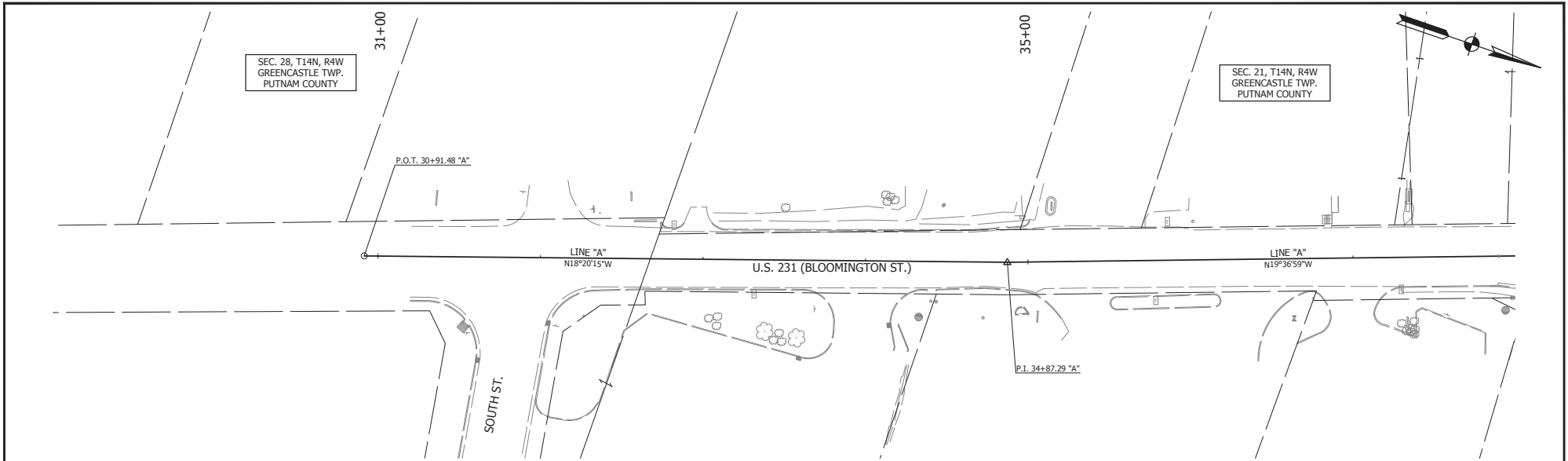
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DESIGNED: L.L.C.	DRAWN: K.R.U.	
CHECKED: B.C.F.	CHECKED: L.L.C.	

INDIANA DEPARTMENT OF TRANSPORTATION	
PROPOSED TYPICAL CROSS SECTIONS	
U.S. 231	

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEET
CONTRACT	6 OF 185
RS 40573	PROJECT
	1700121

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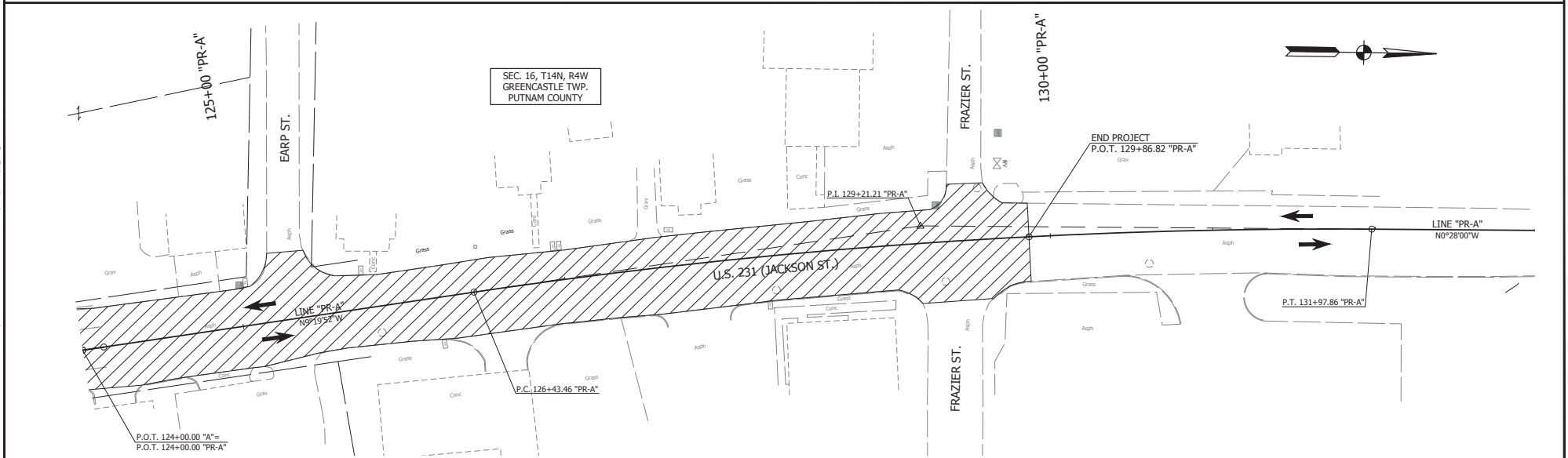
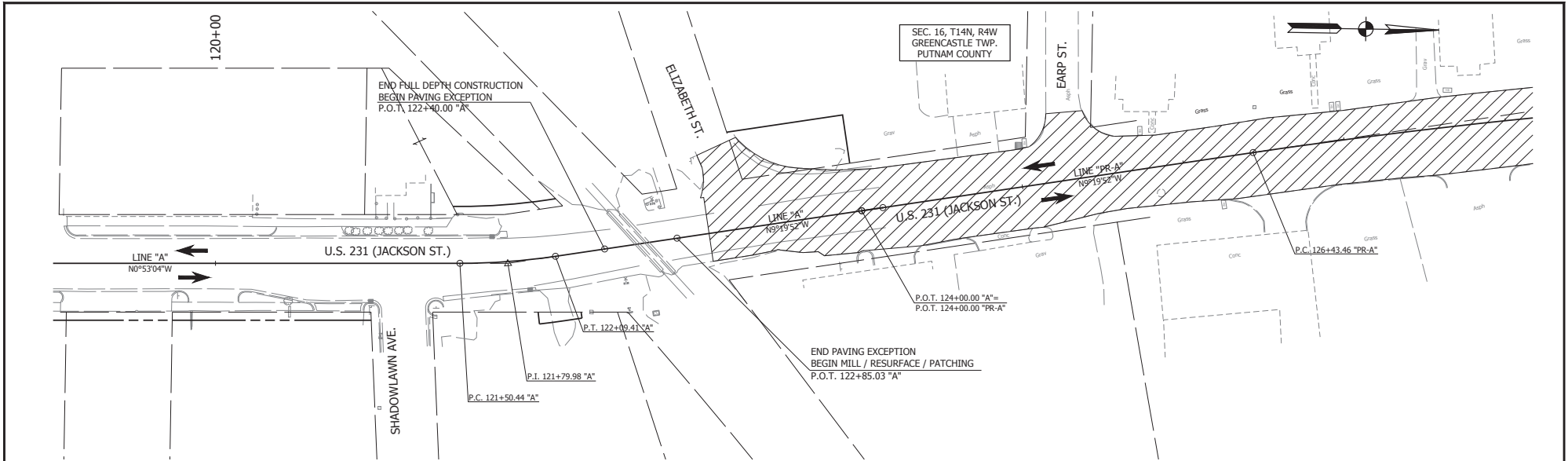
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	AREA OF CONSTRUCTION MILL AND RESURFACE
	AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT
WORK ZONE DESIGN SPEED = 20 MPH	

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: K.R.U.	DRAWN: K.R.U.	
CHECKED: L.L.C.	CHECKED: L.L.C.	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE I

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
	1700121
SURVEY BOOK	SHEET
	7 of 185
CONTRACT	PROJECT
RS 40573	1700121



LEGEND

	AREA OF CONSTRUCTION MILL AND RESURFACE
	AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT

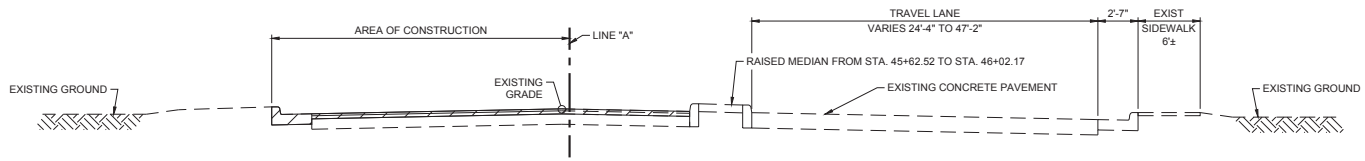
WORK ZONE DESIGN SPEED = 20 MPH

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: K.R.U.	DRAWN: K.R.U.	
CHECKED: L.L.C.	CHECKED: L.L.C.	

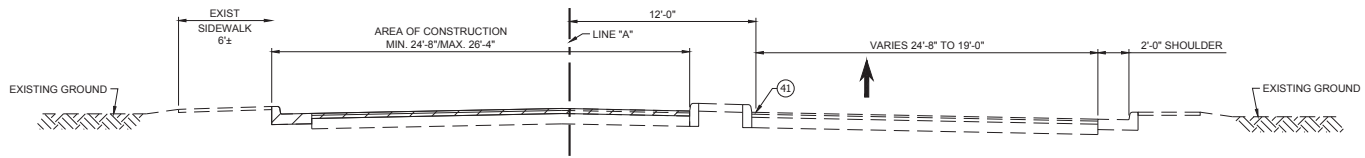
INDIANA DEPARTMENT OF TRANSPORTATION	
MAINTENANCE OF TRAFFIC PHASE I	

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	PROJECT
RS 40573	1700121

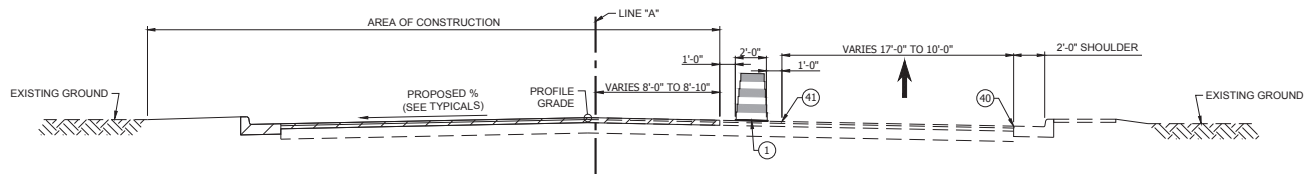
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 PLOT SCALE: 1" = 40'
 DATE: 8/17/20



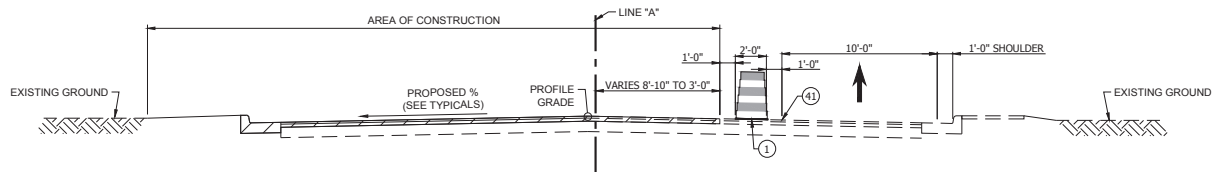
INCIDENTAL TYPICAL SECTION
STA. 45+62.52 TO STA. 46+02.17 "A"



INCIDENTAL TYPICAL SECTION
STA. 46+02.17 TO STA. 46+74 "A"



TYPICAL SECTION
STA. 46+74 TO STA. 48+00 "A"



TYPICAL SECTION
STA. 48+00 TO STA. 49+30 "A"

- LEGEND**
- ▨ AREA OF CONSTRUCTION
 - ① CONSTRUCTION DRUM
 - ② TEMPORARY CONCRETE BARRIER
 - ④⑥ TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - ④① TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

RECOMMENDED FOR APPROVAL _____
DESIGN ENGINEER DATE

DESIGNED: L.L.C. DRAWN: K.R.U.

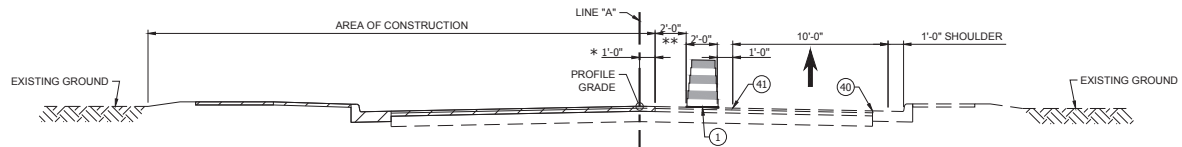
CHECKED: B.C.F. CHECKED: L.L.C.

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - PHASE I-A
U.S. 231

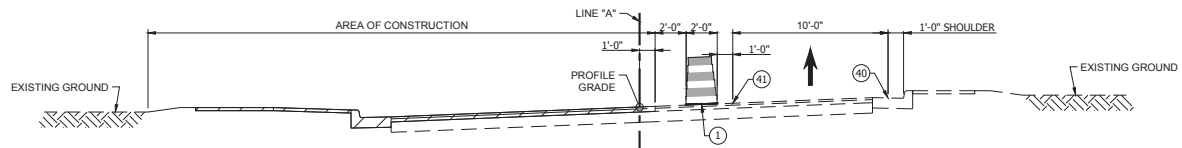
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1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	10 OF 185
RS 40573	PROJECT
	1700121

PRINT DATE: 6/11/2019
 PLOT DATE: 6/11/2019 8:50 AM
 EDITOR: ALP
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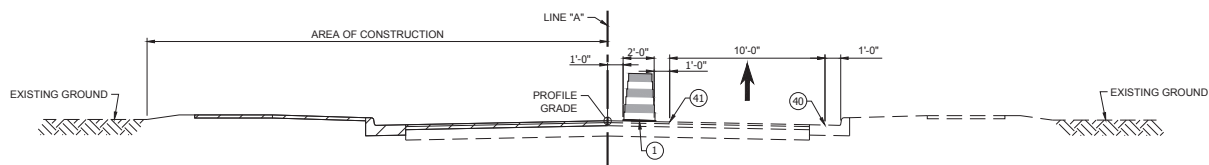


TYPICAL SECTION
 STA. 49+30 TO STA. 54+40.33 "A"
 STA. 55+74.82 "A" TO STA. 62+90.41 "A"

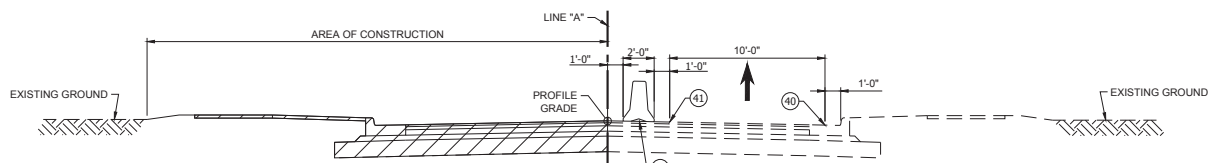
* VARIES 1'-0" TO 0' FROM STA. 61+39.13 TO STA. 61+89.41
 ** VARIES 2'-0" TO 1'-0" FROM STA. 61+39.13 TO STA. 62+90.41



TYPICAL SECTION - SUPERELEVATED
 STA. 54+40.33 TO STA. 55+74.82 "A"



TYPICAL SECTION
 STA. 62+90.41 TO STA. 65+26.69 "A"
 STA. 69+32.80 TO STA. 80+00 "A"



(3) PAVING EXCEPTION; STA. 66+46.68 "A" TO STA. 68+12.80 "A"

TYPICAL SECTION
 STA. 65+26.69 TO STA. 66+46.68 "A"
 STA. 68+12.80 TO STA. 69+32.80 "A"

- LEGEND**
- AREA OF CONSTRUCTION
 - CONSTRUCTION DRUM
 - TEMPORARY CONCRETE BARRIER
 - TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: L.L.C.	DRAWN: K.R.U.	
CHECKED: B.C.F.	CHECKED: L.L.C.	

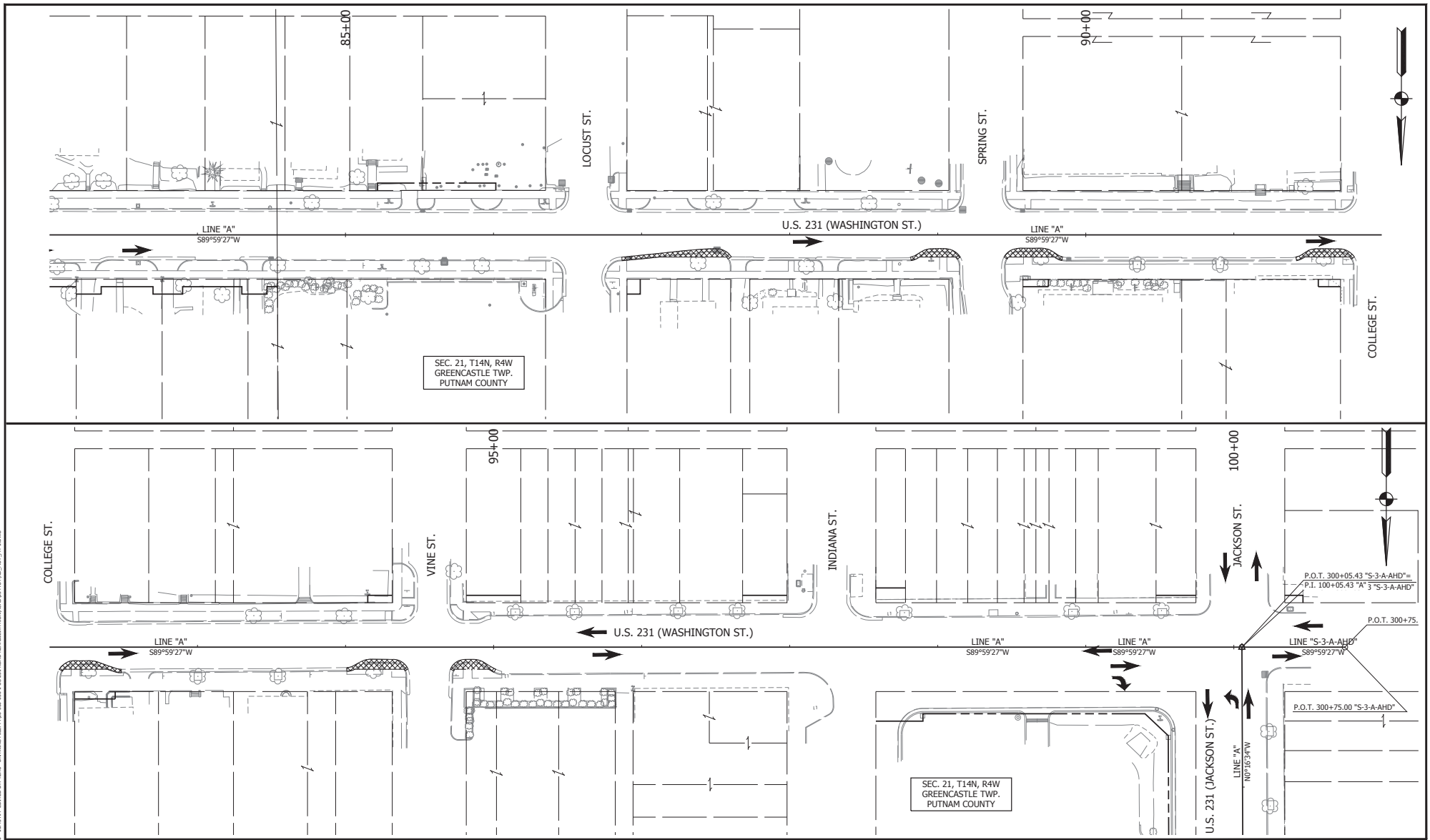
INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - PHASE I-A
 U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	11 OF 185
RS 40573	PROJECT
	1700121

PRINT DATE: 6/11/2019
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 EDITOR: M. J. W. / M. J. W. / M. J. W.

PRINT DATE: 07/20/2010 11:45 AM
 USER: 04878:56202 - 11:45 AM
 EDITED BY: JYH
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 PLOT DATE: 07/20/2010 11:45 AM

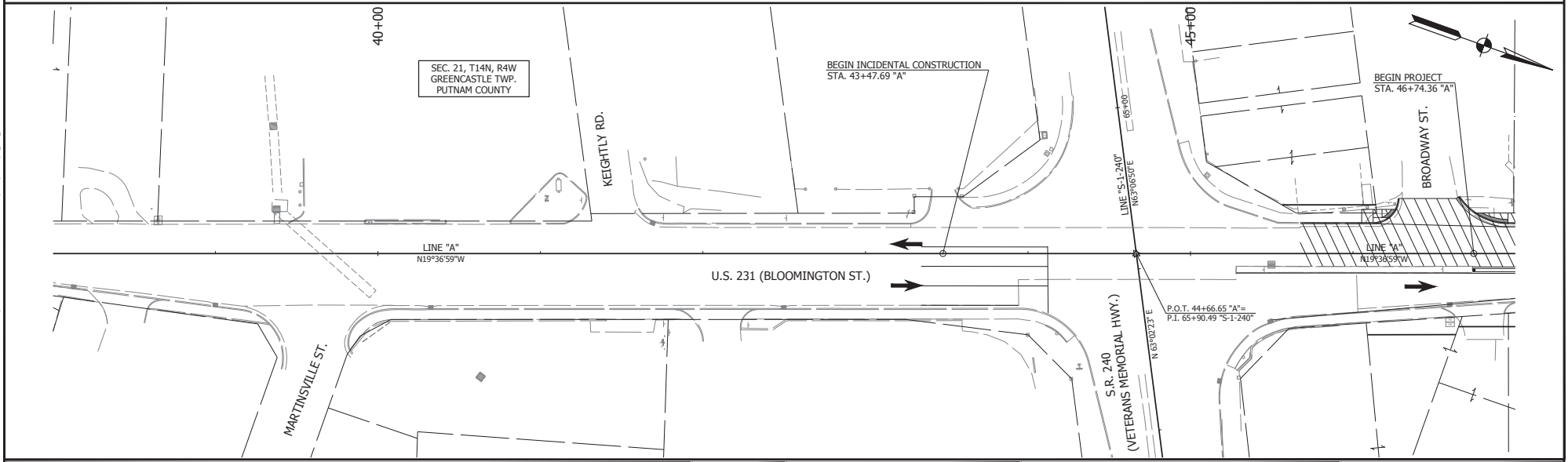
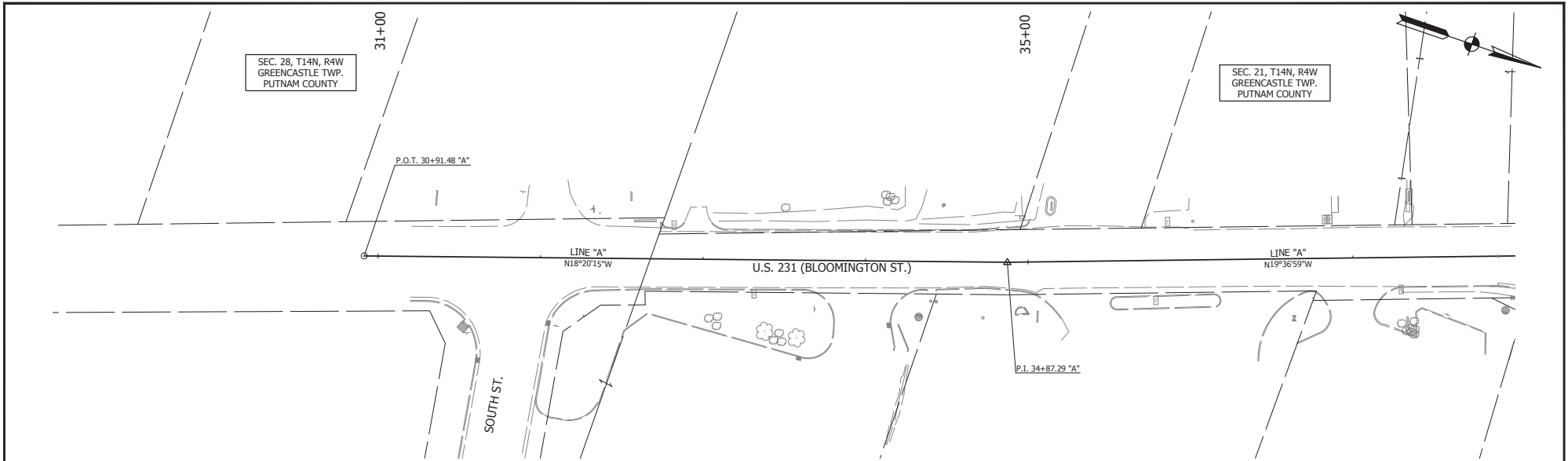


LEGEND	
	AREA OF CONSTRUCTION MILL AND RESURFACE
	AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT
WORK ZONE DESIGN SPEED = 20 MPH	

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: <u>K.R.U.</u>	DRAWN: <u>K.R.U.</u>	
CHECKED: <u>LLC</u>	CHECKED: <u>LLC</u>	

INDIANA DEPARTMENT OF TRANSPORTATION
MAINTENANCE OF TRAFFIC PHASE I

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	8 of 185
RS 40573	PROJECT
	1700121



PRINT DATE: 09/21/2017 10:02:31 AM
 PLOT DATE: 09/20/2017 10:02:31 AM
 PLOT SCALE: 1.0000
 PLOT SHEET: 185 OF 185
 PLOT FILE: I:\2017\1700121\1700121_185.dwg
 PLOT USER: K.R.U.
 PLOT DEVICE: HP DesignJet 2400

LEGEND	
	AREA OF CONSTRUCTION MILL AND RESURFACE
	AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT
WORK ZONE DESIGN SPEED = 20 MPH	

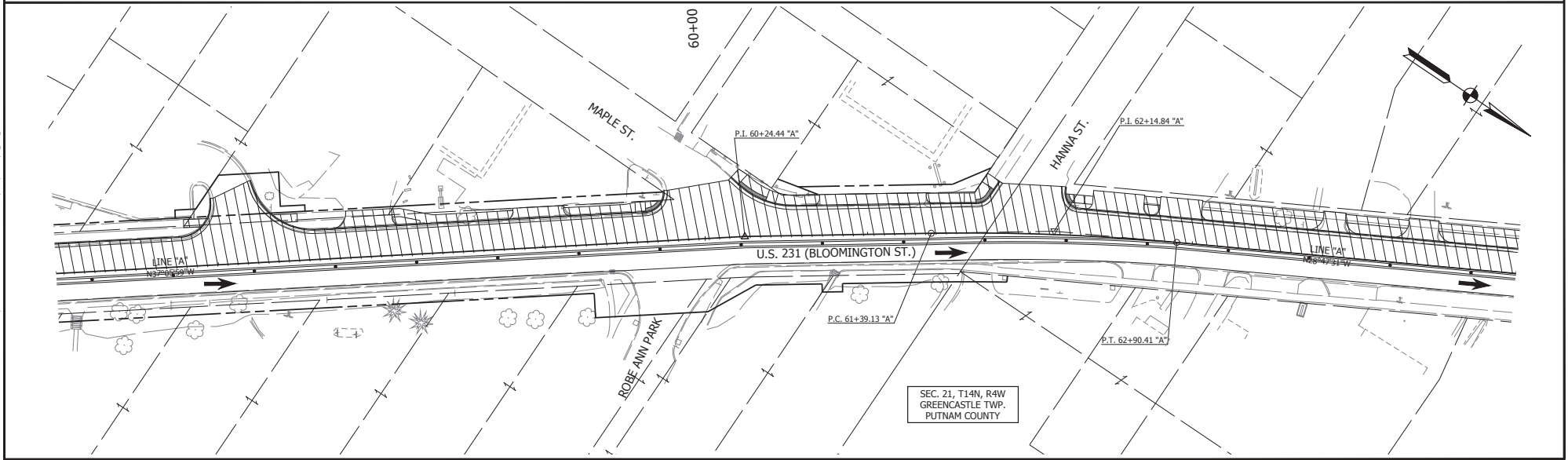
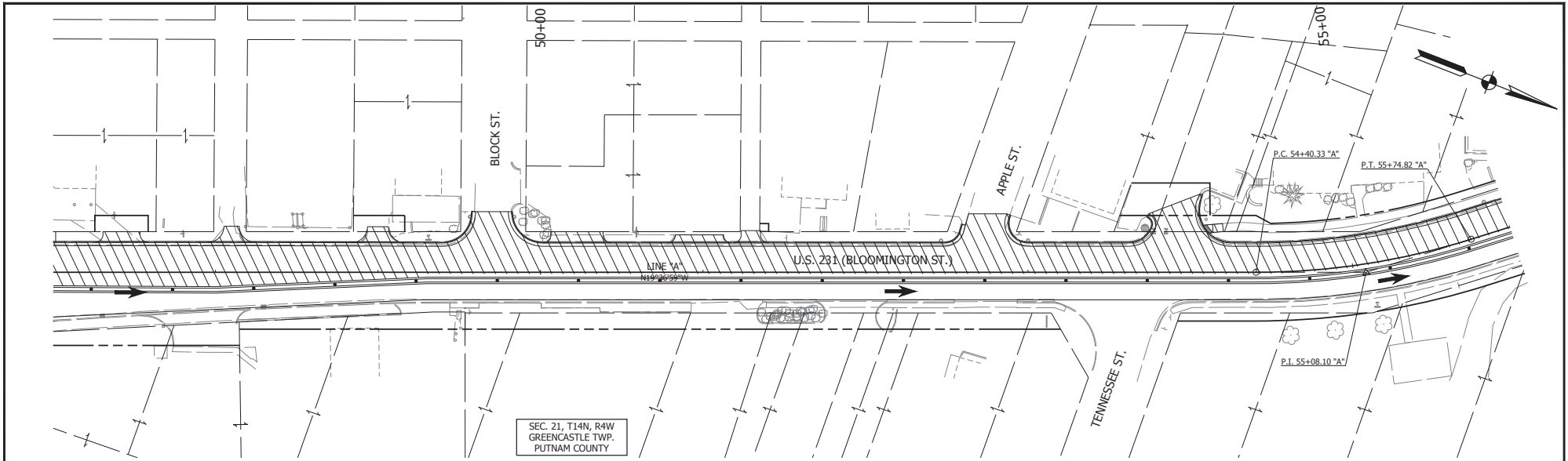
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: K.R.U.	DRAWN: K.R.U.	
CHECKED: L.L.C.	CHECKED: L.L.C.	

INDIANA
DEPARTMENT OF TRANSPORTATION

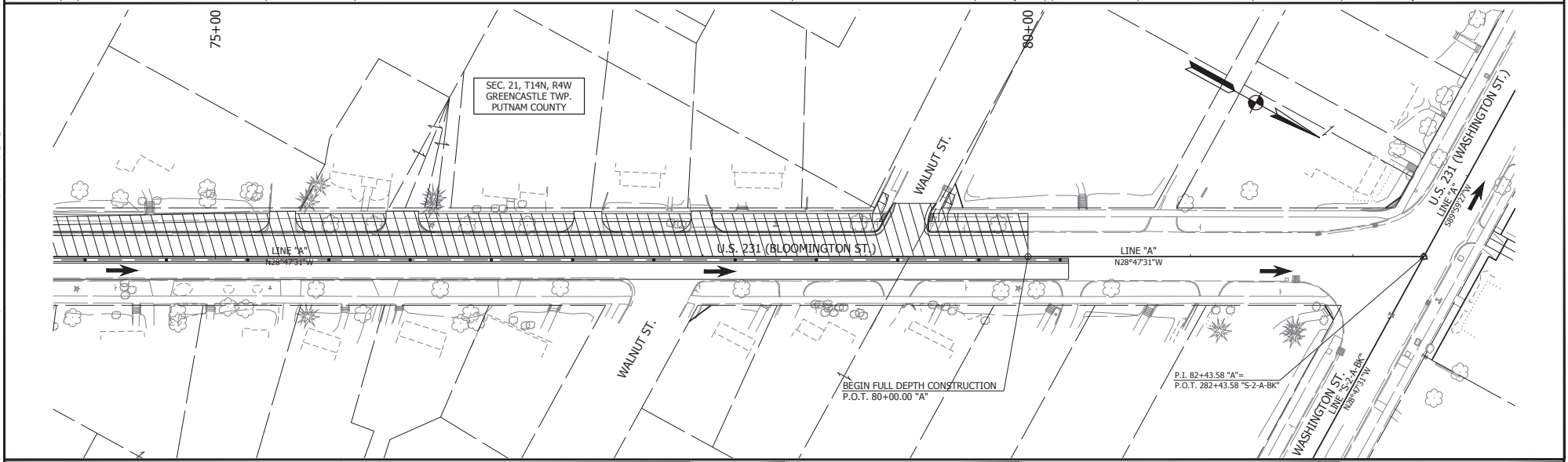
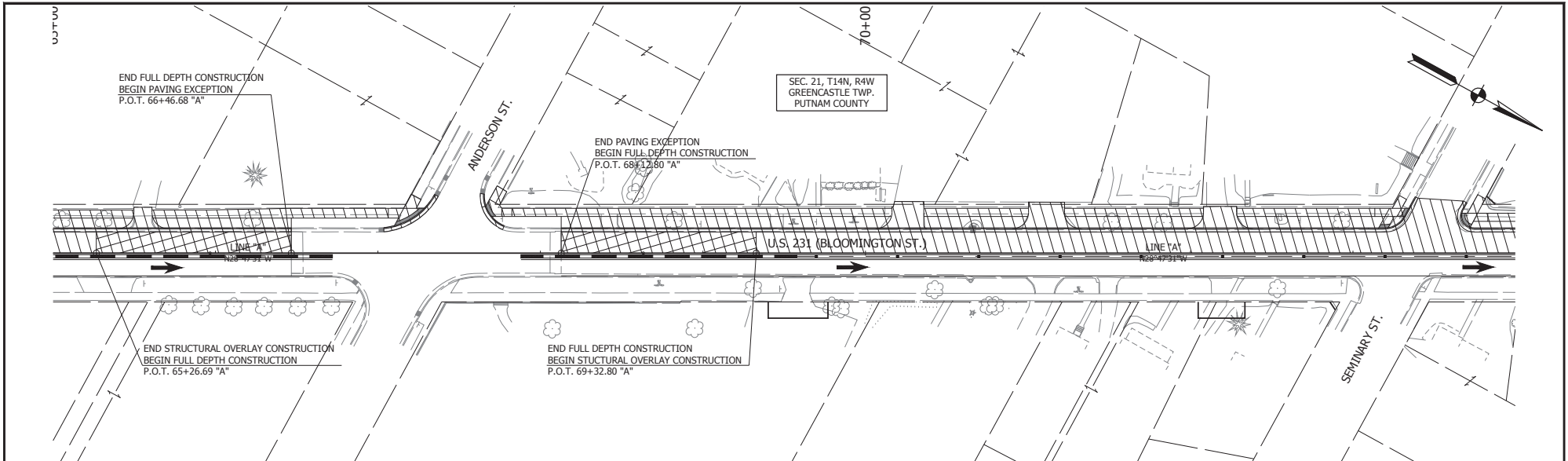
MAINTENANCE OF TRAFFIC
PHASE I-A

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEET
CONTRACT	PROJECT
RS 40573	1700121

PRINT DATE: 02/20/20
 CADD SCALE: 1" = 40' (AS SHOWN)
 DRAWING FILE: P1700121
 DESIGNER: K.R.U.
 DATE: 02/09/14
 EDITOR: M.P.
 DRAWING TITLE: MAINTENANCE OF TRAFFIC PHASE I-A
 PROJECT: 1700121

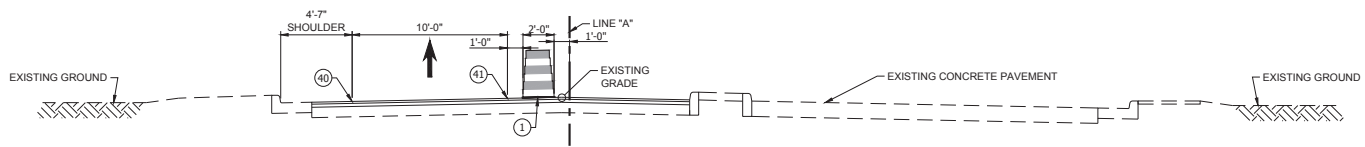


LEGEND AREA OF CONSTRUCTION HILL AND RESURFACE AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT WORK ZONE DESIGN SPEED = 20 MPH	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION MAINTENANCE OF TRAFFIC PHASE I-A	HORIZONTAL SCALE _____ BRIDGE FILE _____
	DESIGNED: <u>K.R.U.</u> DRAWN: <u>K.R.U.</u> CHECKED: <u>LLC.</u> CHECKED: <u>LLC.</u>		VERTICAL SCALE _____ DESIGNATION _____ SURVEY BOOK _____ SHEET _____ CONTRACT _____ PROJECT _____ RS 40573 13 OF 18S 1700121



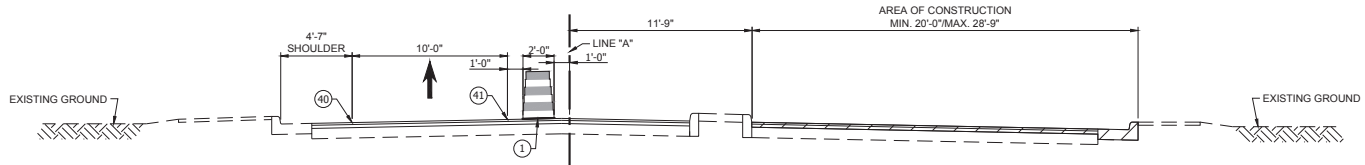
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<p>LEGEND</p> <p> AREA OF CONSTRUCTION MILL AND RESURFACE</p> <p> AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT</p> <p>WORK ZONE DESIGN SPEED = 20 MPH</p>	<p>RECOMMENDED FOR APPROVAL _____</p> <p>DESIGN ENGINEER _____ DATE _____</p>	<p>INDIANA DEPARTMENT OF TRANSPORTATION</p> <p>MAINTENANCE OF TRAFFIC PHASE I-A</p>	<p>HORIZONTAL SCALE _____</p> <p>BRIDGE FILE _____</p>
	<p>DESIGNED: <u>K.R.U.</u> DRAWN: <u>K.R.U.</u></p> <p>CHECKED: <u>L.L.C.</u> CHECKED: <u>L.L.C.</u></p>		<p>VERTICAL SCALE _____</p> <p>DESIGNATION _____</p> <p>1700121</p>
			<p>SURVEY BOOK _____</p> <p>SHEET _____</p> <p>CONTRACT _____</p> <p>PROJECT _____</p> <p>RS 40573 _____</p> <p>1700121</p>



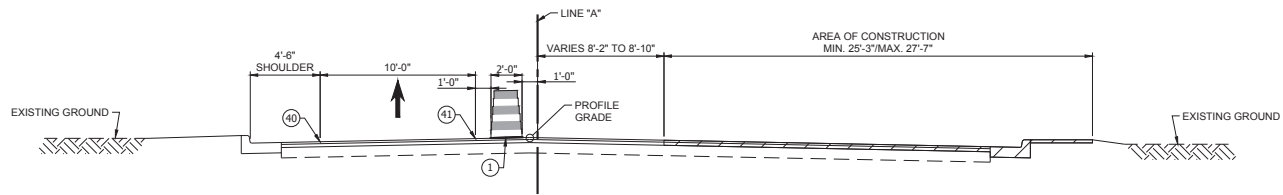
INCIDENTAL TYPICAL SECTION

STA. 43+47.69 TO STA. 46+02.17 "A"



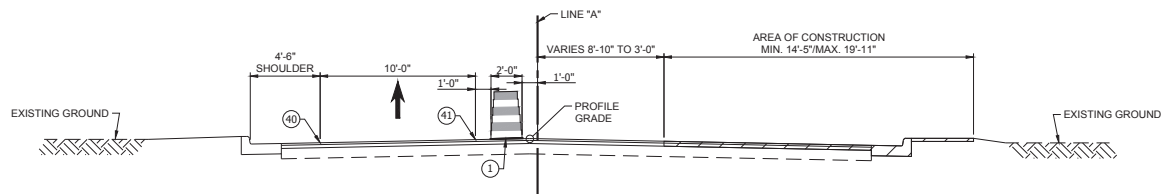
INCIDENTAL TYPICAL SECTION

STA. 46+02.17 TO STA. 46+74 "A"



TYPICAL SECTION

STA. 46+74 TO STA. 48+00 "A"



TYPICAL SECTION

STA. 48+00 TO STA. 49+30 "A"

- LEGEND**
- AREA OF CONSTRUCTION
 - CONSTRUCTION DRUM
 - TEMPORARY CONCRETE BARRIER
 - TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

RECOMMENDED FOR APPROVAL _____
DESIGN ENGINEER DATE

DESIGNED: L.L.C. DRAWN: K.R.U.

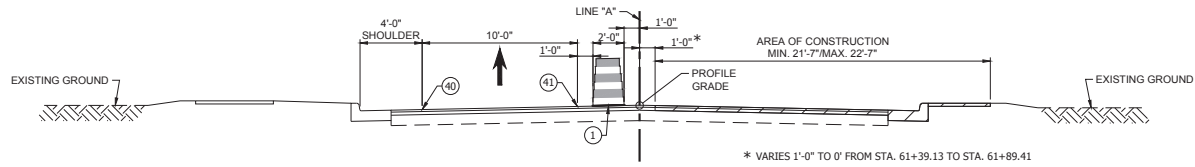
CHECKED: B.C.F. CHECKED: L.L.C.

INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - PHASE I-B
U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	15 OF 18S
RS 40573	PROJECT
	1700121

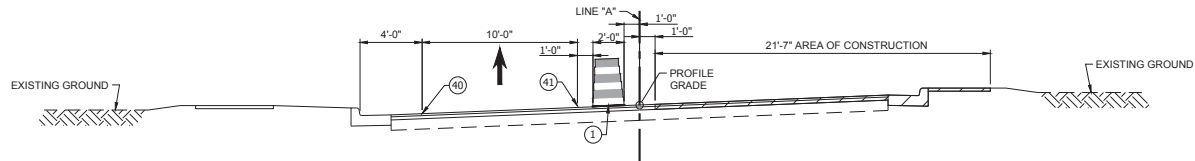
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TYPICAL SECTION

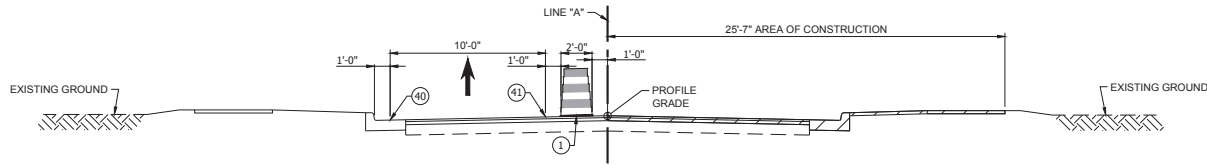
STA. 49+30 TO STA. 54+40.33 "A"
 STA. 55+74.82 "A" TO STA. 62+90.41 "A"

* VARIES 1'-0" TO 0' FROM STA. 61+39.13 TO STA. 61+89.41



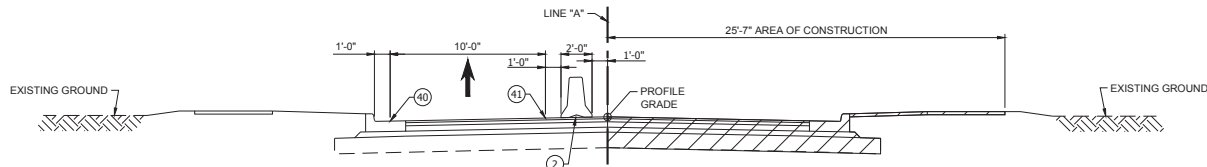
TYPICAL SECTION - SUPERELEVATED

STA. 54+40.33 TO STA. 55+74.82 "A"



TYPICAL SECTION

STA. 62+90.41 TO STA. 65+26.69 "A"
 STA. 69+32.80 TO STA. 80+00 "A"



TYPICAL SECTION

STA. 65+26.69 TO STA. 66+46.69 "A"
 STA. 68+12.80 TO STA. 69+32.80 "A"

(3) PAVING EXCEPTION; STA. 66+46.69 "A" TO STA. 68+12.80 "A"

- LEGEND**
- AREA OF CONSTRUCTION
 - CONSTRUCTION DRUM
 - TEMPORARY CONCRETE BARRIER
 - TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

RECOMMENDED FOR APPROVAL _____
 DESIGN ENGINEER DATE

DESIGNED: L.L.C. DRAWN: K.R.U.

CHECKED: B.C.F. CHECKED: L.L.C.

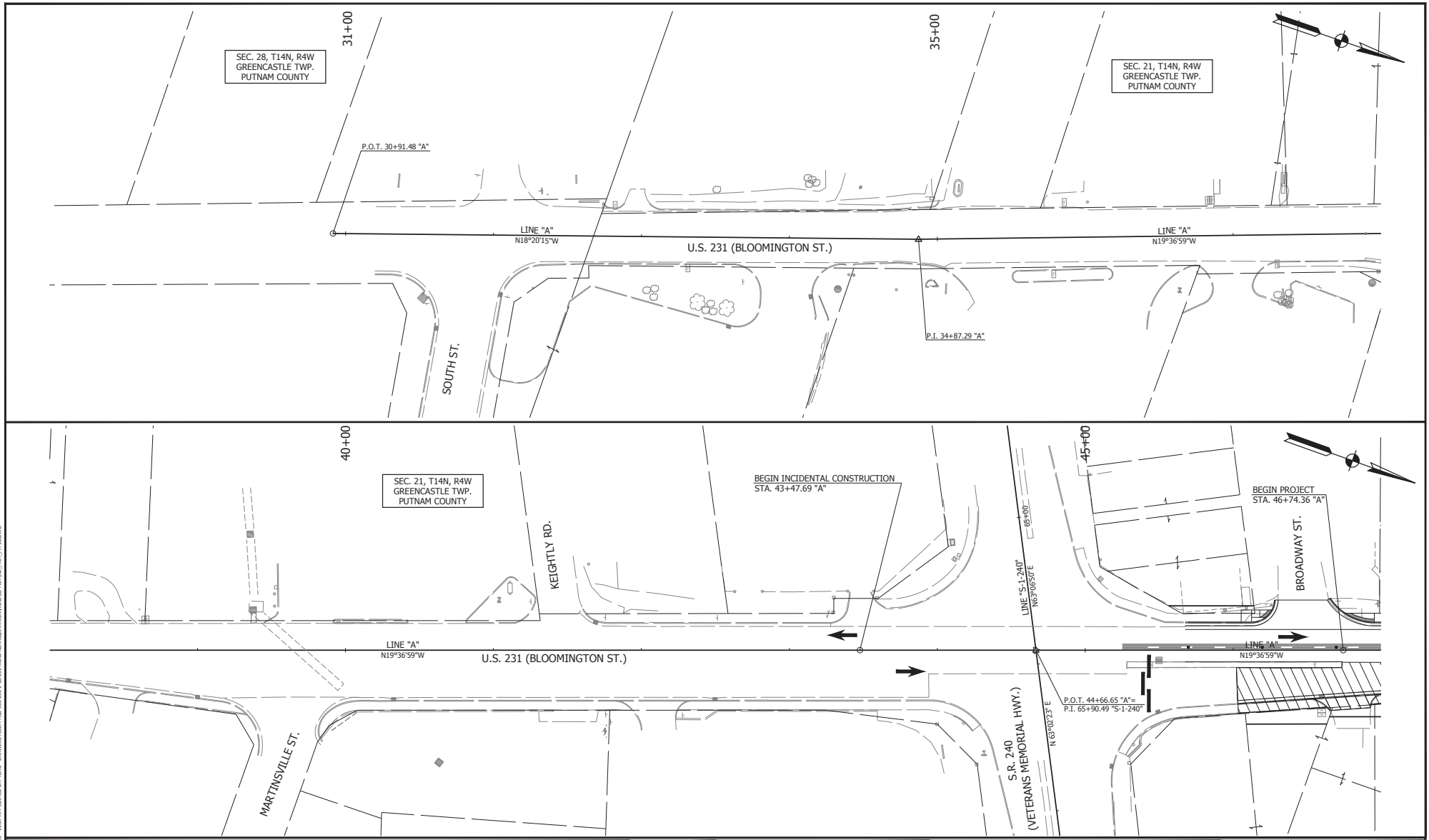
INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - PHASE I-B
 U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	16 OF 185
RS 40573	PROJECT
	1700121

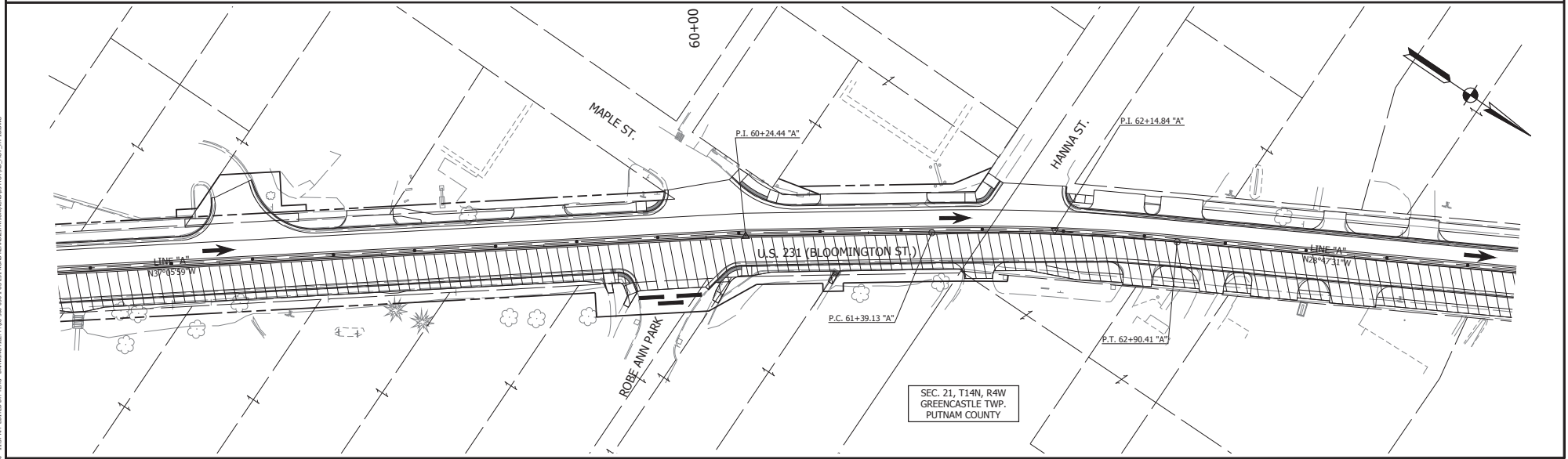
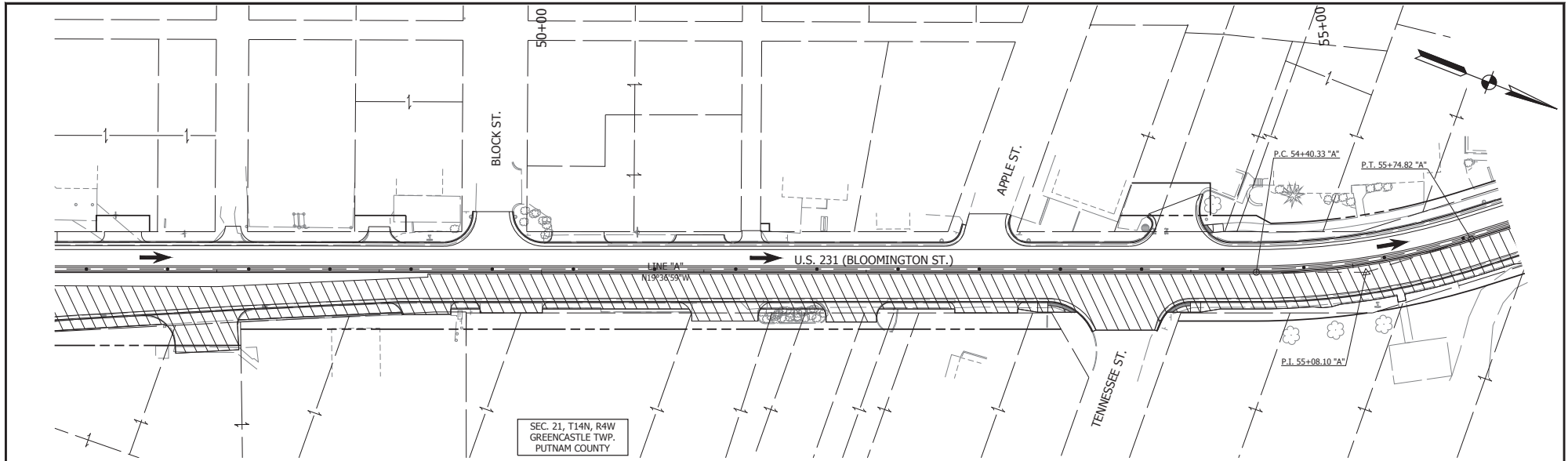
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 PLOT DATE: 6/11/2013 10:45:00 AM
 PLOTTER: HP DesignJet T1100e

PRINT DATE: 09/12/2017 10:50:42 AM DATE: 04/20/17 11:57 AM EDITED BY: YCHU DRAWING FILE: P:\06_000651_151311\ROAD\ISHARE\1700121\CONSTRUCTION\NOTED\NOT_PAN\1700121_1.DWG SCALE: 1:1

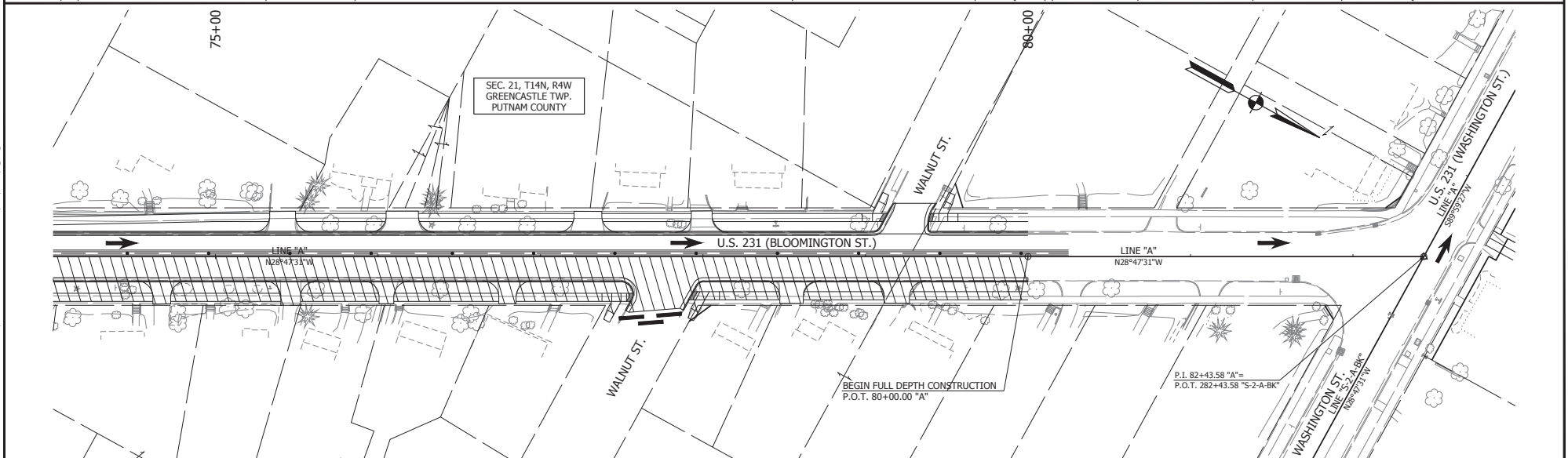
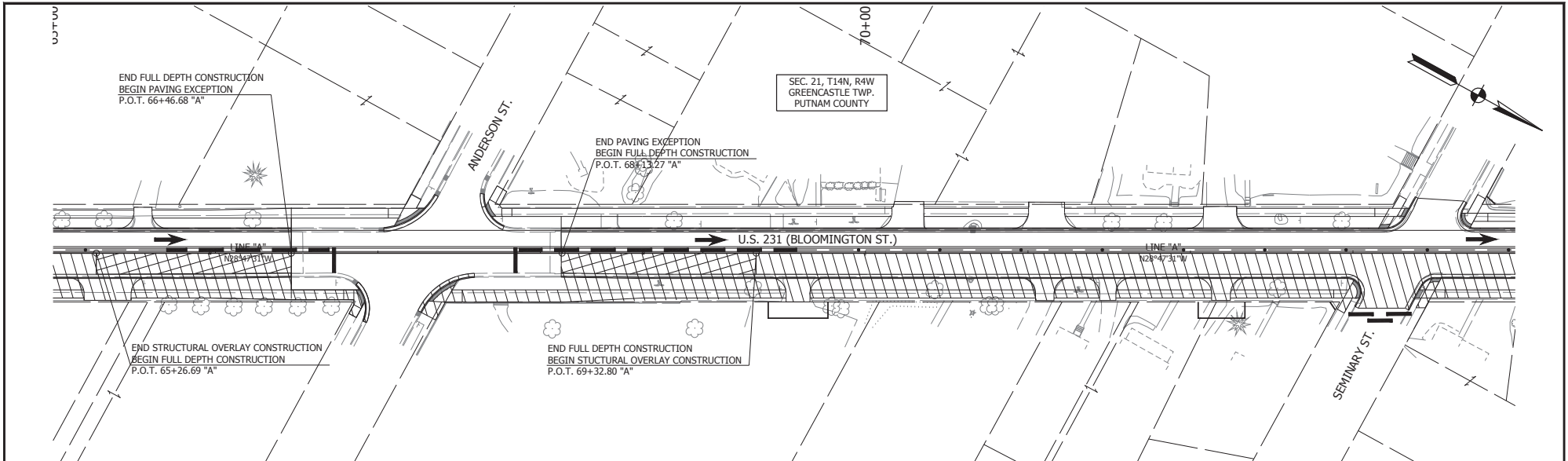


LEGEND AREA OF CONSTRUCTION MILL AND RESURFACE AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT WORK ZONE DESIGN SPEED = 20 MPH CONSTRUCTION DRUM TEMPORARY CONCRETE BARRIER BARRICADE TYPE III-B	RECOMMENDED FOR APPROVAL _____ DATE _____ DESIGN ENGINEER _____	INDIANA DEPARTMENT OF TRANSPORTATION MAINTENANCE OF TRAFFIC PHASE I-B	HORIZONTAL SCALE N/A VERTICAL SCALE N/A	BRIDGE FILE N/A DESIGNATION 1700121 SURVEY BOOK SHEET 17 of 185 CONTRACT PROJECT RS 40573 1700121
	DESIGNED: K.R.U. DRAWN: K.R.U. CHECKED: L.L.C. CHECKED: L.L.C.			

PRINT DATE: 02/20/20
 CADD SCALE: 1" = 40'
 DATE: 02/20/20
 DESIGNED BY: K.R.U.
 DRAWING FILE: P:\18-000\18-005\18-005-103-231-ROAD\DWG\TRAFFIC\PHASE I-B\TRAFFIC_I-B_180220.DWG



LEGEND AREA OF CONSTRUCTION HILL AND RESURFACE AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT WORK ZONE DESIGN SPEED = 20 MPH CONSTRUCTION DRUM TEMPORARY CONCRETE BARRIER BARRICADE TYPE III-B	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION MAINTENANCE OF TRAFFIC PHASE I-B	HORIZONTAL SCALE _____ BRIDGE FILE _____ VERTICAL SCALE _____ DESIGNATION _____
	DESIGNED: <u>K.R.U.</u> DRAWN: <u>K.R.U.</u> CHECKED: <u>LLC.</u> CHECKED: <u>LLC.</u>		SURVEY BOOK _____ SHEET _____ CONTRACT _____ PROJECT _____



LEGEND	
	AREA OF CONSTRUCTION MILL AND RESURFACE
	AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT
	CONSTRUCTION DRUM
	TEMPORARY CONCRETE BARRIER
	BARRICADE TYPE III-B

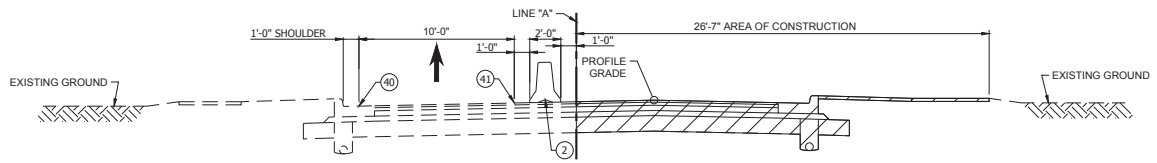
WORK ZONE DESIGN SPEED = 20 MPH

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: <u>K.R.U.</u>	DRAWN: <u>K.R.U.</u>	
CHECKED: <u>L.L.C.</u>	CHECKED: <u>L.L.C.</u>	

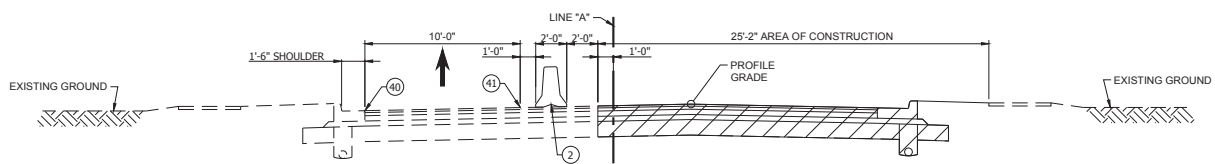
INDIANA DEPARTMENT OF TRANSPORTATION	
MAINTENANCE OF TRAFFIC PHASE I-B	

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEET
CONTRACT	PROJECT
RS 40573	1700121

PRINT DATE: 07/10/20
 PLOT DATE: 04/10/20 11:27 AM
 EDITED BY: CONN
 DRAWING FILE: C:\S\2006\66 U.S. 231 ROAD REPAIR\STATION\CONTR. MTD\RS_40573.DWG



TYPICAL SECTION
STA. 80+00 TO STA. 82+43.58 "A"



TYPICAL SECTION
STA. 82+43.58 TO STA. 86+30.00 "A"

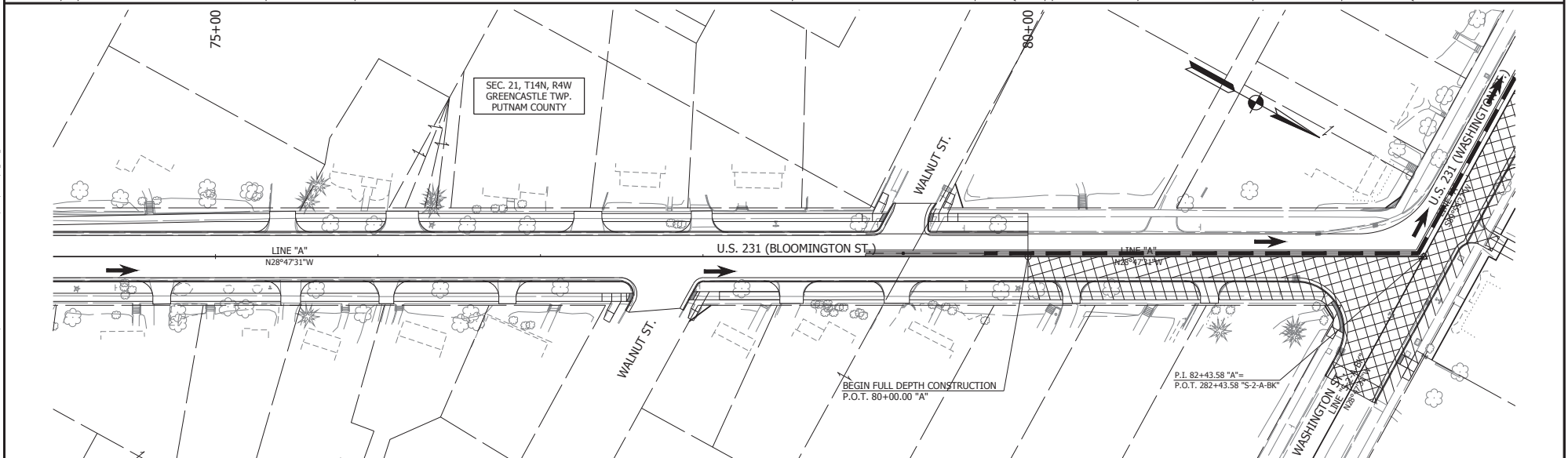
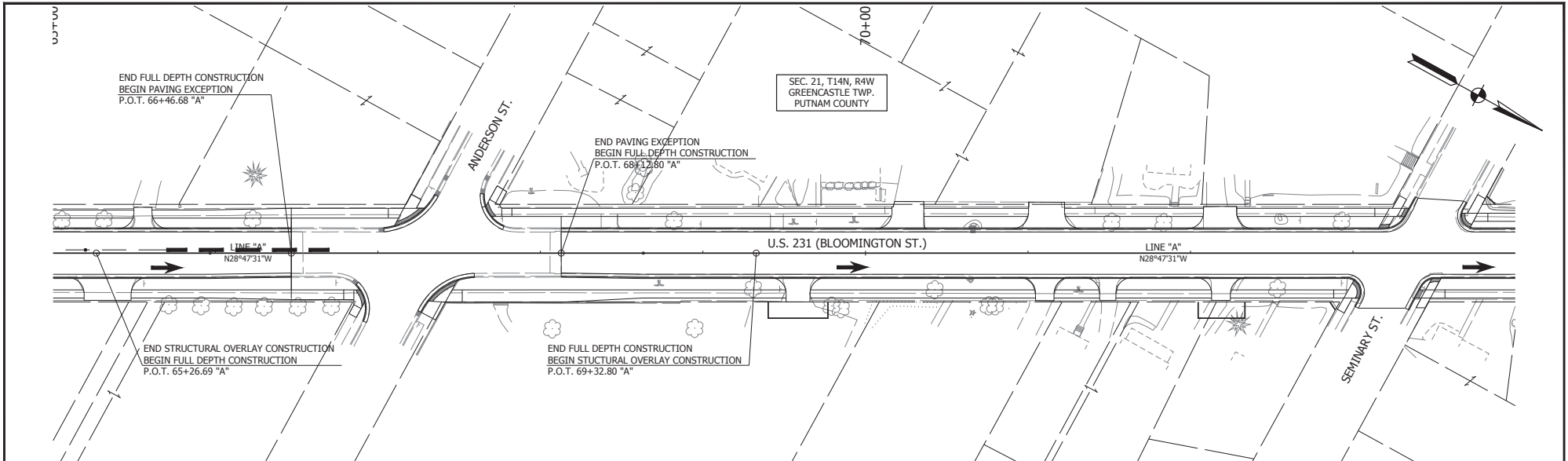
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 PLOT SHEET: 20 OF 185
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 PLOT USER: JCH
 PLOT DEVICE: PLOTTER
 PLOT STATUS: OK
 PLOT MESSAGE:

- LEGEND**
- AREA OF CONSTRUCTION
 - CONSTRUCTION DRUM
 - TEMPORARY CONCRETE BARRIER
 - TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: L.L.C.	DRAWN: K.R.U.	
CHECKED: B.C.F.	CHECKED: L.L.C.	

INDIANA
DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC - PHASE II-A
 U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
	20 OF 185
CONTRACT	PROJECT
RS 40573	1700121



PRINT DATE: 07/10/2018 10:04 AM
 USER: JLR
 PLOT DATE: 07/10/2018 10:04 AM
 PLOT SCALE: 1"=40'
 PLOT SHEET: 1700121
 PLOT AREA: 1700121
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 PLOT SCALE: 1"=40'
 PLOT SHEET: 1700121
 PLOT AREA: 1700121

LEGEND

AREA OF CONSTRUCTION MILL AND RESURFACE
 AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT
 WORK ZONE DESIGN SPEED = 20 MPH

RECOMMENDED FOR APPROVAL _____ DATE _____

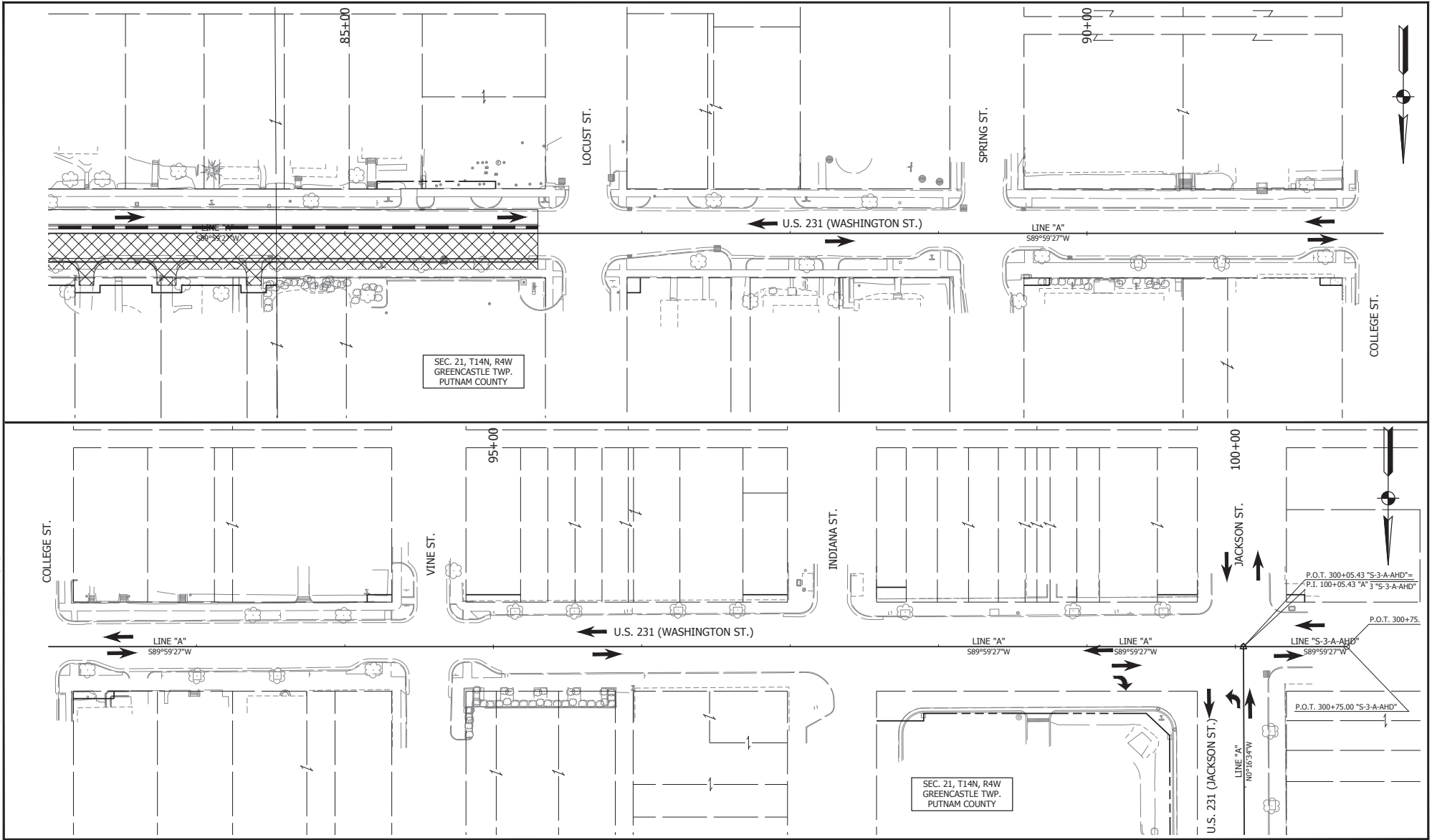
DESIGNED BY: K.R.U. DRAWN BY: K.R.U.

CHECKED BY: L.L.C. CHECKED BY: L.L.C.

INDIANA DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC PHASE II-A

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEET
CONTRACT	PROJECT
RS 40573	1700121

PRINT DATE: 01/20/20
 PLOT DATE: 01/20/20 - 1:50 PM. EDITED BY: CONE. DRAWING FILE: C:\18300-006-1\US 231 ROAD REHABILITATION\DRAWINGS\MOTRS_MOTR_P2-3A.DWG

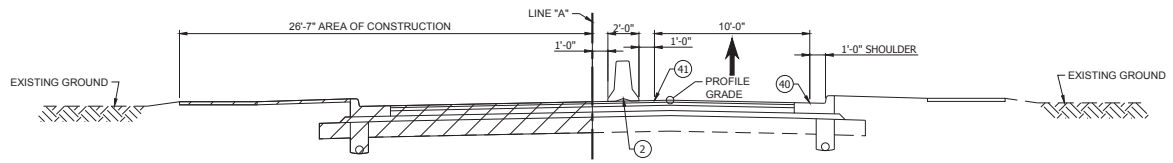


LEGEND	
	AREA OF CONSTRUCTION MILL AND RESURFACE
	AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT
WORK ZONE DESIGN SPEED = 20 MPH	

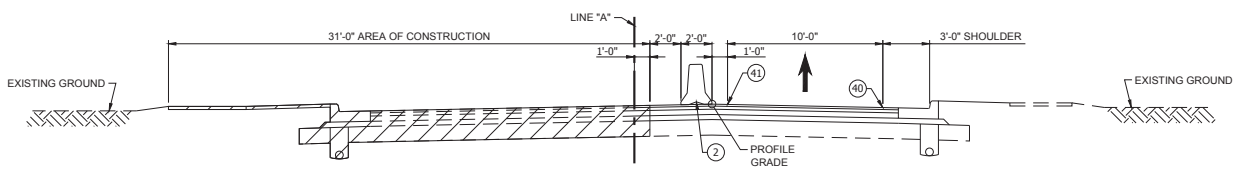
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: <u>K.R.U.</u>	DRAWN: <u>K.R.U.</u>	
CHECKED: <u>L.L.C.</u>	CHECKED: <u>L.L.C.</u>	

INDIANA DEPARTMENT OF TRANSPORTATION	
MAINTENANCE OF TRAFFIC PHASE II-A	

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
	1700121
SURVEY BOOK	SHEET
CONTRACT	22 of 185
RS 40573	PROJECT
	1700121



TYPICAL SECTION
STA. 80+00 TO STA. 82+43.58 "A"



TYPICAL SECTION
STA. 82+43.58 TO STA. 86+30.00 "A"

- LEGEND**
- ▨ AREA OF CONSTRUCTION
 - ① CONSTRUCTION DRUM
 - ② TEMPORARY CONCRETE BARRIER
 - ④ TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - ④ TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

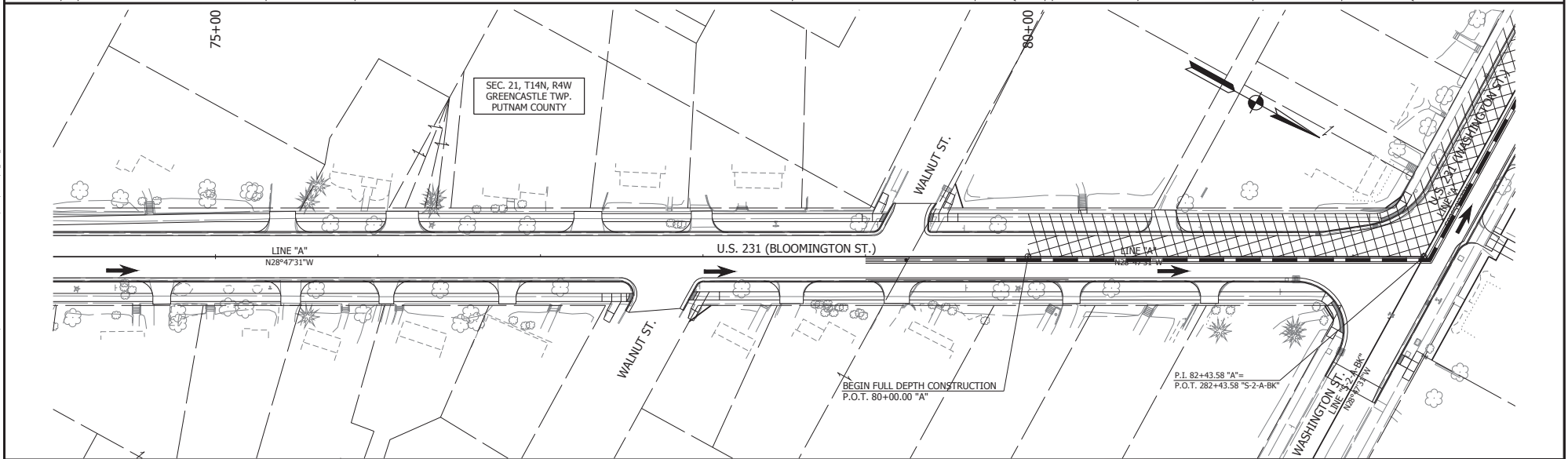
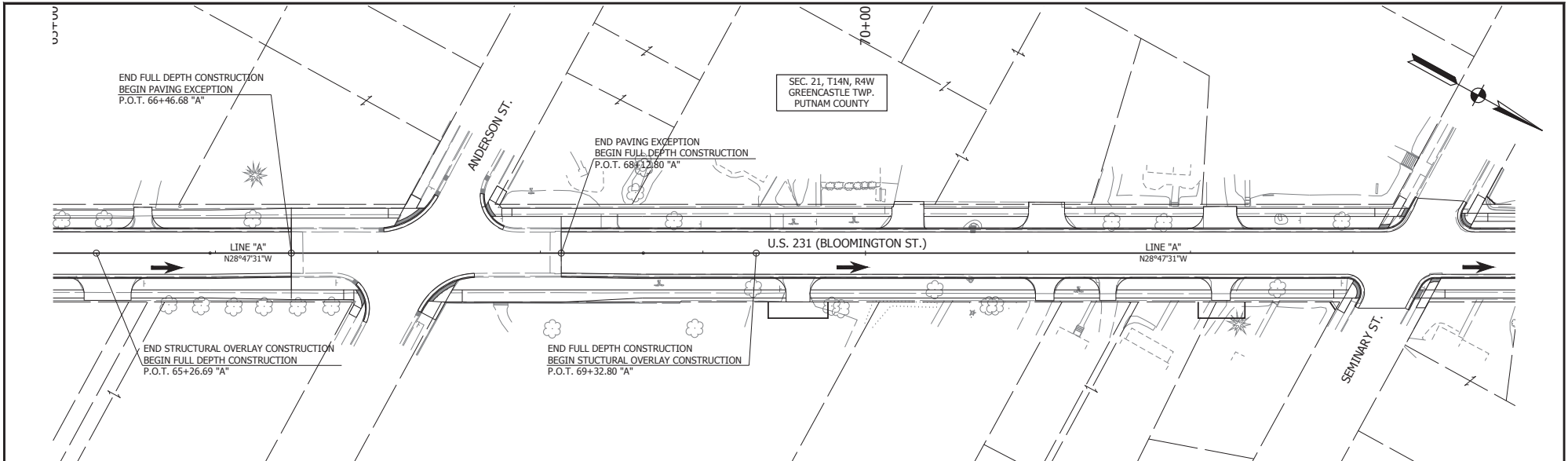
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: L.L.C.	DRAWN: K.R.U.	
CHECKED: B.C.F.	CHECKED: L.L.C.	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - PHASE II-B
U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	23 OF 185
RS 40573	PROJECT
	1700121

PRINT DATE: 6/11/2019
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PRINT DATE: 07/10/20
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 PLOT TIME: 1:00 PM
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 PLOT: 000005611031311000
 SERIAL: 11
 DATE: 06/24/20
 PROJECT: 1700121
 SHEET: 185
 OF: 185

LEGEND

AREA OF CONSTRUCTION
MILL AND RESURFACE

AREA OF CONSTRUCTION
FULL DEPTH PAVEMENT REPLACEMENT

WORK ZONE DESIGN SPEED = 20 MPH

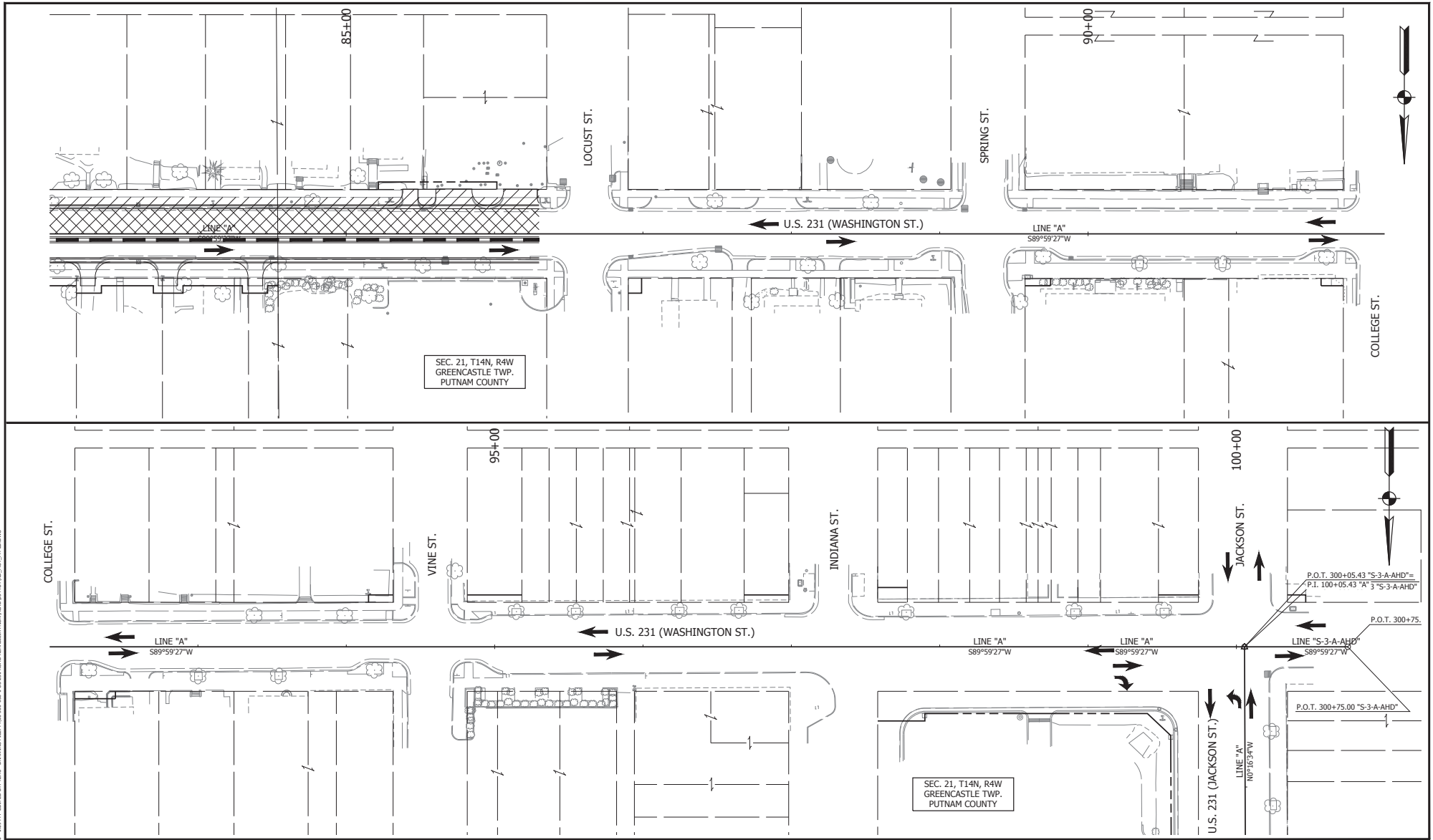
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: <u>K.R.U.</u>	DRAWN: <u>K.R.U.</u>	
CHECKED: <u>L.L.C.</u>	CHECKED: <u>L.L.C.</u>	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE II-B

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEET
CONTRACT	PROJECT
RS 40573	1700121

PRINT DATE: 01/20/20
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 PLOT SCALE: 1:1



SEC. 21, T14N, R4W
GREENCASTLE TWP.
PUTNAM COUNTY

SEC. 21, T14N, R4W
GREENCASTLE TWP.
PUTNAM COUNTY

P.O.T. 300+05.43 "S-3-A-AHD"
P.I. 100+05.43 "A" 3 "S-3-A-AHD"

P.O.T. 300+75.

P.O.T. 300+75.00 "S-3-A-AHD"

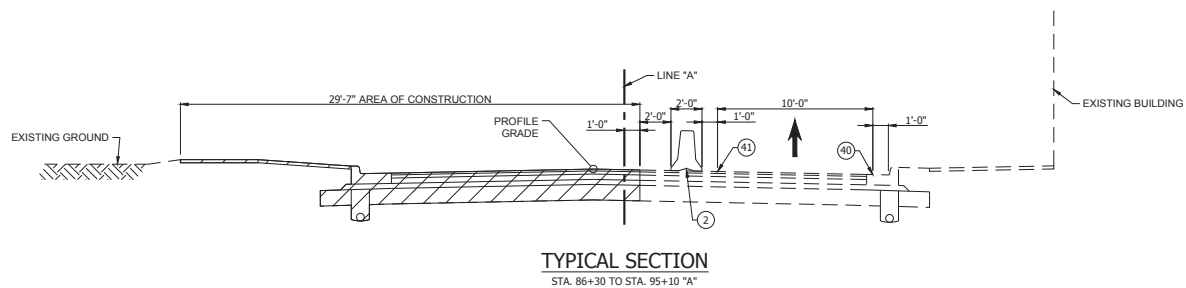
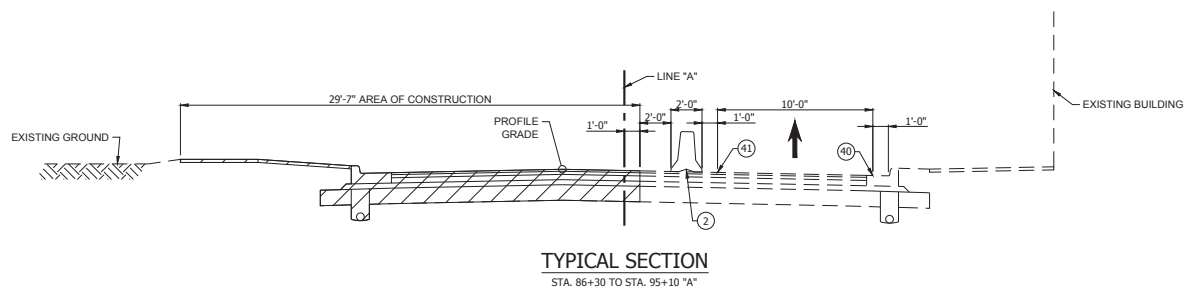
- LEGEND**
- AREA OF CONSTRUCTION
MILL AND RESURFACE
 - AREA OF CONSTRUCTION
FULL DEPTH PAVEMENT REPLACEMENT
- WORK ZONE DESIGN SPEED = 20 MPH

RECOMMENDED FOR APPROVAL		DESIGN ENGINEER	DATE
DESIGNED: <u>K.R.U.</u>	DRAWN: <u>K.R.U.</u>		
CHECKED: <u>L.L.C.</u>	CHECKED: <u>L.L.C.</u>		

INDIANA
DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC
 PHASE II-B

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	25 of 185
RS 40573	PROJECT
	1700121

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 PLOTTER: HP DesignJet 2600DN
 PLOTER: HP DesignJet 2600DN



- | LEGEND | |
|--------|---|
| | AREA OF CONSTRUCTION |
| ① | CONSTRUCTION DRUM |
| ② | TEMPORARY CONCRETE BARRIER |
| ④⑥ | TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4" |
| ④⑪ | TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4" |

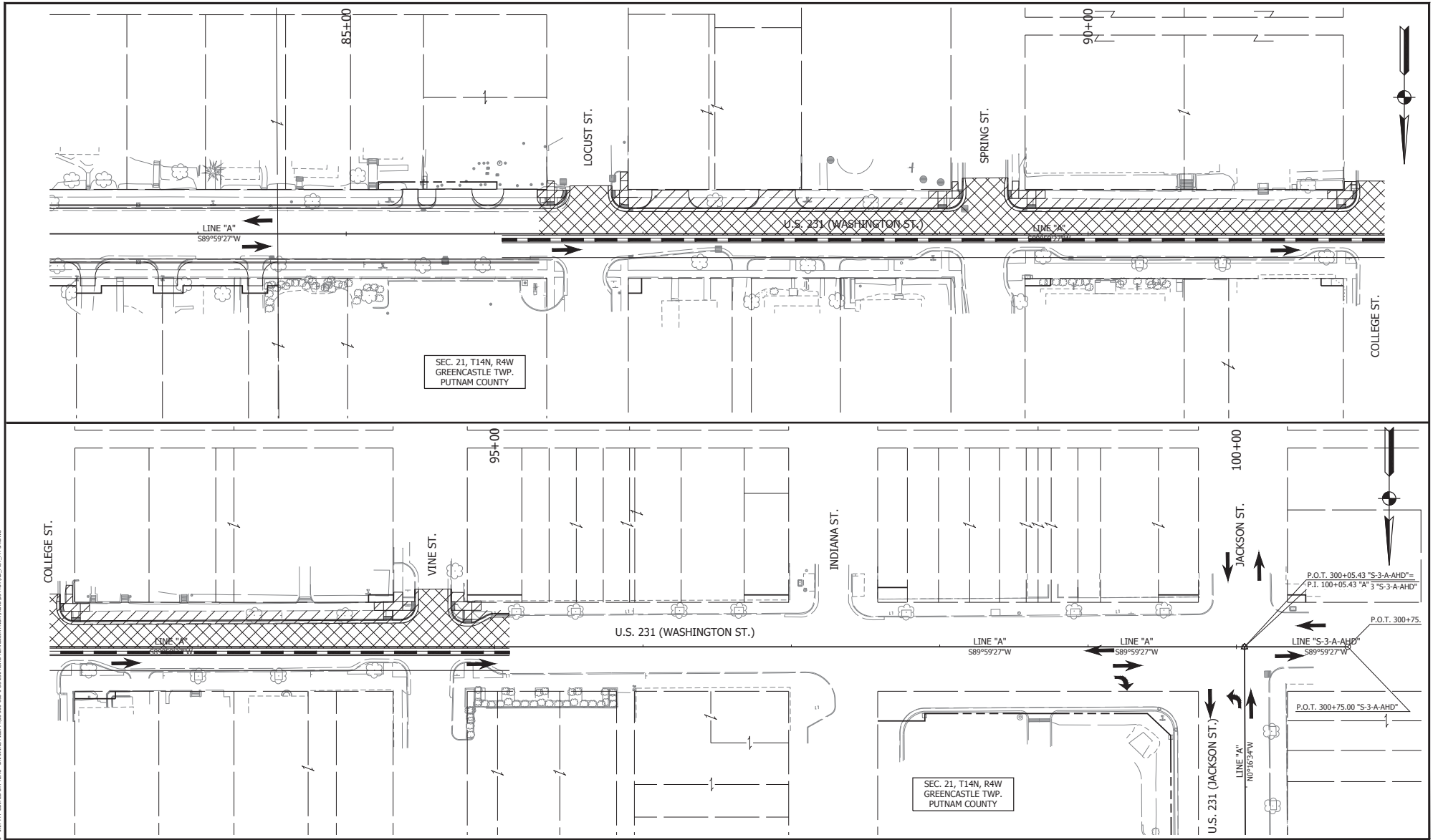
RECOMMENDED FOR APPROVAL _____ DATE _____	
DESIGNED: <u>L.L.C.</u>	DRAWN: <u>K.R.U.</u>
CHECKED: <u>B.C.F.</u>	CHECKED: <u>L.L.C.</u>

INDIANA
 DEPARTMENT OF TRANSPORTATION

 MAINTENANCE OF TRAFFIC - PHASE III-A
 U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	26
PROJECT	18S
RS 40573	1700121

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LEGEND

	AREA OF CONSTRUCTION MILL AND RESURFACE
	AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT

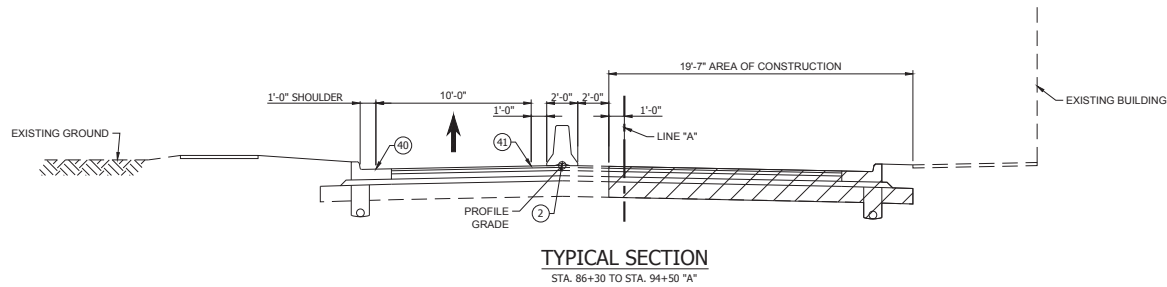
WORK ZONE DESIGN SPEED = 20 MPH

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: <u>K.R.U.</u>	DRAWN: <u>K.R.U.</u>	
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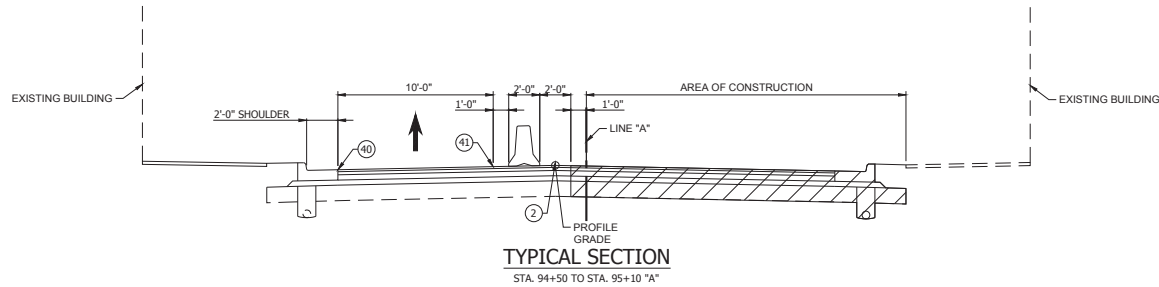
INDIANA DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC
 PHASE III-A

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
	1700121
SURVEY BOOK	SHEET
CONTRACT	27 of 185
RS 40573	PROJECT
	1700121

PRINT DATE: 6/11/2024
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TYPICAL SECTION
STA. 86+30 TO STA. 94+50 "A"



TYPICAL SECTION
STA. 94+50 TO STA. 95+10 "A"

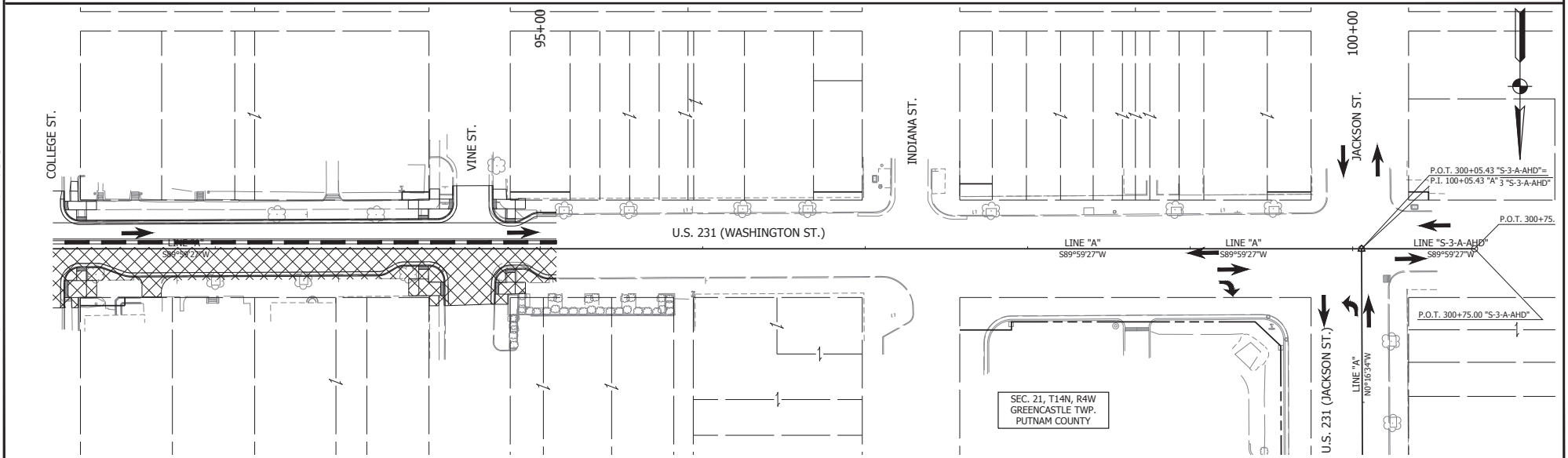
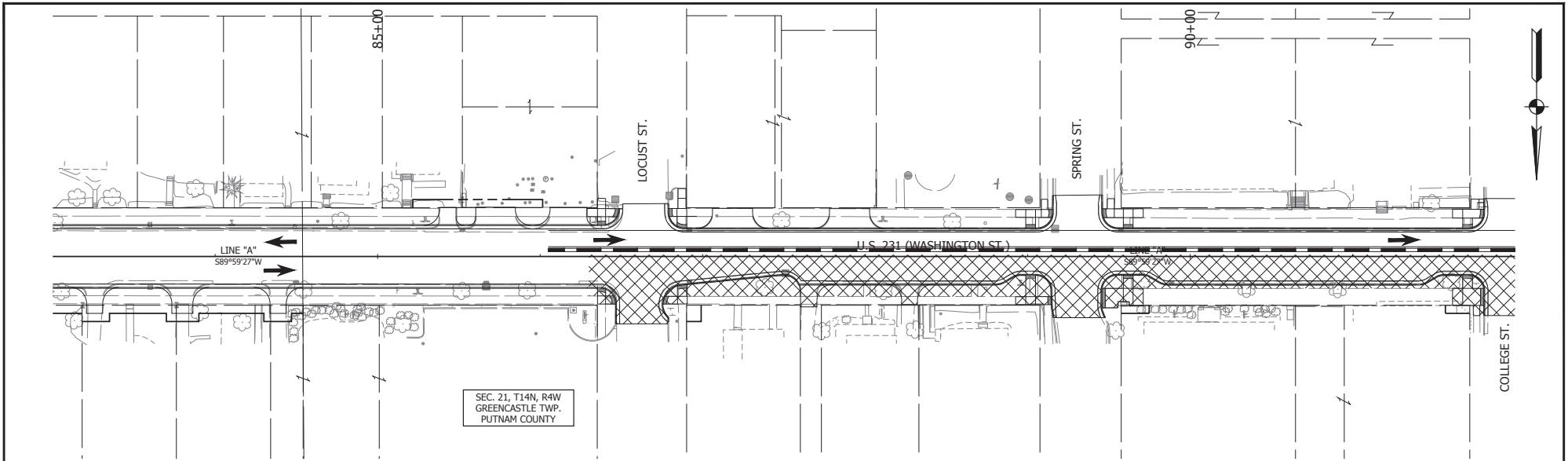
- LEGEND**
- AREA OF CONSTRUCTION
 - CONSTRUCTION DRUM
 - TEMPORARY CONCRETE BARRIER
 - TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: <u>LLC</u>	DRAWN: <u>K.R.U.</u>	
CHECKED: <u>B.C.F.</u>	CHECKED: <u>LLC</u>	

INDIANA
DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC - PHASE III-B
 U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
	28 OF 185
CONTRACT	PROJECT
RS 40573	1700121

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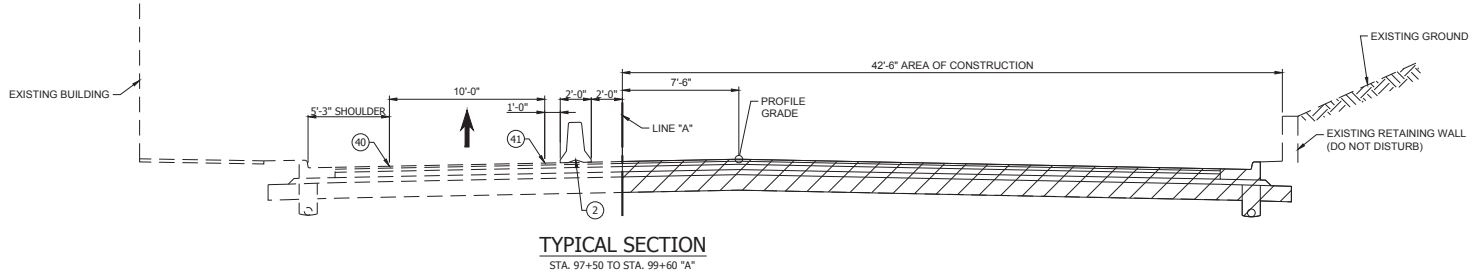
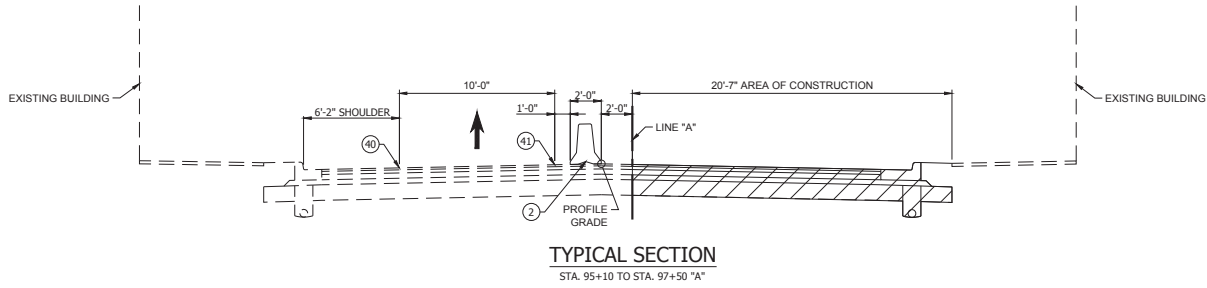


LEGEND	
	AREA OF CONSTRUCTION MILL AND RESURFACE
	AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT
WORK ZONE DESIGN SPEED = 20 MPH	

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: <u>K.R.U.</u>	DRAWN: <u>K.R.U.</u>	
CHECKED: <u>LLC</u>	CHECKED: <u>LLC</u>	

INDIANA
 DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC
 PHASE III-B

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	29 of 185
RS 40573	PROJECT
	1700121



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- LEGEND**
- AREA OF CONSTRUCTION
 - CONSTRUCTION DRUM
 - TEMPORARY CONCRETE BARRIER
 - TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

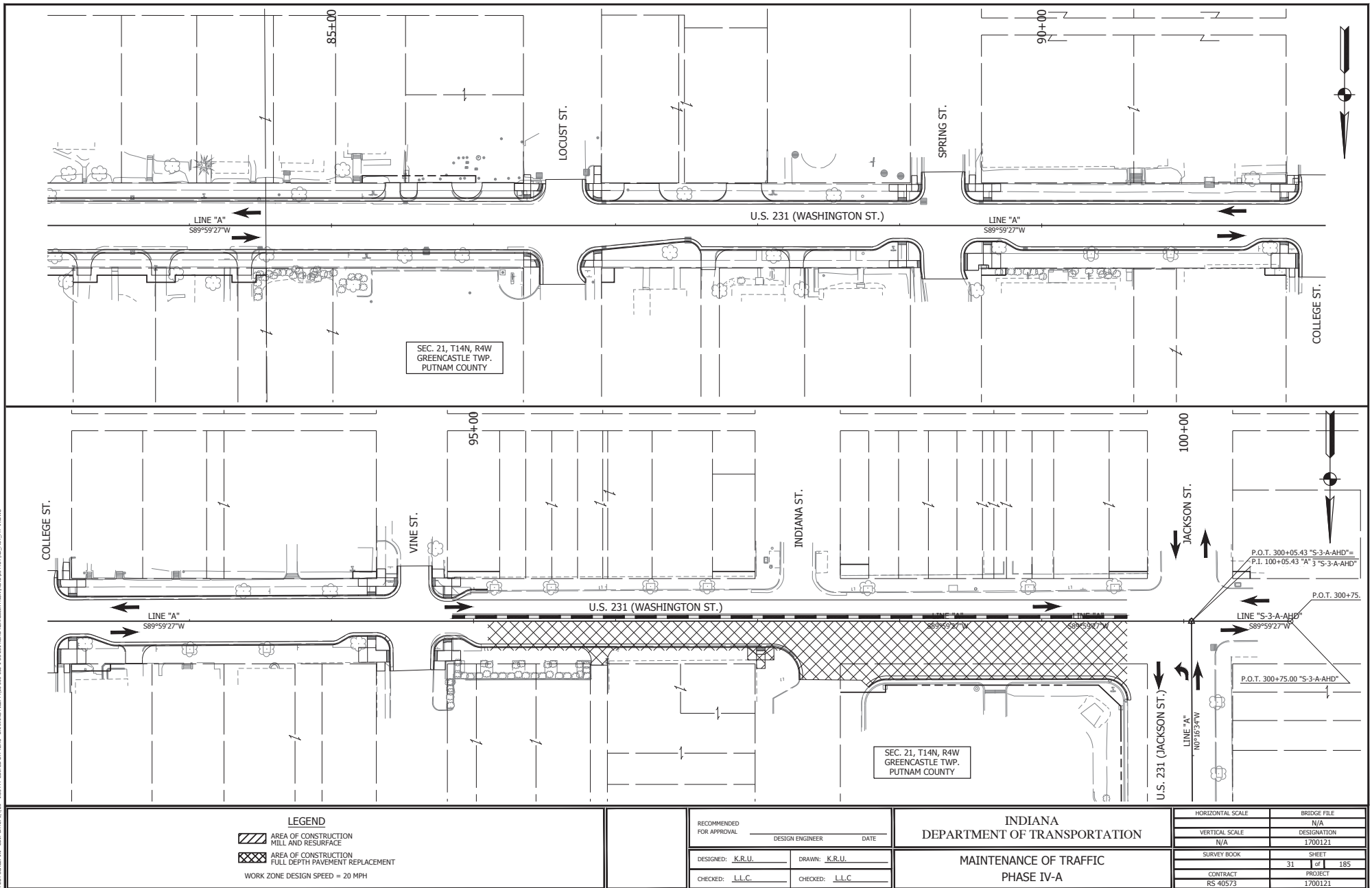
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CHECKED: <u>B.C.F.</u>	CHECKED: <u>L.L.C.</u>

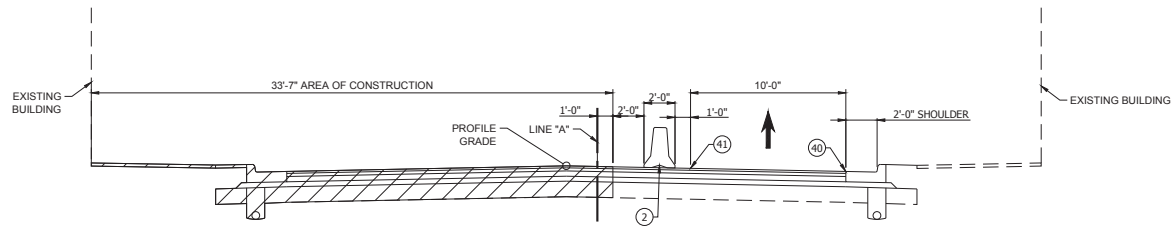
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - PHASE IV-A
U.S. 231

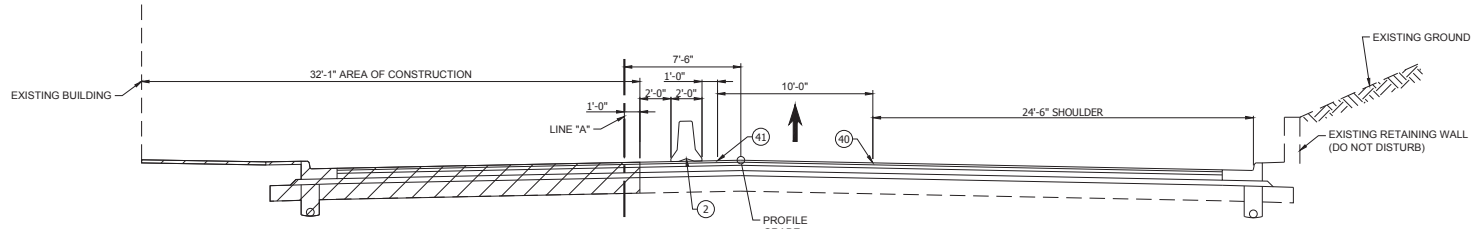
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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEET
	30 OF 185
CONTRACT	PROJECT
RS 40573	1700121

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TYPICAL SECTION
STA. 95+10 TO STA. 97+50 "A"



TYPICAL SECTION
STA. 97+50 TO STA. 100+36.61 "A"

PRINT DATE: 6/11/2019
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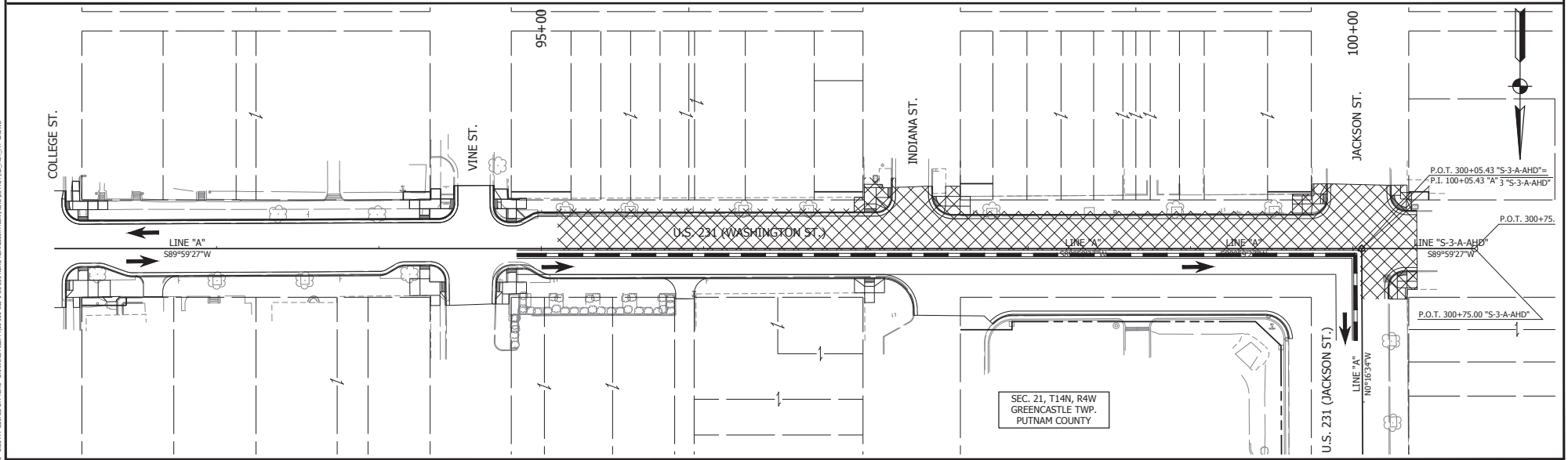
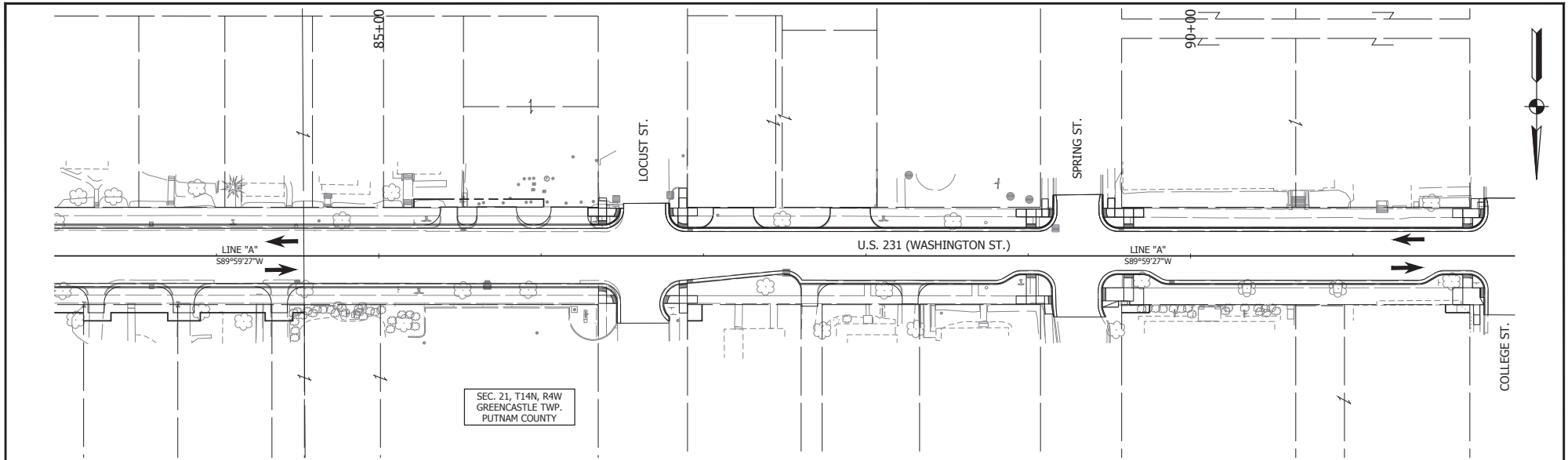
- LEGEND**
- AREA OF CONSTRUCTION
 - CONSTRUCTION DRUM
 - TEMPORARY CONCRETE BARRIER
 - TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

RECOMMENDED FOR APPROVAL _____	
DESIGN ENGINEER	DATE
DESIGNED: <u>LLC</u>	DRAWN: <u>K.R.U.</u>
CHECKED: <u>B.C.F.</u>	CHECKED: <u>LLC</u>

INDIANA
DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC - PHASE IV-B
 U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	32 OF 185
RS 40573	PROJECT
	1700121

PRINT DATE: 01/20/20
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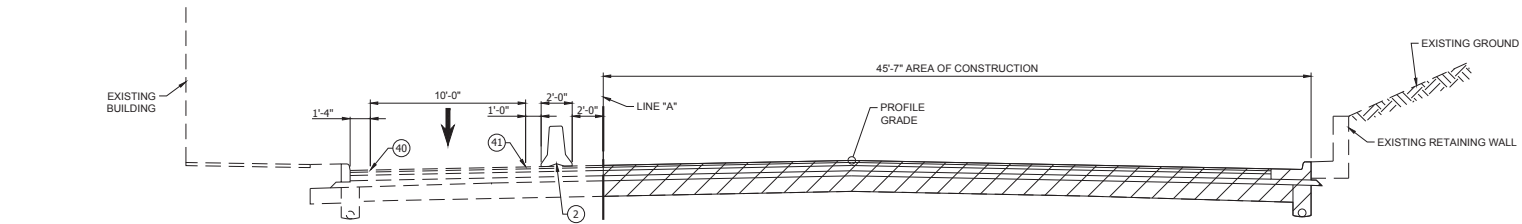


LEGEND	
	AREA OF CONSTRUCTION MILL AND RESURFACE
	AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT
WORK ZONE DESIGN SPEED = 20 MPH	

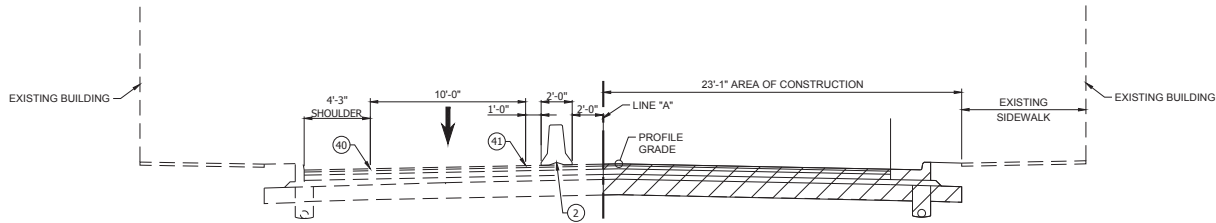
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: <u>K.R.U.</u>	DRAWN: <u>K.R.U.</u>	
CHECKED: <u>LLC.</u>	CHECKED: <u>LLC.</u>	

INDIANA DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC
 PHASE IV-B

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
	1700121
SURVEY BOOK	SHEET
CONTRACT	33 of 185
RS 40573	PROJECT
	1700121



TYPICAL SECTION
STA. 99+60 TO STA. 102+50 "A"



TYPICAL SECTION
STA. 102+50 TO STA. 105+80 "A"

PRINT DATE: 6/11/2019 10:58:46 AM
 PLOT DATE: 6/11/2019 10:58:46 AM
 PLOT TIME: 3:37 PM
 EDITOR: M.P. HANAWAY
 DRAWING FILE: P:\18-000\05-18-2019\REHABILITATION\05-18-2019\TYPICAL\TYPICAL.MXD
 USER: M.P. HANAWAY
 PROJECT: 18-000-05-18-2019

- LEGEND**
- ▨ AREA OF CONSTRUCTION
 - ① CONSTRUCTION DRUM
 - ② TEMPORARY CONCRETE BARRIER
 - ④⑩ TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - ④⑪ TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

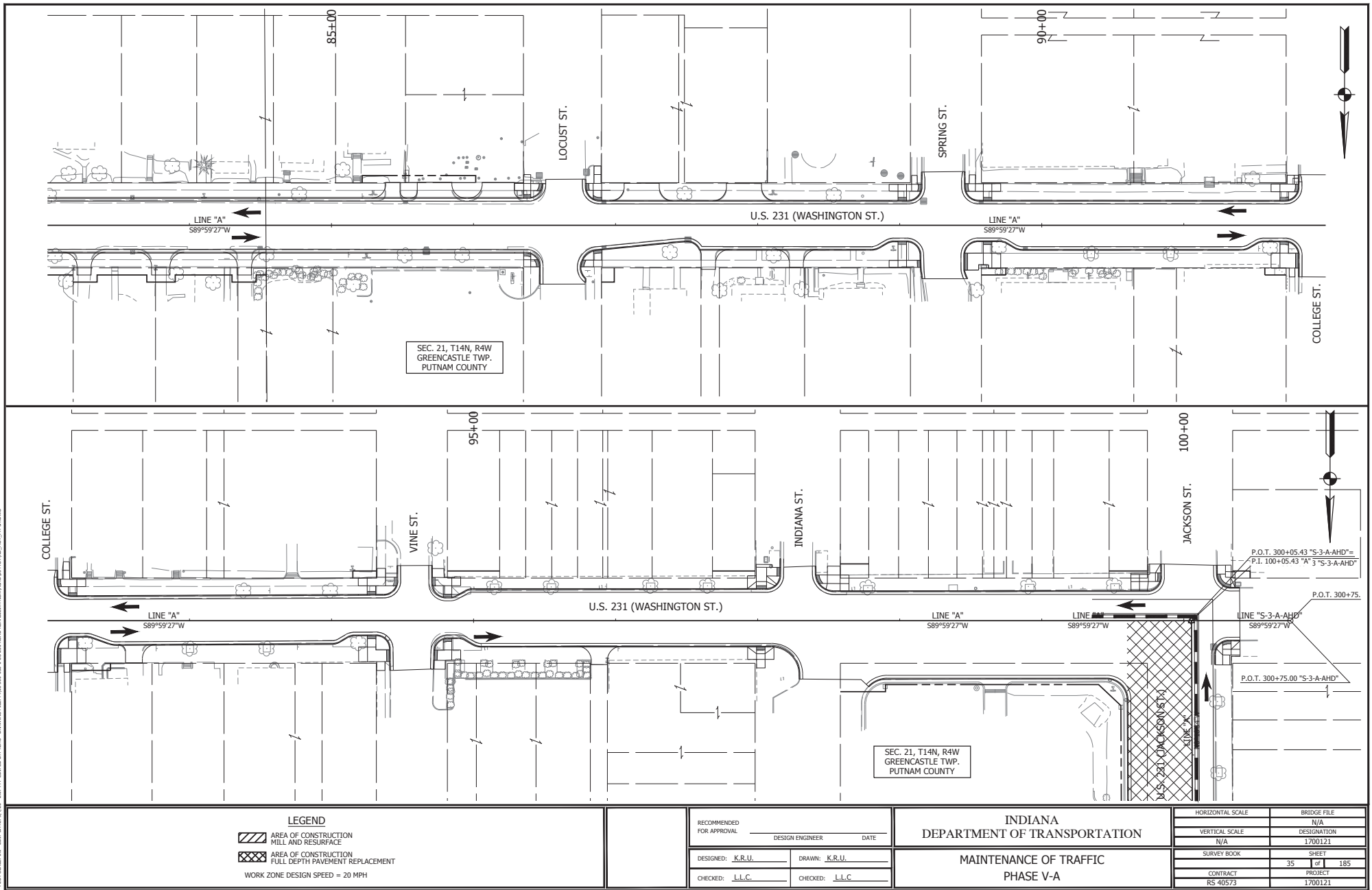
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DESIGN ENGINEER	DATE
DESIGNED: L.L.C.	DRAWN: K.R.U.
CHECKED: B.C.F.	CHECKED: L.L.C.

INDIANA
DEPARTMENT OF TRANSPORTATION

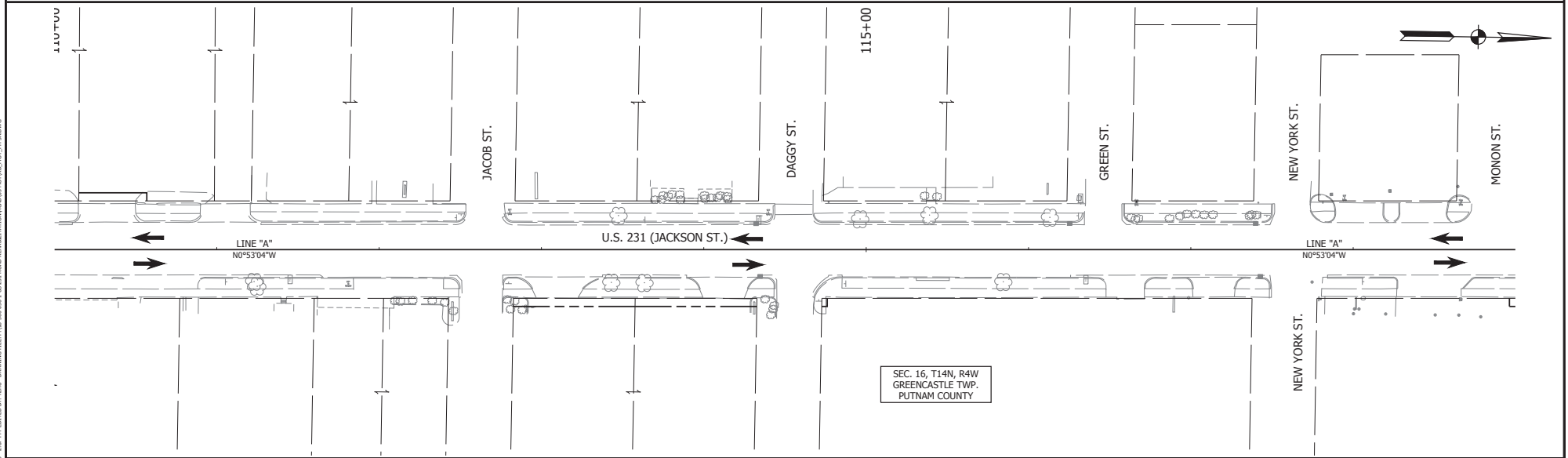
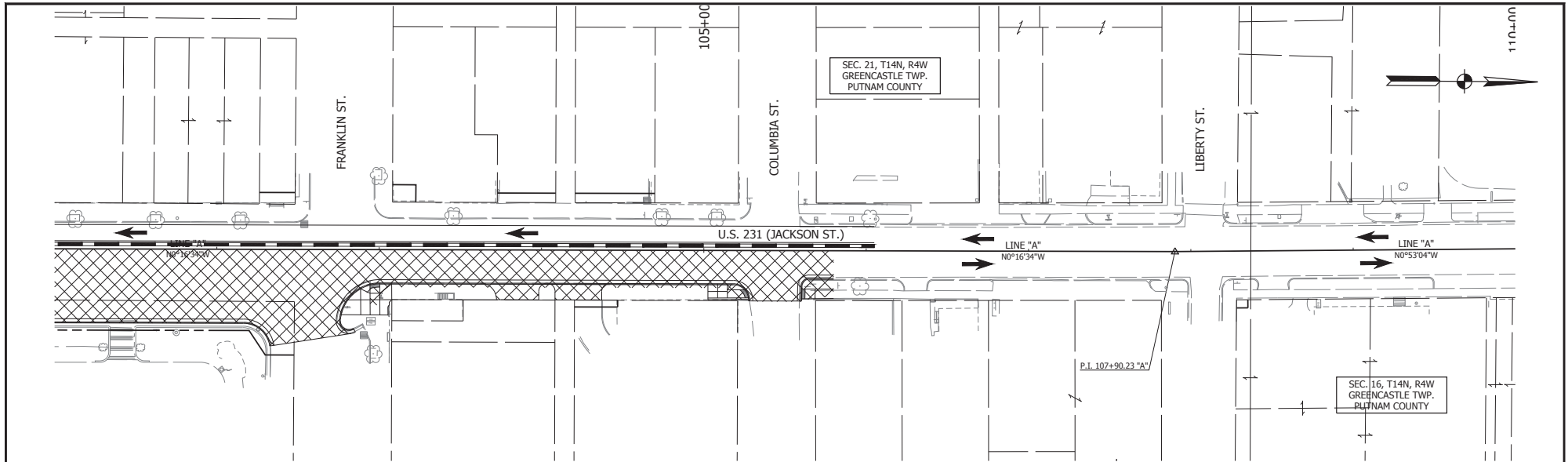
 MAINTENANCE OF TRAFFIC - PHASE V-A
 U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEET
	34 OF 185
CONTRACT	PROJECT
RS 40573	1700121

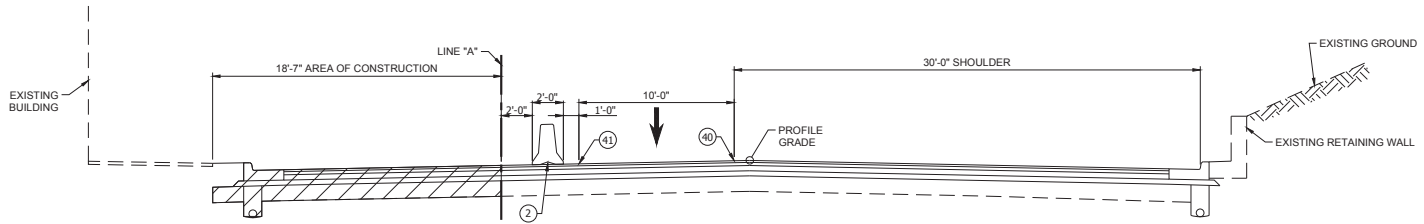
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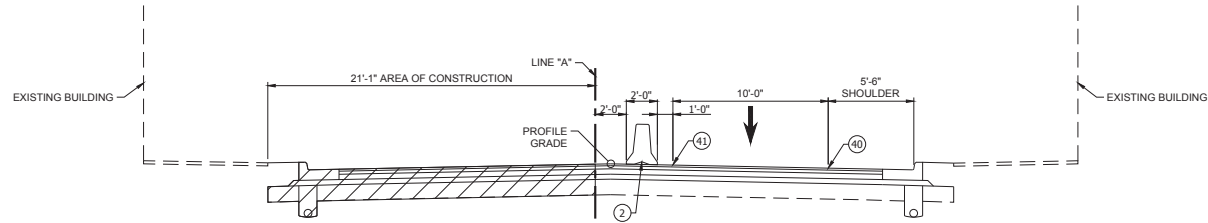
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 PLOT BY: JONAS
 DRAWING FILE: I:\B\300656\US 231 ROAD REPAIR\DRAWINGS\PHASE V-A\PHASE V-A.DWG



<p>LEGEND</p> <p> AREA OF CONSTRUCTION MILL AND RESURFACE</p> <p> AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT</p> <p>WORK ZONE DESIGN SPEED = 20 MPH</p>	<p>RECOMMENDED FOR APPROVAL _____ DATE _____</p> <p>DESIGNED: <u>K.R.U.</u> DRAWN: <u>K.R.U.</u></p> <p>CHECKED: <u>LLC</u> CHECKED: <u>LLC</u></p>	<p>INDIANA DEPARTMENT OF TRANSPORTATION</p> <p>PLAN AND PROFILE PHASE V-A</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>HORIZONTAL SCALE</td> <td>BRIDGE FILE</td> </tr> <tr> <td>VERTICAL SCALE</td> <td>DESIGNATION</td> </tr> <tr> <td>N/A</td> <td>1700121</td> </tr> <tr> <td>SURVEY BOOK</td> <td>SHEET</td> </tr> <tr> <td>CONTRACT</td> <td>36 of 185</td> </tr> <tr> <td>RS 40573</td> <td>PROJECT</td> </tr> <tr> <td></td> <td>1700121</td> </tr> </table>	HORIZONTAL SCALE	BRIDGE FILE	VERTICAL SCALE	DESIGNATION	N/A	1700121	SURVEY BOOK	SHEET	CONTRACT	36 of 185	RS 40573	PROJECT		1700121
	HORIZONTAL SCALE	BRIDGE FILE															
VERTICAL SCALE	DESIGNATION																
N/A	1700121																
SURVEY BOOK	SHEET																
CONTRACT	36 of 185																
RS 40573	PROJECT																
	1700121																



TYPICAL SECTION
STA. 100+36.61 TO STA. 102+50 "A"



TYPICAL SECTION
STA. 102+50 TO STA. 105+80 "A"

- LEGEND**
- ▨ AREA OF CONSTRUCTION
 - ① CONSTRUCTION DRUM
 - ② TEMPORARY CONCRETE BARRIER
 - ④① TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - ④② TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

RECOMMENDED FOR APPROVAL _____
DESIGN ENGINEER DATE

DESIGNED: L.L.C. DRAWN: K.R.U.

CHECKED: B.C.F. CHECKED: L.L.C.

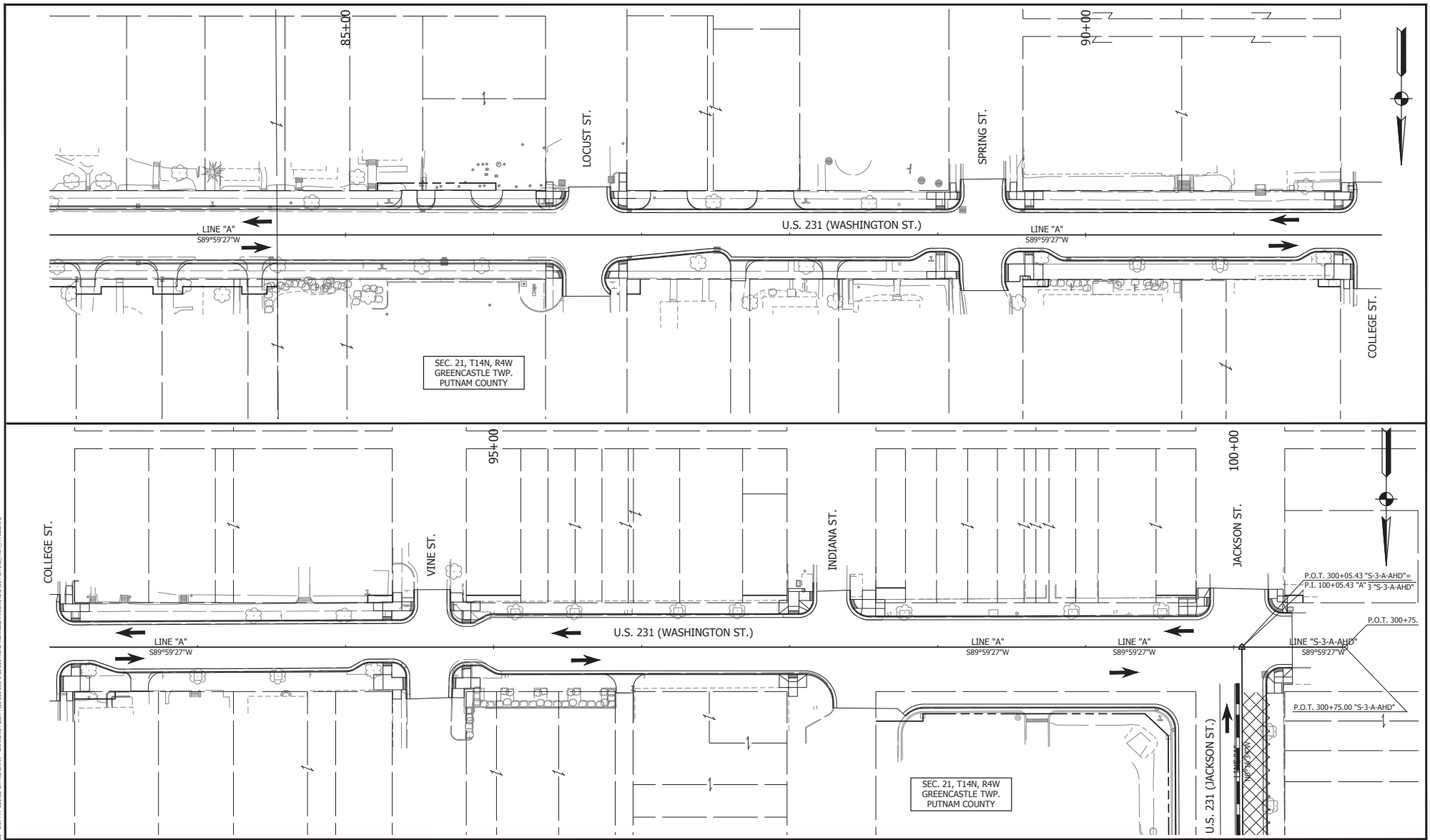
INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - PHASE V-B
U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	37 OF 185
RS 40573	PROJECT
	1700121

PRINT DATE: 6/11/2019
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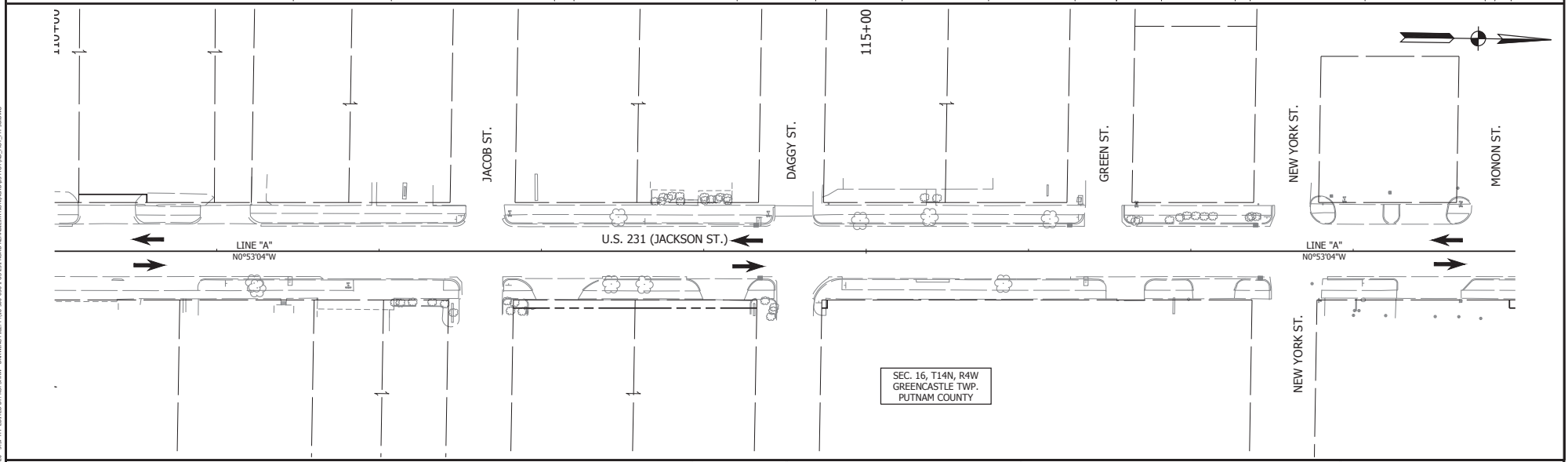
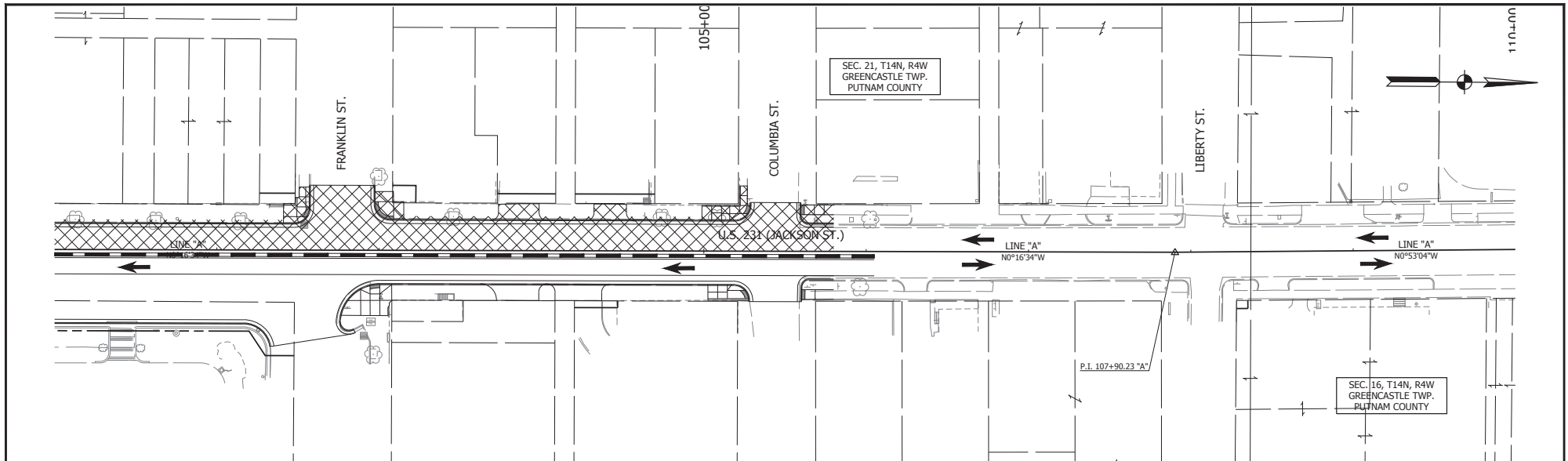
LEGEND	
	AREA OF CONSTRUCTION MILL AND RESURFACE
	AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT
WORK ZONE DESIGN SPEED = 20 MPH	

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: <u>K.R.U.</u>	DRAWN: <u>K.R.U.</u>	
CHECKED: <u>L.L.C.</u>	CHECKED: <u>L.L.C.</u>	

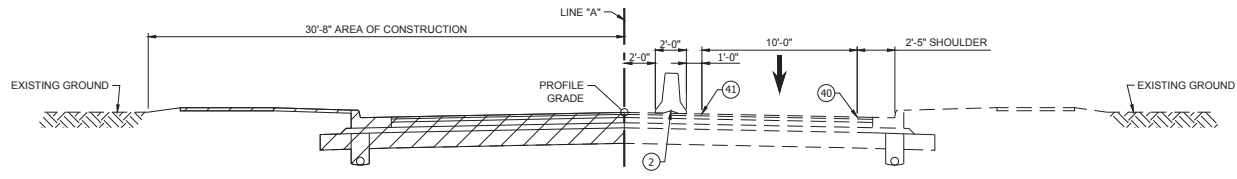
INDIANA DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC
 PHASE V-B

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	38 of 185
RS 40573	PROJECT
	1700121

PRINT DATE: 08/12/21
 PLOT SCALE: 1" = 50'
 DATE: 08/12/21 10:00 AM
 DRAWING FILE: P:\18_0066\115_231 ROAD REHABILITATION\DRAWINGS\PHASE V-B\PHASE V-B.DWG
 EDITOR: B. W. BISHOP
 CHECKER: L.L.C.



<p>LEGEND</p> <p> AREA OF CONSTRUCTION MILL AND RESURFACE</p> <p> AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT</p> <p>WORK ZONE DESIGN SPEED = 20 MPH</p>	<p>RECOMMENDED FOR APPROVAL _____ DATE _____</p> <p>DESIGNED: <u>K.R.U.</u> DRAWN: <u>K.R.U.</u></p> <p>CHECKED: <u>L.L.C.</u> CHECKED: <u>L.L.C.</u></p>	<p>INDIANA DEPARTMENT OF TRANSPORTATION</p> <p>PLAN AND PROFILE PHASE V-B</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>HORIZONTAL SCALE</td> <td>BRIDGE FILE</td> </tr> <tr> <td>VERTICAL SCALE</td> <td>DESIGNATION</td> </tr> <tr> <td>N/A</td> <td>1700121</td> </tr> <tr> <td>SURVEY BOOK</td> <td>SHEET</td> </tr> <tr> <td>CONTRACT</td> <td>PROJECT</td> </tr> <tr> <td>RS 40573</td> <td>1700121</td> </tr> </table>	HORIZONTAL SCALE	BRIDGE FILE	VERTICAL SCALE	DESIGNATION	N/A	1700121	SURVEY BOOK	SHEET	CONTRACT	PROJECT	RS 40573	1700121
	HORIZONTAL SCALE	BRIDGE FILE													
VERTICAL SCALE	DESIGNATION														
N/A	1700121														
SURVEY BOOK	SHEET														
CONTRACT	PROJECT														
RS 40573	1700121														
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">39</td> <td style="width: 50%;">of</td> <td style="width: 50%;">185</td> </tr> </table>		39	of	185									
39	of	185													



TYPICAL SECTION
STA. 105+80 TO STA. 113+00 "A"

- LEGEND**
- ▨ AREA OF CONSTRUCTION
 - ① CONSTRUCTION DRUM
 - ② TEMPORARY CONCRETE BARRIER
 - ④⑩ TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - ④⑪ TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: L.L.C.	DRAWN: K.R.U.	
CHECKED: B.C.F.	CHECKED: L.L.C.	

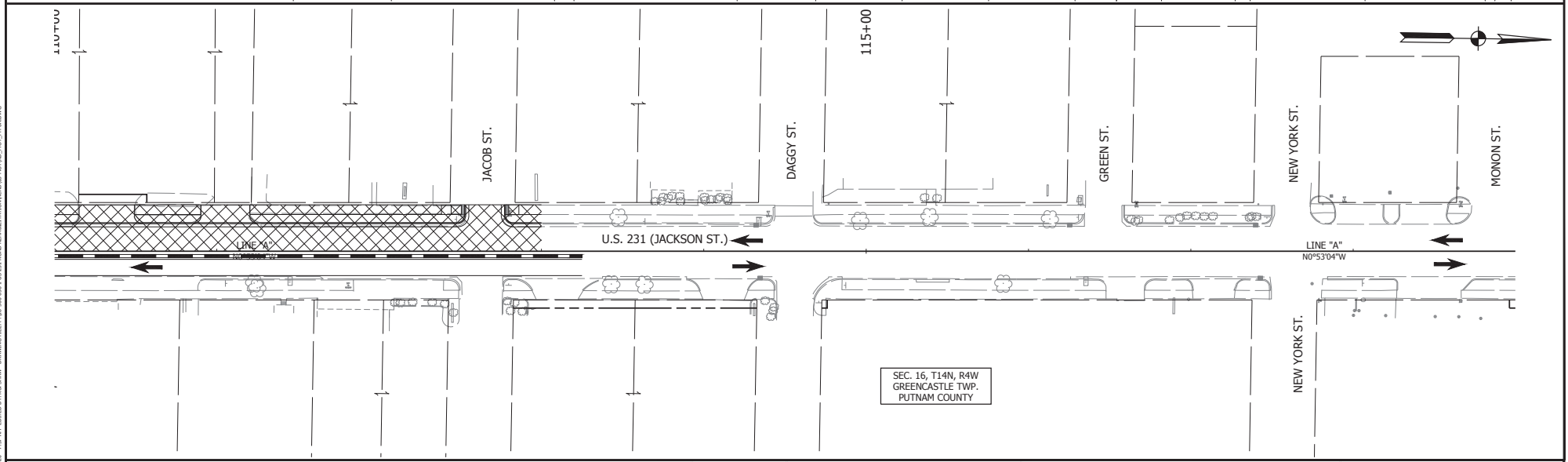
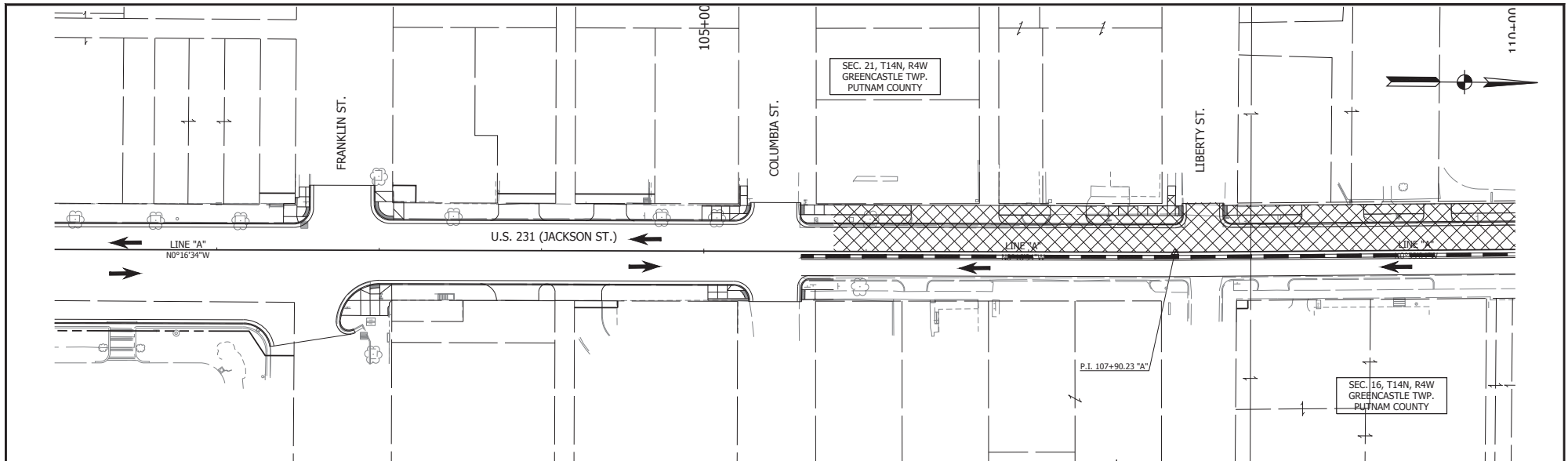
INDIANA DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - PHASE VI-A
U.S. 231

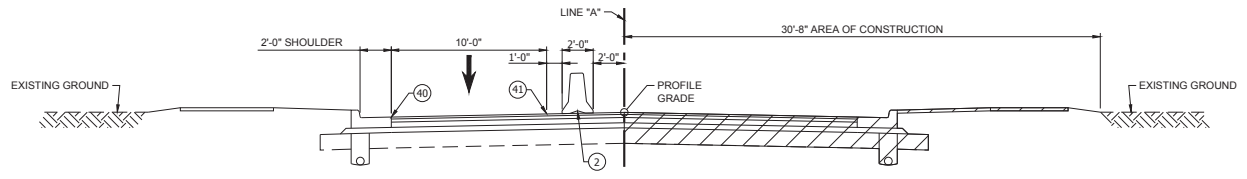
HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
	40 of 185
CONTRACT	PROJECT
RS 40573	1700121

PRINT DATE: 8/11/2016
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PRINT DATE: 03/12/20
 PLOT SCALE: 1" = 50'
 DATE: 03/12/20 2:37 AM
 EDITOR: J. K. SPANGLER
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LEGEND AREA OF CONSTRUCTION MILL AND RESURFACE AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT WORK ZONE DESIGN SPEED = 20 MPH	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION MAINTENANCE OF TRAFFIC PHASE VI-A	HORIZONTAL SCALE _____ BRIDGE FILE N/A VERTICAL SCALE _____ DESIGNATION 1700121 SURVEY BOOK _____ SHEET 41 of 185 CONTRACT _____ PROJECT 1700121 RS 40573
	DESIGNED: K.R.U. DRAWN: K.R.U. CHECKED: L.L.C. CHECKED: L.L.C.		



TYPICAL SECTION
STA. 105+80 TO STA. 113+00 "A"

PRINT DATE: 6/11/2014
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 PLOT DATE: 6/11/2014 7:43 AM
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- LEGEND**
- ▨ AREA OF CONSTRUCTION
 - ① CONSTRUCTION DRUM
 - ② TEMPORARY CONCRETE BARRIER
 - ④⑩ TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - ④⑪ TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

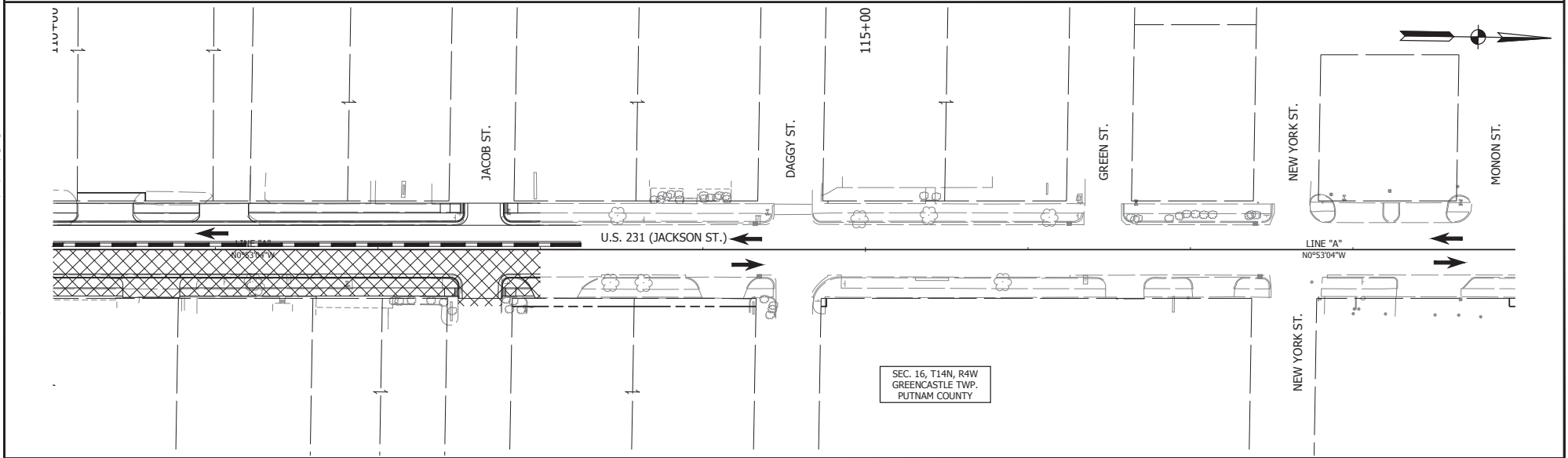
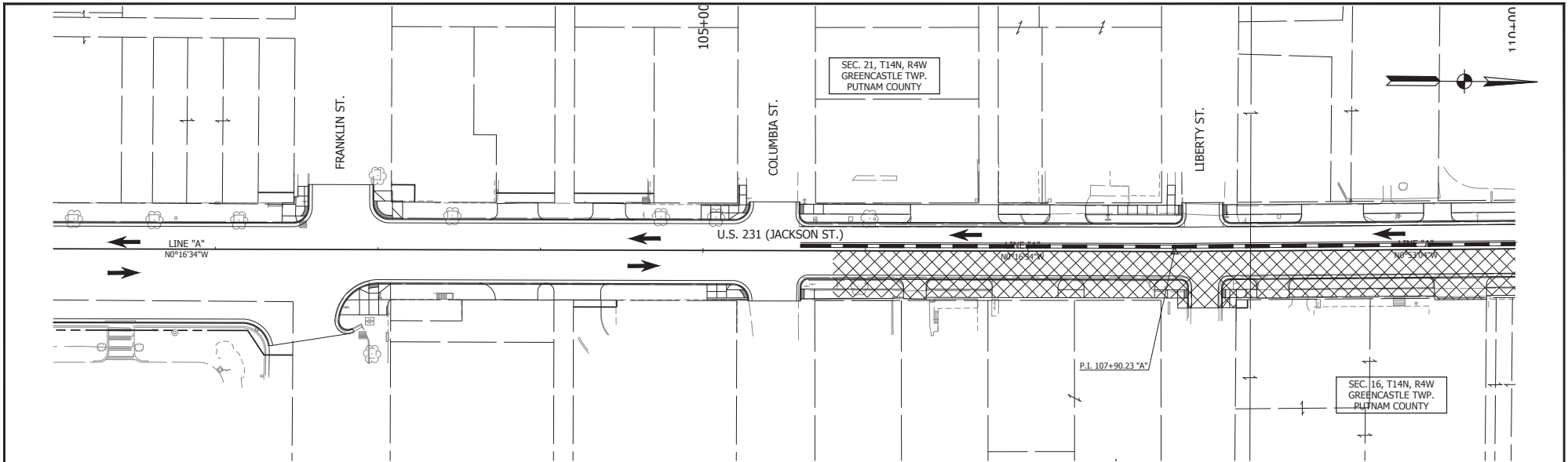
RECOMMENDED FOR APPROVAL _____	
DESIGN ENGINEER	DATE
DESIGNED: <u>LLC</u>	DRAWN: <u>K.R.U.</u>
CHECKED: <u>B.C.F.</u>	CHECKED: <u>LLC</u>

INDIANA
DEPARTMENT OF TRANSPORTATION

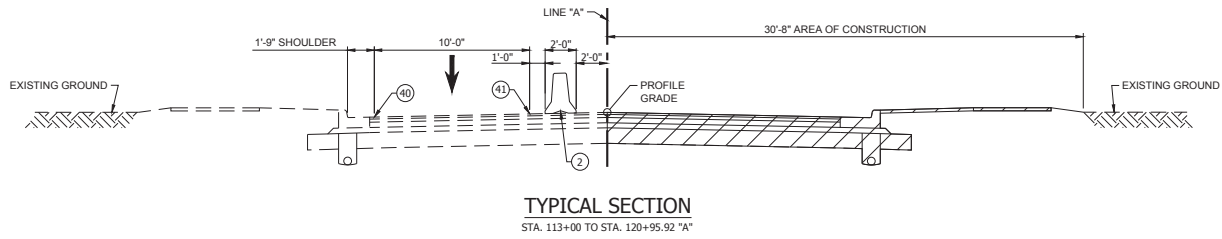
MAINTENANCE OF TRAFFIC - PHASE VI-B
U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
	42 OF 185
CONTRACT	PROJECT
RS 40573	1700121

PRINT DATE: 03/12/2020 11:00:00 AM DATE: 11/05/2019 7:42 AM EDITOR: P. K. SPANGLER DRAWING FILE: P:\05-00066-1\05-231 ROAD REPAIR\STATISTICS\KAC08-00700-007-01A.DWG



LEGEND AREA OF CONSTRUCTION MILL AND RESURFACE AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT WORK ZONE DESIGN SPEED = 20 MPH		RECOMMENDED FOR APPROVAL _____ DATE _____ DESIGN ENGINEER _____ DESIGNED: K.R.U. DRAWN: K.R.U. CHECKED: L.L.C. CHECKED: L.L.C.	INDIANA DEPARTMENT OF TRANSPORTATION MAINTENANCE OF TRAFFIC PHASE VI-B	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">HORIZONTAL SCALE</td> <td style="font-size: small;">BRIDGE FILE</td> </tr> <tr> <td style="font-size: small;">VERTICAL SCALE</td> <td style="font-size: small;">DESIGNATION</td> </tr> <tr> <td style="font-size: small;">SURVEY BOOK</td> <td style="font-size: small;">SHEET</td> </tr> <tr> <td style="font-size: small;">CONTRACT</td> <td style="font-size: small;">PROJECT</td> </tr> <tr> <td style="font-size: small;">RS 40573</td> <td style="font-size: small;">1700121</td> </tr> </table>	HORIZONTAL SCALE	BRIDGE FILE	VERTICAL SCALE	DESIGNATION	SURVEY BOOK	SHEET	CONTRACT	PROJECT	RS 40573	1700121
	HORIZONTAL SCALE	BRIDGE FILE												
VERTICAL SCALE	DESIGNATION													
SURVEY BOOK	SHEET													
CONTRACT	PROJECT													
RS 40573	1700121													
			LINE "A" N0°53'04"W											



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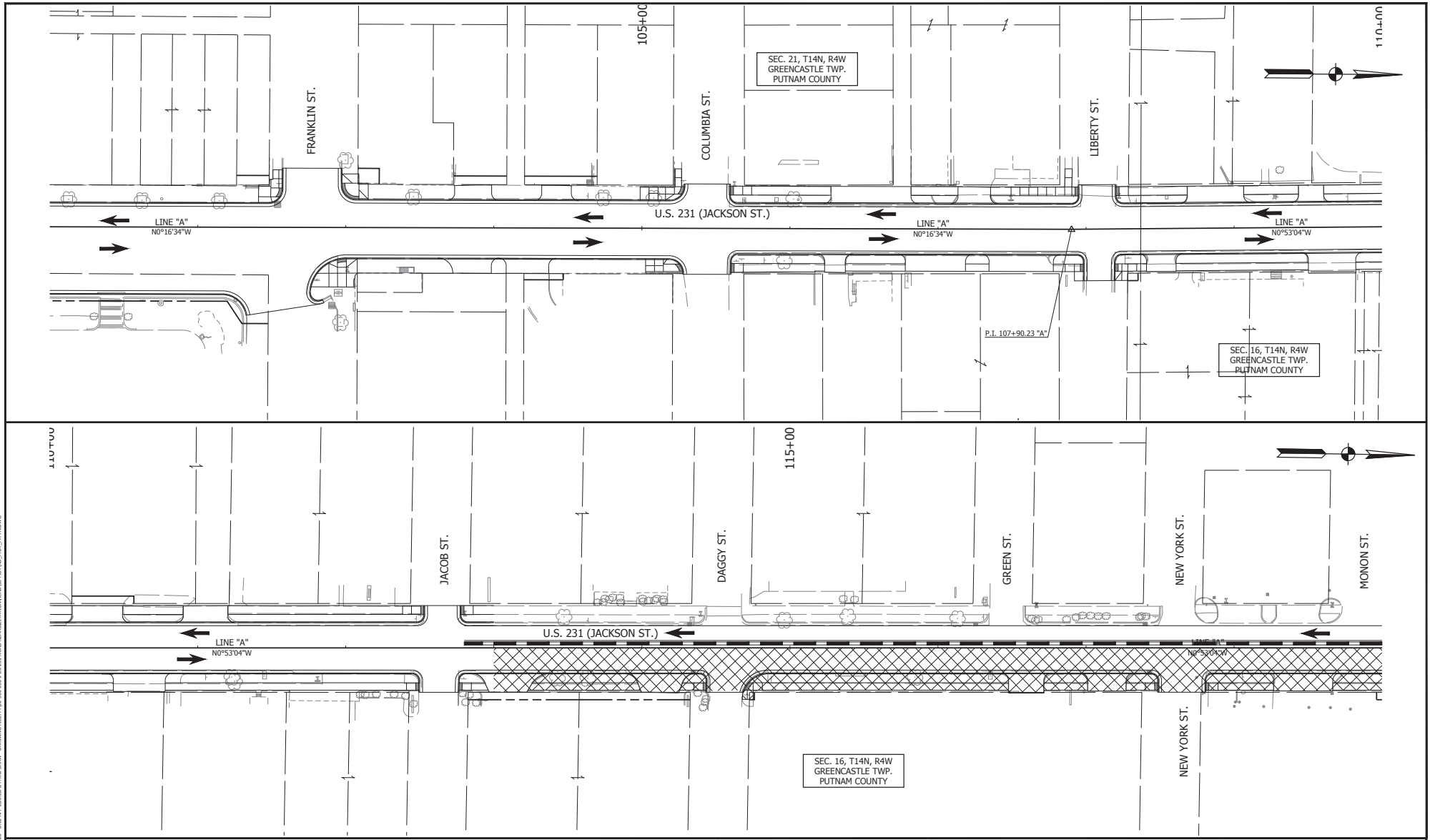
- LEGEND**
- AREA OF CONSTRUCTION
 - CONSTRUCTION DRUM
 - TEMPORARY CONCRETE BARRIER
 - TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

RECOMMENDED FOR APPROVAL	
DESIGN ENGINEER	DATE
DESIGNED: L.L.C.	DRAWN: K.R.U.
CHECKED: B.C.F.	CHECKED: L.L.C.

INDIANA DEPARTMENT OF TRANSPORTATION	
MAINTENANCE OF TRAFFIC - PHASE VII-A U.S. 231	

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	44 of 185
PROJECT	
RS 40573	1700121

PRINT DATE: 03/21/2017 10:50:00 - 0.00 AM, EDITED BY: K.R.U., DRAWING FILE: I:\03-00066-1\US 231 ROAD REHAB\STATISTICS\03-00066-1\03-00066-1.DWG
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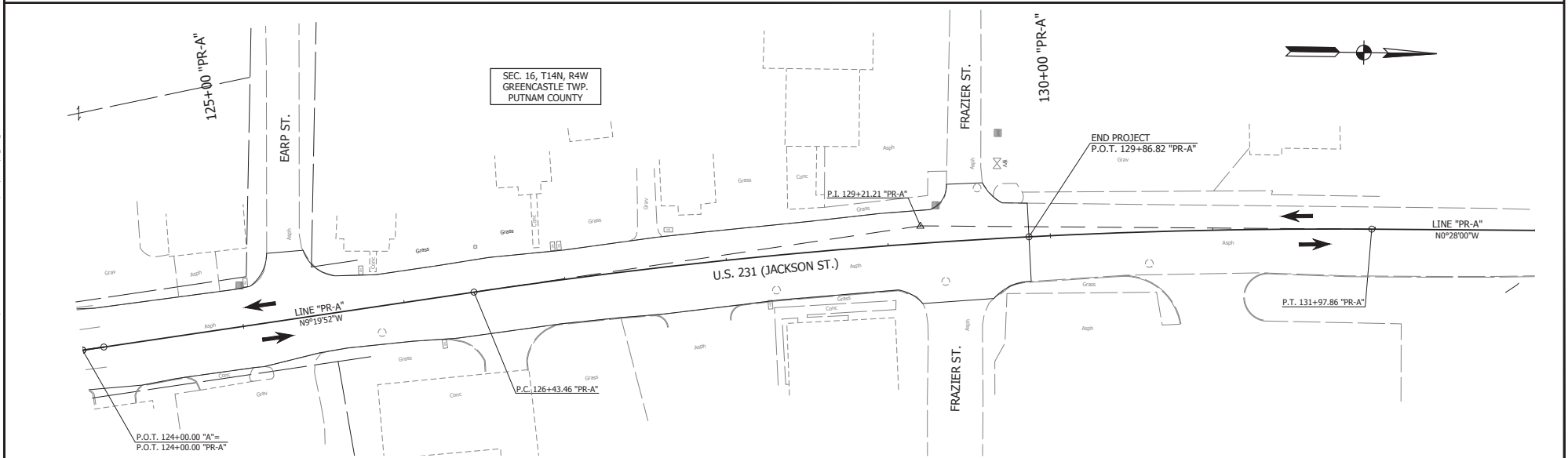
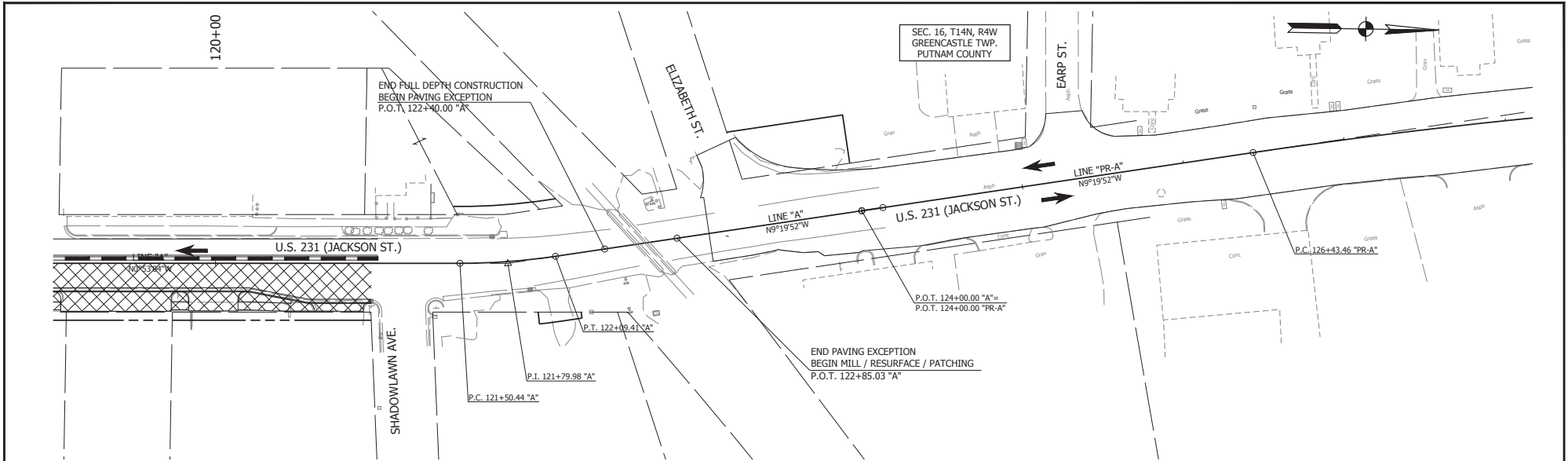


LEGEND
 AREA OF CONSTRUCTION
 MILL AND RESURFACE
 AREA OF CONSTRUCTION
 FULL DEPTH PAVEMENT REPLACEMENT
 WORK ZONE DESIGN SPEED = 20 MPH

RECOMMENDED FOR APPROVAL _____ DATE _____
 DESIGN ENGINEER
 DESIGNED: K.R.U. DRAWN: K.R.U.
 CHECKED: L.L.C. CHECKED: L.L.C.

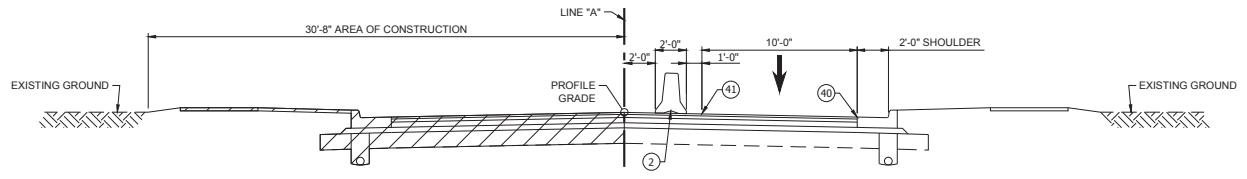
INDIANA
 DEPARTMENT OF TRANSPORTATION
 PLAN AND PROFILE
 PHASE VII-A

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	45 of 185
RS 40573	PROJECT
	1700121



PRINT DATE: 04/17/20
 JOB NUMBER: 1700121
 DATE PLOTTED: 04/17/20 8:03 AM
 EDITED BY: K.R.U.
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LEGEND AREA OF CONSTRUCTION MILL AND RESURFACE AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT WORK ZONE DESIGN SPEED = 20 MPH	RECOMMENDED FOR APPROVAL _____ DATE _____ DESIGN ENGINEER _____	INDIANA DEPARTMENT OF TRANSPORTATION MAINTENANCE OF TRAFFIC PHASE VII-A	HORIZONTAL SCALE _____ BRIDGE FILE N/A
	DESIGNED: K.R.U. DRAWN: K.R.U. CHECKED: L.L.C. CHECKED: L.L.C.		VERTICAL SCALE N/A DESIGNATION 1700121 SURVEY BOOK _____ SHEET 121 OF 185 CONTRACT RS 40573 PROJECT 1700121



TYPICAL SECTION
STA. 113+00 TO STA. 120+95.92 "A"

PRINT DATE: 6/11/2024
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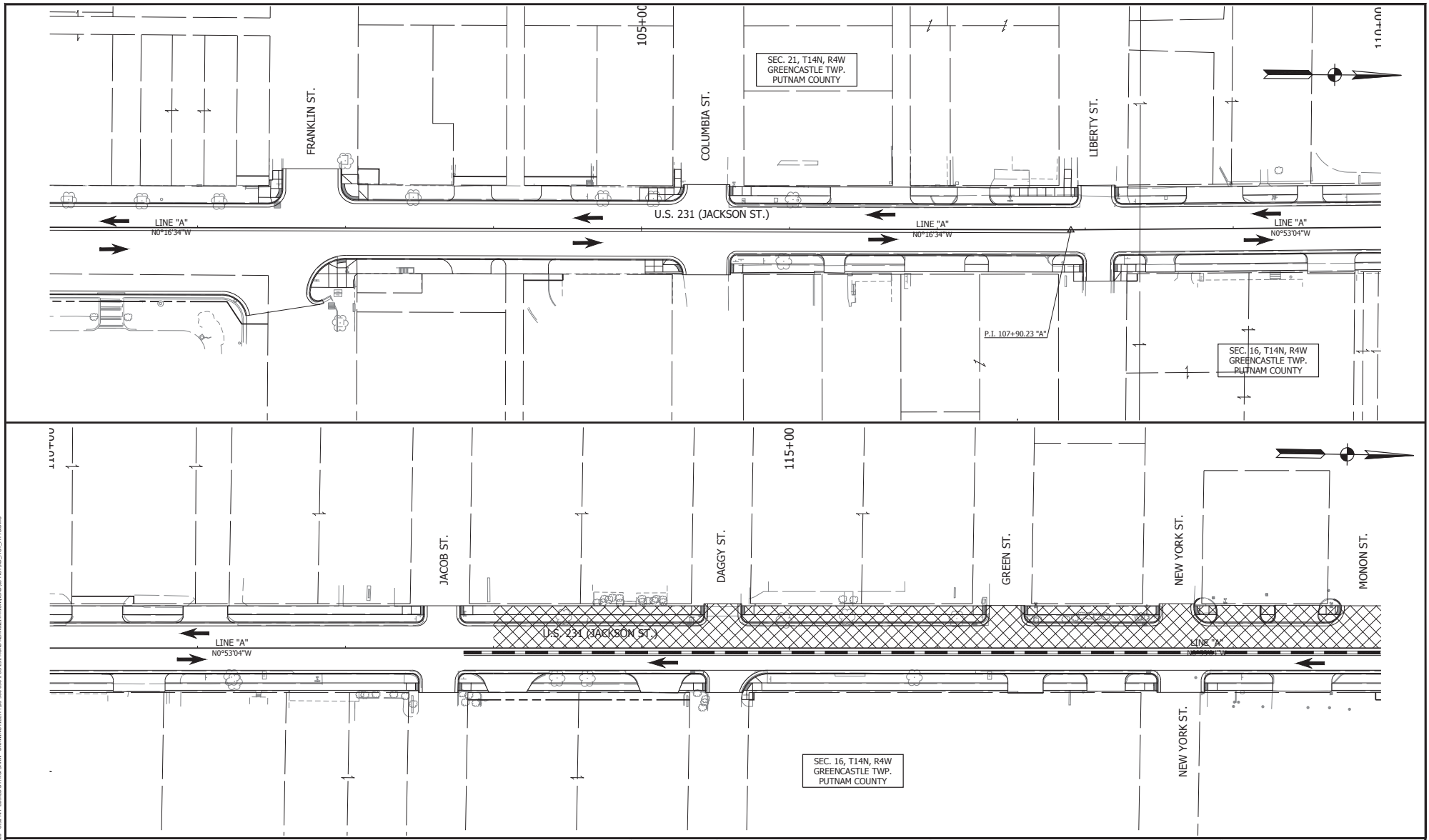
- LEGEND**
- AREA OF CONSTRUCTION
 - CONSTRUCTION DRUM
 - TEMPORARY CONCRETE BARRIER
 - TEMP. PAVEMENT MARKINGS, SOLID WHITE, 4"
 - TEMP. PAVEMENT MARKINGS, SOLID YELLOW, 4"

RECOMMENDED FOR APPROVAL _____	
DESIGN ENGINEER	DATE
DESIGNED: <u>LLC</u>	DRAWN: <u>K.R.U.</u>
CHECKED: <u>B.C.F.</u>	CHECKED: <u>LLC</u>

INDIANA
DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC - PHASE VII-B
 U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1/2" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	
CONTRACT	SHEET
RS 40573	47 of 185
PROJECT	
	1700121

PRINT DATE: 03/21/2023 10:50:00 AM EDITOR: J. K. SPANGLER DRAWING FILE: I:\PROJECTS\1700121\1700121_001.DWG PLOT DATE: 03/21/2023 10:50:00 AM

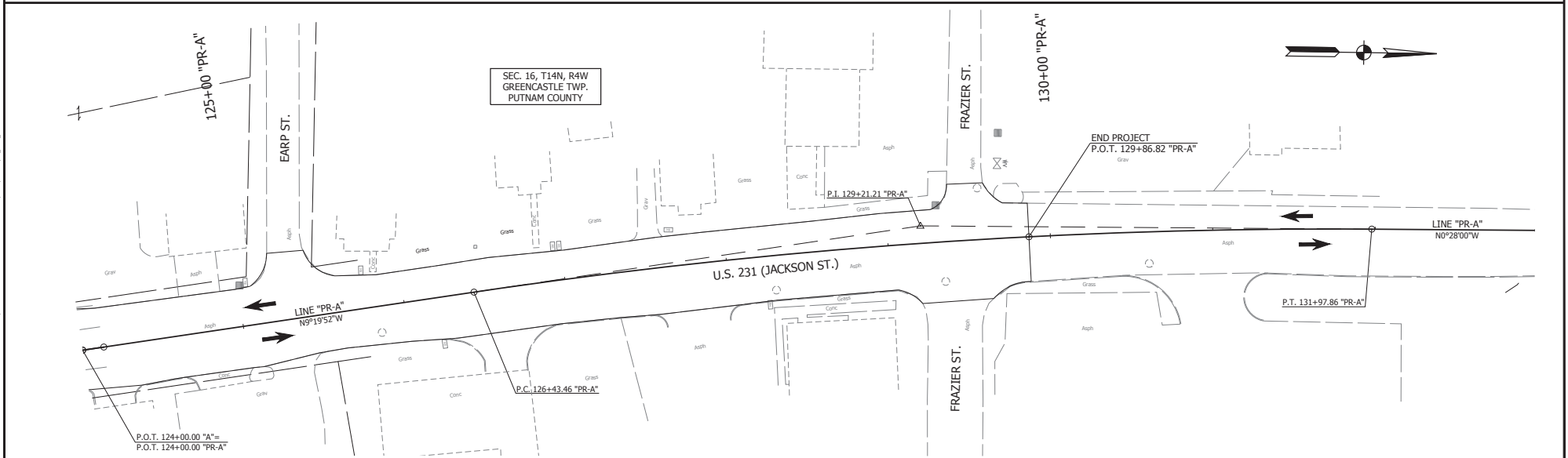
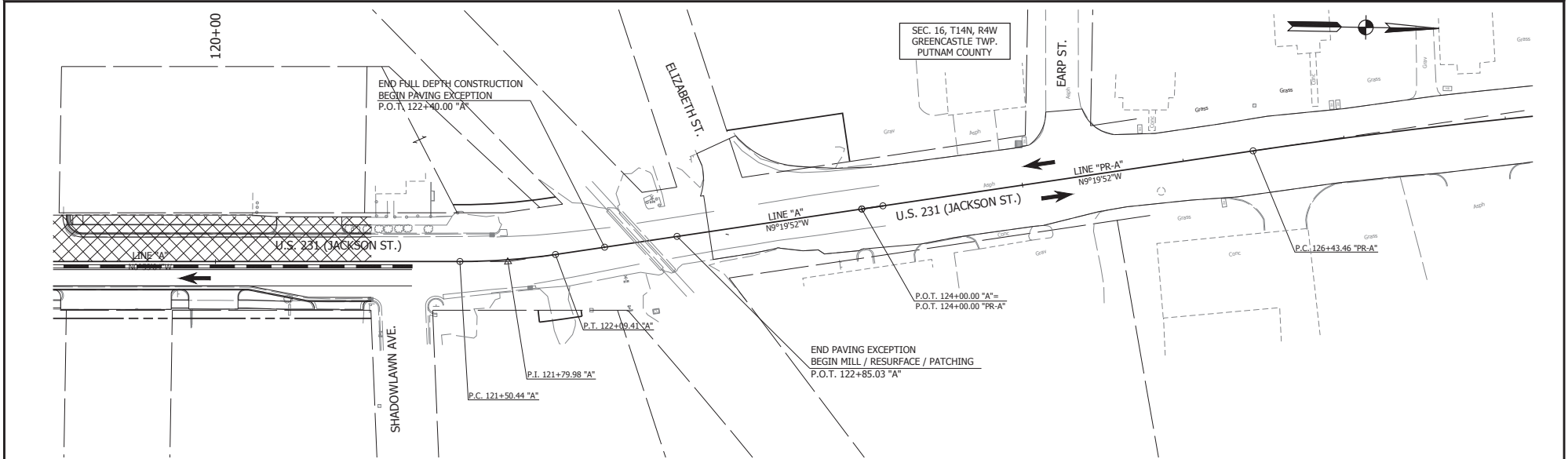


LEGEND
 AREA OF CONSTRUCTION
 MILL AND RESURFACE
 AREA OF CONSTRUCTION
 FULL DEPTH PAVEMENT REPLACEMENT
 WORK ZONE DESIGN SPEED = 20 MPH

RECOMMENDED FOR APPROVAL _____ DATE _____
 DESIGN ENGINEER
 DESIGNED: K.R.U. DRAWN: K.R.U.
 CHECKED: L.L.C. CHECKED: L.L.C.

INDIANA
 DEPARTMENT OF TRANSPORTATION
 MAINTENANCE OF TRAFFIC
 PHASE VII-B

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
CONTRACT	48 of 185
RS 40573	PROJECT
	1700121



LEGEND

	AREA OF CONSTRUCTION MILL AND RESURFACE
	AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT

WORK ZONE DESIGN SPEED = 20 MPH

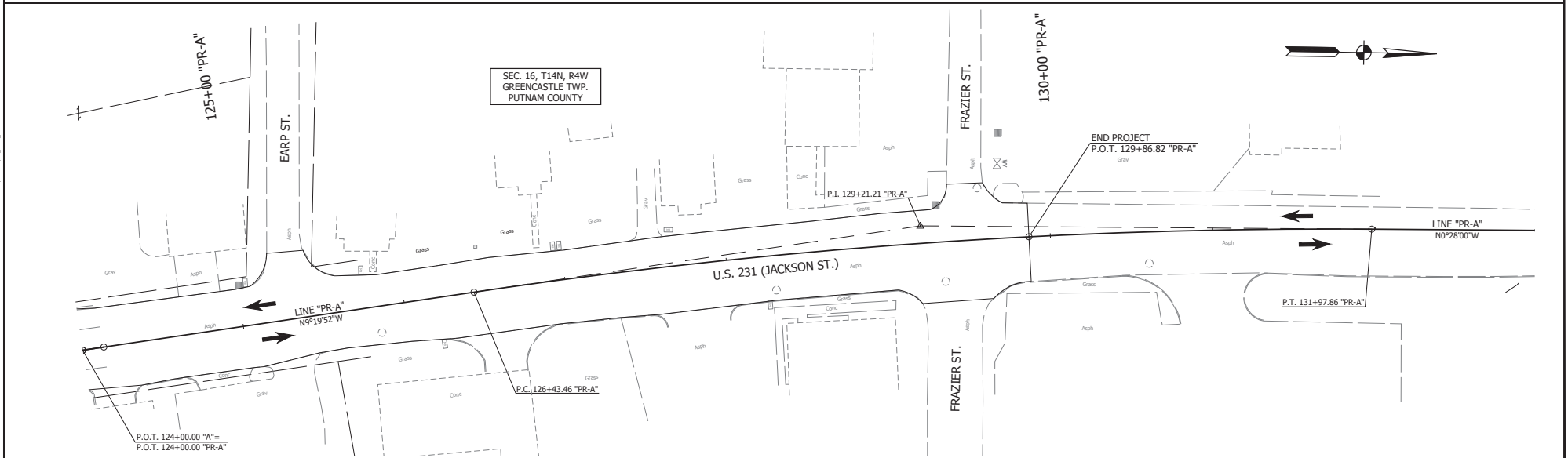
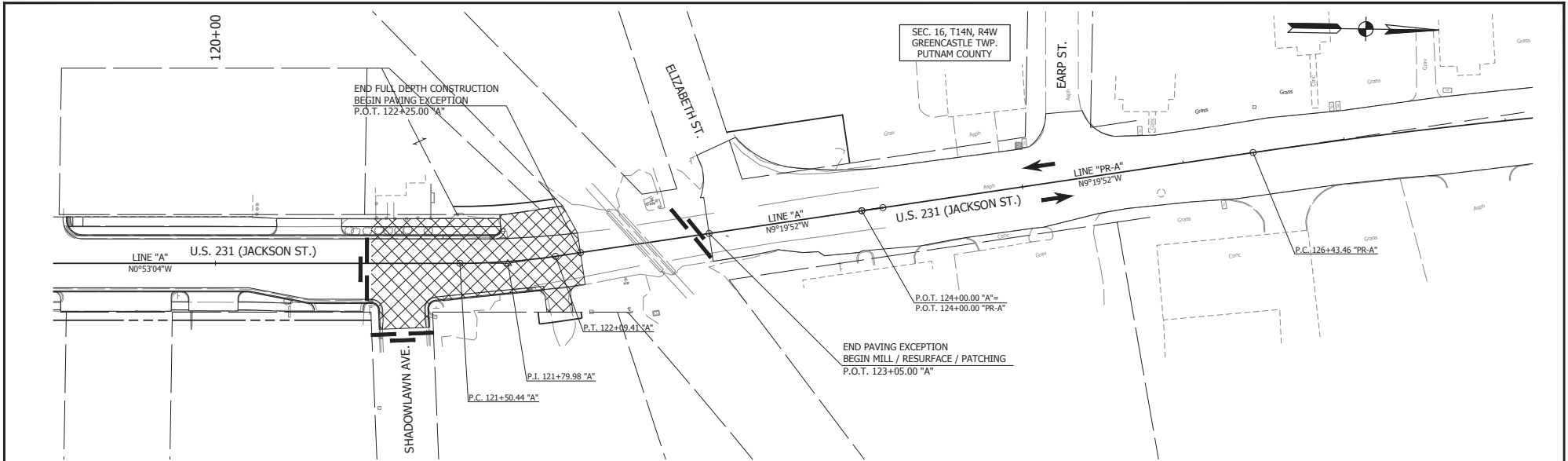
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: K.R.U.	DRAWN: K.R.U.	
CHECKED: L.L.C.	CHECKED: L.L.C.	

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE VII-B

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
49	121
CONTRACT	PROJECT
RS 40573	1700121

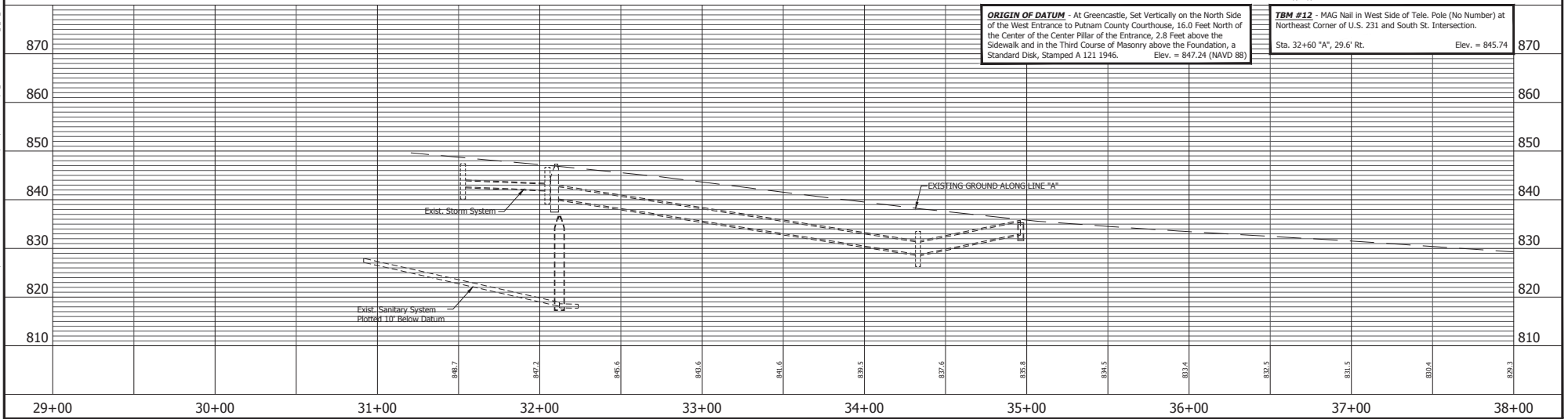
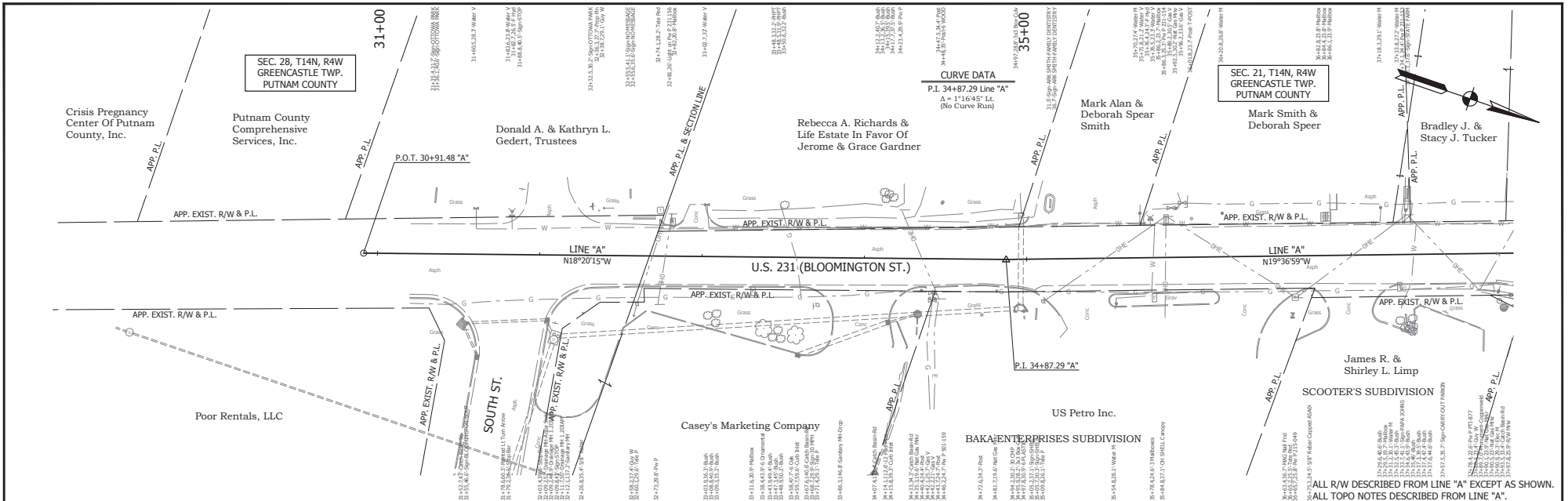
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PRINT DATE: 04/17/20
 DWG SCALE: 1:1
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 PLOTTER DRIVER: HP DesignJet 2400 PCL6
 PLOTTER SETTINGS: HP DesignJet 2400 PCL6
 PLOTTER STATUS: OK
 PLOTTER ERROR: NONE
 PLOTTER MESSAGE: NONE
 PLOTTER WARNING: NONE
 PLOTTER ERROR: NONE
 PLOTTER MESSAGE: NONE
 PLOTTER WARNING: NONE

LEGEND AREA OF CONSTRUCTION MILL AND RESURFACE AREA OF CONSTRUCTION FULL DEPTH PAVEMENT REPLACEMENT WORK ZONE DESIGN SPEED = 20 MPH	RECOMMENDED FOR APPROVAL _____ DATE _____ DESIGN ENGINEER _____	INDIANA DEPARTMENT OF TRANSPORTATION MAINTENANCE OF TRAFFIC PHASE VIII	HORIZONTAL SCALE _____ BRIDGE FILE _____
	DESIGNED: K.R.U. DRAWN: K.R.U. CHECKED: L.L.C. CHECKED: L.L.C.		VERTICAL SCALE _____ DESIGNATION _____ SURVEY BOOK _____ SHEET _____ CONTRACT _____ PROJECT _____ RS 40573 _____ 1700121

DATE: 01/11/2017
 DRAWING FILE: P:\18-00-06-118-211-ROAD-REHABILITATION\DRAWINGS\PLAN\PROFILES\PLAN PROFILE SHEET A_30_01.DWG
 DRAWN BY: CAMPHAN
 CHECKED BY: J. L. L.



ORIGIN OF DATUM - At Greencastle, Set Vertically on the North Side of the West Entrance to Putnam County Courthouse, 16.0 Feet North of the Center of the Center Pillar of the Entrance, 2.8 Feet above the Sidewalk and in the Third Course of Masonry above the Foundation, a Standard Disk, Stamped A 121 1946. Elev. = 847.24 (NAVD 88)

TBM #12 - MAG Nail in West Side of Tele. Pole (No Number) at Northeast Corner of U.S. 231 and South St. Intersection. Sta. 32+60 "A", 29.6' Rt. Elev. = 845.74

1" = 30' NORTH EAST 46717.9925 71518.4470	1" = 30' NORTH EAST 47038.1529 71412.3325
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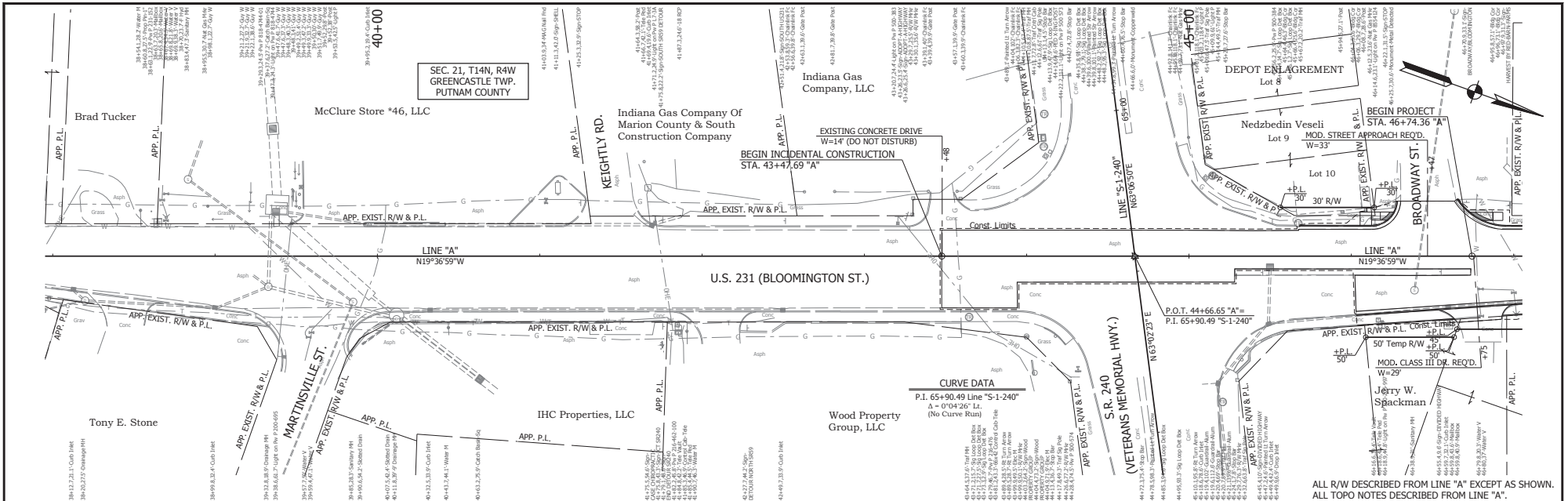


RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: Y.Z.	DRAWN: M.R.M.	
CHECKED: L.L.C.	CHECKED: L.L.C.	

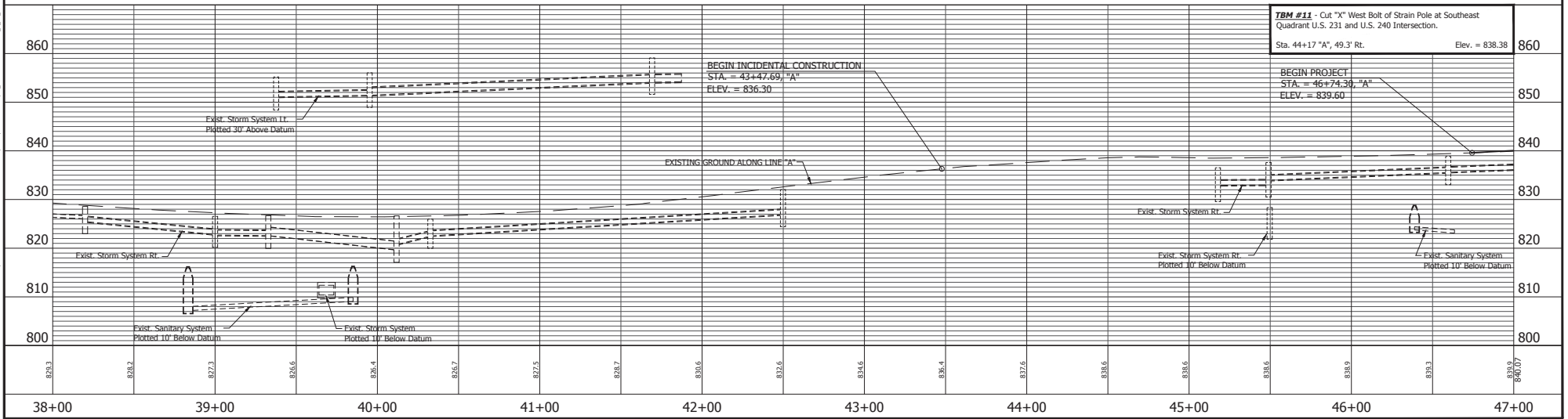
INDIANA DEPARTMENT OF TRANSPORTATION
PLAN AND PROFILE
 STA. 30+91.48 TO 38+00.00 LINE "A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
	51 of 185
CONTRACT	PROJECT
RS 40573	1700121

PRINT DATE: 01/20/20
 PROJECT DATE: 01/21/20
 DRAWING DATE: 02/26/20
 10:04 AM
 EDITED BY: CAMPBELL
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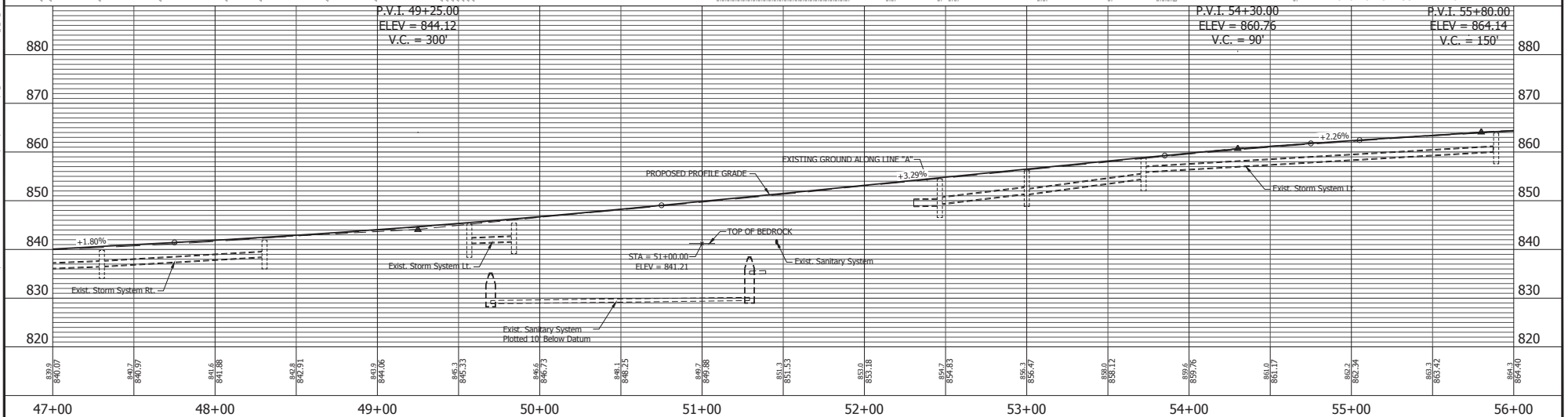
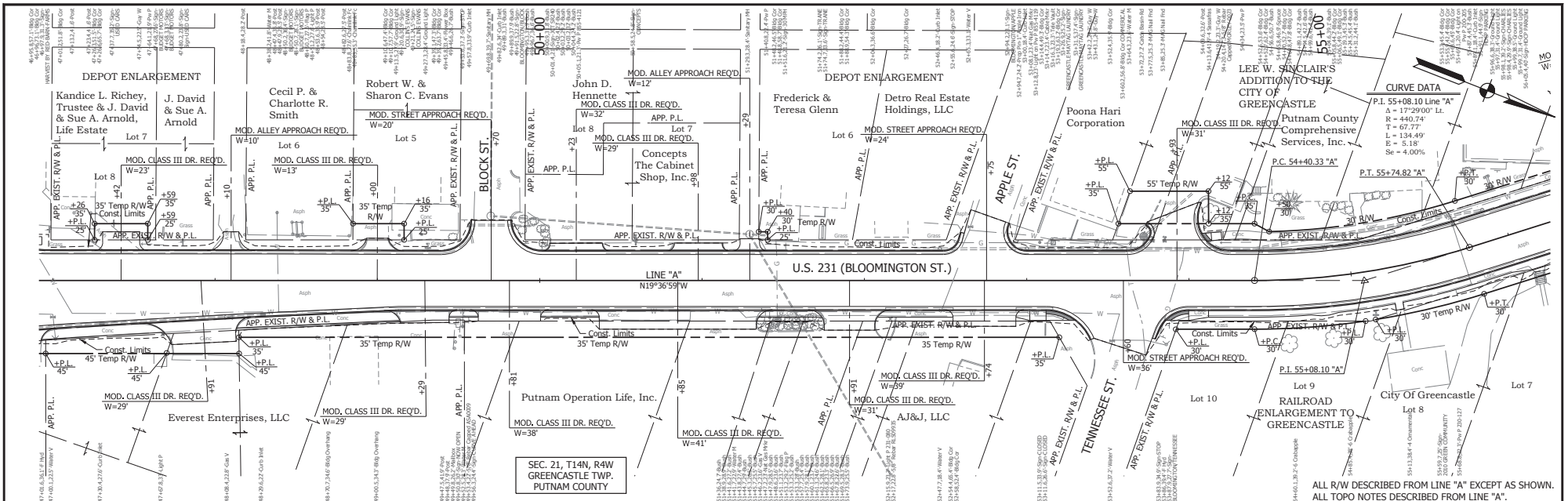


ALL R/W DESCRIBED FROM LINE "A" EXCEPT AS SHOWN.
 ALL TOPO NOTES DESCRIBED FROM LINE "A".



<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">RECOMMENDED FOR APPROVAL</td> <td style="width: 50%;">DESIGN ENGINEER _____ DATE _____</td> </tr> <tr> <td>DESIGNED: <u>Y.Z.</u></td> <td>DRAWN: <u>M.R.M.</u></td> </tr> <tr> <td>CHECKED: <u>L.L.C.</u></td> <td>CHECKED: <u>L.L.C.</u></td> </tr> </table>	RECOMMENDED FOR APPROVAL	DESIGN ENGINEER _____ DATE _____	DESIGNED: <u>Y.Z.</u>	DRAWN: <u>M.R.M.</u>	CHECKED: <u>L.L.C.</u>	CHECKED: <u>L.L.C.</u>	INDIANA DEPARTMENT OF TRANSPORTATION PLAN AND PROFILE STA. 38+00.00 TO 47+00.00 LINE "A"	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>HORIZONTAL SCALE</td> <td>BRIDGE FILE</td> </tr> <tr> <td>1" = 30'</td> <td>N/A</td> </tr> <tr> <td>VERTICAL SCALE</td> <td>DESIGNATION</td> </tr> <tr> <td>N/A</td> <td>1700121</td> </tr> <tr> <td>SURVEY BOOK</td> <td>SHEET</td> </tr> <tr> <td>CONTRACT RS 40573</td> <td>52 of 185</td> </tr> <tr> <td></td> <td>PROJECT</td> </tr> <tr> <td></td> <td>1700121</td> </tr> </table>	HORIZONTAL SCALE	BRIDGE FILE	1" = 30'	N/A	VERTICAL SCALE	DESIGNATION	N/A	1700121	SURVEY BOOK	SHEET	CONTRACT RS 40573	52 of 185		PROJECT		1700121
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER _____ DATE _____																							
DESIGNED: <u>Y.Z.</u>	DRAWN: <u>M.R.M.</u>																							
CHECKED: <u>L.L.C.</u>	CHECKED: <u>L.L.C.</u>																							
HORIZONTAL SCALE	BRIDGE FILE																							
1" = 30'	N/A																							
VERTICAL SCALE	DESIGNATION																							
N/A	1700121																							
SURVEY BOOK	SHEET																							
CONTRACT RS 40573	52 of 185																							
	PROJECT																							
	1700121																							

PROJECT DATE: 05/20/2010
 PROJECT NAME: I-75/US 231 RAMP
 DRAWING FILE: I:\181800\096\IUS 231 ROAD\BIDDING\1700121\INDIANA\INDIANAPLAN\INDIANAPLAN PROFILE SHEET A_30.DWG
 DRAWN BY: CAMPAKAW
 CHECKED BY: CAMPAKAW
 DATE: 05/20/2010



504 NORTH 4887.8430 EAST 70756.6543	505 NORTH 4894.6801 EAST 70733.9023	506 NORTH 4899.7329 EAST 70693.0230
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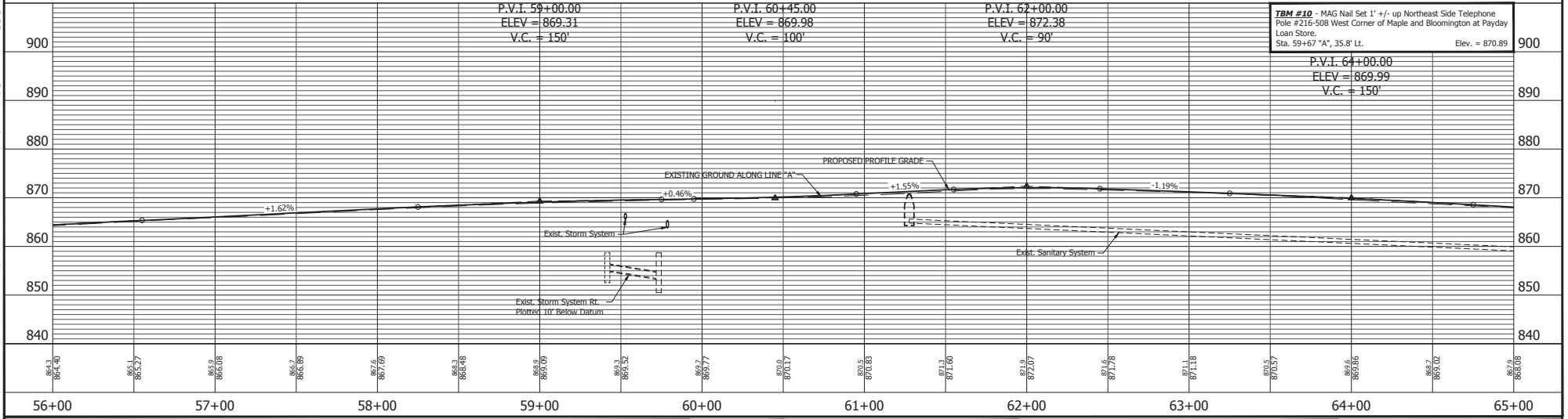
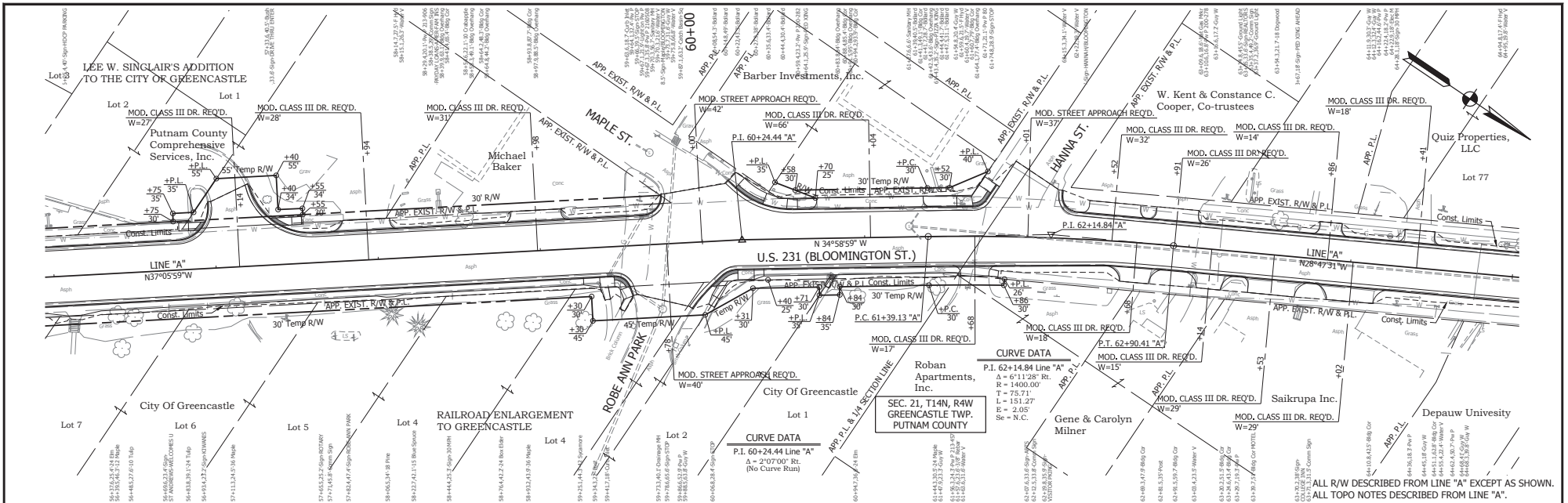
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: Y.Z.	DRAWN: M.R.M.	
CHECKED: L.L.C.	CHECKED: L.L.C.	

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
 STA. 47+00.00 TO 56+00.00 LINE "A"

HORIZONTAL SCALE 1" = 30'	BRIDGE FILE N/A
VERTICAL SCALE N/A	DESIGNATION 1700121
SURVEY BOOK	SHEET
CONTRACT RS 40573	53 OF 185
PROJECT	1700121

PROJECT FILE #1700121
 PROJECT NAME: STATE ROUTE 46
 DRAWING DATE: 08/20/2024
 DRAWING FILE: P18-00056-118-211 ROAD REHABILITATION/CONCRETE/PAV REPROF PLAN PROFILE SHEET A_3D.DWG
 EDITED BY: COMPHUM
 DRAWING FILE: P18-00056-118-211 ROAD REHABILITATION/CONCRETE/PAV REPROF PLAN PROFILE SHEET A_3D.DWG

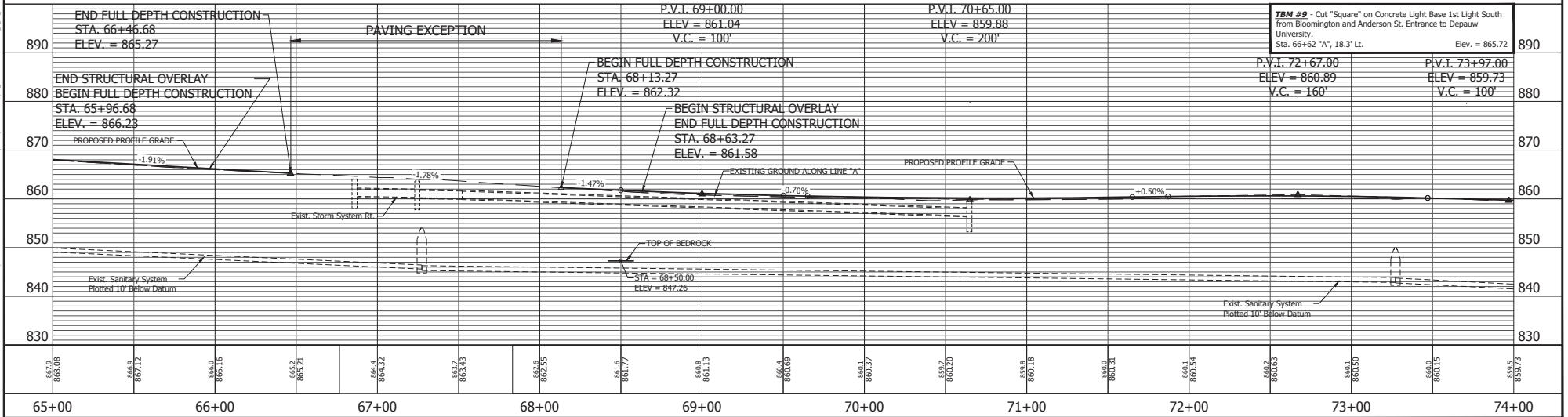
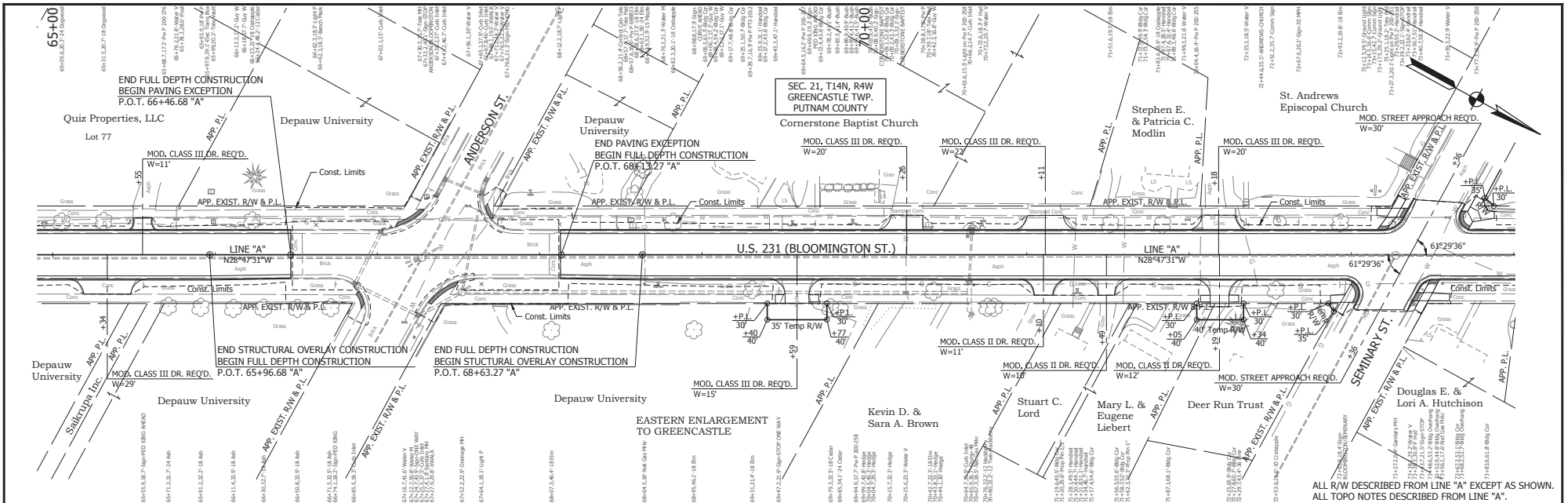


56+00 NORTH 49354.3500 EAST 70421.8050 P.I. 60+24.44 "A"	57+00 NORTH 49448.3169 EAST 70356.0509 P.C. 61+39.13 "A"	58+00 NORTH 49510.3483 EAST 70312.6433 P.I. 62+14.84 "A"	59+00 NORTH 49576.6992 EAST 70276.1785 P.T. 62+90.41 "A"
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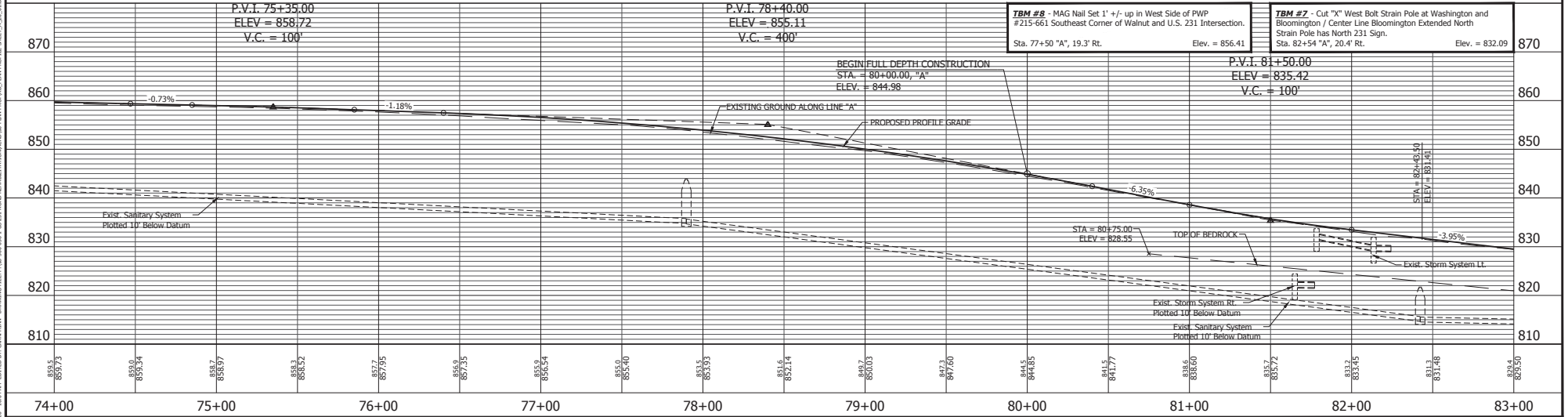
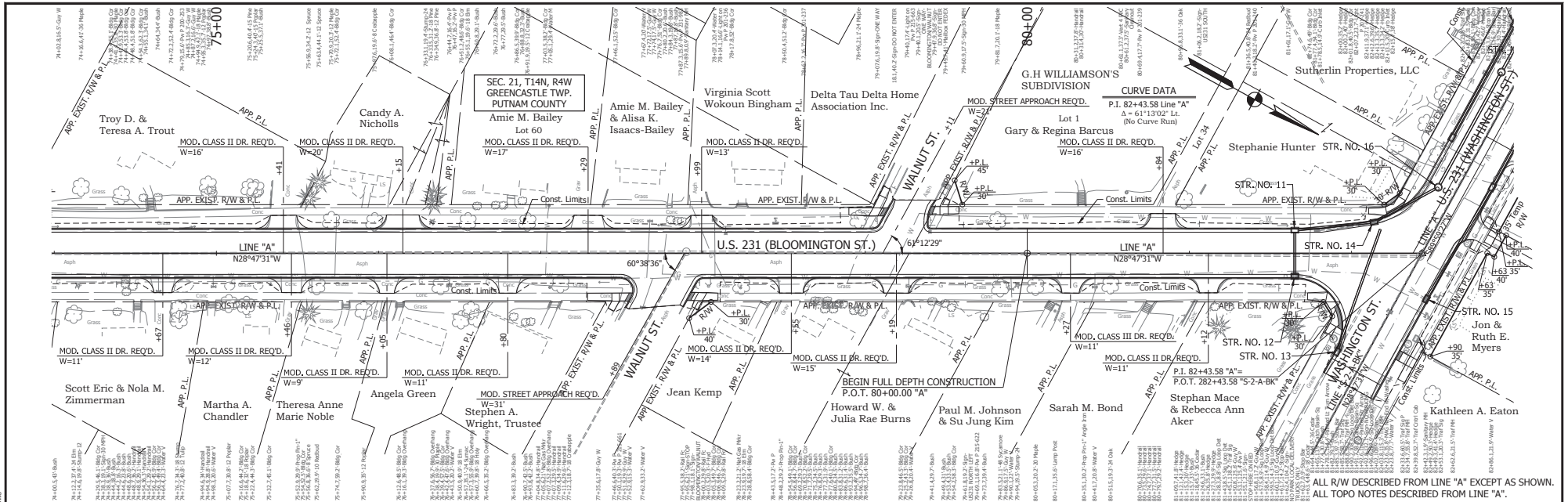
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____ DESIGNED: Y.Z. _____ DRAWN: M.R.M. _____ CHECKED: L.L.C. _____ CHECKED: L.L.C. _____	INDIANA DEPARTMENT OF TRANSPORTATION PLAN AND PROFILE STA. 56+00.00 TO 65+00.00 LINE "A"
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HORIZONTAL SCALE 1" = 30'	BRIDGE FILE N/A
VERTICAL SCALE N/A	DESIGNATION 1700121
SURVEY BOOK	SHEET 54 of 185
CONTRACT RS 40573	PROJECT 1700121

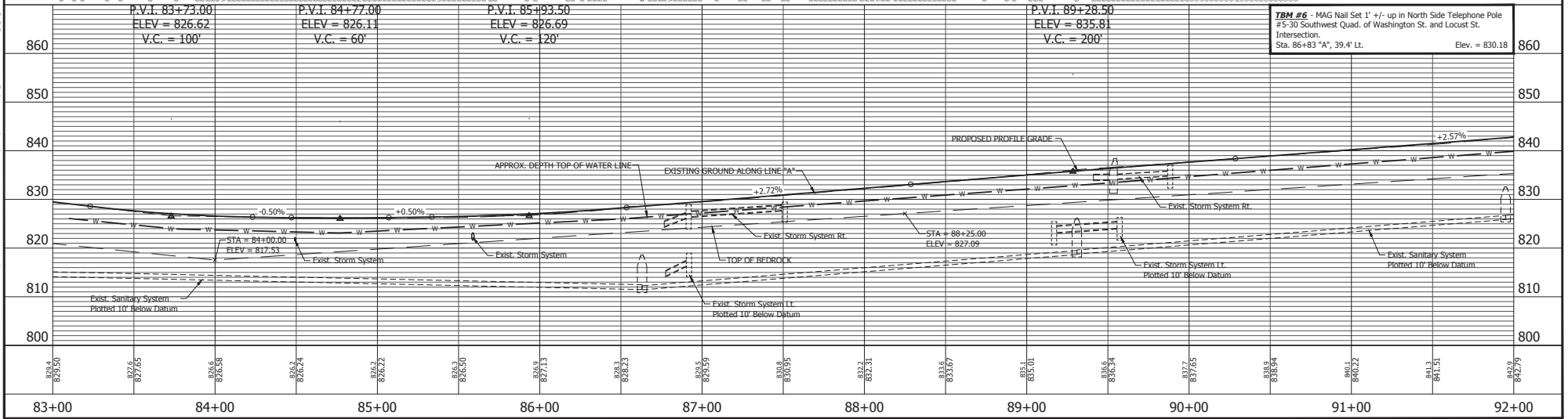
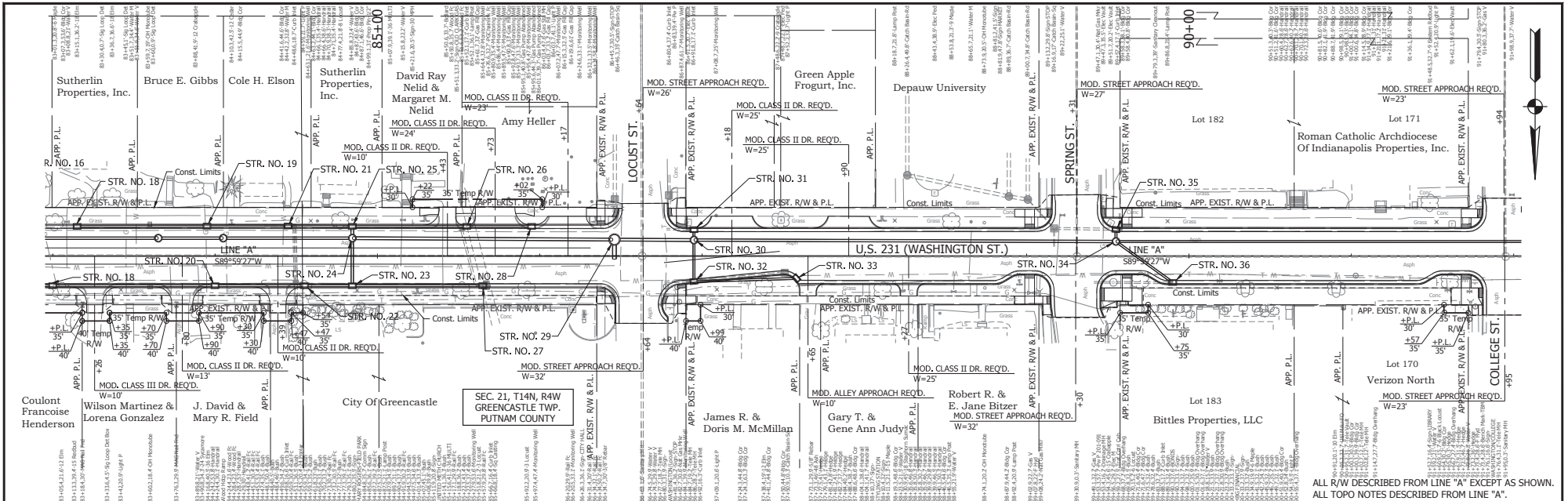
PROJECT: 1700121
 DATE: 02/20/20
 DRAWING FILE: P:\18-000\05-105-231-ROAD-REHABILITATION\DRAWING\PLAN\PROFILES\PLAN PROFILE SHEET_A.dwg
 DESIGNED BY: J.Z.
 CHECKED BY: LLC
 DRAWN BY: M.R.M.
 CHECKED BY: LLC



RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____		INDIANA DEPARTMENT OF TRANSPORTATION PLAN AND PROFILE STA. 65+00.00 TO 74+00.00 LINE "A"	HORIZONTAL SCALE 1" = 30'	BRIDGE FILE N/A
DESIGNED: Y.Z.	DRAWN: M.R.M.		VERTICAL SCALE N/A	DESIGNATION 1700121
CHECKED: LLC	CHECKED: LLC		SURVEY BOOK	SHEET 55 of 185
			CONTRACT RS 40573	PROJECT 1700121

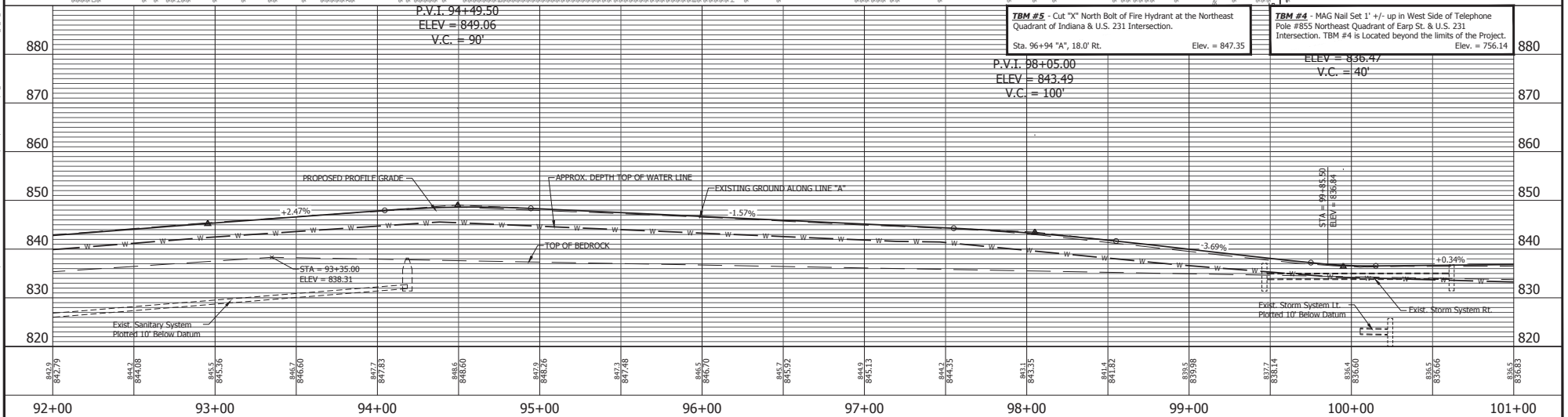
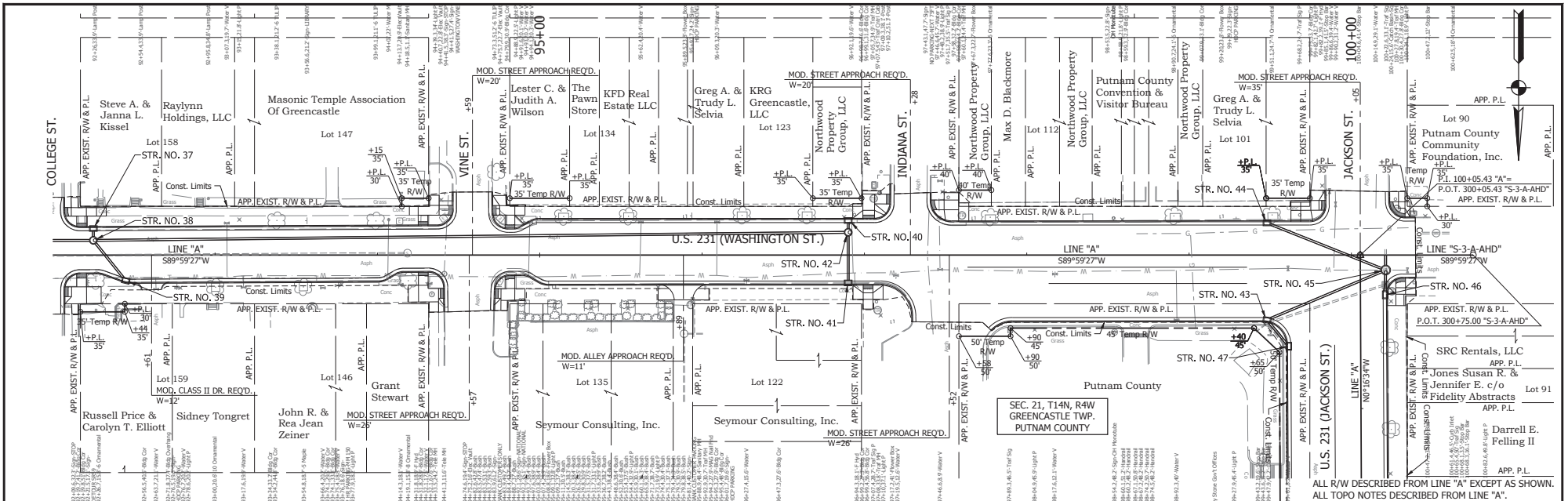


	DESIGNED: Y.Z.	DRAWN: M.R.M.	INDIANA DEPARTMENT OF TRANSPORTATION PLAN AND PROFILE STA. 74+00.00 TO 83+00.00 LINE "A"	HORIZONTAL SCALE	BRIDGE FILE
	CHECKED: L.L.C.	CHECKED: L.L.C.		VERTICAL SCALE	DESIGNATION
NORTH 51285.4995 EAST 69135.4660				N/A	N/A
				1700121	1700121
				56	185
				RS 40573	1700121



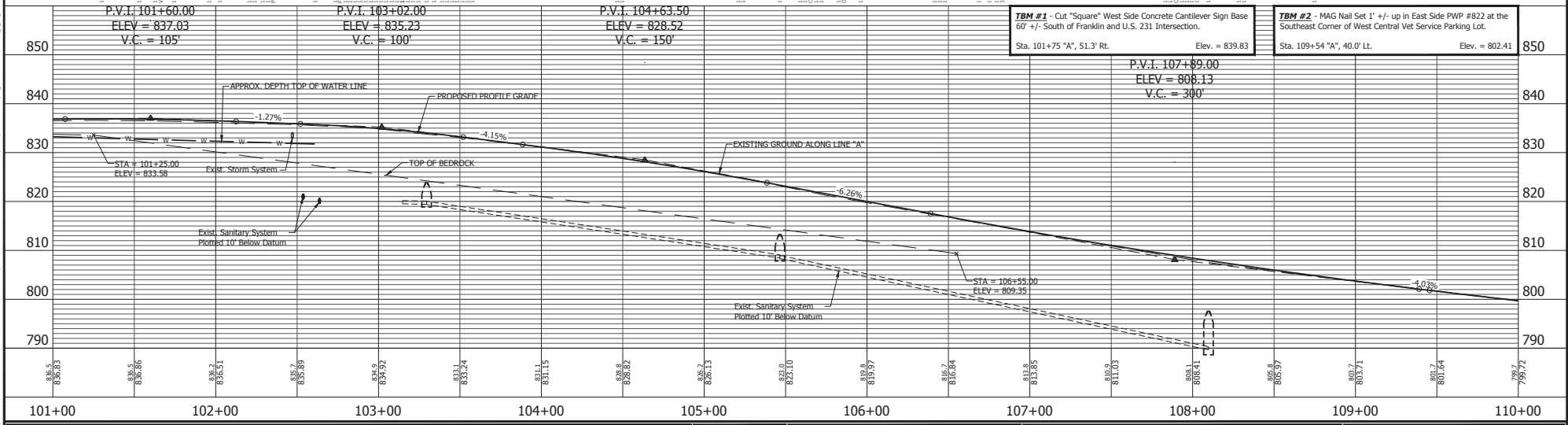
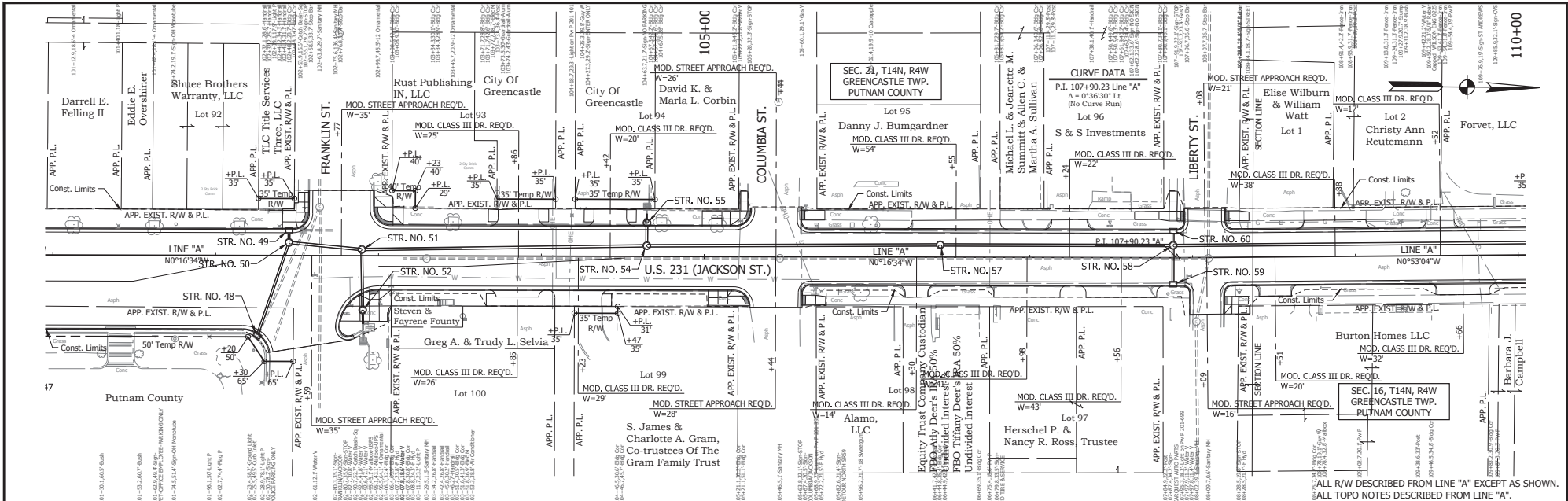
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____		INDIANA DEPARTMENT OF TRANSPORTATION PLAN AND PROFILE STA. 83+00.00 TO 92+00.00 LINE "A"	HORIZONTAL SCALE 1" = 30'		BRIDGE FILE N/A	
DESIGNED: <u>Y.Z.</u>	DRAWN: <u>M.R.M.</u>		VERTICAL SCALE N/A		DESIGNATION 1700121	
CHECKED: <u>L.L.C.</u>	CHECKED: <u>L.L.C.</u>		SURVEY BOOK RS 40573		SHEET 57 of 185	
			PROJECT 1700121			

PROJECT: I-170, STA. 92+00 TO 101+00
 DRAWING: PLAN AND PROFILE, LINE "A"
 DATE: 08/14/2014
 DESIGNED BY: Y.Z.
 DRAWN BY: M.R.M.
 CHECKED BY: L.L.C.
 PROJECT NO.: 1700121



NORTH EAST 51288.1258 67573.6137 UTM 1700121	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____		INDIANA DEPARTMENT OF TRANSPORTATION PLAN AND PROFILE STA. 92+00.00 TO 101+00.00 LINE "A"	HORIZONTAL SCALE 1" = 30' VERTICAL SCALE N/A SURVEY BOOK 58 CONTRACT RS 40573	BRIDGE FILE N/A DESIGNATION 1700121 SHEET 11 PRODUCT 1700121
	DESIGNED: Y.Z. CHECKED: L.L.C.	DRAWN: M.R.M. CHECKED: L.L.C.			

DATE: 05/20/2024 10:09 AM EDITOR: CAMERON DRAWING FILE: C:\181800\096\US 231 ROAD\REVISION\TOWN\096\PLAN\PROFILES\PLAN PROFILE SHEET A_20.DWG

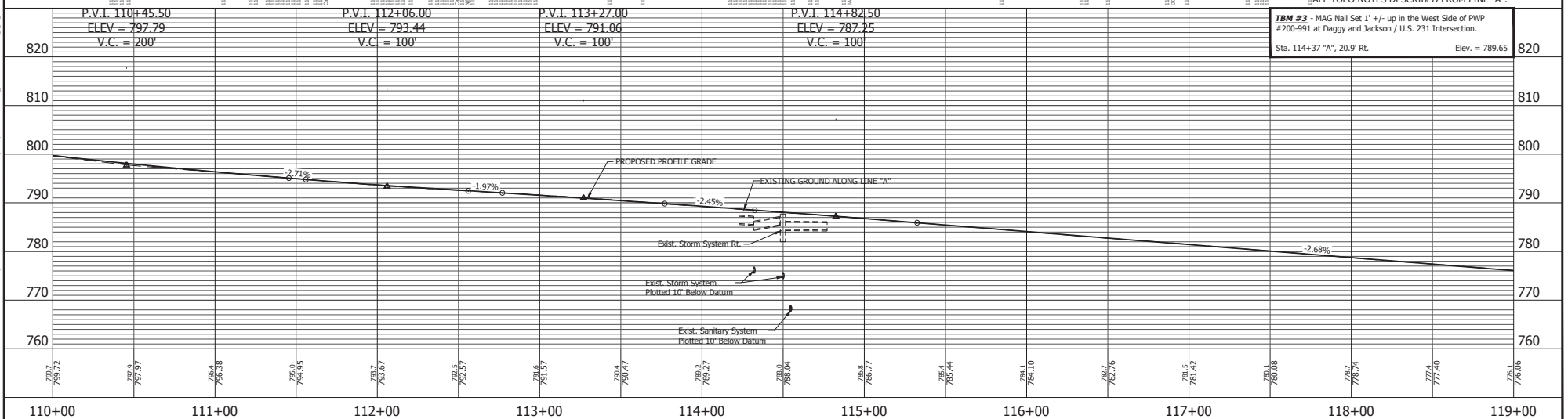
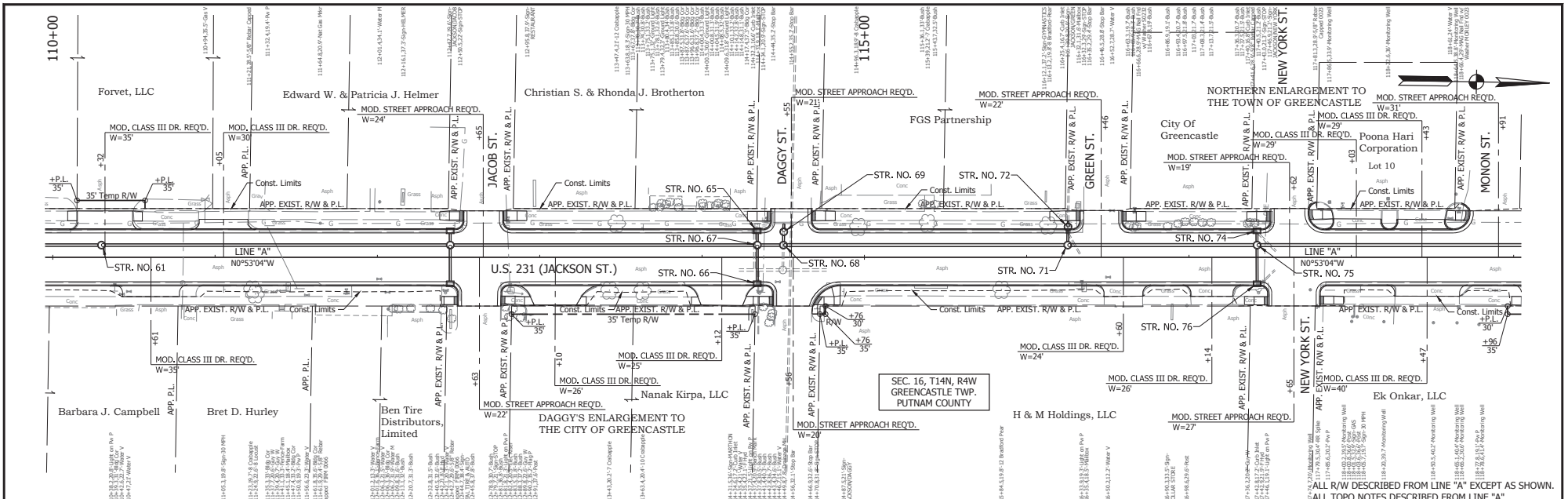


TBM #1 - Cut "Square" West Side Concrete Cantilever Sign Base
 60' +/- South of Franklin and U.S. 231 Intersection.
 Sta. 101+75 "A", 51.3' Rt. Elev. = 839.83

TBM #2 - MAG Nail Set 1' +/- up in East Side PWP #822 at the
 Southeast Corner of West Central Vet Service Parking Lot.
 Sta. 109+54 "A", 40.0' Lt. Elev. = 802.41

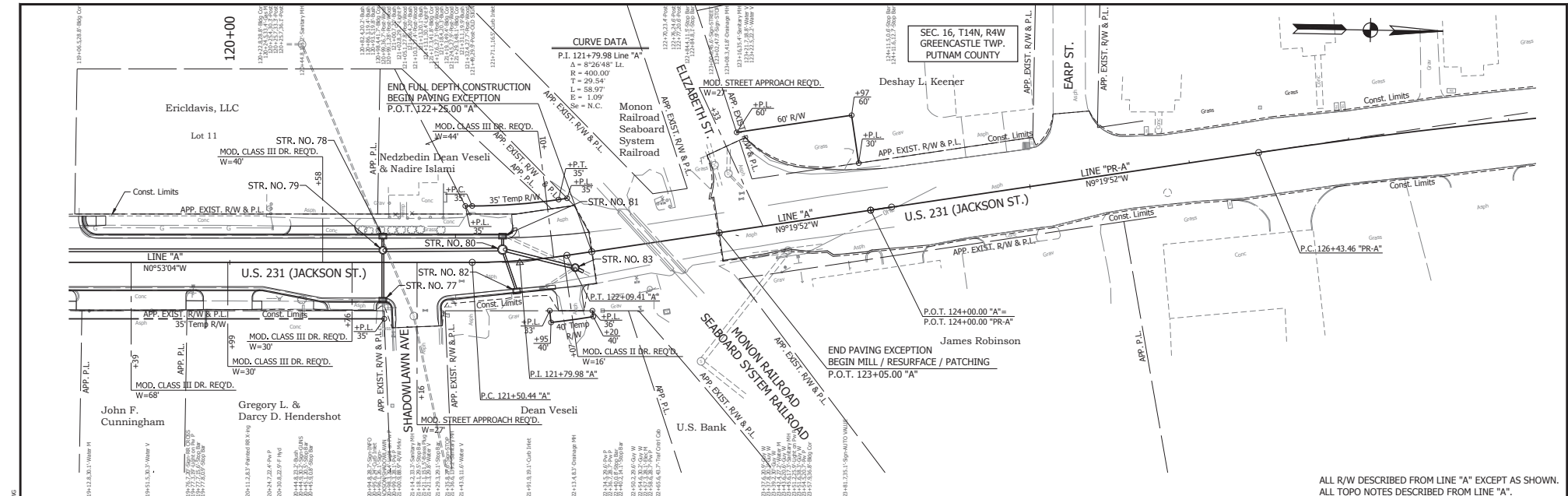
SITE NORTH 52072.9167 EAST 67569.8317 	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION PLAN AND PROFILE STA. 101+00.00 TO 110+00.00 LINE "A"	HORIZONTAL SCALE 1" = 30' BRIDGE FILE N/A
	DESIGNED: <u>Y.Z.</u> DRAWN: <u>M.R.M.</u>		VERTICAL SCALE N/A DESIGNATION 1700121
	CHECKED: <u>L.L.C.</u> CHECKED: <u>L.L.C.</u>		SURVEY BOOK 59 SHEET 1 of 185
	CONTRACT RS 40573 PROJECT 1700121		

PROJECT: 170121
 PROJECT DATE: 06/20/20
 PROJECT LOCATION: 112+31.1 ROAD REHABILITATION/CONSTRUCTION/IMPROVEMENT/ROADSIDE/RAINWATER SHEET A, 20, 01.00

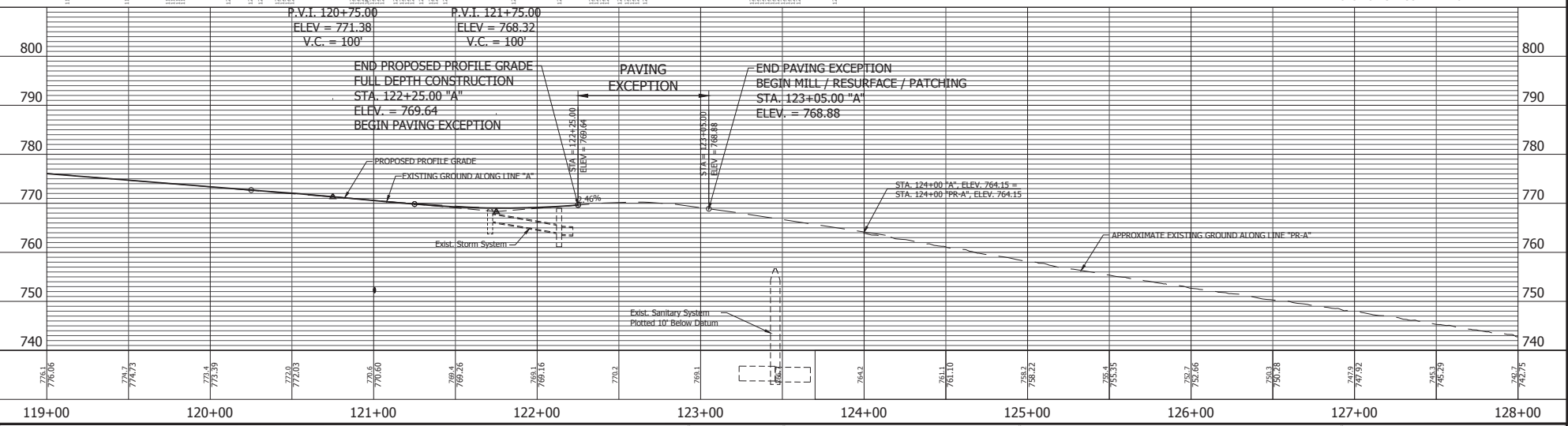


TBM #3 - MAG Nail Set 1' +/- up in the West Side of PWP #200-991 at Daggy and Jackson / U.S. 231 Intersection.
 Sta. 114+37 "A", 20.9' Rt. Elev. = 789.65

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION PLAN AND PROFILE STA. 110+00.00 TO 119+00.00 LINE "A"	HORIZONTAL SCALE 1" = 30'	BRIDGE FILE N/A
DESIGNED: <u>Y.Z.</u> DRAWN: <u>M.R.M.</u> CHECKED: <u>LLC.</u> CHECKED: <u>LLC.</u>		VERTICAL SCALE N/A	DESIGNATION 1700121
		SURVEY BOOK RS 40573	SHEET 60 of 185 PROJECT 1700121



ALL R/W DESCRIBED FROM LINE "A" EXCEPT AS SHOWN.
 ALL TOPO NOTES DESCRIBED FROM LINE "A".



515	NORTH 53432.9580 EAST 67548.8382	519	NORTH 53462.4937 EAST 67548.3823	520	NORTH 53491.6412 EAST 67543.5929	521	NORTH 53579.7109 EAST 67512.6904
P.O. 121+50.44 "A"		P.I. 121+79.98 "A"		P.T. 122+09.41 "A"		P.O.T. 124+00.00 "A"	

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: Y.Z.	DRAWN: M.R.M.	
CHECKED: L.L.C.	CHECKED: L.L.C.	

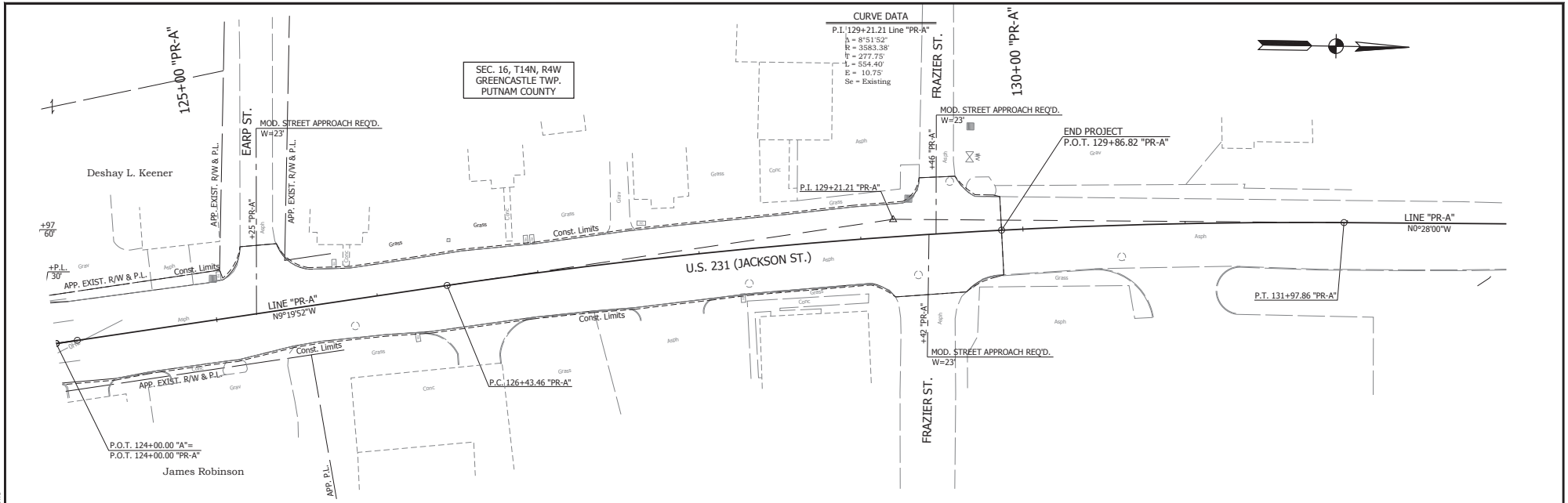
INDIANA DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE

STA. 119+00.00 "A" TO 124+13.16 LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1700121
SURVEY BOOK	SHEET
	61 of 185
CONTRACT	PROJECT
RS 40573	1700121

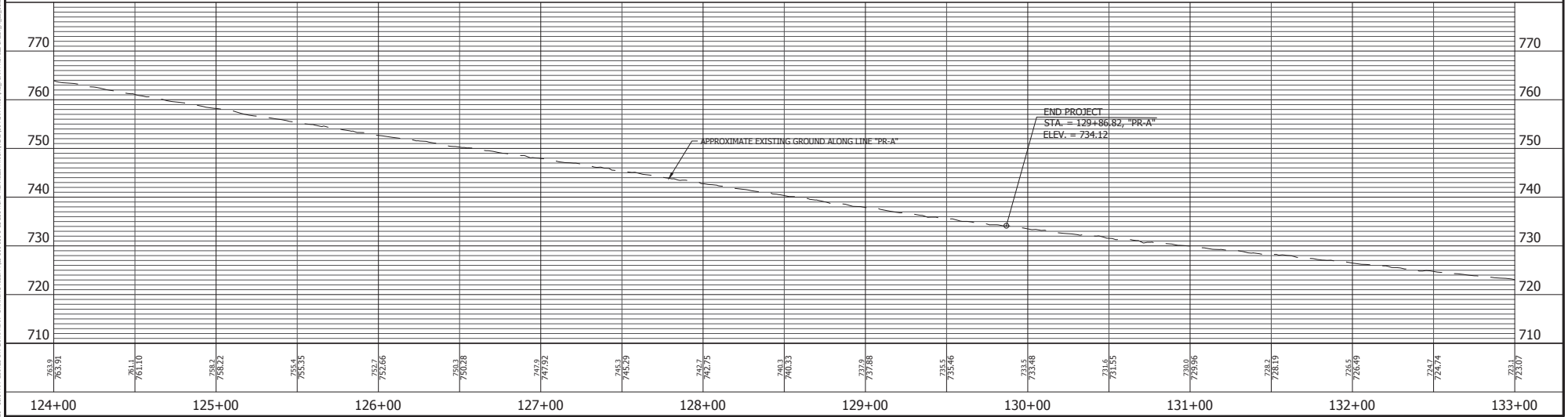
PROJECT DATE: 01/20/20
 PROJECT SHEET NO.: 61 OF 185
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 EDITED BY: CAMPBELL



CURVE DATA

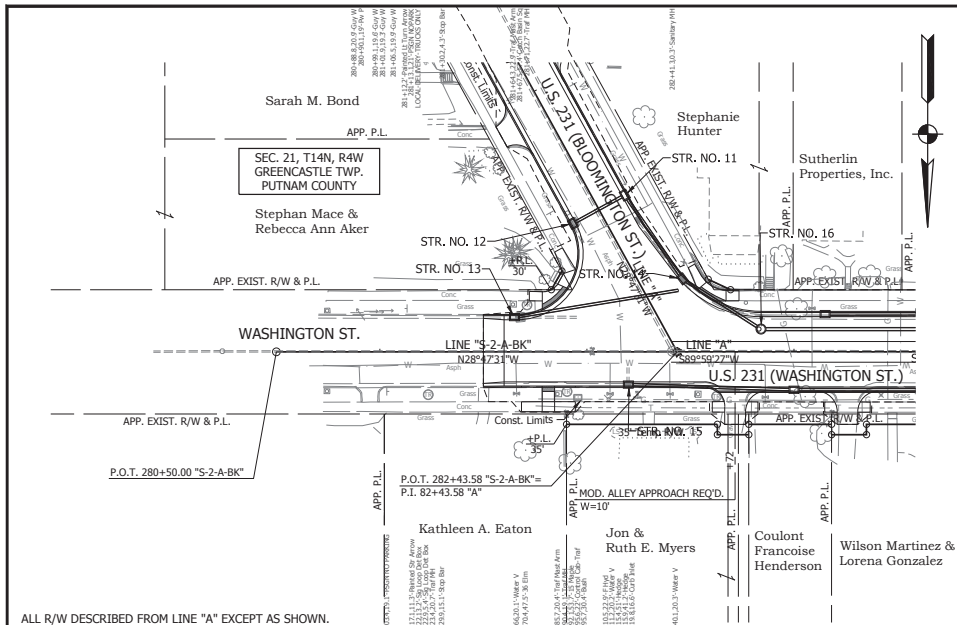
P.I. 129+21.21 Line "PR-A"

$\Delta = 8^{\circ}51'52"$
 $R = 3583.36'$
 $T = 277.75'$
 $L = 554.40'$
 $E = 10.75'$
 $S_e = \text{Existing}$

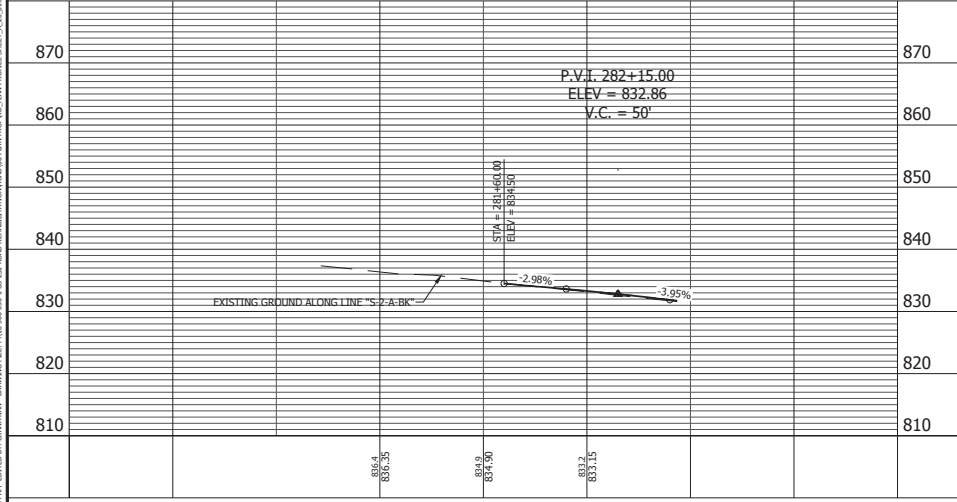


	<p>RECOMMENDED FOR APPROVAL _____</p> <p>DESIGNED: <u>Y.Z.</u> DRAWN: <u>M.R.M.</u></p> <p>CHECKED: <u>LLC.</u> CHECKED: <u>LLC.</u></p>	<p>INDIANA DEPARTMENT OF TRANSPORTATION</p> <p>PLAN AND PROFILE</p> <p>STA. 124+00.00 TO 133+00.00 LINE "PR-A"</p>	<p>HORIZONTAL SCALE _____</p> <p>VERTICAL SCALE _____</p> <p>SURVEY BOOK _____</p> <p>CONTRACT _____</p>	<p>BRIDGE FILE _____</p> <p>DESIGNATION _____</p> <p>SHEET _____</p> <p>PROJECT _____</p>
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PORTLAND CEMENT CONCRETE, 100% AIR EDDED BY GRANULAR DRAGGING BLENDING, 18, 5000 PSI, 15.231 ROAD BRIDGE STATATIONING PLAN PROFILE, 18, 44 PROFILE SHEET, A, 30, 01.DWG

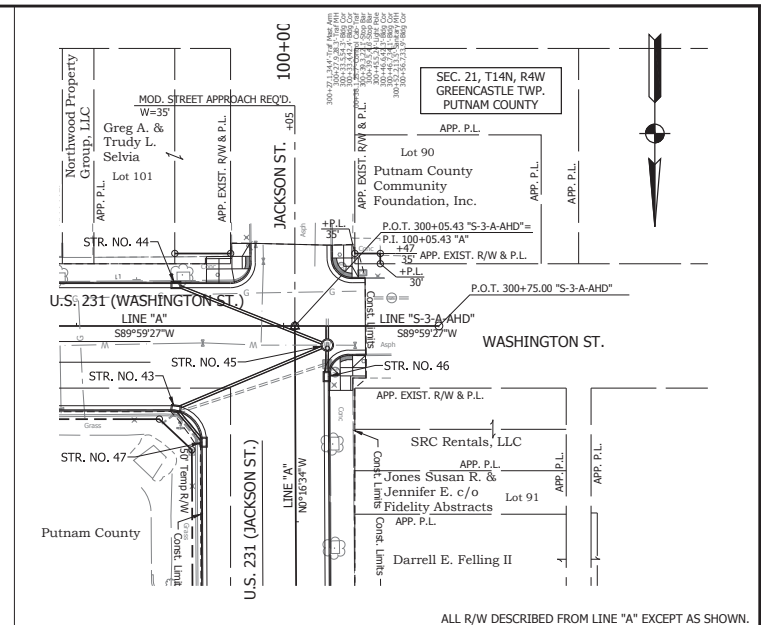


ALL R/W DESCRIBED FROM LINE "A" EXCEPT AS SHOWN.
ALL TOPO NOTES DESCRIBED FROM LINE "A".

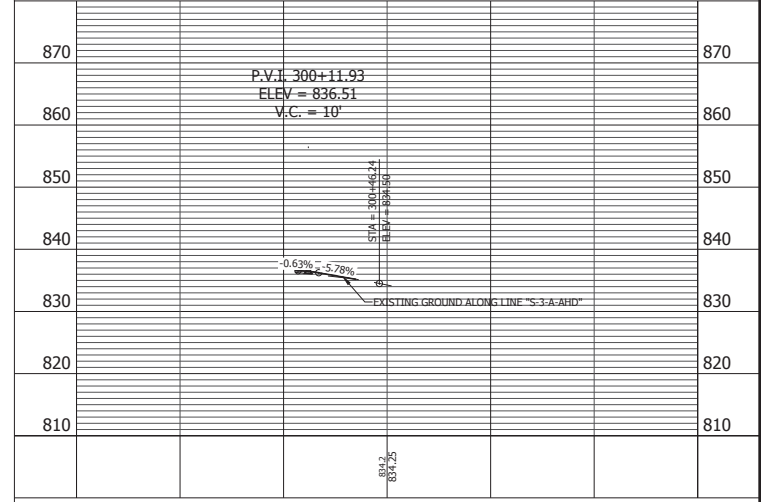


281+00 282+00

<p>512 NORTH 51288.4090 EAST 69335.4660</p>	<p>515 NORTH 51288.1253 EAST 67373.6137</p>
P.I. 82+43.58 "A"	P.I. 100+05.43 "A"



ALL R/W DESCRIBED FROM LINE "A" EXCEPT AS SHOWN.
ALL TOPO NOTES DESCRIBED FROM LINE "A".



300+50

<p>RECOMMENDED FOR APPROVAL _____</p> <p>DESIGN ENGINEER _____ DATE _____</p>	<p>INDIANA DEPARTMENT OF TRANSPORTATION</p> <p>PLAN AND PROFILE</p> <p>LINE "S-2-A-BK" & LINE "S-3-A-AHD"</p>	<p>HORIZONTAL SCALE 1" = _____</p> <p>BRIDGE FILE N/A</p> <p>VERTICAL SCALE N/A</p> <p>DESIGNATION 1700121</p> <p>SURVEY BOOK _____</p> <p>SHEET _____</p> <p>CONTRACT 63</p> <p>PROJECT 185</p> <p>RS 40573</p> <p>1700121</p>
<p>DESIGNED: Y.Z.</p> <p>CHECKED: L.L.C.</p>	<p>DRAWN: M.R.M.</p> <p>CHECKED: L.L.C.</p>	