

**BLOOMINGTON TRAFFIC COMMISSION  
AGENDA**

**January 24, 2024**

**4:30 P.M. –In-person and Virtual Hybrid meeting  
City Hall, Council Chambers**

Online link: <https://bloomington.zoom.us/j/6359441221>

Meeting ID: 635 944 1221

Passcode: COBPT

Dial in: +1 312 626 6799 US (Chicago)

- I. Call to Order**
- II. Approval of Minutes**
  - A. October 25, 2023
- III. Communications from Commission**
- IV. Public Comment\***
  - A. Letter to Traffic Commission: Regarding Vehicles Running Red Lights  
–Kaitlyn
- V. Reports from Staff**
- VI. Old Business\***
- VII. New Business\***
  - A. TC-24-01 Karst Farm Connector Trail Project – *Paul Satterly, Monroe County Highway Engineer*
- VIII. Traffic Inquiries:**
- IX. Adjournment:**

*Next meeting – February 28, 2024 – City Council Chambers*

*\*Action Requested/Public comment prior to any vote (limited to five minutes per speaker)*

*Auxiliary aids for people with disabilities are available upon request with adequate notice. Please call (812) 349-3429 or e-mail [human.rights@bloomington.in.gov](mailto:human.rights@bloomington.in.gov).*

*The City is committed to providing equal access to information. However, despite our efforts, at times, portions of our board and commission packets are not accessible for some individuals. If you encounter difficulties accessing material in this packet, please contact Melissa Hirtzel at [hirtzelm@bloomington.in.gov](mailto:hirtzelm@bloomington.in.gov) and provide your name, contact information, and a link to or description of the document or web page you are having problems with.*

**BLOOMINGTON TRAFFIC COMMISSION**  
**Draft Minutes**  
**October 25, 2023**  
**5:00 P.M. –In-person and Virtual Hybrid meeting**  
**City Hall, Council Chambers**

**I. Call to Order**

In-person: Love, Alexander, Shadday, Ryterband, Moore, Cibor

**II. Approval of Minutes**

September 27, 2023 motion Ryterband, Second Alexander. Approved 6-0

**III. Communications from Commission**

A. Cibor gave an update on the 7-line stop sign amendment to Title 15, and the mayor's veto of the inclusion of additional stop intersections along the route. A new 180 day order was issued to maintain what is currently installed at Dunn St. Further discussion is expected.

B. Alexander gave an update on two items:

i. B-line closures and detour. Expressed a desire for the City to have a dedicated staff who could ensure that detours remain clear for travel.

ii. 17<sup>th</sup> side path project. Alexander expressed disappointment in the pedestrian experience at intersections along the path. Vehicles do not want to give pedestrians the right-of-way.

**IV. Public Comment\***

None

**V. Old Business\***

None

**VI. New Business\***

A. Feedback Requested from Boards and Commissions - Traffic Commission Letter

i. The Commission reviewed the drafted letter based on their previous discussion. Discussion ensued. Motion to forward the letter to the Special Committee on Council Processes Alexander, Second Ryterband. Approved 6-0.

**VII. Reports from Staff (moved to the end of the meeting)**

A. Staff Led: Advisory Transportation Commission Proposal

i. Presentation by Ryan Robling. Discussion ensued. No action required. Staff will bring updates if the proposal moves forward.

ii. Public Comment: Dave Askins – Offered a potential name for the proposed commission.

**VIII. Traffic Inquiries:**

None

**IX. Adjournment: 5:39 pm**

Hi Kathleen,

Erika Oliphant sent me your email. I was talking with her about some concerns I have regarding people running red lights and asked her who might be a good person to talk to. She also recommended that I might attend the next Bloomington Traffic Commission meeting. I have some thoughts about a public safety awareness campaign.

For a while now, I have been concerned that running red lights seems to have become more and more common. I often see this happen at the intersection of Walnut and Winslow. I see people speeding up to the red light to get through it. The other day I was behind a Jeep heading south on Walnut approaching the Winslow intersection. The light turned red before they passed the Burger King and they still sped up to get through. It's so extreme now that when I am at any intersection and the light has just turned green for me, I tend to look both ways because I have seen people run the red light past the point where others have a green light.

The most concerning incident that happened with me recently was turning left onto Walnut from Miller. I had my son in the car with me. We had been at a red light and when the light turned green I started to turn. Four cars heading south on Walnut then sped through their red light cutting us off.

These aren't the only locations where I've seen this happen. I feel like it's become a pervasive issue and I don't think it's unique to Bloomington. I've heard reports of an increase in traffic fatalities and a simultaneous decrease in traffic violations nationwide. One of the reasons for this that I've seen is regarding a decrease in the budgets for traffic police.

I definitely think that one of the reasons it keeps going on is that there are little to no consequences for it. If there is the ability for more traffic police at some of these intersections, that might help. If budgets are an issue, I'm wondering about cameras being a possibility. I think if people start getting tickets that will have an impact. I'm also wondering about a public safety campaign, possibly putting signs up at the intersections near the traffic light saying something to the effect of: Running Red Lights Can Kill. It sounds sort of corny to me but I think it would be beneficial to have some kind of message that might have an effect on people.

Thank you for your offer for me to reach out.

I really appreciate your time,

Kaitlyn





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**TRAFFIC COMMISSION  
STAFF REPORT**

**Case #:** TC-24-01  
**Date:** January 2024

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**FROM:** Ryan Robling, Planning Services Manager, Planning and Transportation Department

**REGARDING:** Karst Farm Connector Trail Project

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**Description and Purpose:**

Please see included memo from Paul Satterly, Monroe County Highway Engineer.

**Title 15 Changes:**

Section 15.12.030, entitled "Signalized intersections." shall be amended by adding the following from Schedule D(1):

Add

<b>Cross Street</b>	<b>Cross Street</b>
Constitution Avenue	Liberty Drive

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**Recommendation:** Staff recommends that Traffic Commission forward the Title 15 changes to Council with a positive recommendation.





# MONROE COUNTY HIGHWAY DEPARTMENT

5900 W. FOSTER CURRY DRIVE  
BLOOMINGTON, INDIANA 47403  
PHONE: (812) 349-2555 FAX: (812) 349-2959  
[www.co.monroe.in.us](http://www.co.monroe.in.us)

December 28, 2023

Andrew Cibor, P.E.  
City Engineer  
Engineering Department  
Bloomington City Hall  
401 N. Morton Street  
Bloomington, Indiana 47404

Dear Mr. Cibor,

Monroe County is leading the design for the Karst Farm Connector Trail project. This project is federally funded through the MPO and involves both the County and the City. The letting is scheduled for January 18, 2024 and the project will be constructed in 2024.

The trail will start at the existing Karst Farm Greenway near the Gifford Road trail crossing, will run straight east along an existing farm field, continue east along the north side of the Lamplighter Mall trailer park, cross Curry Pike at Constitution Avenue, run along the north side of Constitution Avenue, and then run south along the east side of Liberty Drive to connect with the Bloomfield Trail at Bloomfield Road/SR 45. The trail on the east end of Constitution Avenue and on Liberty Drive will be within City limits.

The trail project will include the installation of two traffic signals to accommodate trail users and to improve the safety and level of service at these intersections. One signal will be located at the intersection of Curry Pike and Constitution Avenue and the other signal will be located at the intersection of Liberty Drive and Constitution Avenue. The Curry Pike traffic signal will be maintained by the County and the Liberty Drive traffic signal will be maintained by the City.

A traffic signal and turn lane warrant analysis was performed. The August 13, 2021 report determined that a traffic signal and a northbound left turn lane were warranted for the intersection of Liberty Drive and Constitution Avenue.

As attachments, we have included the traffic signal plan details, the plan and profile drawings of the trail within the City and the Traffic Analysis Memo with attachments.

The traffic signal will need to be approved by the Bloomington Traffic Commission. Please add this traffic signal to the January 24, 2024 Traffic Commission meeting agenda.

Please call me if you have any questions about this project, 812-349-2554.

Sincerely,



Paul B. Satterly  
Monroe County Highway Engineer

Attachments

cc: Lisa Ridge, Monroe County Highway Director

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Traffic Analysis Memo  
Monroe Co., IN  
Constitution Way & Curry Pike  
Constitution Way & Liberty Drive

August 13<sup>th</sup>, 2021

**Purpose and Need**

The purpose of this study is to analyze traffic conditions at the intersections of **Constitution Way & Curry Pike** and **Constitution Way & Liberty Drive** to determine what intersection improvements would both improve vehicular traffic operations and serve pedestrians on the Karst Connector Trail. Monroe county has expressed a desire for a safe pedestrian crossing of Liberty Dr and Curry Pike, which are currently free flowing, so signaling the intersections will be considered.

The following analysis has been performed:

1. Signal warrants at each intersection
2. Capacity analysis at each intersection
3. Turn lane analysis at Liberty Dr

**Traffic Data & Analyzed Scenarios**

Existing traffic data was provided by the County and collected during non-school hours. The county estimated traffic to increase by 25% due to both the school traffic that wasn't collected, and anticipated near-term growth in employment for nearby businesses, resulting in the following scenarios:

- **Scenario 1, Existing Traffic** – Provided Traffic Volumes
- **Scenario 2, Estimated Peak Traffic** – Provided Traffic Volumes + School Traffic + Near Term Growth

The existing data and estimated peak data can be found in **Appendix 1**.

**1. Signal Warrant**

The Indiana Manual on Uniform Traffic Control Devices (IMUTCD) provides standards and guidelines for the installation and operation of traffic control signals along public roadways. The IMUTCD requires that a Traffic Signal Warrant Analysis be performed prior to the installation of a new traffic signal to determine if a traffic signal will improve traffic safety and capacity operations. For a signal to be warranted, thresholds for one of nine warrants must be met.

**For both of the study intersections, Warrant 3: Peak Hour Vehicular Volume was met for the estimated peak traffic volumes.** The results of this warrant analysis are included in **Appendix 2**.



## 2. Capacity Analysis

The most common methodology to analyze roadway network capacity is a level-of-service (LOS) analysis. The LOS is a report card grading system which measures how well the capacity of an intersection or roadway segment accommodates the traffic volume demand. The LOS for intersections is based on the delay (in seconds) that a typical vehicle would experience while waiting at the intersection. **Appendix 3** summarizes the range of delays as listed in the 2010 HCM that are associated with each LOS letter for signalized and unsignalized intersections.

The capacity analysis was performed with the recognized software program Synchro. **Appendix 3** summarizes the resulting LOS and vehicle delay of the midday and PM peak hour for each scenario. **Appendix 4** includes reports generated by Synchro, showing program inputs and outputs.

### *Liberty Drive*

The PM peak hour at Liberty operates at unacceptable levels of service for both existing and estimated peak scenarios with the existing one-way stop configuration, but **with a signal, will operate at acceptable levels of service for both existing traffic and estimated peak traffic.**

### *Curry Pike*

The PM peak hour at Liberty operates at acceptable levels of service as a two-way stop except for eastbound during the estimated peak volume for the PM peak hour. Both the existing PM peak hour and estimated midday peak hour, however, have average eastbound LOS and delays of D - 28-29 seconds, which is close to the unacceptable E – 35 seconds. **With a signal, the intersection will operate at acceptable levels of service for both existing traffic and estimated peak traffic scenarios.**

## 3. Turn Lane Analysis

Turn lane analysis was performed for the Liberty Dr signal. Turn lane warrants are provided in chapter 46 of the Indiana Design Manual (IDM) to determine when right or left-turn lanes should be provided.

### *Right-Turn Warrants:*

Section 46-4.01(01) of the IDM provides the right-turn lane warrants. The first warrant uses IDM Figure 46-4A to chart the vehicles in the direction of the right turn against the right turn volume. The resulting graph shows the **eastbound right-turn lane “should be considered”** and the **southbound right-turn lane “may not be necessary.”** See **Appendix 5** for right-turn lane warrant analysis.

Simulating an eastbound right-turn lane in Synchro results in 95<sup>th</sup> percentile queue lengths of 33 ft for eastbound-left and 65 ft for eastbound-right using the estimated peak volumes. A minimal 100 ft eastbound right-turn lane with a 100 ft taper will be sufficient to handle most eastbound queues.

*Left-Turn Warrants:*

Section 46-4.01(02) of the IDM provides the left-turn lane warrants. The third warrant uses IDM Figure 46-4C, which utilizes volume parameters like opposing volume, advancing volume, speed, and percent left turns. Since the eastbound left-turn has no opposing volume, only the northbound left-turn was analyzed with this chart. The resulting analysis shows that a **northbound left-turn lane is warranted**. See **Appendix 6** for left-turn lane warrant analysis.

Simulating a northbound left-turn lane in Synchro results in 95<sup>th</sup> percentile queue length of 192 ft using the estimated peak volumes. A 200 ft northbound left-turn lane with a 100 ft taper will be sufficient to handle most northbound queues.

Sincerely,  
Matthew Oyer, P.E.  
[Moyer@bfsengr.com](mailto:Moyer@bfsengr.com)  
(765) 423-5602  
Butler, Fairman and Seufert, Inc.

## Appendices

- |   |            |
|---|------------|
| 1. Midday and PM Intersection Counts        | (28 pages) |
| 2. Peak Hour Signal Warrant                 | (1 page)   |
| 3. Capacity Analysis Parameters and Results | (2 page)   |
| 4. Synchro Reports                          | (44 pages) |
| 5. Right-Turn Lane Warrant Analysis         | (1 page)   |
| 6. Left-Turn Lane Warrant Analysis          | (1 page)   |

PROJECT	DESIGNATION
190045	190045
CONTRACT	BRIDGE FILE
R-1188	NA

MONROE COUNTY BOARD OF COMMISSIONERS

*Tommy Johnson*  
PRESIDENT

*Reilly O'Heers*  
PRESIDENT

*Elizabeth O'Heers*  
VICE PRESIDENT

*Paul Satterly, P.E.*  
COUNTY ENGINEER

# INDIANA DEPARTMENT OF TRANSPORTATION



## TRAIL PLANS

### KARST FARM GREENWAY CONNECTOR

#### MONROE COUNTY

PROJECT NO. 1900405

P.E.  
R/W  
CONST.

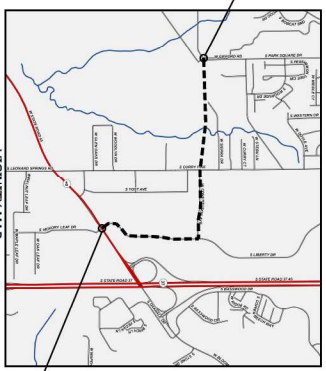
GROSS LENGTH: 1.25 MI  
NET LENGTH: 1.25 MI

MULTI-USE TRAIL BEGINNING AT KARST FARM GREENWAY AND ENDING AT SR-46 IN SECTIONS 1 & 12, TOWNSHIP 8 NORTH, RANGE 2 WEST, VAN BUREN TOWNSHIP, MONROE COUNTY, CITY OF BLOOMINGTON, INDIANA

PLAN {LONG- 1"-20' / TRANS- 1"-20'} PROFILE {HORIZ- 1"-20' / VERT- 1"-10'} MAX. GRADE: 6.99%

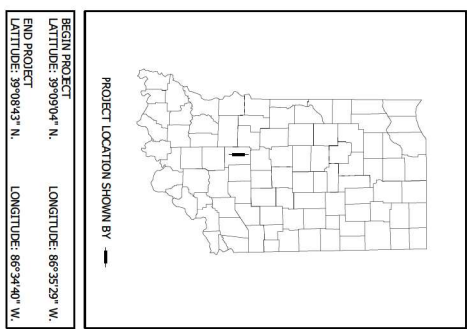
SCALE: NONE

BEGIN PROJECT  
P.O.T. Sta. 10+37.70' PK-2A



VICINITY MAP  
MONROE COUNTY

END PROJECT  
P.O.T. Sta. 82+71.44' A"



BEGIN PROJECT  
LATITUDE: 39°09'04" N. LONGITUDE: 86°35'29" W.

END PROJECT  
LATITUDE: 39°08'43" N. LONGITUDE: 86°34'40" W.

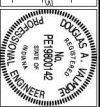
**CAUTION**

LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (reading, but not limited to, manholes, vaults, etc.) AND FIELD SURVEY. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.



ALL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZE PLANS WILL NOT CONFORM TO STANDARD SCALES.

PLANS PREPARED BY: Butler Fellman and Soulet Inc. (317)713-2415  
PHONE: \_\_\_\_\_  
CERTIFIED BY: [Signature] DATE: 9/15/2023  
FOR LETTING: \_\_\_\_\_ INDIANA DEPARTMENT OF TRANSPORTATION DATE: \_\_\_\_\_



DESIGNATION	BRIDGE FILE
190045	190045
SURVEY BOOK	SHEET
CONTRACT	PROJECT
R-1188	190045

INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 2021 TO BE USED WITH THESE PLANS

DESIGN SPEED	15 MPH
FUNCTIONAL CLASSIFICATION	MULTI-USE TRAIL
RURAL/URBAN	URBAN
TERMINI	ROLLING
ACCESS CONTROL	NONE

TRAFFIC DATA	LIBERTY DRIVE
ADFT	814 VPS
DAVE	50 VPH
DIRECTIONAL DISTRIBUTION	50% L.A.D.T.
THICKS	5% D.A.V.T.
DESIGN SPEED	25
PROJECT DESIGN CRITERIA	4th RECONSTRUCTION MON GREENWAY
FUNCTIONAL CLASSIFICATION	URBAN (L-UP)
TERMINI	LEVEL
ACCESS CONTROL	NONE



UTILITIES

Table with utility provider details including Gas Distribution, Electric, and Water providers with their respective contact information.

REVISIONS

Table with columns for SHEET NO., DATE, and REVISED.

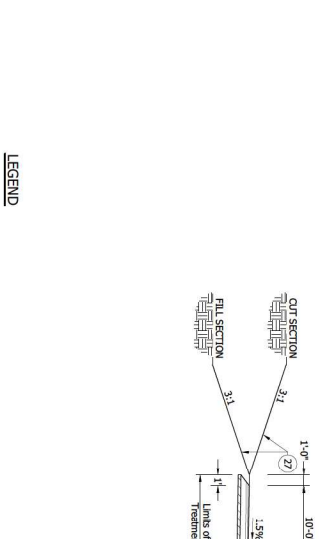
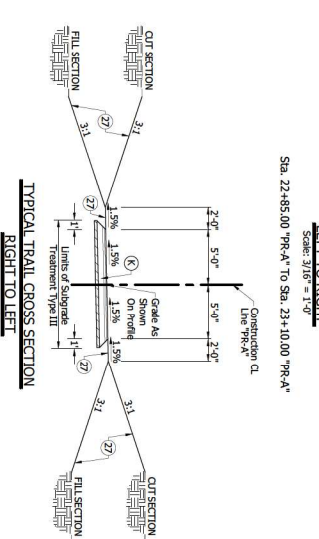
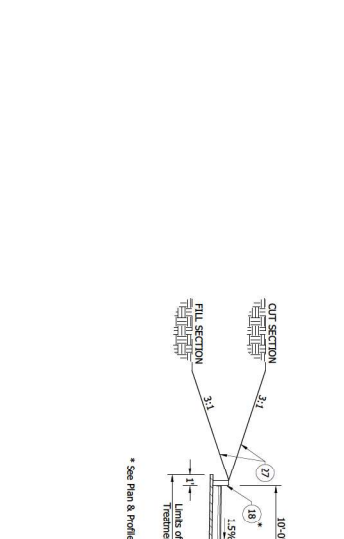
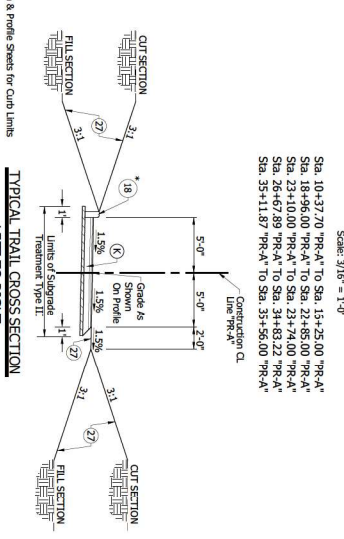
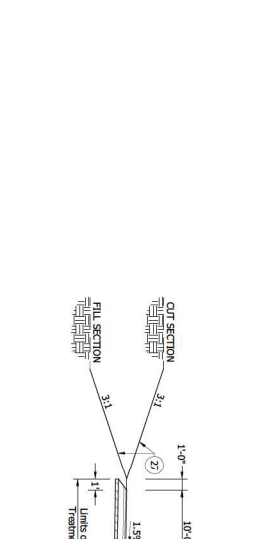
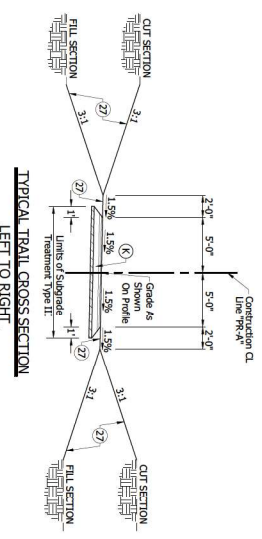
GENERAL NOTES

- List of general notes regarding earth studding, median areas, traffic access, and general notes required.

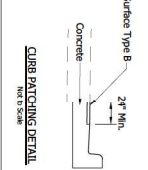
INDEX

Table with columns for SHEET NO. and DESIGNATION, listing various drawing sheets and their titles.

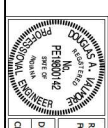
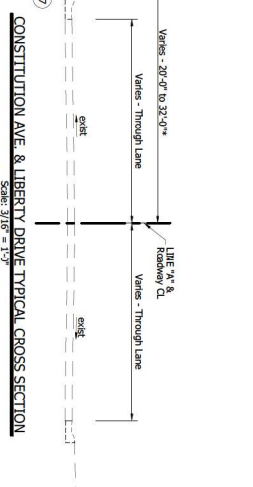
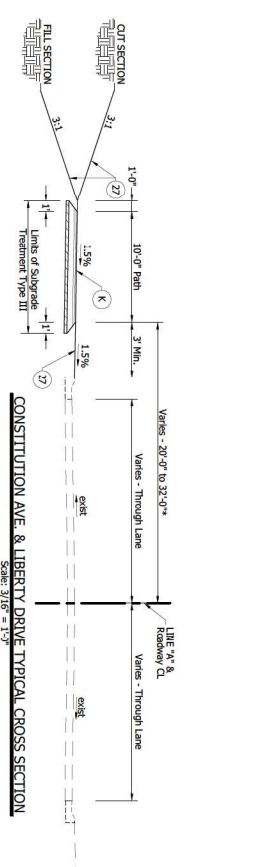
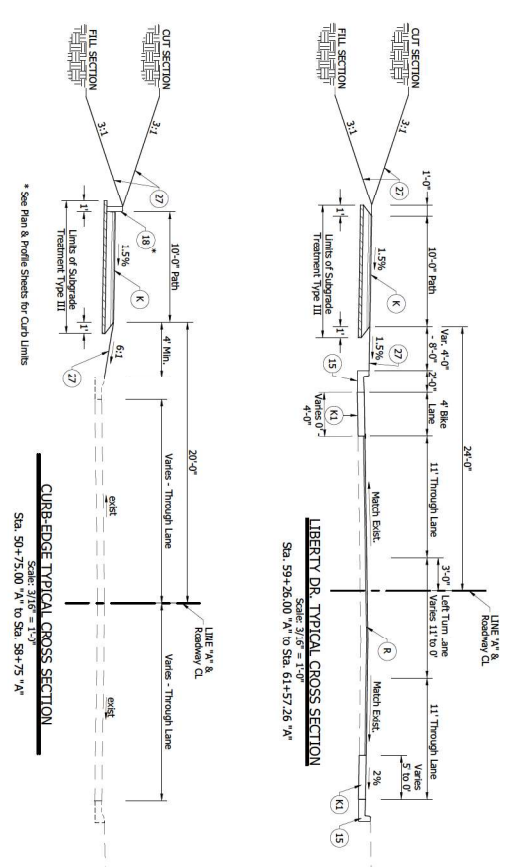
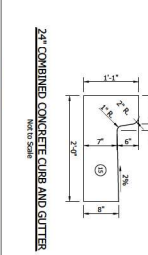
Professional Engineer Seal for David M. Valmore, PE No. 19805, State of Indiana, along with project information for Karst Farm Greenway Connector.



- LEGEND**
- (K) HMA for Shoulder, Consisting of:
    - 165 #7/9S HMA Surface, Type B on 6" Concrete Base, 4" on Subgrade Treatment, Type III
  - (18) 8" Concrete Curb
  - (27) Seed Mixture, "J"
  - (R) HMA for Approaches Consisting of:
    - 165 #7/9S HMA Surface, Type B on 1 1/2" Milling & 600 #7/9S HMA Base, Type B, on Subgrade Treatment, Type II
  - (15) Combined Concrete Curb & Gutter
  - 165 #7/9S HMA Surface, Type B



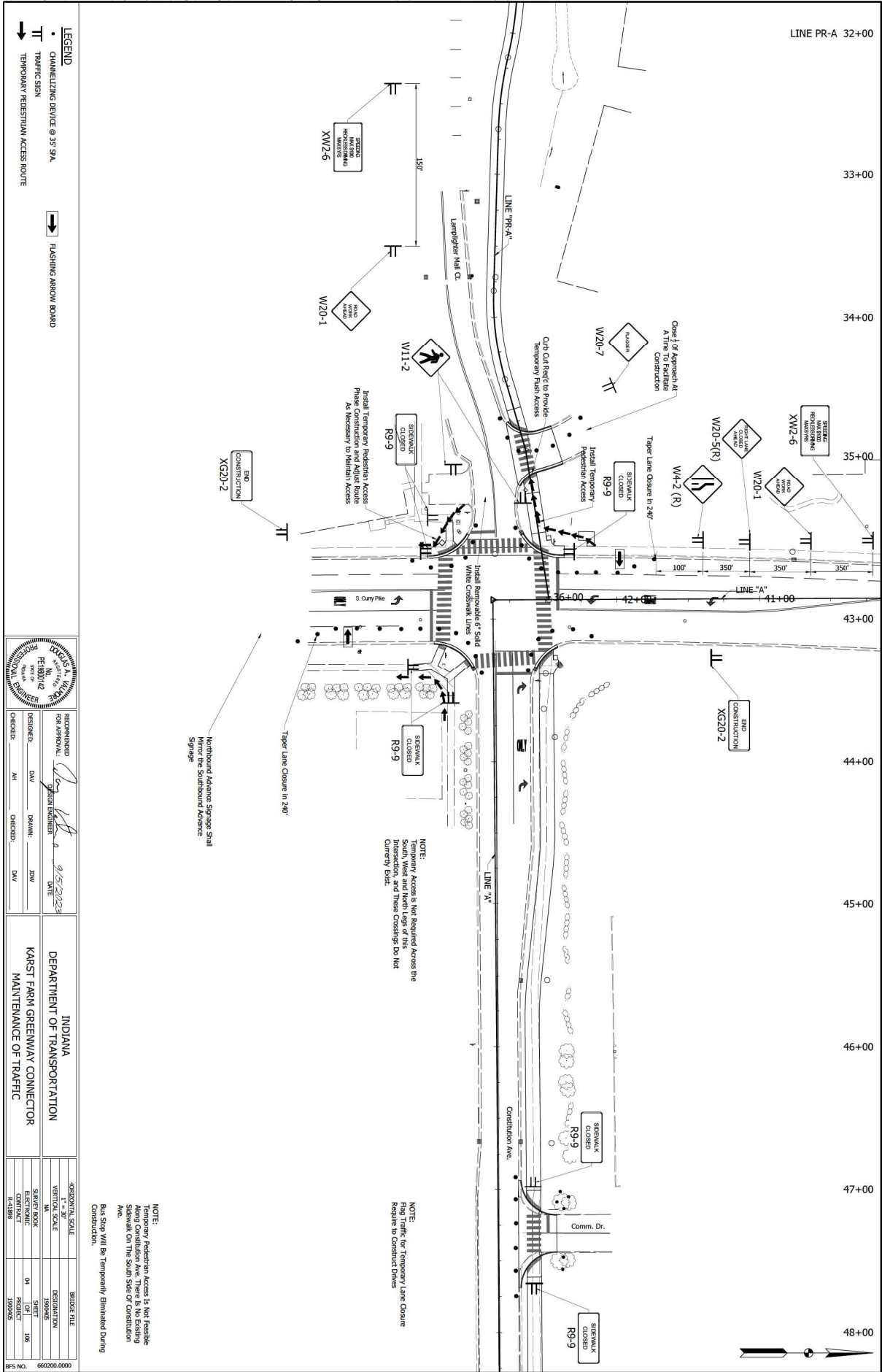
NOTE: APPLICABLE TO ALL ADJACENT TO EXISTING PAVEMENT



DESIGNED:	DAV	DRAWN:	JWV
CHECKED:	MAI	CHECKED:	DAV

INDIANA  
DEPARTMENT OF TRANSPORTATION  
KARST FARM GREENWAY CONNECTOR  
TYPICAL SECTIONS

4000000000	BRIDGE FILE
99000000	DISIGNATION
1900005	SHEET
03	PROJECT
1900005	NO. 58



- LEGEND**
- CHANNELIZING DEVICE @ 35' 9"
  - TT TRAFFIC SIGN
  - TT TEMPORARY PEDESTRIAN ACCESS ROUTE
  - FLASHING ARROW BOARD

	DESIGNED: DAV	DATE: 9/15/2023
	CHECKED: MH	DATE: 9/15/2023

INDIANA  
DEPARTMENT OF TRANSPORTATION  
KARST FARM GREENWAY CONNECTOR  
MAINTENANCE OF TRAFFIC

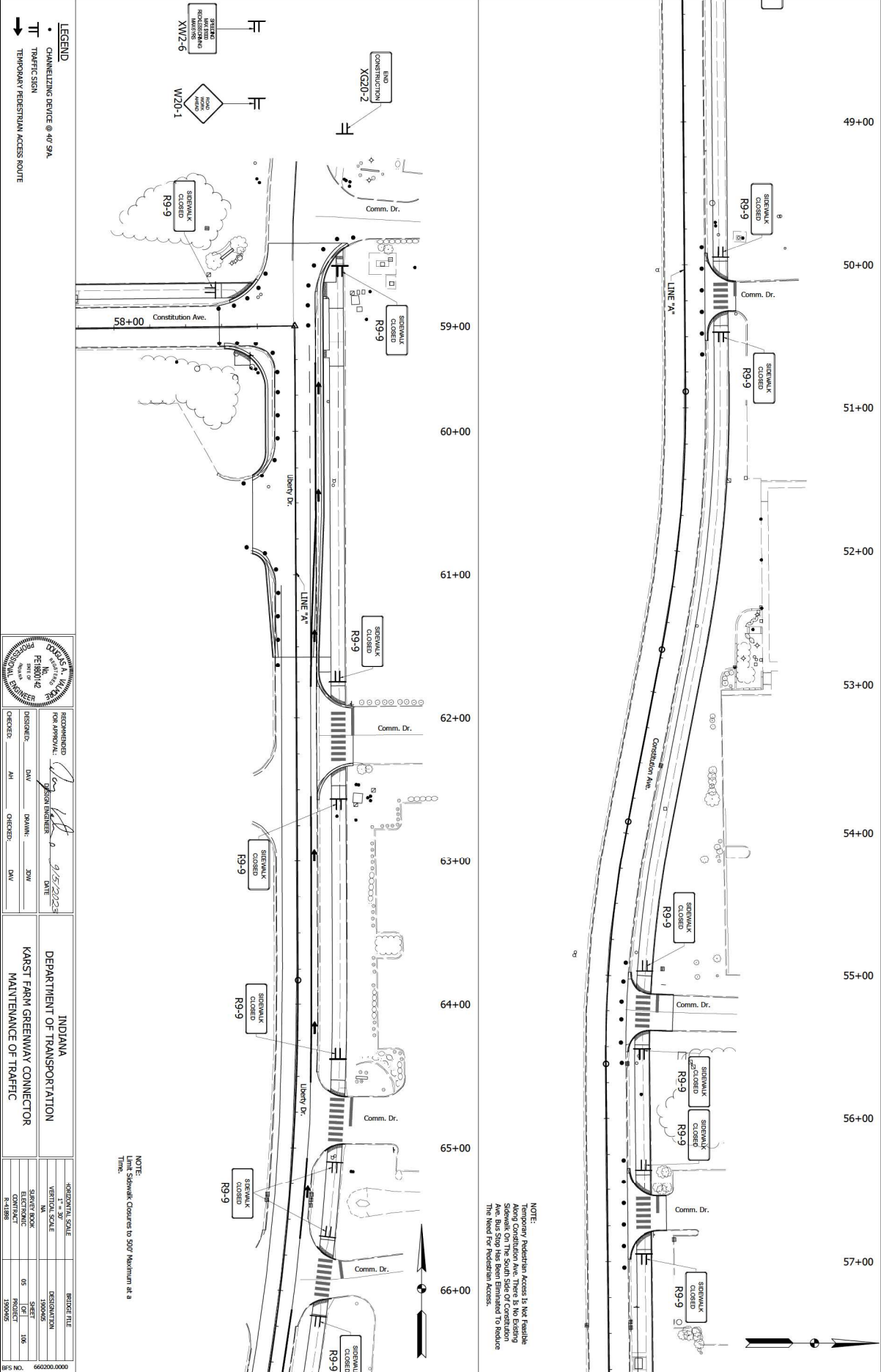
VERTICAL SCALE	BRIDGE FILE
1" = 10'	DISIGNATION
SHEET/BOOK	PROJECT
1/1	190905
DATE	NO.
04	106
PROJECT	
190905	

NOTE: Temporary Access Is Not Feasible Along Constitution Ave. There Is No Existing Sidewalk On The South Side Of Constitution Ave. Bus Stop Will Be Temporarily Eliminated During Construction.

NOTE: Right Turn Lane Closure Requires To Construct Drives

NOTE: Temporary Access Is Not Feasible Across the South, West and North Legs of this Intersection, and These Crossings Do Not Curvedly End.





NOTE:  
 Temporary Pedestrian Access Is Not Feasible  
 Due To Limited Right Of Way Along  
 Liberty Dr. Pedestrian Access To  
 Constitution Ave. Bus Stop Has Been Eliminated To Reduce  
 The Need For Pedestrian Access.

- LEGEND**
- CHANNELIZING DEVICE @ 4' 9"
  - TT TRAFFIC SIGN
  - ← TEMPORARY PEDESTRIAN ACCESS ROUTE

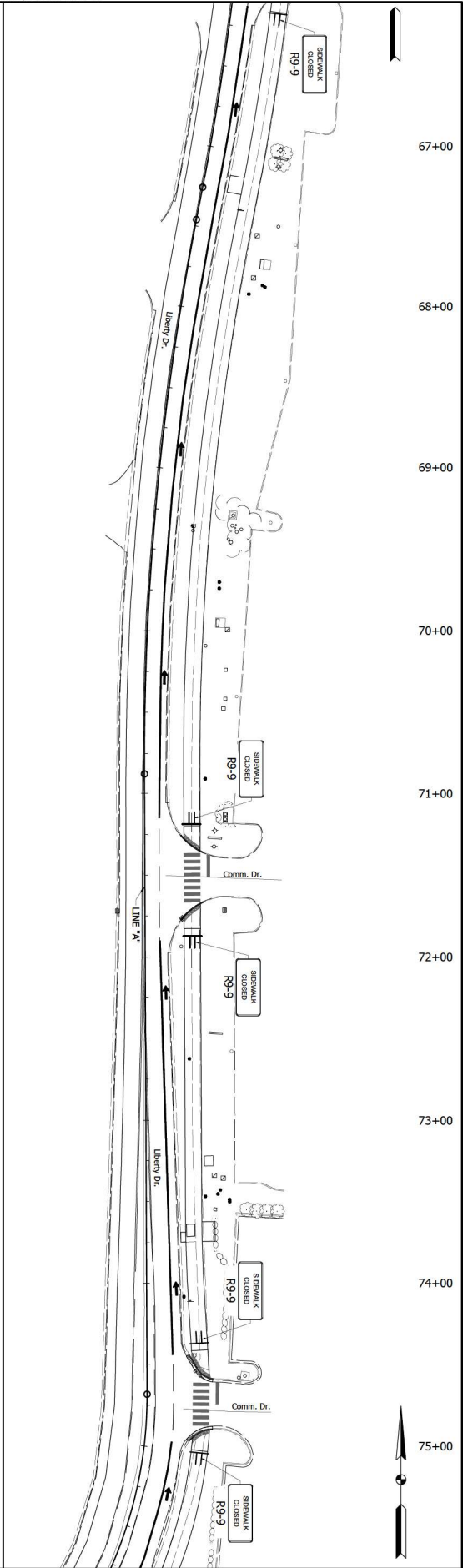


RECOMMENDED FOR APPROVAL		DATE	
DESIGNED: DAV	DRAWN: JMW	9/15/2023	
CHECKED: MH	CHECKED: DAV		

INDIANA  
 DEPARTMENT OF TRANSPORTATION  
 KARST FARM GREENWAY CONNECTOR  
 MAINTENANCE OF TRAFFIC

4000000000	BRIDGE FILE
660200.000000	DISIGNATION
1590005	SHEET
106	PROJECT
1590005	CONTRACT
R-11888	DATE

NOTE:  
 All Sidewalk Closures to 50' Maximum at a  
 Time.



**LEGEND**

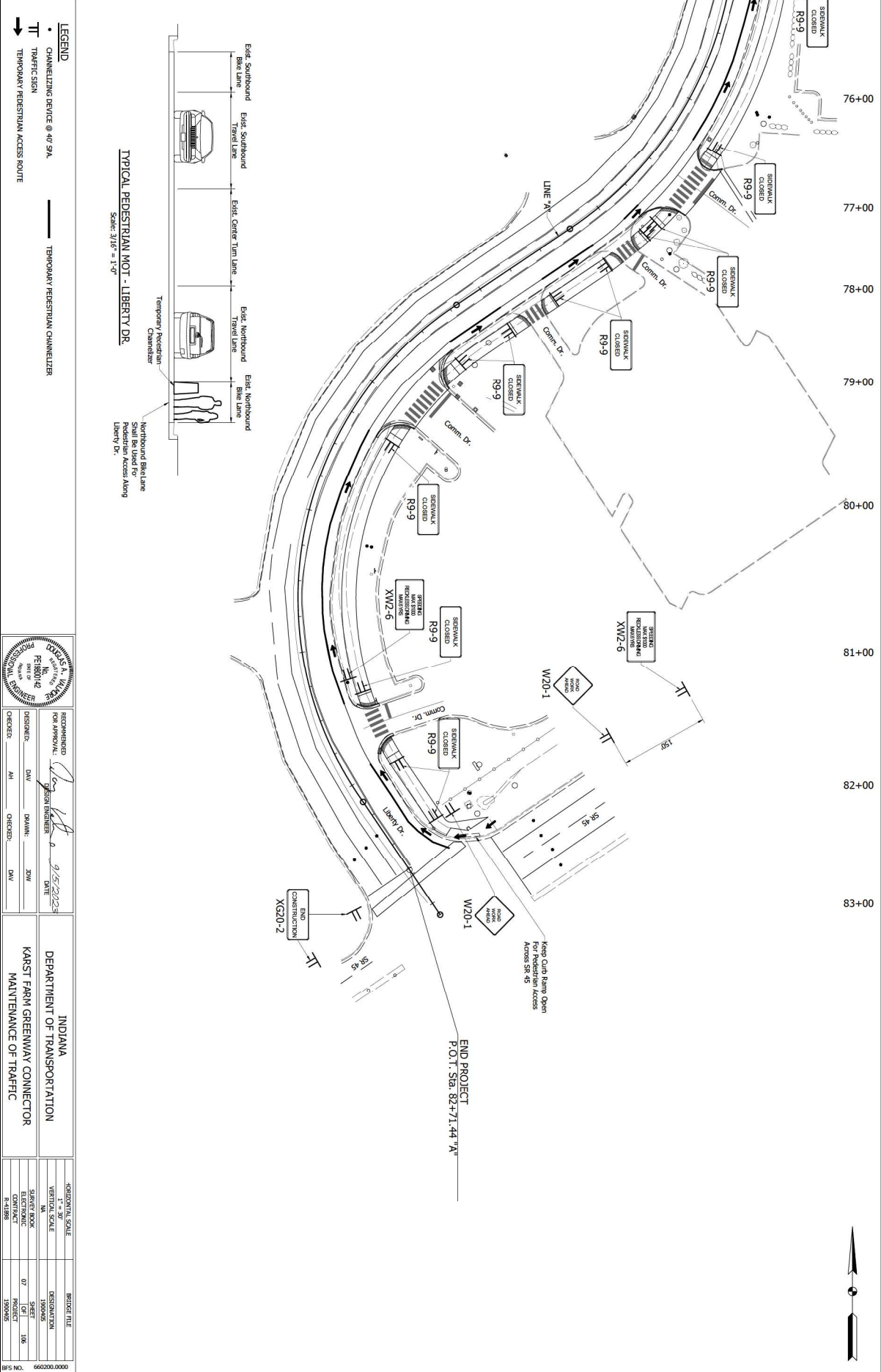
- CHANNELIZING DEVICE @ 4' 9"
- TRAFFIC SIGN
- TEMPORARY PEDESTRIAN ACCESS ROUTE

	RECOMMENDED FOR APPROVAL:	DESIGNED:	DATE:
	 DAVID M. VALMORE REGISTERED PROFESSIONAL ENGINEER No. 15010 State of Indiana	DAV	9/15/2023
CHECKED:	DRAWN:	IN CHARGE:	DATE:
MH	DAV	DAV	DAV

INDIANA  
DEPARTMENT OF TRANSPORTATION  
KARST FARM GREENWAY CONNECTOR  
MAINTENANCE OF TRAFFIC

400/200 FT SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
1" = 10'	150005
SHEET/BOOK	SHEET
CONTRACT	PROJECT
R-41886	150005

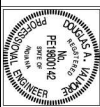
BFS NO. 660200.0000



**TYPICAL PEDESTRIAN MOT - LIBERTY DR.**  
Scale: 3/16" = 1'-0"

- LEGEND**
- CHANNELIZING DEVICE @ 4' ON
  - TT TRAFFIC SIGN
  - TEMPORARY PEDESTRIAN ACCESS ROUTE

TEMPORARY PEDESTRIAN CHANNELIZER



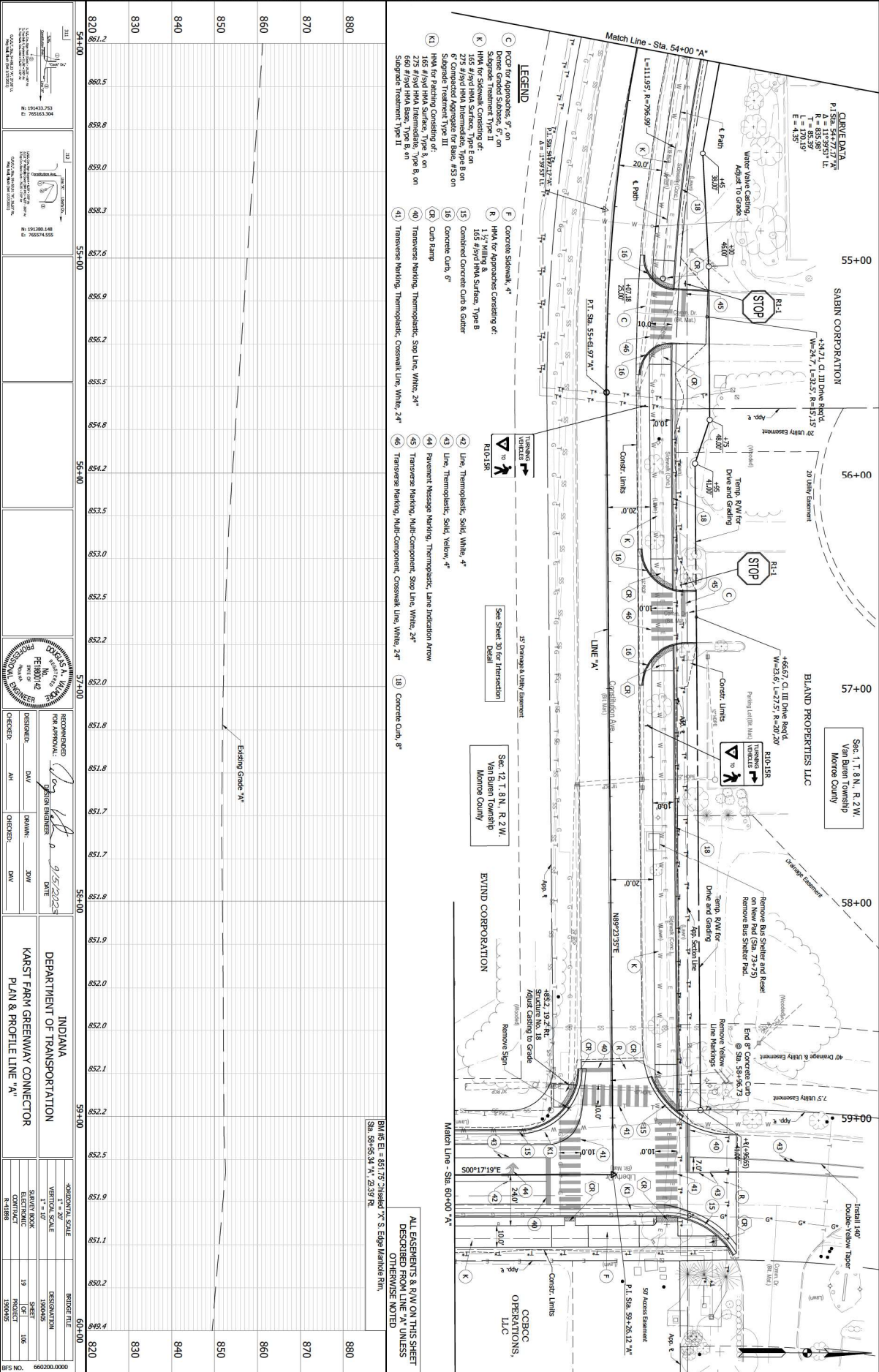
DESIGNED:	DAV	DATE:	9/15/2023
CHECKED:	MH	DATE:	

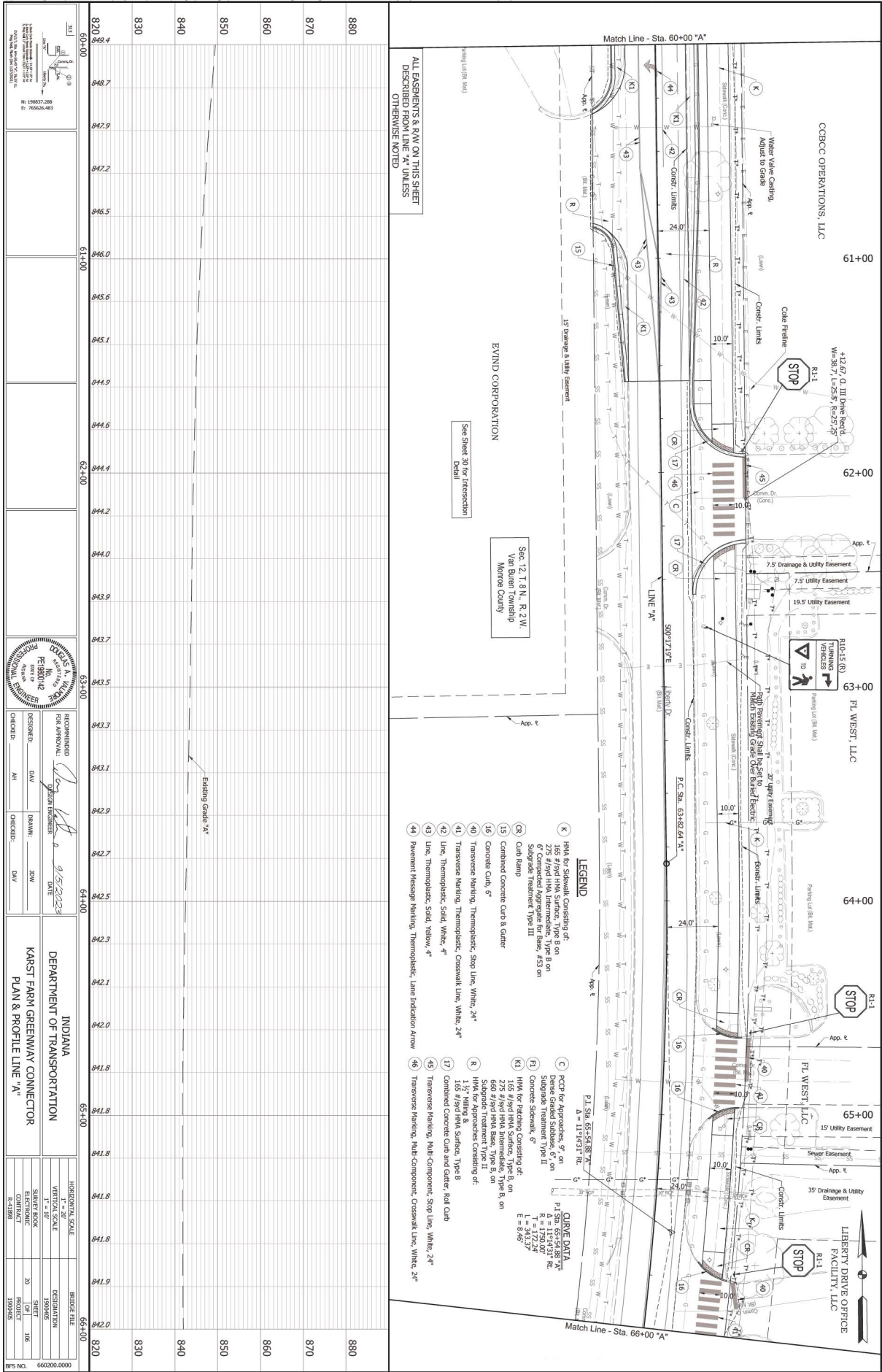
INDIANA  
DEPARTMENT OF TRANSPORTATION  
KARST FARM GREENWAY CONNECTOR  
MAINTENANCE OF TRAFFIC

VERTICAL SCALE	BRIDGE FILE
SCALE	DESIGNATION
CONTRACT	PROJECT
R-1188	150005









ALL EASEMENTS & ROW ON THIS SHEET DESCRIBED FROM LINE "A-A" UNLESS OTHERWISE NOTED

See Sheet 30 for Intersection Detail

Sec. 12, T. 8 N., R. 2 W. Van Buren Township Monroe County

LEGEND

- K HMA for Shoulder, Consisting of 165 #19d HMA, Surface, Type B on 6" Compacted Aggregate for Base, #53 on 6" Granular Filler, Type III
- C PCCP for Approaches, 9" on 6" Concrete Slabwork, Type II
- R 1 1/2" HMA & 165 #19d HMA, Surface, Type B
- K1 HMA for Patching Consisting of 275 #19d HMA, Intermediate, Type B on 6" Granular Filler, Type III
- B1 Concrete Slabwork, 9" on 6" Granular Filler, Type III
- R1 1 1/2" HMA & 165 #19d HMA, Surface, Type B
- K2 Concrete Curb, 6"
- R2 Transverse Marking, Thermoplastic, Stop Line, White, 24"
- R3 Transverse Marking, Thermoplastic, Crosswalk Line, White, 24"
- R4 Line, Thermoplastic, Solid, Yellow, 4"
- R5 Pavement Marking, Thermoplastic, Lane Indicator Arrow
- R6
- R7
- R8
- R9
- R10
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- R97
- R98
- R99
- R100

CLONE DATA

P1.SN	65154188
A	11194317
T	112724
L	34537
E	8149

820	820.000	60+00	60+00.0
830	830.000	61+00	61+00.0
840	840.000	62+00	62+00.0
850	850.000	63+00	63+00.0
860	860.000	64+00	64+00.0
870	870.000	65+00	65+00.0
880	880.000	66+00	66+00.0

DESIGNED BY: [Signature]

CHECKED BY: [Signature]

DATE: 9/15/2023

FOR APPROVAL: [Signature]

DESIGN ENGINEER: [Signature]

INDIANA DEPARTMENT OF TRANSPORTATION

KARST FARM GREENWAY CONNECTOR

PLAN & PROFILE LINE "A-A"

VERTICAL SCALE 1" = 10'

SHEET NO. 195

PROJECT NO. 1500005

DATE: 9/15/2023

INDIANA DEPARTMENT OF TRANSPORTATION

KARST FARM GREENWAY CONNECTOR

PLAN & PROFILE LINE "A-A"

INDIANA DEPARTMENT OF TRANSPORTATION

KARST FARM GREENWAY CONNECTOR

PLAN & PROFILE LINE "A-A"

INDIANA DEPARTMENT OF TRANSPORTATION

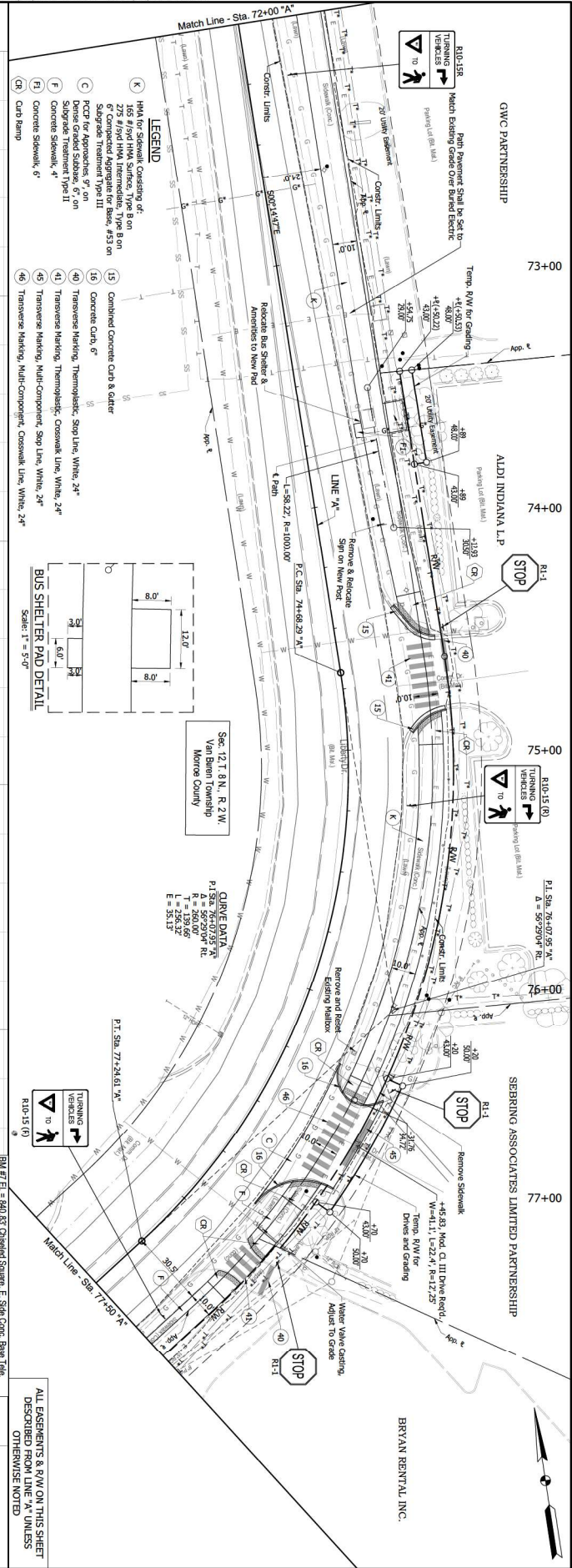
KARST FARM GREENWAY CONNECTOR

PLAN & PROFILE LINE "A-A"





880	820	870	860	850	840	830	820
820	843.7	843.9	844.0	844.2	844.2	844.3	844.3
840	844.3	844.3	844.3	844.2	844.1	844.1	844.1
870	844.1	844.1	844.0	843.7	843.5	843.3	843.1
860	842.8	842.6	842.4	842.1	841.9	841.6	841.3
850	841.9	841.6	841.3	841.0	840.7	840.4	840.2
840	840.0	839.9	839.5	839.5	839.5	839.5	839.5
830	839.5	839.5	839.5	839.5	839.5	839.5	839.5
820	839.5	839.5	839.5	839.5	839.5	839.5	839.5



**RECOMMENDED FOR APPROVAL**

DESIGNED BY: DAV  
CHECKED BY: MH

DATE: 9/15/2023

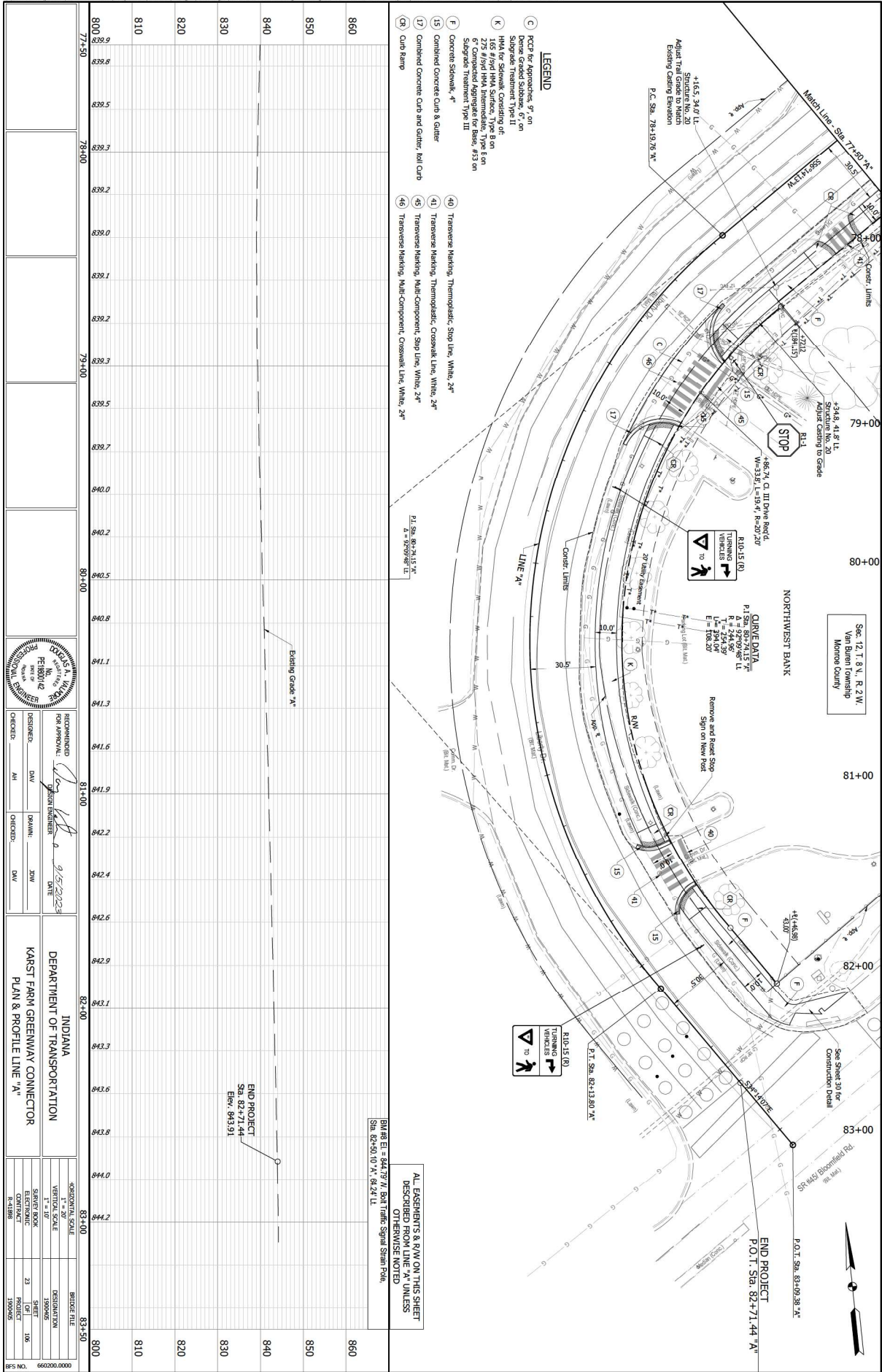
DESIGNED BY: JMW  
CHECKED BY: DAV

INDIANA  
DEPARTMENT OF TRANSPORTATION  
KARST FARM GREENWAY CONNECTOR  
PLAN & PROFILE LINE "A"

VERTICAL SCALE  
1" = 10'

BRIDGE FILE  
DESIGNATION  
190005  
SHEET  
22  
PROJECT  
190005  
NO. 95

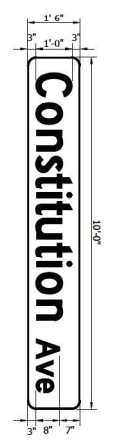
ALL EASEMENTS & R/W ON THIS SHEET DESCRIBED FROM LINE "A" UNLESS OTHERWISE NOTED



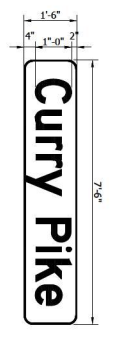
800	839.9	77+50
810	839.2	78+00
820	839.3	79+00
830	839.7	80+00
840	839.7	81+00
850	840.0	82+00
860	840.2	83+00
870	840.5	84+00
880	840.8	85+00
890	841.1	86+00
900	841.3	87+00
910	841.6	88+00
920	841.9	89+00
930	842.2	90+00
940	842.4	91+00
950	842.6	92+00
960	842.9	93+00
970	843.1	94+00
980	843.3	95+00
990	843.6	96+00
1000	843.8	97+00
1010	844.0	98+00
1020	844.2	99+00
1030	844.4	100+00
1040	844.7	101+00
1050	845.0	102+00
1060	845.3	103+00
1070	845.6	104+00
1080	845.9	105+00
1090	846.2	106+00
1100	846.5	107+00
1110	846.8	108+00
1120	847.1	109+00
1130	847.4	110+00
1140	847.7	111+00
1150	848.0	112+00
1160	848.3	113+00
1170	848.6	114+00
1180	848.9	115+00
1190	849.2	116+00
1200	849.5	117+00
1210	849.8	118+00
1220	850.1	119+00
1230	850.4	120+00
1240	850.7	121+00
1250	851.0	122+00
1260	851.3	123+00
1270	851.6	124+00
1280	851.9	125+00
1290	852.2	126+00
1300	852.5	127+00
1310	852.8	128+00
1320	853.1	129+00
1330	853.4	130+00
1340	853.7	131+00
1350	854.0	132+00
1360	854.3	133+00
1370	854.6	134+00
1380	854.9	135+00
1390	855.2	136+00
1400	855.5	137+00
1410	855.8	138+00
1420	856.1	139+00
1430	856.4	140+00
1440	856.7	141+00
1450	857.0	142+00
1460	857.3	143+00
1470	857.6	144+00
1480	857.9	145+00
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1510	858.8	148+00
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1530	859.4	150+00
1540	859.7	151+00
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1560	860.3	153+00
1570	860.6	154+00
1580	860.9	155+00
1590	861.2	156+00
1600	861.5	157+00
1610	861.8	158+00
1620	862.1	159+00
1630	862.4	160+00
1640	862.7	161+00
1650	863.0	162+00
1660	863.3	163+00
1670	863.6	164+00
1680	863.9	165+00
1690	864.2	166+00
1700	864.5	167+00
1710	864.8	168+00
1720	865.1	169+00
1730	865.4	170+00
1740	865.7	171+00
1750	866.0	172+00
1760	866.3	173+00
1770	866.6	174+00
1780	866.9	175+00
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1810	867.8	178+00
1820	868.1	179+00
1830	868.4	180+00
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1850	869.0	182+00
1860	869.3	183+00
1870	869.6	184+00
1880	869.9	185+00
1890	870.2	186+00
1900	870.5	187+00
1910	870.8	188+00
1920	871.1	189+00
1930	871.4	190+00
1940	871.7	191+00
1950	872.0	192+00
1960	872.3	193+00
1970	872.6	194+00
1980	872.9	195+00
1990	873.2	196+00
2000	873.5	197+00
2010	873.8	198+00
2020	874.1	199+00
2030	874.4	200+00
2040	874.7	201+00
2050	875.0	202+00
2060	875.3	203+00
2070	875.6	204+00
2080	875.9	205+00
2090	876.2	206+00
2100	876.5	207+00
2110	876.8	208+00
2120	877.1	209+00
2130	877.4	210+00
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2160	878.3	213+00
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2220	880.1	219+00
2230	880.4	220+00
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2260	881.3	223+00
2270	881.6	224+00
2280	881.9	225+00
2290	882.2	226+00
2300	882.5	227+00
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2320	883.1	229+00
2330	883.4	230+00
2340	883.7	231+00
2350	884.0	232+00
2360	884.3	233+00
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2380	884.9	235+00
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2480	887.9	245+00
2490	888.2	246+00
2500	888.5	247+00
2510	888.8	248+00
2520	889.1	249+00
2530	889.4	250+00
2540	889.7	251+00
2550	890.0	252+00
2560	890.3	253+00
2570	890.6	254+00
2580	890.9	255+00
2590	891.2	256+00
2600	891.5	257+00
2610	891.8	258+00
2620	892.1	259+00
2630	892.4	260+00
2640	892.7	261+00
2650	893.0	262+00
2660	893.3	263+00
2670	893.6	264+00
2680	893.9	265+00
2690	894.2	266+00
2700	894.5	267+00
2710	894.8	268+00
2720	895.1	269+00
2730	895.4	270+00
2740	895.7	271+00
2750	896.0	272+00
2760	896.3	273+00
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2810	897.8	278+00
2820	898.1	279+00
2830	898.4	280+00
2840	898.7	281+00
2850	899.0	282+00
2860	899.3	283+00
2870	899.6	284+00
2880	899.9	285+00
2890	900.2	286+00
2900	900.5	287+00
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2920	901.1	289+00
2930	901.4	290+00
2940	901.7	291+00
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2960	902.3	293+00
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2980	902.9	295+00
2990	903.2	296+00
3000	903.5	297+00
3010	903.8	298+00
3020	904.1	299+00
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3040	904.7	301+00
3050	905.0	302+00
3060	905.3	303+00
3070	905.6	304+00
3080	905.9	305+00
3090	906.2	306+00
3100	906.5	307+00
3110	906.8	308+00
3120	907.1	309+00
3130	907.4	310+00
3140	907.7	311+00
3150	908.0	312+00
3160	908.3	313+00
3170	908.6	314+00
3180	908.9	315+00
3190	909.2	316+00
3200	909.5	317+00
3210	909.8	318+00
3220	910.1	319+00
3230	910.4	320+00
3240	910.7	321+00
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3260	911.3	323+00
3270	911.6	324+00
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3310	912.8	328+00
3320	913.1	329+00
3330	913.4	330+00
3340	913.7	331+00
3350	914.0	332+00
3360	914.3	333+00
3370	914.6	334+00
3380	914.9	335+00
3390	915.2	336+00
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3530	919.4	350+00
3540	919.7	351+00
3550	920.0	352+00
3560	920.3	353+00
3570	920.6	354+00
3580	920.9	355+00
3590	921.2	356+00
3600	921.5	357+00
3610	921.8	358+00
3620	922.1	359+00
3630	922.4	360+00
3640	922.7	361+00
3650	923.0	362+00
3660	923.3	363+00
3670	923.6	364+00
3680	923.9	365+00
3690	924.2	366+00
3700	924.5	367+00
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3760	926.3	373+00
3770	926.6	374+00
3780	926.9	375+00
3790	927.2	376+00
3800	927.5	377+00
3810	927.8	378+00
3820	928.1	379+00







SIGN NUMBER	124-103
WIDTH X HEIGHT	10'-0" x 7'-6"
CORNER RADIUS	0.5"
BACKGROUND	White
TYPE	Reflective
COLOR	Green
LETTERING/POSTER TYPE	Reflective
LETTERING COLOR	White/White
LETTERS SHALL BE SIZE	"



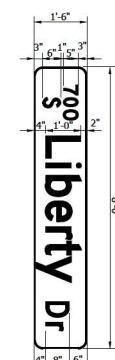
SIGN NUMBER	124-104
WIDTH X HEIGHT	7'-6" x 7'-6"
CORNER RADIUS	0.5"
BACKGROUND	White
TYPE	Reflective
COLOR	Green
LETTERING/POSTER TYPE	Reflective
LETTERING COLOR	White/White
LETTERS SHALL BE SIZE	"



SIGN NUMBER	124-105
WIDTH X HEIGHT	12'-6" x 7'-6"
CORNER RADIUS	0.5"
BACKGROUND	White
TYPE	Reflective
COLOR	Green
LETTERING/POSTER TYPE	Reflective
LETTERING COLOR	White/White
LETTERS SHALL BE SIZE	"

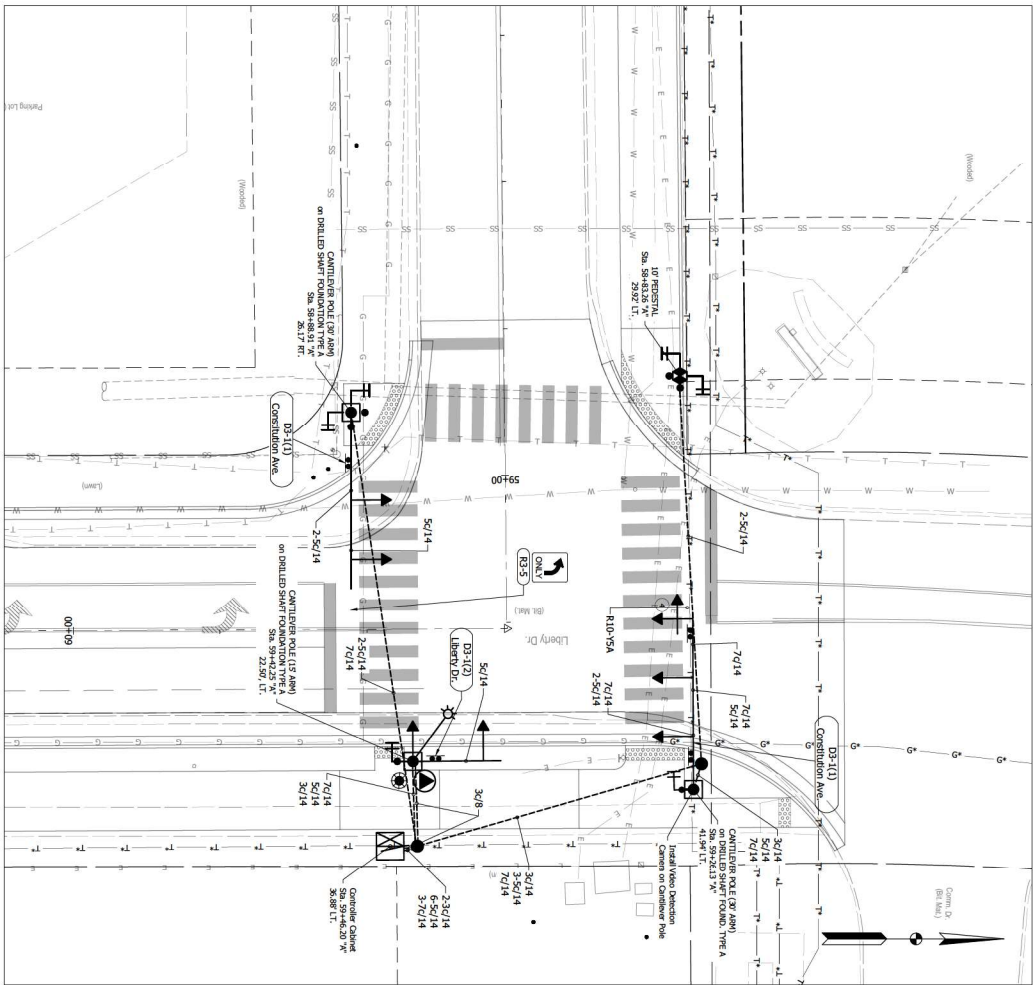


SIGN NUMBER	124-101
WIDTH X HEIGHT	11'-6" x 8'-0"
CORNER RADIUS	0.5"
BACKGROUND	White
TYPE	Reflective
COLOR	Green
LETTERING/POSTER TYPE	Reflective
LETTERING COLOR	White/White
LETTERS SHALL BE SIZE	"



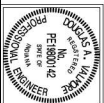
SIGN NUMBER	124-102
WIDTH X HEIGHT	8'-0" x 8'-0"
CORNER RADIUS	0.5"
BACKGROUND	White
TYPE	Reflective
COLOR	Green
LETTERING/POSTER TYPE	Reflective
LETTERING COLOR	White/White
LETTERS SHALL BE SIZE	"

RECOMMENDED FOR APPROVAL:	DESIGN ENGINEER:	DATE:	INDIANA DEPARTMENT OF TRANSPORTATION	VERTICAL SCALE:	BRIDGE FILE:
DESIGNED BY: DAV	DESIGNED BY: DAV	DATE: 9/5/2023	KARST FARM GREENWAY CONNECTOR	SCALE: 1/8" = 1'-0"	DISIGNATION: 190005
CHECKED BY: MH	CHECKED BY: DAV		STREET NAME SIGN DETAILS	SHEET NO: 31	PROJECT NO: 190005



CONSTITUTION AVENUE & LIBERTY DRIVE - SIGNAL DETAIL

Scale: 1" = 10'-0"



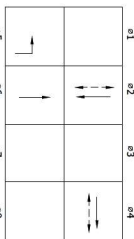
DESIGNED:	DAV	DRAWN:	JW
CHECKED:	AM	CHECKED:	DAV
DATE:	9/15/2023		

INDIANA  
DEPARTMENT OF TRANSPORTATION  
KARST FARM GREENWAY CONNECTOR  
SIGNAL DETAILS

VERTICAL SCALE	N/A	BRIDGE FILE	
SHEET NO.	37	DISIGNATION	190005
PROJECT	190005		

SIGN NUMBER	R10-Y5A
WIDTH x HEIGHT	30" x 36"
BORDER WIDTH	0.50"
CORNER RADIUS	1.88"
MOUNTING	Overhead
BACKGROUND	Reflective
LEGEND/BORDER	TYPE: Reflective COLOR: Black/Black

LEFT TURN ON FLASHING YELLOW ARROW



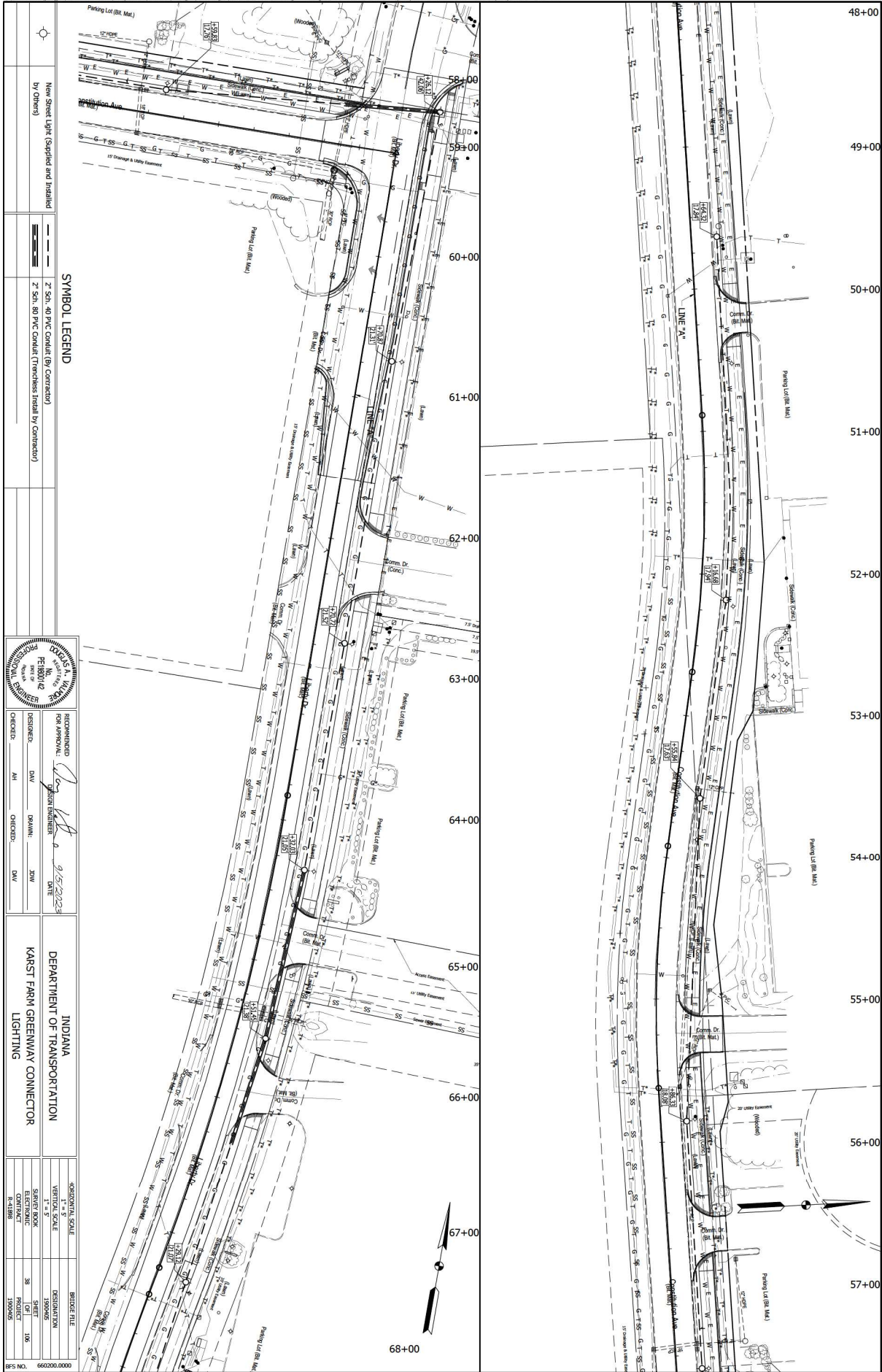
PHASE DIAGRAM  
No preferential  
All Signals Red Flash

LEGEND

- TRAFFIC SIGNAL HEAD, 3 FACE, 12" RED, AMBER, GREEN, POLYCARBONATE, W/BACKPLATE AND TAPE
- TRAFFIC SIGNAL HEAD, 4 FACE, 12" RED ARROW, AMBER ARROW, FLASHING AMBER ARROW, GREEN ARROW, POLYCARBONATE, W/BACKPLATE AND TAPE
- SIGNAL CANTILEVER POLE/ARMS
- COUNTDOWN PEDESTRIAN SIGNAL HEAD, 18" INTERNATIONAL SYMBOLS\*
- COUNTDOWN PEDESTRIAN SIGNAL HEAD, 18" INTERNATIONAL SYMBOLS\* AND ACCESSIBLE PEDESTRIAN PUSHBUTTON W/ R10-35 SIGN
- 18" SIGNAL PESTRIAN ON 24" 24" 24" FOUNDATION AND ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTON W/ R10-35 SIGN
- TS3 ECONOLITE CONTROLLER AND "P-T" CABINET ON "P-T" FOUNDATION WITH A1500-855-02 SERIES GLANCE FREE BRIGHT & PRIORITY VIDEO FIELD BATTERY BACKUP (FMV2) SYSTEM AND
- SIGNAL HANDPOLE, TYPE II
- 2" CONDUIT (SCH. 80 UNDER EXIST. PAVEMENT/SCH. 40 IN TRENCH)
- SIGNAL SERVICE
- LIGHTING SERVICE POINT
- UNIMMUNE, ON 10' ARM

\* PEDESTRIAN HEADS SHALL BE MOUNTED ON ONE WAY, ONE-OR-TWO-WAY UNIMMUNE, HUB PLATE. SIGNAL HEAD MOUNT SHALL BE SUCH THAT THE HEAD DOES NOT CONTACT WITH PAVEMENT 18"0 WHEN OPEN.





**SYMBOL LEGEND**

	New Street Light (Supplied and Installed by Others)
	2\"/>
	2\"/>

**RECOMMENDED FOR APPROVAL:**

DESIGNED: *DAV* DATE: 9/15/2023

CHECKED: *MA* CHECKED: *DAV*

REGISTERED PROFESSIONAL ENGINEER

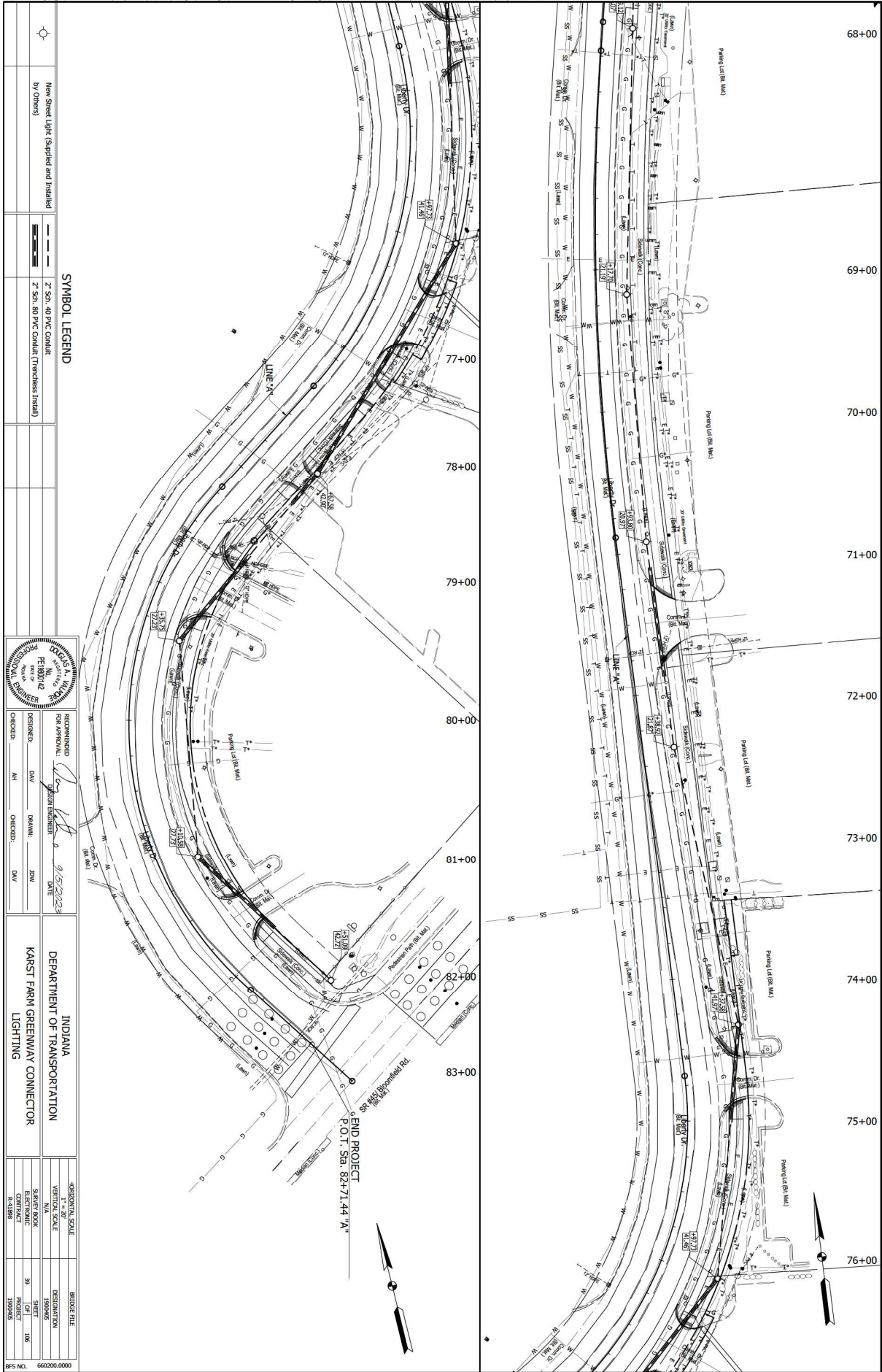
NO. 10000

STATE OF INDIANA

**INDIANA DEPARTMENT OF TRANSPORTATION**

**KARST FARM GREENWAY CONNECTOR LIGHTING**

VERTICAL SCALE	1" = 5'
HORIZONTAL SCALE	1" = 50'
SHEET NO.	38
PROJECT NO.	150005
DATE	9/15/2023



		New Street Light (Supplied and Installed by Others)	
		2\"/>	
<b>SYMBOL LEGEND</b>			
		2\"/>	
RECOMMENDED FOR APPROVAL: <i>[Signature]</i> DATE: 9/15/2023 DESIGNER: DAV DESIGN ENGINEER: JMW CHECKED: MH CHECKED: DAV			
INDIANA DEPARTMENT OF TRANSPORTATION KARST FARM GREENWAY CONNECTOR LIGHTING			
VERTICAL SCALE N/A		BRIDGE FILE DESIGNATION 159005	
SHEET/BOOK CONTRACT R-4188		SHEET PROJECT 105 159005	
660200.00000			