

PROJECT	DESIGNATION
1900017	1900017
CONTRACT	BRIDGE FILE
R-42444	CV 002-071-74.20

STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
CV 002-071-74.20	PRECAST REINFORCED CONCRETE BOX CULVERT	14'-0" SPAN X 8'-0" RISE X 142'-0" LONG 25° SKEW LT.	NIESPODZIANY DITCH	372+78.00 "PR"

INDIANA DEPARTMENT OF TRANSPORTATION

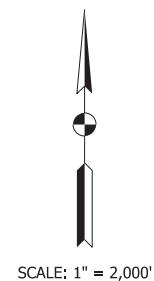
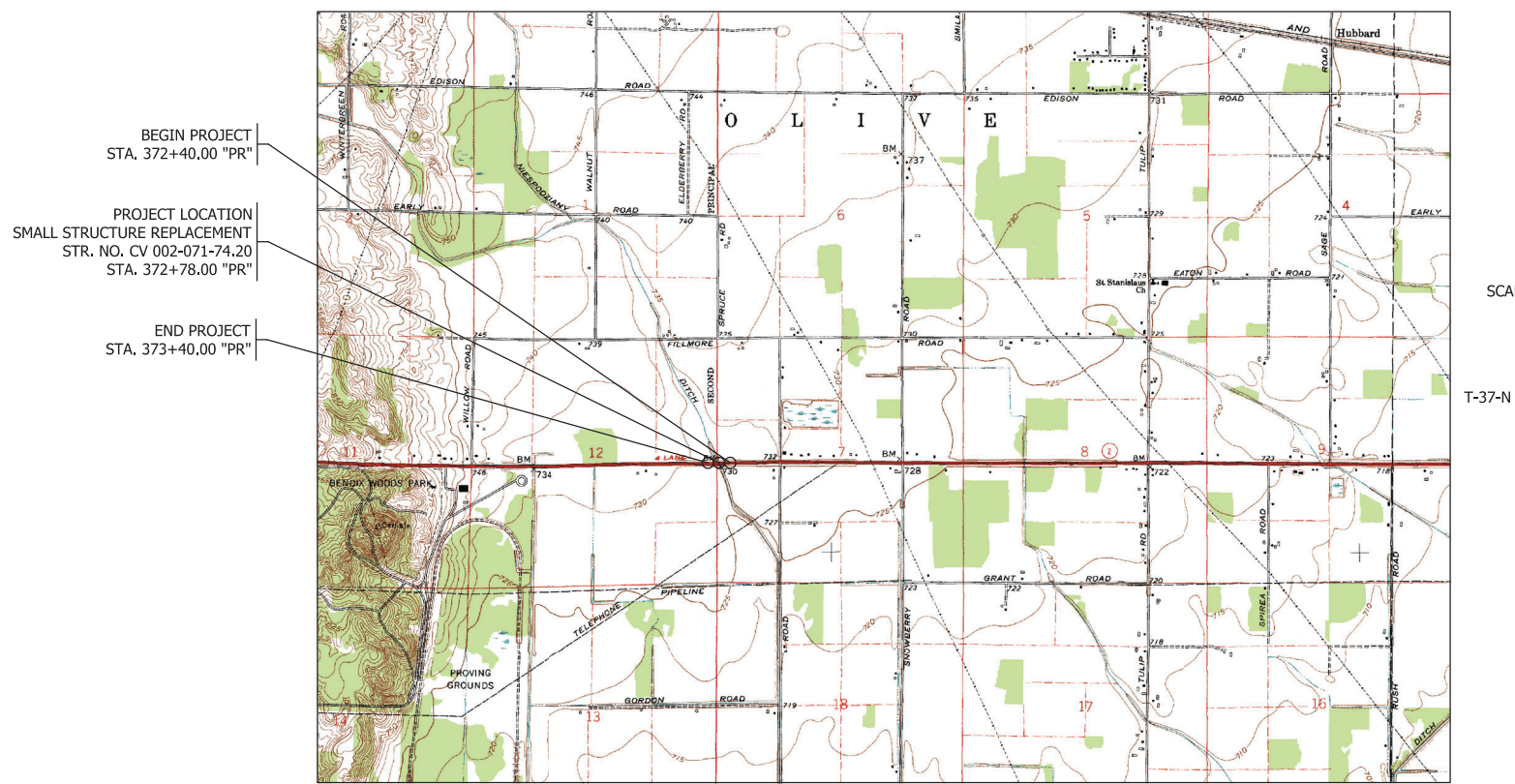


ROAD PLANS

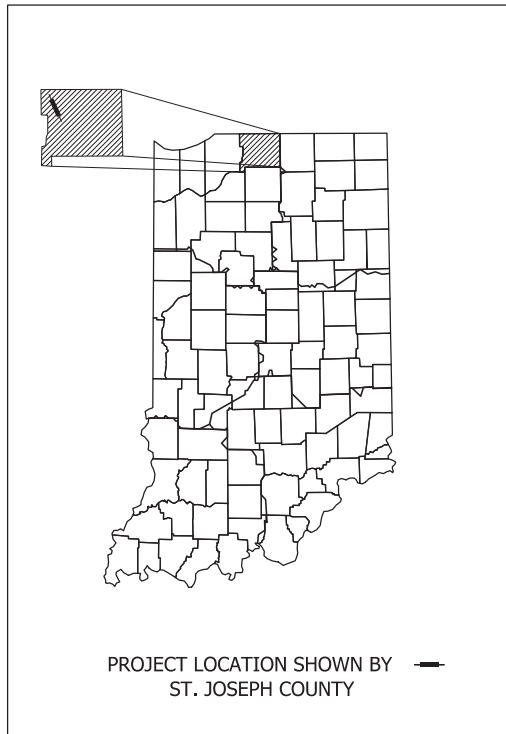
ROUTE: S.R. 2 AT: RP 74+20
 PROJECT NO. 1900017 P.E.
 1900017 R/W
 1900017 CONST.

KIN PROJECT INFORMATION					
Des. No.	PROJECT DESCRIPTION				
	Work Type	Route	Location	Feature Crossed	County
1900177 (LEAD)	HMA Overlay	SR 2	US 20 to US20/US31 Int.	N/A	LaPorte, St. Joseph
1900017	Small Structure Replacement	SR 2	6.5 miles west of US 31	Niespodziany Ditch	St. Joseph

Small Structure Replacement on S.R. 2 over Niespodziany Ditch
 Located 6.5 Miles West of US 31 in
 Section 7 & 12, T-37-N, R-1-E and R-1-W, Olive Township, St. Joseph County, Indiana



TRAFFIC DATA		
A.A.D.T.	2018	21,959 V.P.D.
A.A.D.T.	2039	24,495 V.P.D.
D.H.V	2039	2,266 V.P.H.
DIRECTIONAL DISTRIBUTION		50.89 %
TRUCKS		17.46 % A.A.D.T. 12.41 % D.H.V.
DESIGN DATA		
DESIGN SPEED	60 M.P.H.	
PROJECT DESIGN CRITERIA	3R (Non-Freeway)	
FUNCTIONAL CLASSIFICATION	Principal Arterial	
RURAL/URBAN	Rural	
TERRAIN	Level	
ACCESS CONTROL	None	



LATITUDE: 41°10'19" LONGITUDE: 86°28'02"

ROADWAY LENGTH: 0.018 MI.
 TOTAL LENGTH: 0.018 MI.
 MAX. GRADE: -0.090 %

HUC: 07120001010070

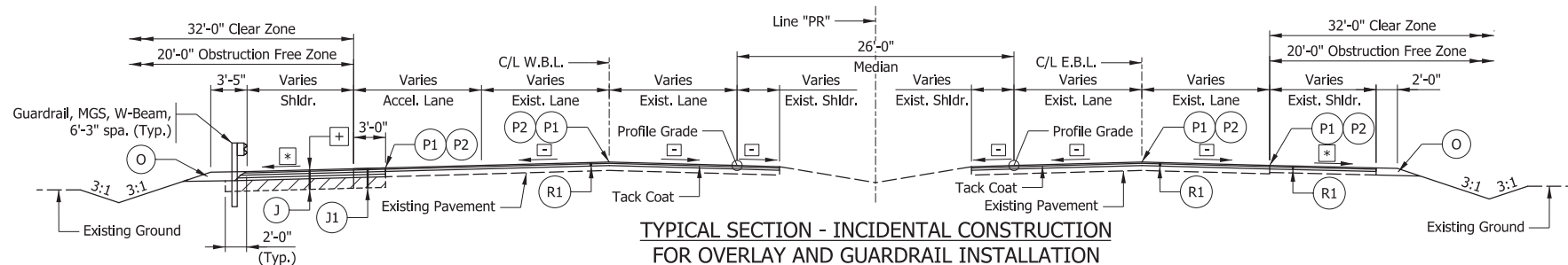
PLANS PREPARED BY:

9102 North Meridian St. Suite 200
 Indianapolis, IN 46260
 (317) 566-0629
 Fax: (317) 566-0633
 Website: www.sjcalnc.com

INDIANA DEPARTMENT OF TRANSPORTATION
 STANDARD SPECIFICATIONS DATED 2024
 TO BE USED WITH THESE PLANS

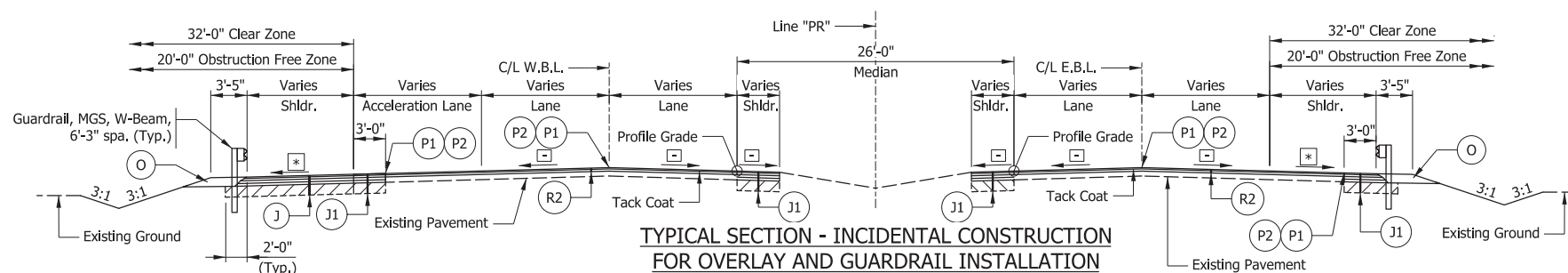
PLANS PREPARED BY: SJCA, Inc. (317) 566-0629 PHONE NUMBER
 CERTIFIED BY: _____ DATE
 APPROVED FOR LETTING: _____ INDIANA DEPARTMENT OF TRANSPORTATION DATE

BRIDGE FILE	CV 002-071-74.20
DESIGNATION	1900017
SURVEY BOOK	SHEETS
ELECTRONIC	1 of 16
CONTRACT	PROJECT
R-42444	1900017



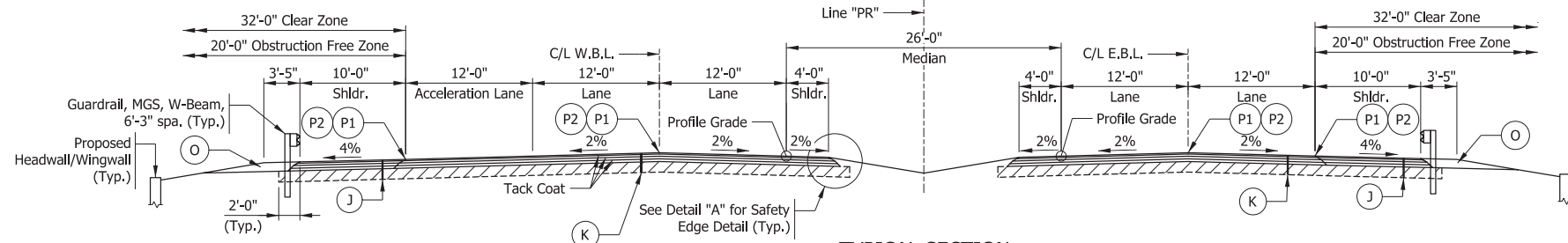
TYPICAL SECTION - INCIDENTAL CONSTRUCTION FOR OVERLAY AND GUARDRAIL INSTALLATION

Note: Guardrail Lt. is from Sta. 372+81.10 "PR" to 374+99.79 "PR"
 Scale: 1/8" = 1'-0"
 Sta. 371+46.00 "PR" to Sta. 371+90.00 "PR"
 Sta. 373+90.00 "PR" to Sta. 376+30.00 "PR"



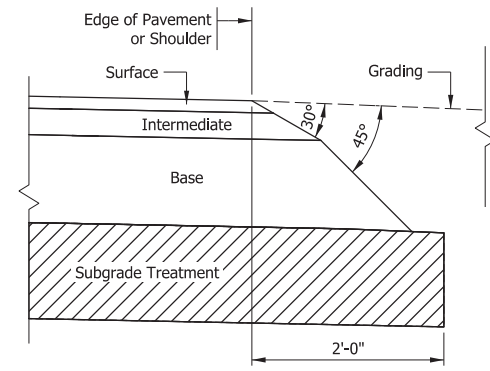
TYPICAL SECTION - INCIDENTAL CONSTRUCTION FOR OVERLAY AND GUARDRAIL INSTALLATION

Note: Guardrail Lt. is from Sta. 371+90.00 "PR" to 372+40.00 "PR"
 Scale: 1/8" = 1'-0"
 Sta. 371+90.00 "PR" to Sta. 372+40.00 "PR"
 Sta. 373+40.00 "PR" to Sta. 373+90.00 "PR"
 375+30.41



TYPICAL SECTION

Note: See Detail "A" for Safety Edge Detail (Typ.)
 Scale: 1/8" = 1'-0"
 Sta. 372+40.00 "PR" to Sta. 373+40.00 "PR"



SAFETY EDGE DETAIL
Not to Scale

LEGEND

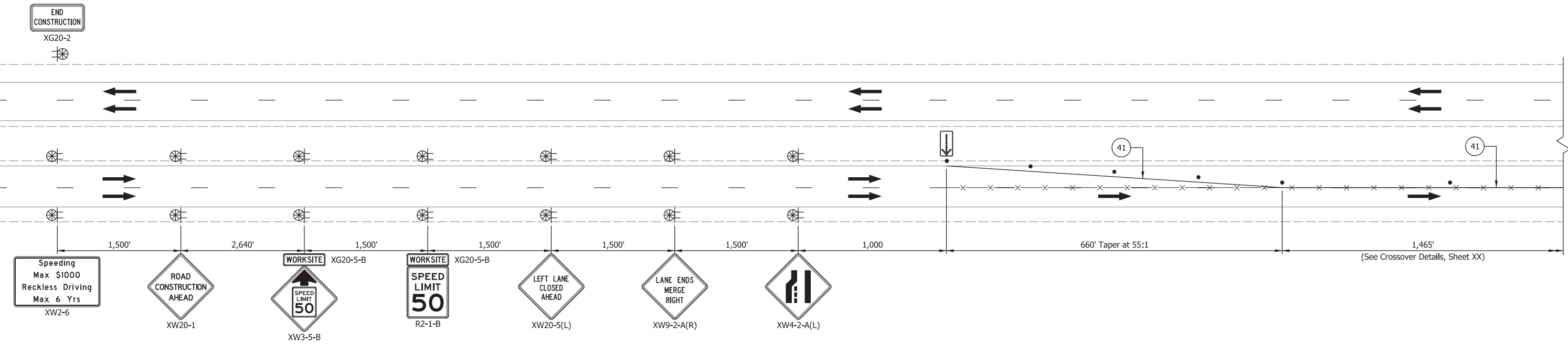
- Limits of Subgrade Treatment
- Widening with HMA, Type D from Sta. 373+40.00 "PR" to Sta. 376+30.00 "PR"
- Cross Slope varies from existing to 2%
- Cross Slope varies from existing to 4%
- Full-depth HMA Shoulder consisting of:
165 #/syd QC/QA-HMA, 4, 76, Surface, 9.5 mm on
275 #/syd QC/QA-HMA, 4, 76, Intermediate, 19.0 mm on
1100 #/syd QC/QA-HMA, 4, 64, Base, 25.0 mm on
Subgrade Treatment Type IC on
Geotextile for Pavement, Type 2B
- Widening with HMA, Type D, consisting of:
165 #/syd HMA Surface, Type D on
275 #/syd HMA Intermediate, Type D on
1100 #/syd HMA Base, Type D on
Subgrade Treatment Type IC
- Full-depth HMA Pavement consisting of:
165 #/syd QC/QA-HMA, 4, 76, Surface, 9.5 mm on
275 #/syd QC/QA-HMA, 4, 76, Intermediate, 19.0 mm on
1100 #/syd QC/QA-HMA, 4, 64, Base, 25.0 mm on
Subgrade Treatment Type IC on
Geotextile for Pavement, Type 2B
- Compacted Aggregate Base No. 53 (Variable depth, 10" max.)
- Joint Adhesive required for surface and intermediate layers at longitudinal joints.
- Liquid Asphalt Sealant required on surface layer over longitudinal joint (24" width)
- Asphalt Resurfacing consisting of:
165 #/syd QC/QA-HMA, 3, 70, Surface, 9.5 mm on
275 #/syd QC/QA-HMA, 3, 70, Intermediate, 19.0 mm on
Milling, Asphalt, 4"
- HMA Milling Transition consisting of:
165 #/syd QC/QA-HMA, 3, 70, Surface, 9.5 mm on
275 #/syd QC/QA-HMA, 3, 70, Intermediate, 19.0 mm on
Transition Milling

Model: Typical Sections
6/16/2023 3:30:33 PM User: JLight

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

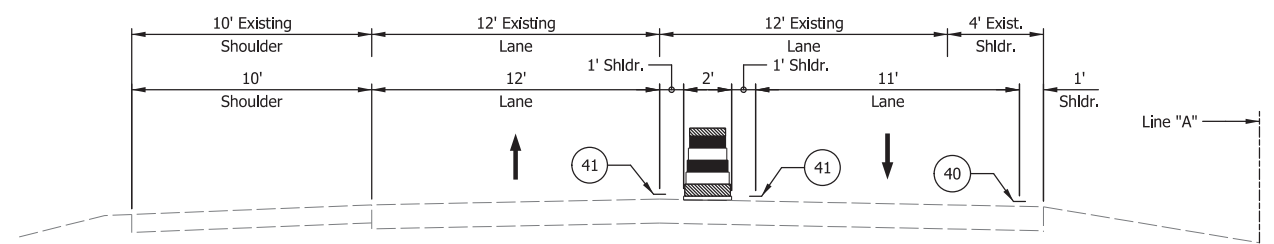
INDIANA DEPARTMENT OF TRANSPORTATION	
TYPICAL SECTIONS	

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	CV 002-071-74.20
VERTICAL SCALE	DESIGNATION
AS NOTED	1900017
SURVEY BOOK	SHEETS
ELECTRONIC	3 of 16
CONTRACT	PROJECT
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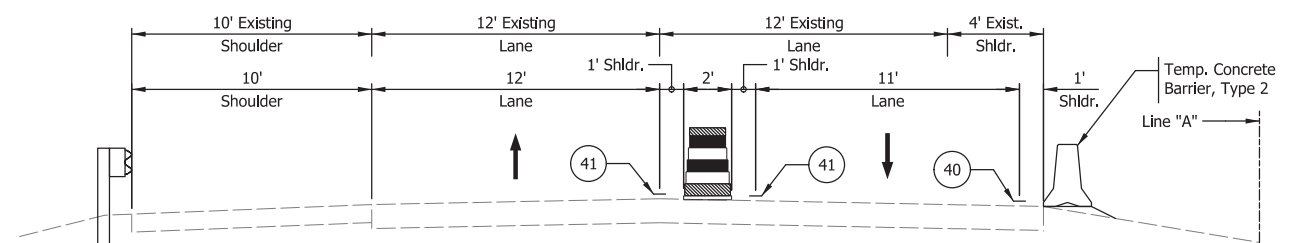
ADVANCE SIGNING AND LANE CLOSURE DETAIL

Not to scale



SECTION "A-A"

Not to Scale



SECTION "B-B"

Not to Scale

ESTIMATED QUANTITIES				
ITEM	UNIT	PHASE I	PHASE II	TOTAL
CONSTRUCTION SIGN, A	EACH	35	35	33
CONSTRUCTION SIGN, B	EACH	5	6	6
TEMPORARY CONCRETE BARRIER, TYPE 2	LFT	570	570	570
FLASHING ARROW SIGN	DAYS	90	90	180
LINE, REMOVE	LFT	4830	2422	7252
TEMPORARY PAVEMENT MARKING, REMOVABLE, 4IN	LFT	9211	9767	18978
BARRICADE, III-A	LFT	48	48	48
BARRICADE, III-B	LFT	72	84	84

LEGEND

- x—x— Line, Remove
- Construction Drums
- ⊗ Construction Sign w/ Warning Light
- Traffic Flow
- ⬇️ Flashing Arrow Sign
- [A] Barricade, III-A (12 Lft each)
- [B] Barricade, III-B (12 Lft each)
- (40) Temporary Pavement Marking, 4", Removable (White)
- (41) Temporary Pavement Marking, 4", Removable (Yellow)

NOTES

1. Construction Zone Design Speed = 50 MPH
2. Construction Clear Zone = 16'
3. See Sheets 5-6 for Phase I and Phase II details, Crossover Details, and location of Sections "A-A" and "B-B".
4. Contractor Shall Follow INDOT Std. Spec. 801.15 (b).
5. All Construction Signs Shall Meet Current MUTCD Standards.

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE _____

DESIGNED: _____ KCH DRAWN: _____ KCH/BDH

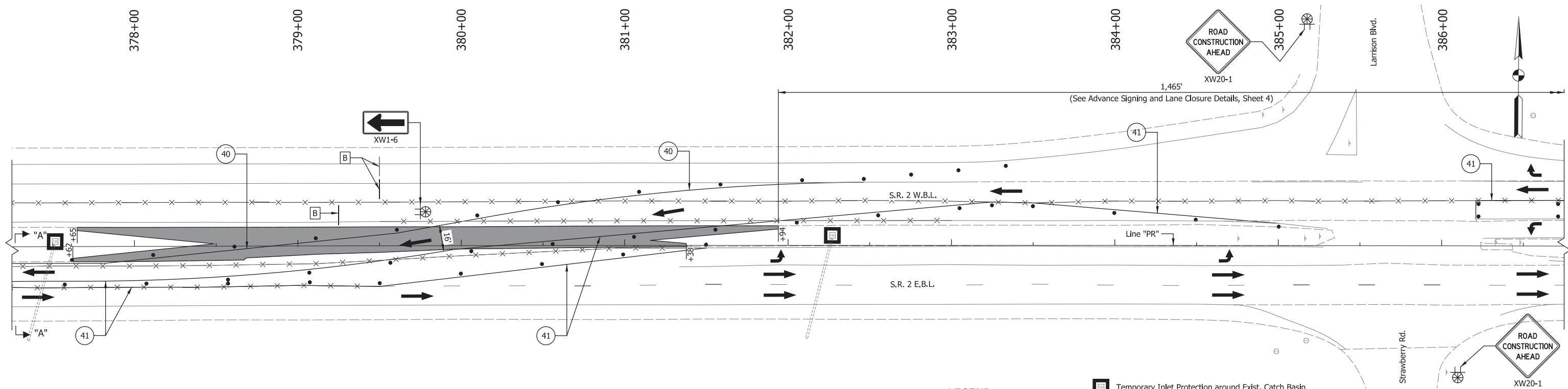
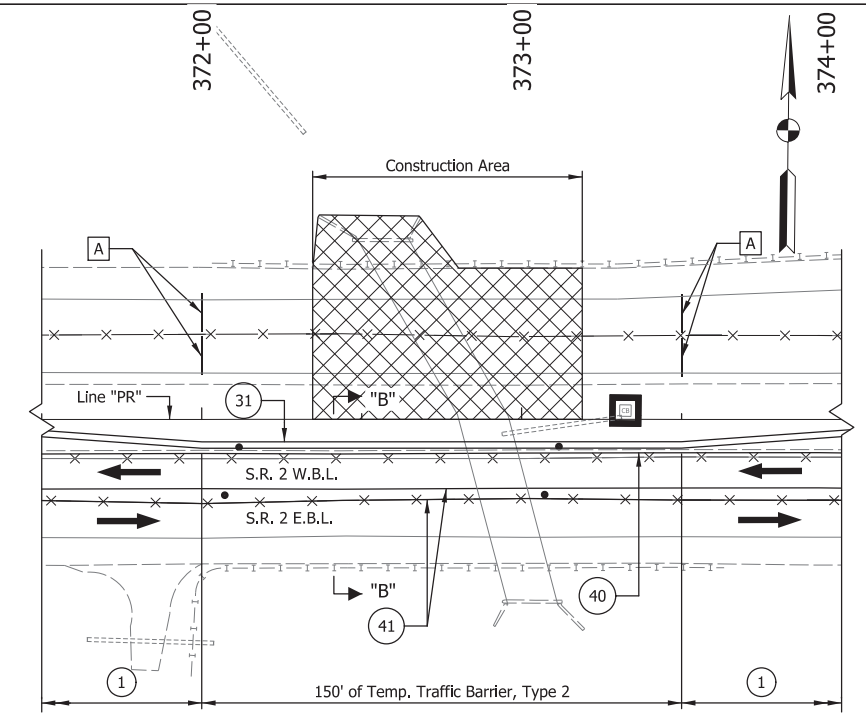
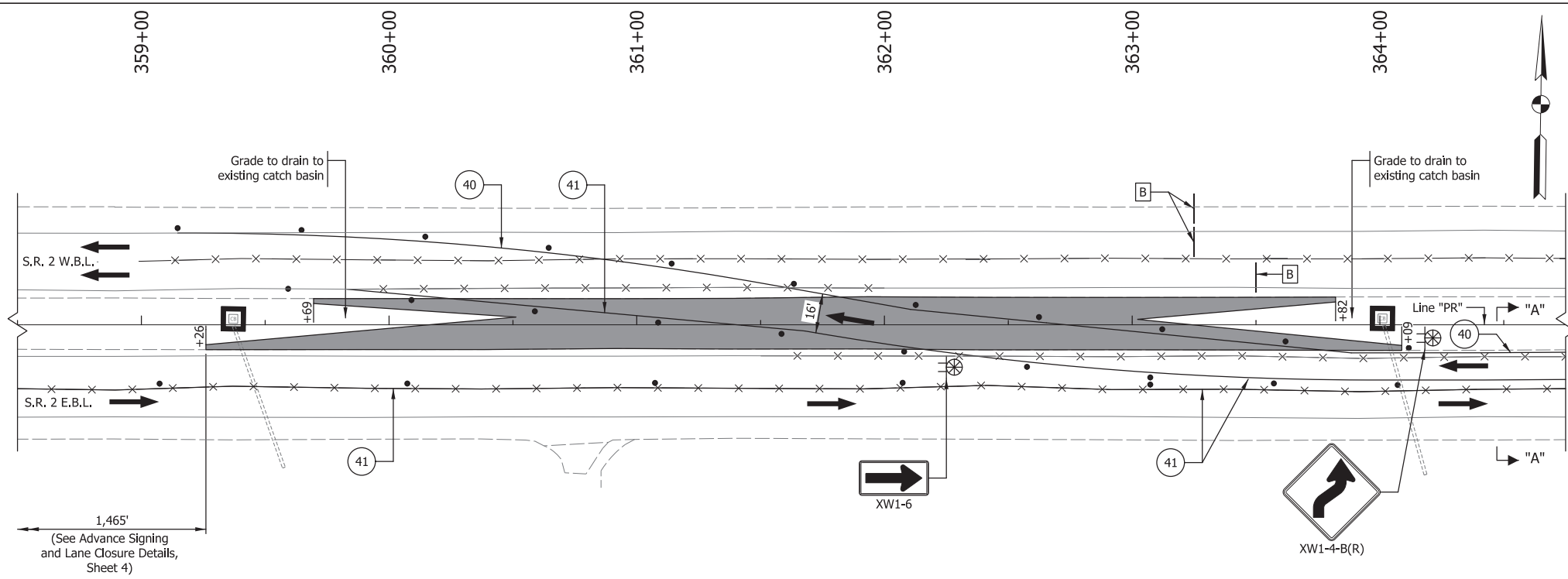
CHECKED: _____ AMG CHECKED: _____ AMG

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	CV 002-071-74.20
VERTICAL SCALE	DESIGNATION
AS NOTED	1900017
SURVEY BOOK	SHEETS
ELECTRONIC	4 of 16
CONTRACT	PROJECT
R-42444	1900017

Model: Sht_Avd_Signing 6/16/2023 3:00:34 PM User: JLight



- LEGEND**
- Area of Temporary Crossover, B
 - Construction Area
 - Line, Remove
 - Construction Drums
 - Construction Sign w/ Warning Light
 - Traffic Flow
 - Flashing Arrow Sign

- Temporary Inlet Protection around Exist. Catch Basin
- Barricade, III-A (12 Lft each)
- Barricade, III-B (12 Lft each)
- 210' of Temp. Traffic barrier, Type 2 (Taper at 14:1)
- Temp. Traffic barrier, Type 2
- Temporary Pavement Marking, 4", Removable (White)
- Temporary Pavement Marking, 4", Removable (Yellow)

- NOTES**
1. Construction Zone Design Speed = 50 MPH
 2. Construction Clear Zone = 16'
 3. See Sheet 4 for Advance Signing and Lane Closure Details and Sections "A-A" and "B-B".

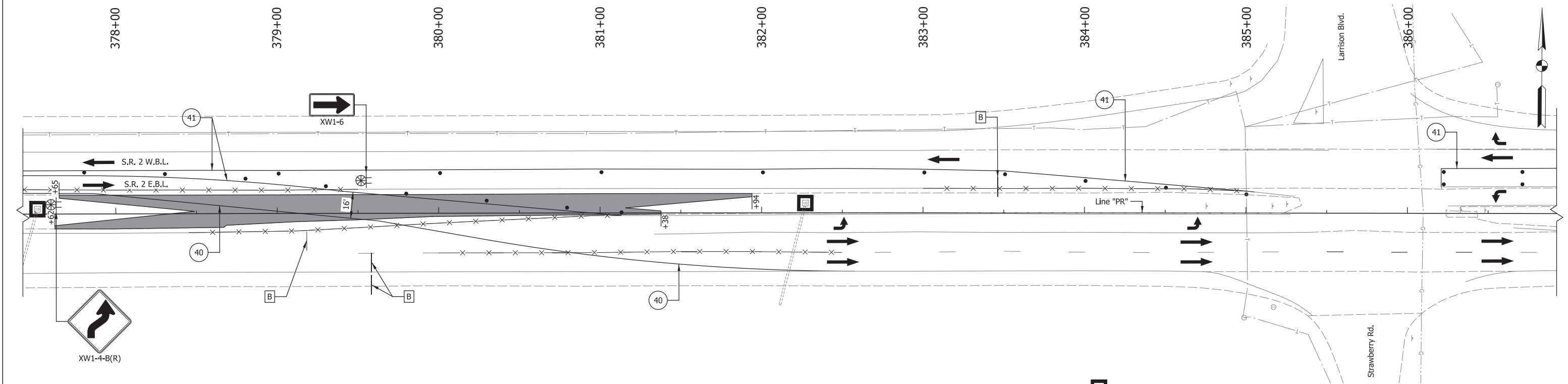
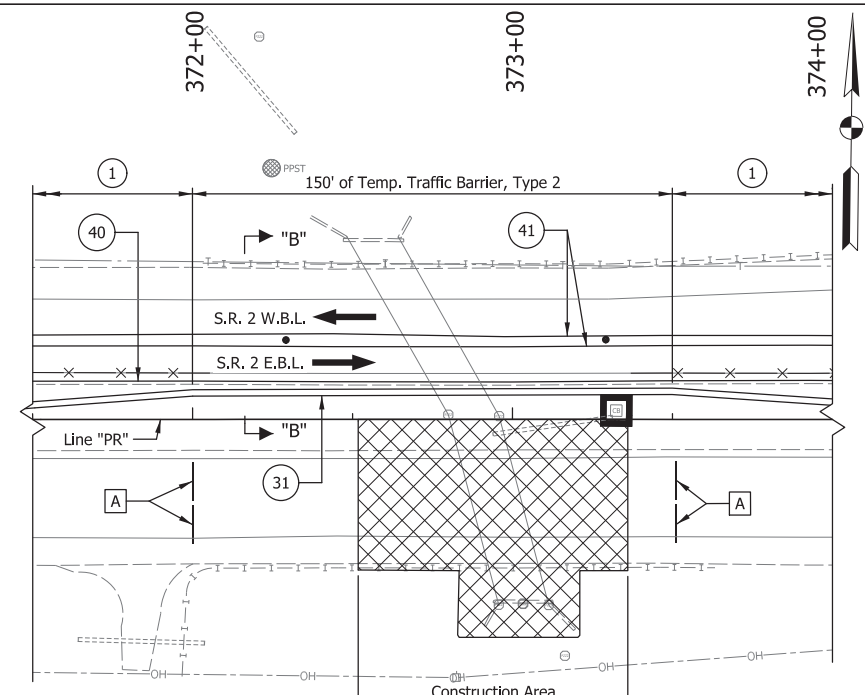
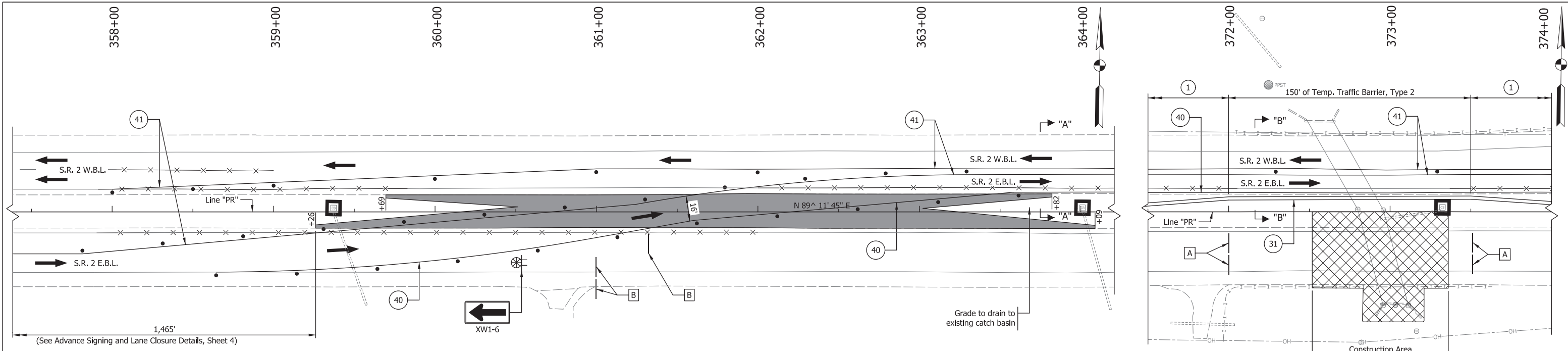
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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ KCH	DRAWN: _____ KCH	
CHECKED: _____ MDP	CHECKED: _____ MDP	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC
PHASE I
CROSSOVER DETAILS**

HORIZONTAL SCALE 1" = 30'	BRIDGE FILE CV 002-071-74.20
VERTICAL SCALE N/A	DESIGNATION 1900017
SURVEY BOOK ELECTRONIC	SHEETS 5 of 16
CONTRACT R-42444	PROJECT 1900017



- LEGEND**
- Area of Temporary Crossover, B
 - Construction Area
 - Line, Remove
 - Construction Drums
 - Construction Sign w/ Warning Light
 - Traffic Flow
 - Flashing Arrow Sign
 - Temporary Inlet Protection around Exist. Catch Basin
 - Barricade, III-A (12 Lft each)
 - Barricade, III-B (12 Lft each)
 - 210' of Temp. Traffic barrier, Type 2 (Taper at 14:1)
 - Temp. Traffic barrier, Type 2
 - Temporary Pavement Marking, 4", Removable (White)
 - Temporary Pavement Marking, 4", Removable (Yellow)

- NOTES**
- Construction Zone Design Speed = 50 MPH
 - Construction Clear Zone = 16'
 - See Sheet 4 for Advance Signing and Lane Closure Details and Sections "A-A" and "B-B".

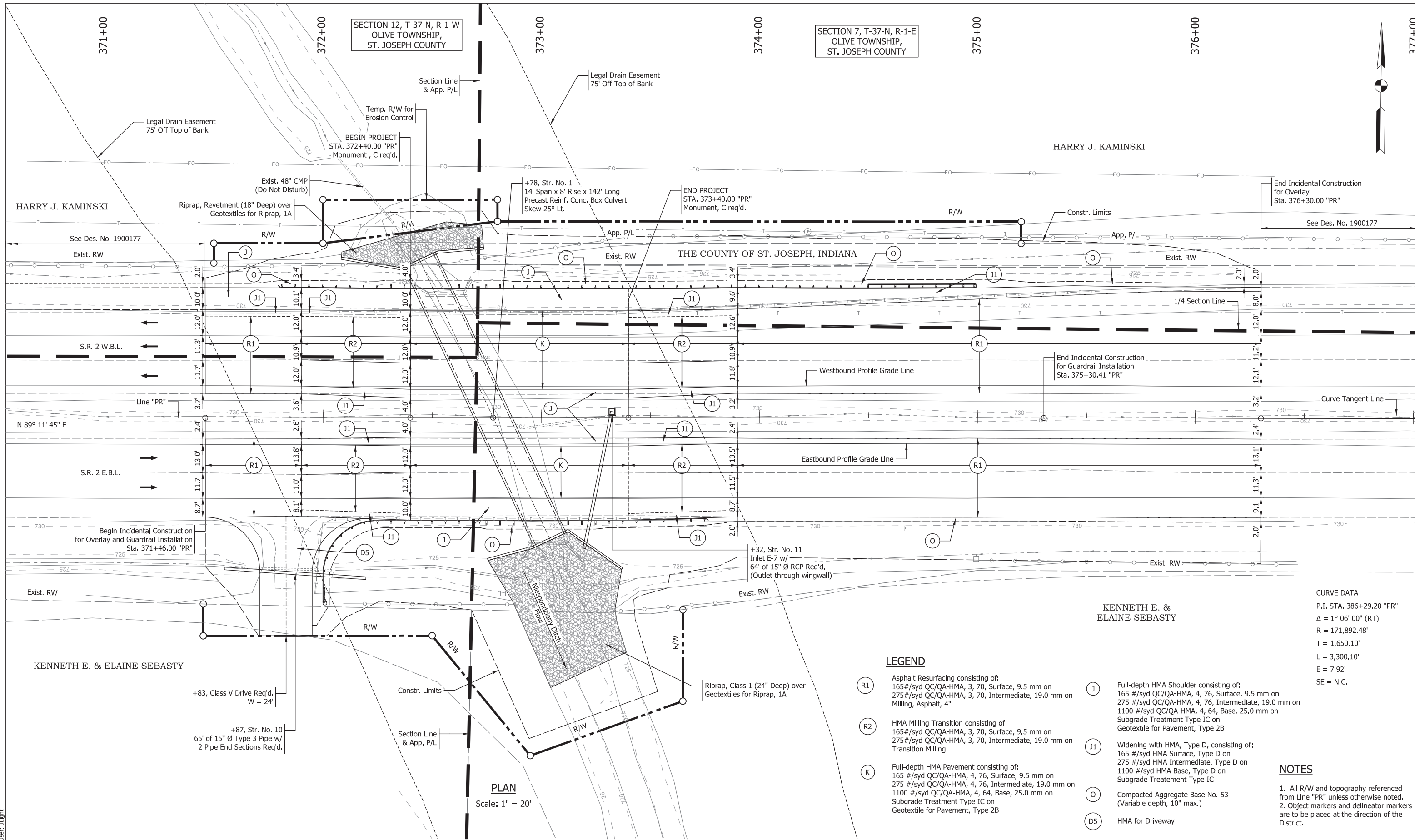
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6/16/2023 3:00:36 PM User: JLight

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

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC
PHASE II
CROSSOVER DETAILS**

HORIZONTAL SCALE 1" = 30'	BRIDGE FILE CV 002-071-74.20
VERTICAL SCALE N/A	DESIGNATION 1900017
SURVEY BOOK ELECTRONIC	SHEETS 6 of 16
CONTRACT R-42444	PROJECT 1900017

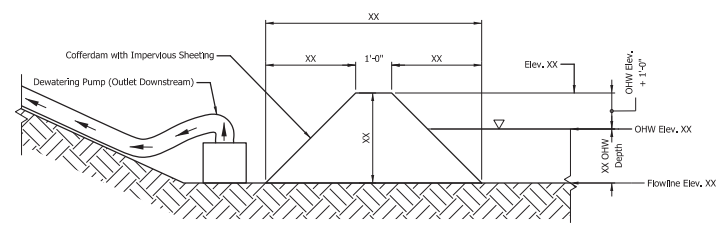
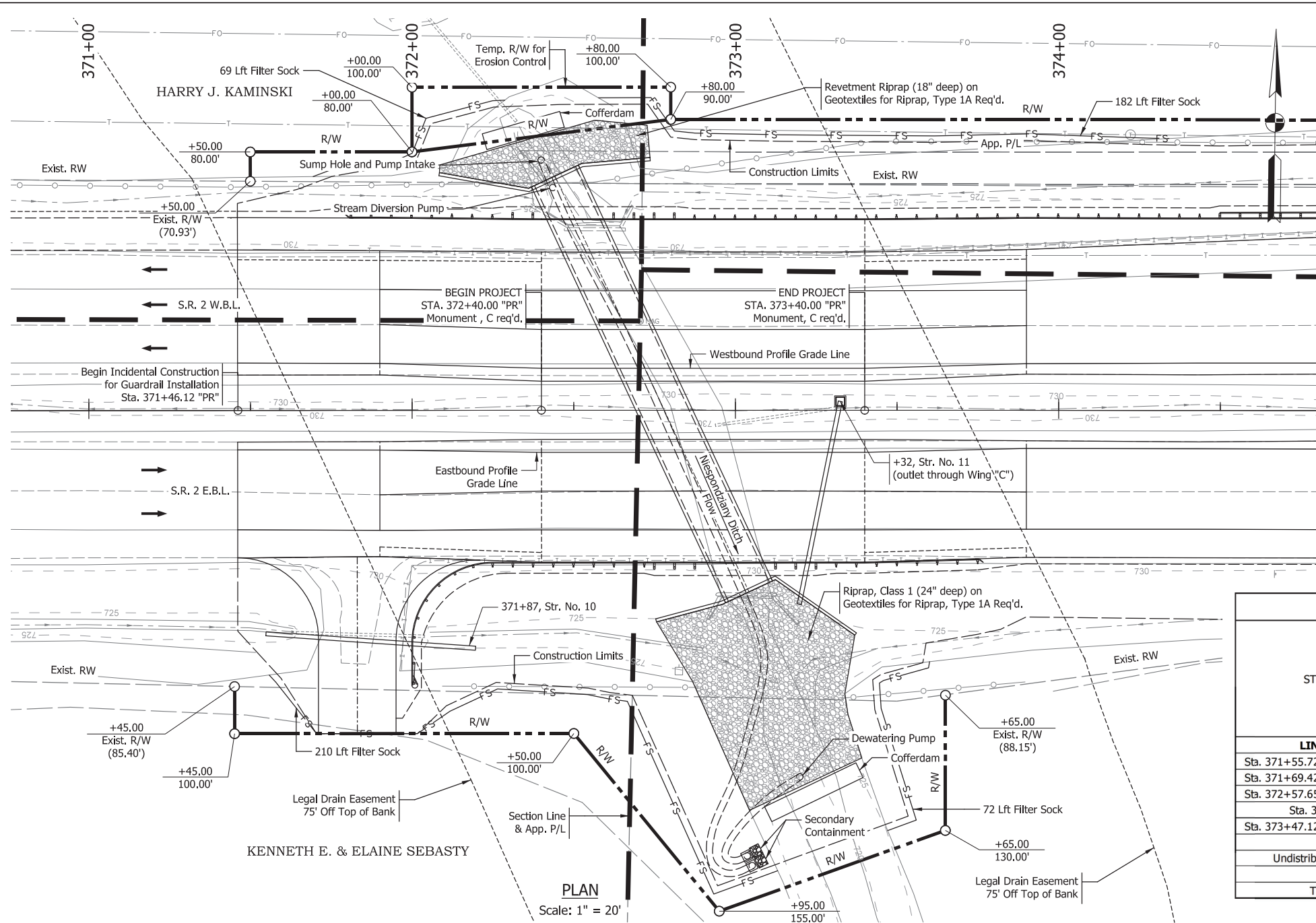


RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: ASI	DRAWN: ASI	
CHECKED: -	CHECKED: -	

INDIANA DEPARTMENT OF TRANSPORTATION	
CONSTRUCTION DETAILS	

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	CV 002-071-74.20
VERTICAL SCALE	DESIGNATION
N/A	1900017
SURVEY BOOK	SHEETS
ELECTRONIC	7 of 16
CONTRACT	PROJECT
R-42444	1900017

Model: Constr. Details
 5/16/2023 3:30:37 PM User: JLight



TEMPORARY EROSION CONTROL TABLE															
STATION	LOCATION			FILTER SOCK LFT	SEDIMENT REMOVE CYS	SEDIMENT BASIN EACH	MOBILIZATION/ DEMOLITIZATIO N EACH	NO. 2 STONE TON	SLOPE DRAIN LFT	RIPRAP SPLASHPAD CYS	TEMPORARY CHECK DAM, TRAVERSABLE LFT	TEMPORARY CHECK DAM, REVETMENT RIPRAP CYS	TEMPORARY INLET PROTECTION EACH	FISH POOL EACH	REMARKS
	LEFT	MEDIAN	RIGHT												
LINE "PR"															
Sta. 371+55.72 to Sta. 373+13.10			X	210	10.5										
Sta. 371+69.42 to Sta. 372+28.72	X			69	3.5										
Sta. 372+57.65 to Sta. 374+34.06	X			182	9.1										
Sta. 373+32.43			X		1.0								1		
Sta. 373+47.12 to Sta. 373+60.08			X	72	3.6										
Undistributed Quantity							2	100							
TOTAL				533	28		2	100					1		

- NOTES**
- Any areas in addition to those called out, left undisturbed for a period exceeding 7 days shall be required to have temporary seeding.
 - All disturbed areas shall be permanently seeded in accordance with INDOT Standard Specifications as soon as possible upon completion of work in that area.
 - Upon Completion of ditch grading, permanent erosion control measures specified in the plans shall be implemented.
 - Erosion Control Blankets will be used on all slopes steeper than 3:1.
 - Pump Around operation shall remain in place until all work in the channel is complete including channel stabilization.
 - Separate Operations are shown for construction of each half of the channel scour protection. Construction shall be performed on one half at a time to limit the restriction of the existing channel. After completing the construction of one half, the pump around operation shall be removed and then setup for the other half of the construction.
 - See General Plan sheet for limits of permanent riprap scour protection.

Model: Erosion Control Sheet
6/16/2023 3:30:38 PM User: JLight

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE AS NOTED	BRIDGE FILE CV 002-071-74.20
DESIGNED: MAH/JBL	DRAWN: MAH/JBL		VERTICAL SCALE AS NOTED	DESIGNATION 1900017
CHECKED: XX	CHECKED: XX	EROSION CONTROL	SURVEY BOOK ELECTRONIC	SHEETS 8 of 16
			CONTRACT R-42444	PROJECT 1900017

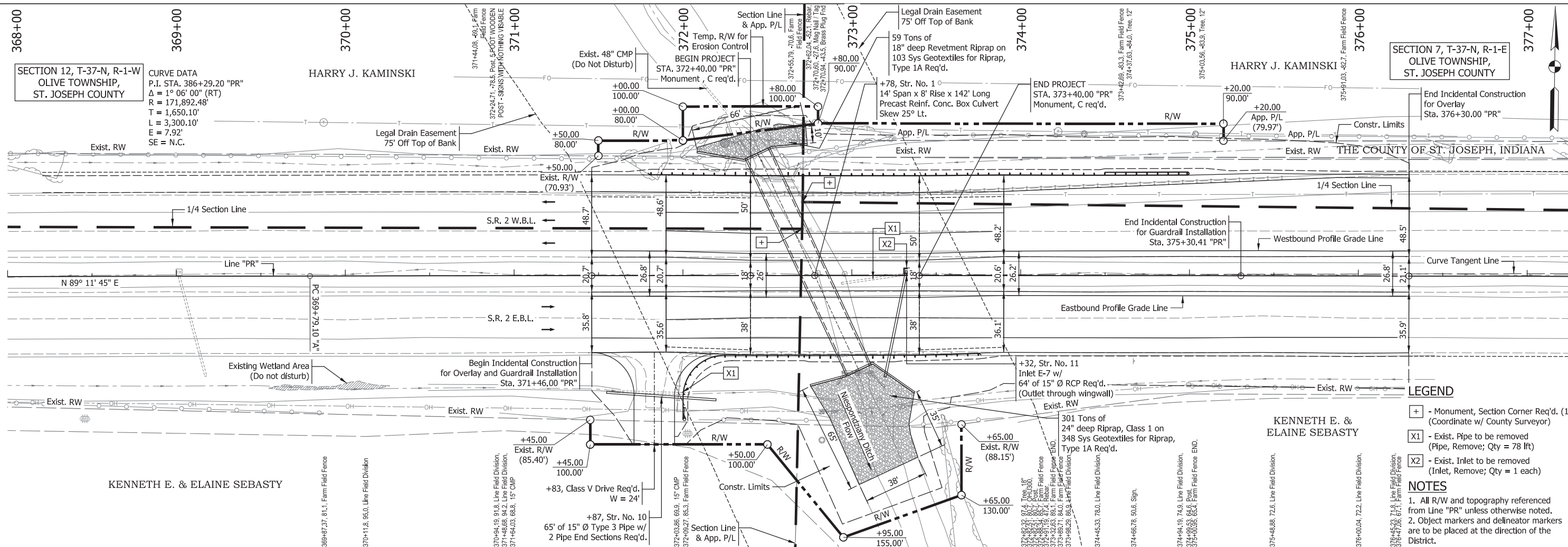
SECTION 12, T-37-N, R-1-W
OLIVE TOWNSHIP,
ST. JOSEPH COUNTY

CURVE DATA
P.I. STA. 386+29.20 "PR"
Δ = 1° 06' 00" (RT)
R = 171,892.48'
T = 1,650.10'
L = 3,300.10'
E = 7.92'
SE = N.C.

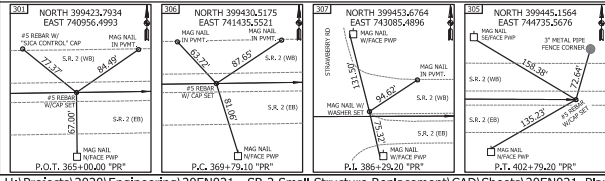
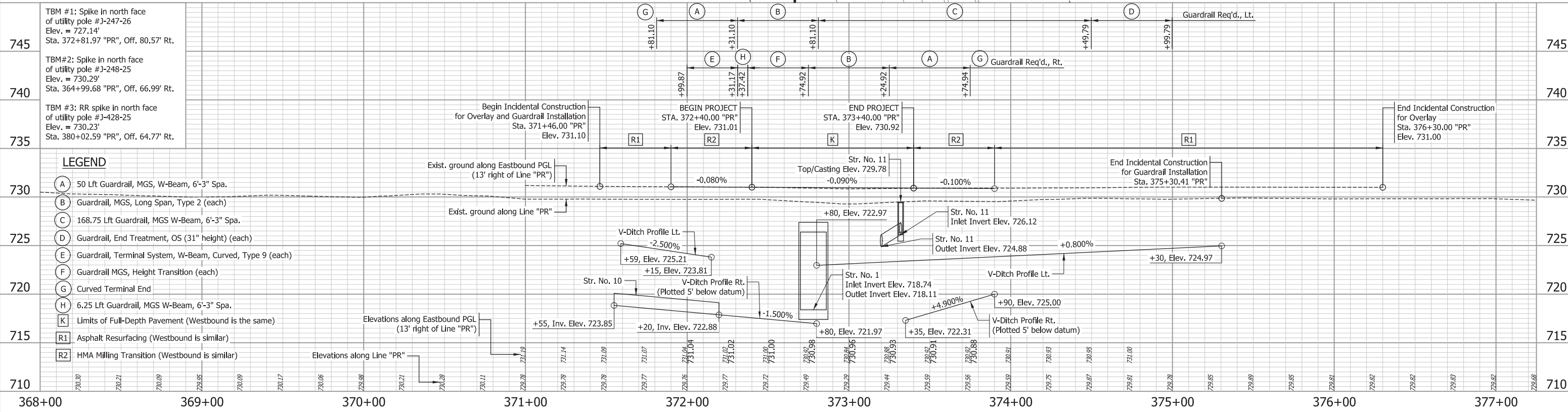
HARRY J. KAMINSKI

SECTION 7, T-37-N, R-1-E
OLIVE TOWNSHIP,
ST. JOSEPH COUNTY

HARRY J. KAMINSKI



- LEGEND**
- + - Monument, Section Corner Req'd. (1 each)
(Coordinate w/ County Surveyor)
 - X1 - Exist. Pipe to be removed
(Pipe, Remove; Qty = 78 ft)
 - X2 - Exist. Inlet to be removed
(Inlet, Remove; Qty = 1 each)
- NOTES**
1. All R/W and topography referenced from Line "PR" unless otherwise noted.
 2. Object markers and delineator markers are to be placed at the direction of the District.



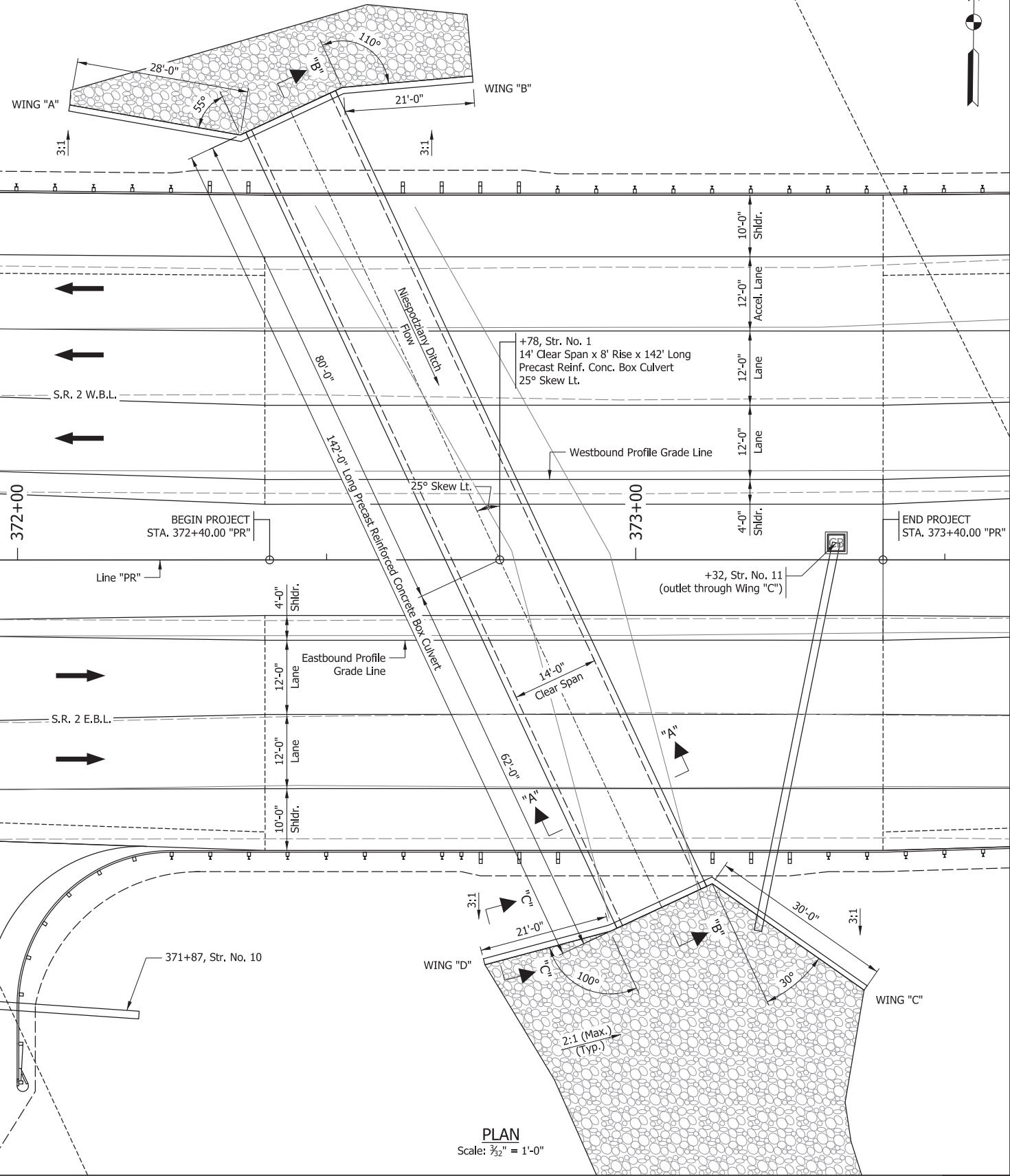
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MDP	DRAWN: KCH	
CHECKED: AMG	CHECKED: AMG	

INDIANA
DEPARTMENT OF TRANSPORTATION

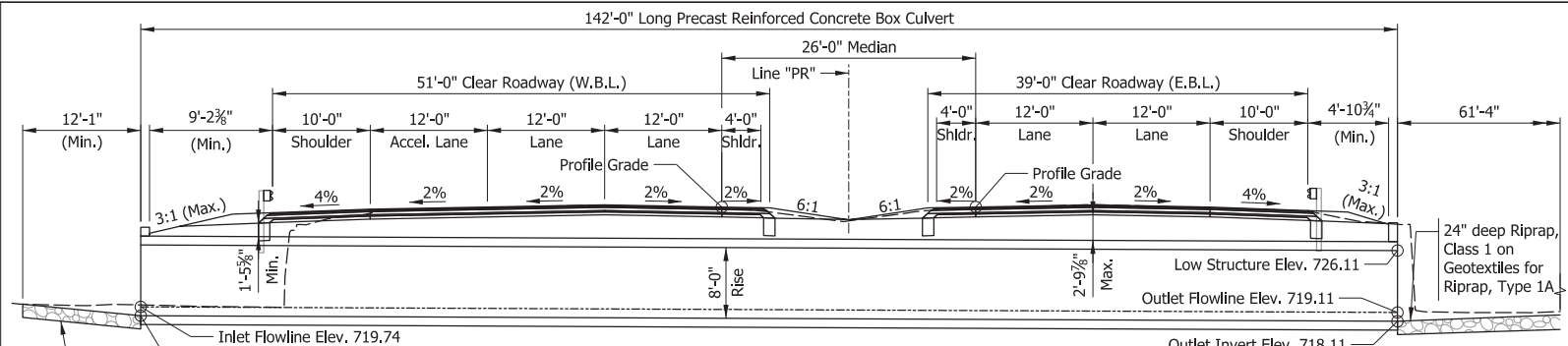
PLAN AND PROFILE
LINE "PR" - S.R. 2

HORIZONTAL SCALE 1" = 30'	BRIDGE FILE CV 002-071-74.20
VERTICAL SCALE 1" = 5'	DESIGNATION 1900017
SURVEY BOOK ELECTRONIC	SHEETS 9 of 16
CONTRACT R-42444	PROJECT 1900017

User: JLight
Model: Plan_Profile
6/16/2023 3:30:40 PM



PLAN
Scale: 3/32" = 1'-0"



SECTION "B-B"
Scale: 3/32" = 1'-0"

NOTES

- Roadway dimensions are measured perpendicular to Line "PR".
- Structure dimensions are measured along the C/L of the structure.

	WINGWALL			
	A	B	C	D
Elev. A	728.49	728.49	727.86	727.86
Elev. B	727.32	726.24	723.94	726.19
Elev. C	717.74	717.74	717.11	717.11
D	10.75	10.75	10.75	10.75
E	9.58	8.50	6.83	9.08
L	28.00	21.00	30.00	21.00
Area (Sft.)	286	204	266	210
	TOTAL			
	966			

UTILITIES

See Title Sheet for Information

EXISTING STRUCTURE

Existing Structure is a simple span concrete slab structure with a span length of 13'-9" at a left skew with 16'-0" Clear Roadway width. Existing structure to be removed.

DESIGN DATA

LOADING

Design for HL-93 in accordance with 2018 AASHTO LRFD specification, and all subsequent interims.

Dead load increased 35 PSF for future wearing surface.

SUMMARY OF QUANTITIES

Structure Backfill, Type 5 = 661 CY5

GENERAL NOTES

All dimensions are in feet (ft.) except as noted.

Standard DWG. E714-BCSP-01 shall be followed for stream bed scour protection and sumping detail.

Contractor shall verify the existing flowline elevation to set the appropriate sump depth.

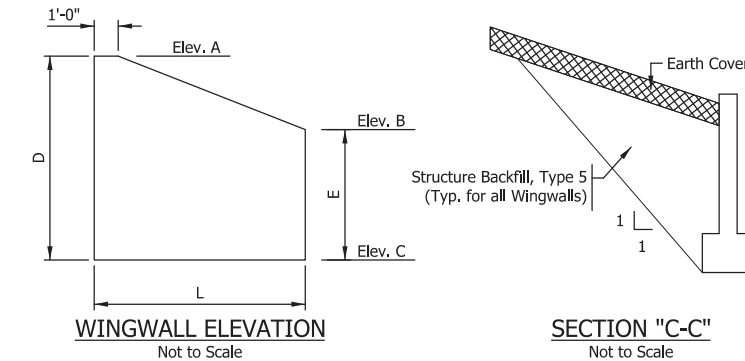
Reinforcement in structure shall be Epoxy Coated.

Waterproofing shall be constructed in concurrence with INDOT Std. Spec. 714.

HYDRAULIC DATA

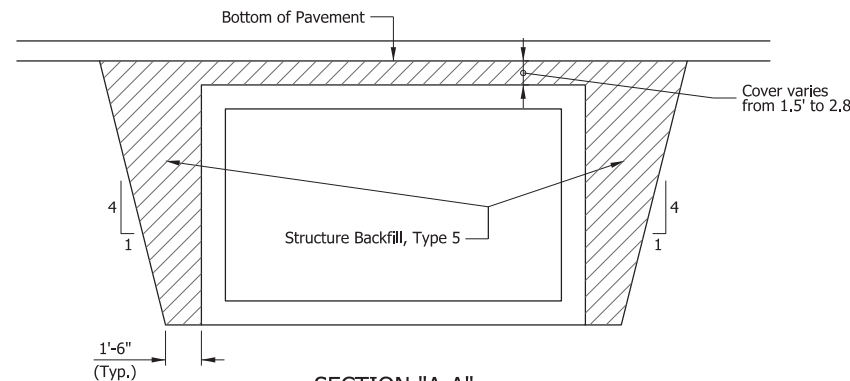
Drainage Area	6.28 acres
Q100 Discharge	718 cfs
Q100 Outlet Depth	5.75 ft
Design Roadway Serviceability Elev.	729.22 ft
Q100 Headwater Elev.	729.04 ft
Backwater	2.19 ft
Outlet Velocity @ Q50	8.89 ft/sec
Natural Channel Velocity	4.55 ft/sec
Flowline Elevation @ Outlet	719.11 ft
Minimum Low Structure Elevation	726.11 ft
Skew	25°

PRECAST REINFORCED CONCRETE BOX CULVERT
14'-0" SPAN X 8'-0" RISE X 142'-0" LONG
51'-0" CLEAR ROADWAY WIDTH (W.B.L.)
39'-0" CLEAR ROADWAY WIDTH (E.B.L.); 25° SKEW LT.
S.R. 2 OVER NIESPODZIANY DITCH
ST. JOSEPH COUNTY

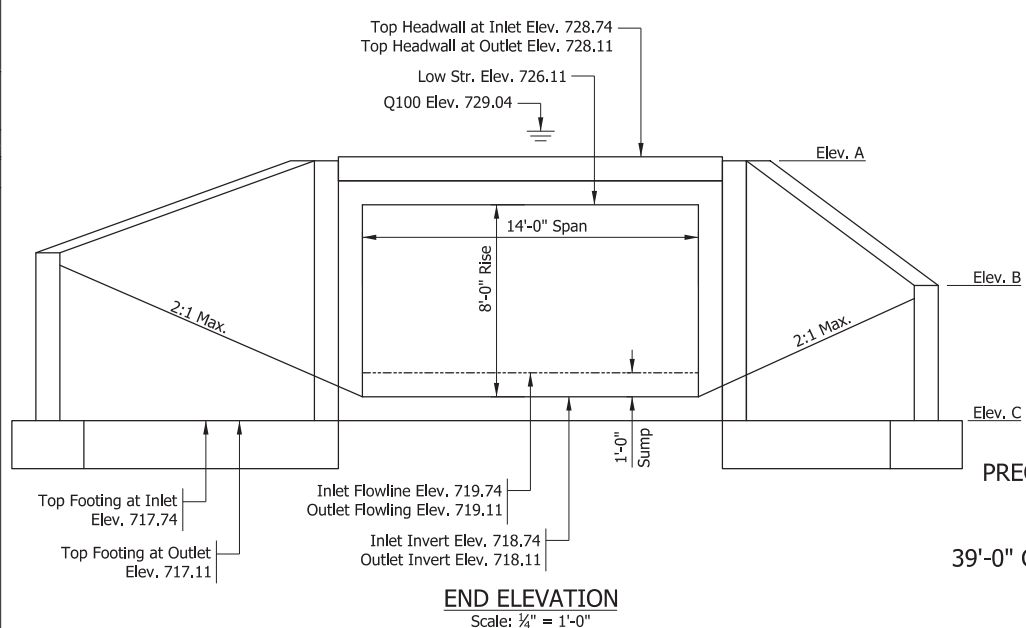


WINGWALL ELEVATION
Not to Scale

SECTION "C-C"
Not to Scale



SECTION "A-A"
Not to Scale



END ELEVATION
Scale: 3/4" = 1'-0"

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

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	CV 002-071-74.20
VERTICAL SCALE	DESIGNATION
AS NOTED	1900017
SURVEY BOOK	SHEETS
ELECTRONIC	10 of 16
CONTRACT	PROJECT
R-42444	1900017

