PROJECT	DESIGNATION
2001541	2001541
CONTRACT	
B-41467	

INDIANA DEPARTMENT OF TRANSPORTATION

ROAD PLANS

CULVERT ASSETS		
DES. NO.	CULVERT ASSET ID	WORK TYPE
2001541	CLV 067-055-82.48	SMALL STRUCTURE REPLACEMENT

ROUTE: PUMPKINVINE HILL ROAD FROM: RP 82+44 TO: RP 82+52

PROJECT NO. 2001541 P.E.

NO ADDITIONAL RIGHT OF WAY REQUIRED FOR THIS PROJECT ~~R/W~~

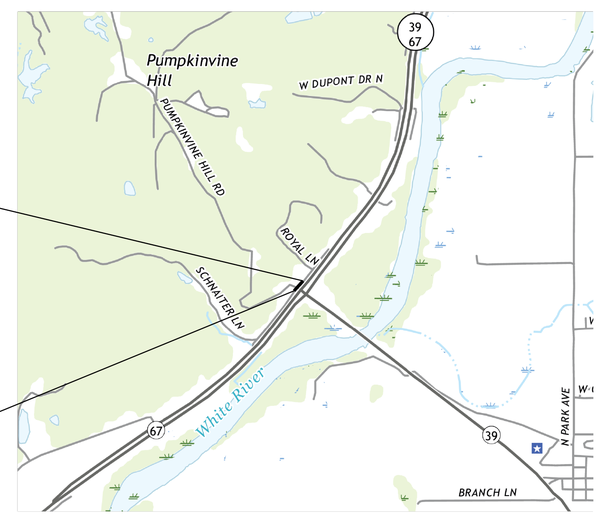
2001541 CONST.

KIN PROJECT INFORMATION	
DESIGNATION	PROJECT DESCRIPTION
1900067	SR 67 - SMALL STRUCTURE REPLACEMENT WITH BRIDGE (LEAD DES. NO.)
1900088	SR 67 - SMALL STRUCTURE REPLACEMENT WITH BRIDGE
1902163	SR 67 - SMALL STRUCTURES & DRAINS CONSTRUCTION
1801040	SR 67 - SMALL STRUCTURE PIPE LINING
1801041	SR 67 - SMALL STRUCTURE PIPE LINING
1801042	SR 67 - SMALL STRUCTURE REPLACEMENT

Small Structures & Drains Construction on Pumpkinvine Hill Road
At the South Intersection of SR 67 and SR 39
Section 32, T-12-N, R-1-E, Jefferson Township, Morgan County, Indiana

END PROJECT 2001541
205+56.60 "S-1"

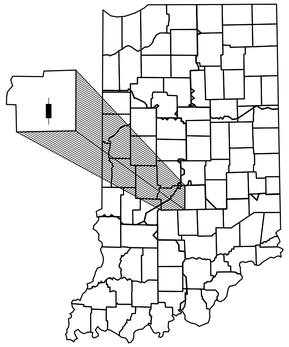
BEGIN PROJECT 2001541
201+00.00 "S-1"



SCALE: 1" = 1200'

TRAFFIC DATA - SR 67			
A.A.D.T.	(2023)	7,789	V.P.D.
A.A.D.T.	(2043)	8,277	V.P.D.
D.H.V	(2043)	9.91	%
DIRECTIONAL DISTRIBUTION		50.51	%
TRUCKS		15.23%	A.A.D.T.
		15.69%	D.H.V.

DESIGN DATA - PUMPKINVINE HILL ROAD	
DESIGN SPEED	30 M.P.H.
PROJECT DESIGN CRITERIA	PARTIAL 3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	LOCAL
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE



PROJECT LOCATION SHOWN BY
MORGAN COUNTY

LATITUDE: 39°26' 09" N LONGITUDE: 86° 27' 10" W

GROSS LENGTH: 0.09 MI.
NET LENGTH: 0.09 MI.
MAX. GRADE: 5.96 %

HYDROLOGIC UNIT CODES
051202011503

BURGESS & NIPLE
Engineers ■ Architects ■ Planners

251 N. ILLINOIS ST.
CAPITOL CENTER SUITE 920
INDIANAPOLIS, IN 46204
PHONE (317) 237-2760
FAX (317) 237-2755

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

JASON M. MATHIAS
REGISTERED
NO. PE10911235
STATE OF INDIANA
PROFESSIONAL ENGINEER

PLANS PREPARED BY: BURGESS & NIPLE, INC. (317) 237-2760 PHONE NUMBER

CERTIFIED BY: Jason Mathias 10/30/2023 DATE

RECOMMENDED FOR LETTING: Mark Bailey 04/02/2024 DATE
INDIANA DEPARTMENT OF TRANSPORTATION

DESIGNATION
2001541

SHEETS		
1	of	18

CONTRACT	PROJECT
B-41467	2001541

Plot: 10/30/2023 12:45:06 PM
File: P:\PR58957\Cadd\CDS\TI.dgn

UTILITIES

MORGAN COUNTY RURAL WATER
KYLE DILLON
1393 E. SHORE DRIVE
MARTINSVILLE, IN 46151
765-342-7370
kdillon@mcrw.org

SPARKLIGHT COMMUNICATIONS
GEORGE McCORMACK
500 1/2 CENTERCROSS
EDINBURGH, IN 46164
812-272-2348
George.mccormack@cableone.biz

SOUTH CENTRAL INDIANA REMC FIBER
JOBY JORDAN
300 MORTON AVENUE
MARTINSVILLE, IN 46151
765-352-4771
jobyj@sci-fiber.com

SOUTH CENTRAL INDIANA REMC ELECTRIC
TOMMY SCHOOLCRAFT
300 MORTON AVENUE
MARTINSVILLE, IN 46151
765-352-4782
toms@sciremc.com

811 Know what's below. Call before you dig.

INDIANA UNDERGROUND
1-800-382-5544 OR CALL 811
24 HOURS A DAY 7 DAYS A WEEK

GENERAL NOTES

**	THE PLANS SHOW SOME OF THE UTILITIES LOCATED WITHIN THE LIMITS OF THE CONTRACT ACCORDING TO INFORMATION OBTAINED FROM THE VARIOUS UTILITY COMPANIES. THE ACCURACY OF THE PLANS IN THIS RESPECT IS NOT GUARANTEED BY BURGESS & NIPLE, INC.
**	ALL EARTH SHOULDERS AND CUT AND FILL SLOPES SHALL BE PLAIN OR MULCH SEEDED EXCEPT WHERE OTHERWISE SPECIFIED.

** REPRESENTS GENERAL NOTES REQUIRED

INDEX

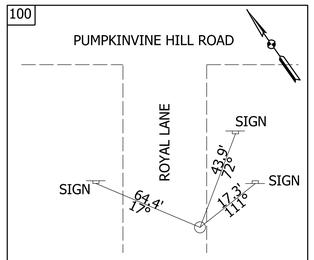
SHEET NO.	DRAWINGS INDEX
1	TITLE
2	INDEX AND GENERAL NOTES
3	TYPICAL SECTIONS
4-5	MAINTENANCE OF TRAFFIC
6	PLAN AND PROFILE SHEET
7	APPROACH DETAIL
8	CULVERT DETAILS
9	EROSION CONTROL DETAILS
10	SIGNAL DETAIL & PAVEMENT MARKING PLAN
11	SIGNAL & PAVEMENT MARKING TABLE
12	APPROACH TABLE
13	STRUCTURE DATA TABLE & PIPE MATERIAL TABLE
14-18	CROSS SECTIONS

REVISIONS

SHEET NO.	DATE	REVISED

CONTROL POINTS

100



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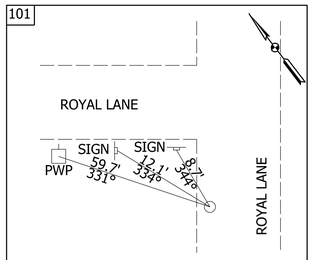
E: 3,130,655.1540
STA. 201+09.49 "S-1", 9.57' Rt.
MAG NAIL IN PAVEMENT

101



N: 1,526,162.8800
E: 3,130,959.3948
STA. 206+47.89 "S-1", 13.73' Lt.
MAG NAIL IN PAVEMENT

JASON M. MATHIAS REGISTERED NO. PE10911235 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — Jason Mathias — DESIGN ENGINEER — 10/30/2023 DATE

DESIGNED: MJS DRAWN: MJS
CHECKED: JMM CHECKED: JMM

INDIANA DEPARTMENT OF TRANSPORTATION

INDEX SHEET

SCALE	BRIDGE FILE
N/A	N/A
	DESIGNATION
	2001541
	SHEETS
	2 of 18
CONTRACT	PROJECT
B-41467	2001541

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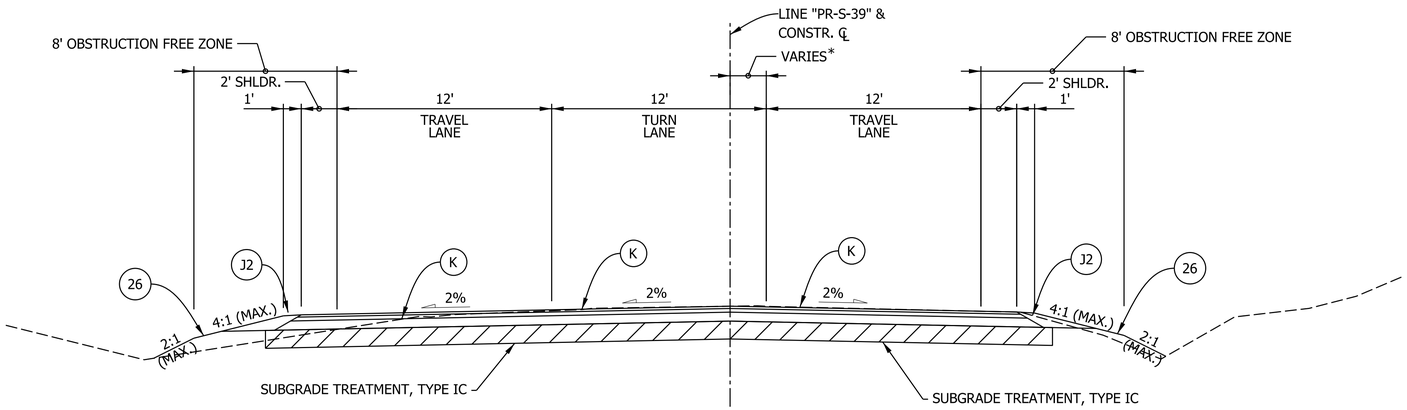
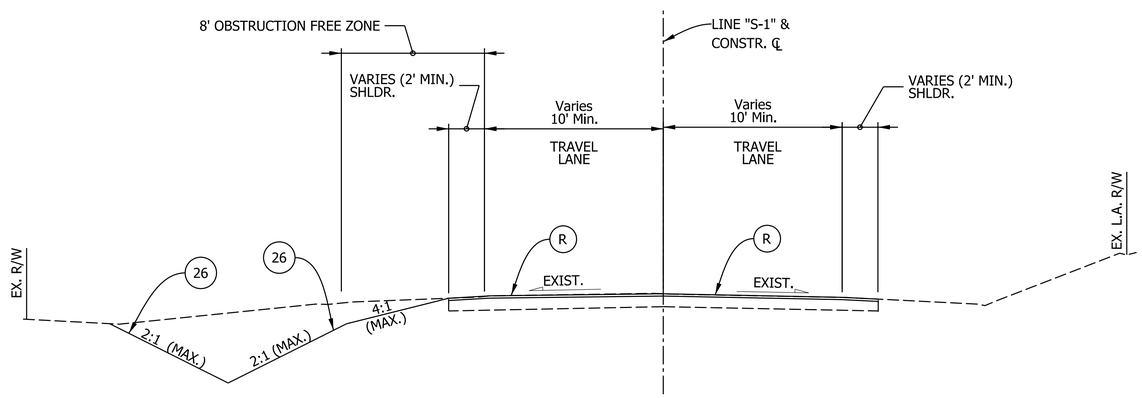


PUMPKINVINE HILL ROAD

STA. 48+14.51 "PR-S-39" TO STA. 48+50.43 "PR-S-39"

*VARIES FROM 0.06' LT. AT STA. 48+14.51 TO 0.91' RT. AT STA. 48+50.43



ROYAL LANE

STA. 201+00.00 "S-1" TO STA. 205+56.60 "S-1"

LEGEND

(K) FULL DEPTH HMA
165 LBS/SYD QC/QA-HMA, 3, 64, SURFACE, 9.5 mm ON
275 LBS/SYD QC/QA-HMA, 3, 64, INTERMEDIATE, 19.0 mm ON
660 LBS/SYD QC/QA-HMA, 3, 64, BASE, 25.0 mm ON
SUBGRADE TREATMENT TYPE IC ON
GEOTEXTILE FOR PAVEMENT TYPE 2B

(R) 165 LBS/SYD QC/QA-HMA, 3, 64, SURFACE, 9.5 mm ON
1.5" ASPHALT MILLING

(J2) COMPACTED AGGREGATE, NO. 53

(26) SODDING (NURSERY)

JASON M. MATHIAS
REGISTERED
NO. PE10911235
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 10/30/2023 DATE

DESIGNED: MJS | DRAWN: MJS
CHECKED: JMM | CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE	BRIDGE FILE
1' = 1/4"	N/A
	DESIGNATION
	2001541
	SHEETS
	3 of 18
CONTRACT	PROJECT
B-41467	2001541

Plot: 10/30/2023 6:55 PM SAM_PMS

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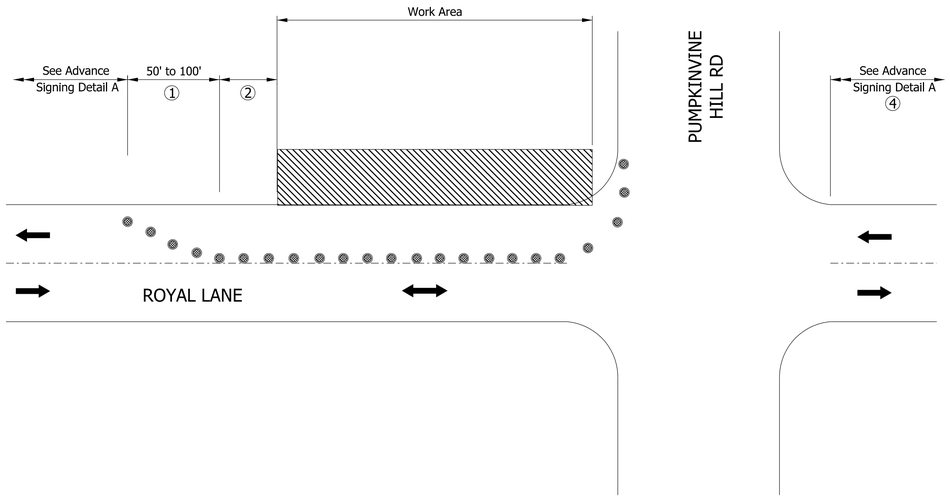
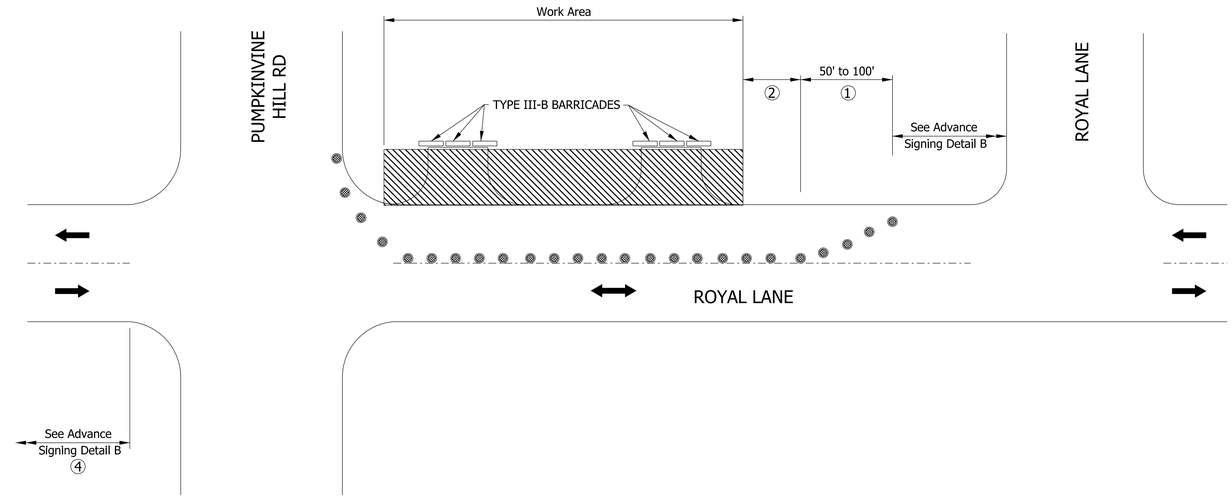
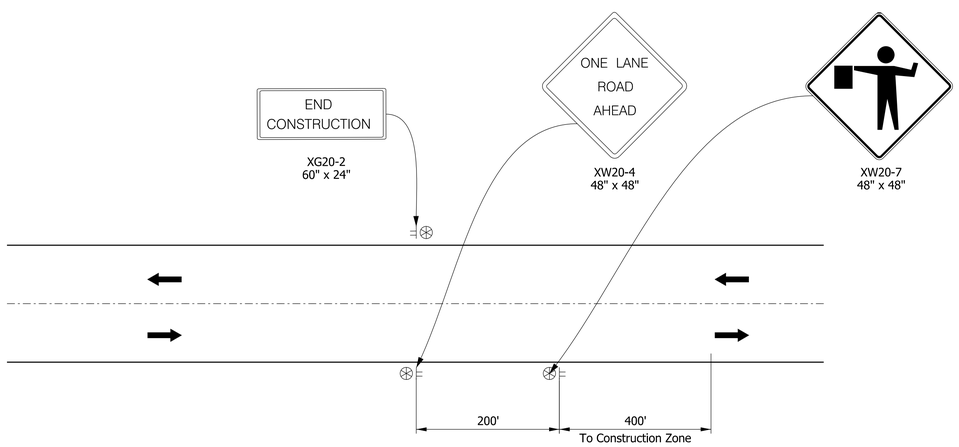


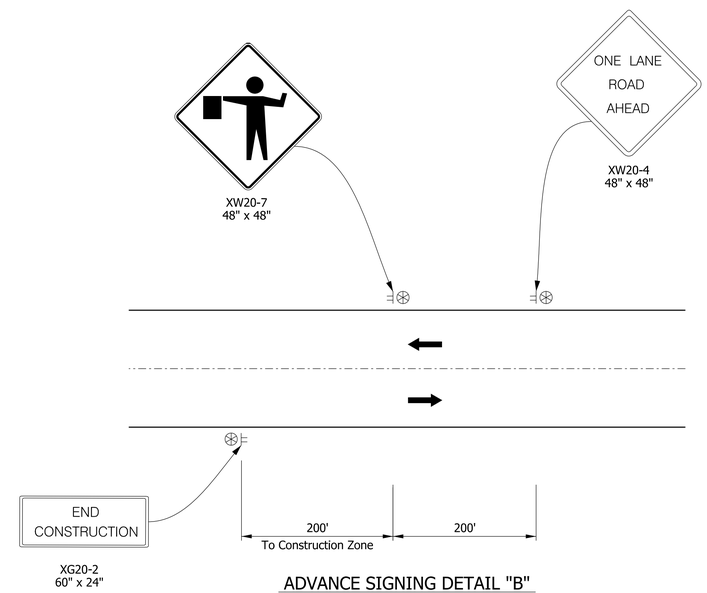
TYPICAL FLAGGER MOT PLAN PHASE 1



TYPICAL FLAGGER MOT PLAN PHASE 3



ADVANCE SIGNING DETAIL "A"



ADVANCE SIGNING DETAIL "B"

NOTES:

1. SPACING OF DRUMS AT THIS LOCATION SHALL BE 10 FT FOR A 50 FT TAPER OR 20 FT FOR A 100 FT TAPER.
2. LONGITUDINAL BUFFER LENGTH.
3. TRAFFIC ON ROYAL LANE SHALL OPERATE WITH A FLAGGER & ONE LANE DURING CONSTRUCTION HOURS. DRUMS ARE TO BE PLACED AT THE EDGE OF PAVEMENT TO ALLOW BOTH LANES TO BE OPEN AFTER CONSTRUCTION HOURS.
4. REVERSE DETAIL AS NEEDED.

JASON M. MATHIAS
REGISTERED
NO. PE10911235
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — Jason Mathias — 10/30/2023
DESIGN ENGINEER — DATE

DESIGNED: MJS | DRAWN: MJS
CHECKED: JMM | CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 1 & 3

SCALE	BRIDGE FILE
N.T.S.	N/A
	DESIGNATION
	2001541
	SHEETS
	4 of 18
CONTRACT	PROJECT
B-41467	2001541

Plot: 10/30/2023 7:34 PM $AM_PMs
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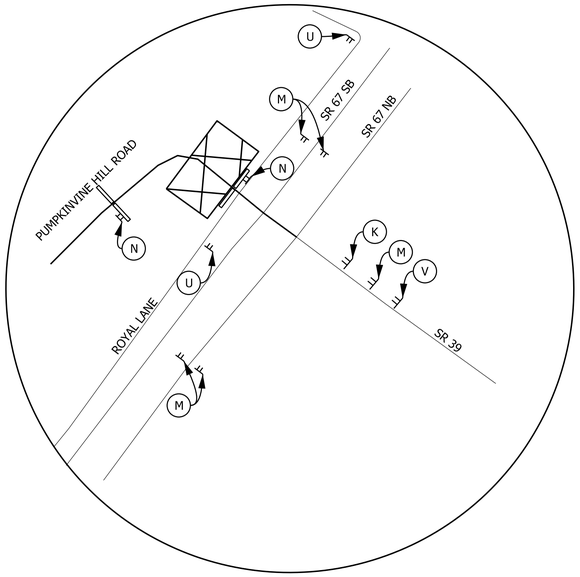
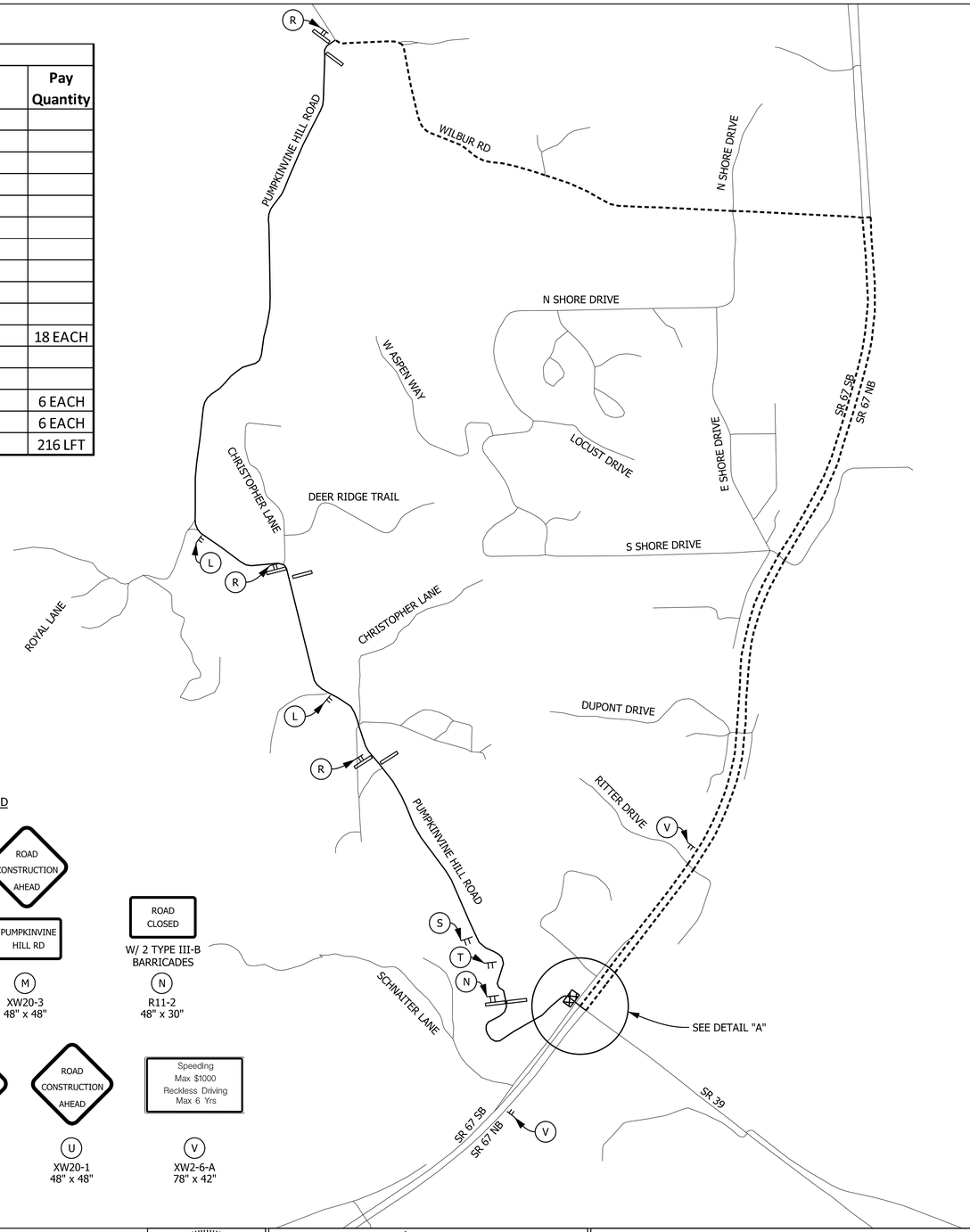
Model: _MODEL_

MOT QUANTITIES SUMMARY TABLE					
Description	Sign Type	Phase 1	Phase 2	Phase 3	Pay Quantity
ROAD CONSTRUCTION AHEAD (XW20-1)	A	0	7	0	
ROAD CLOSED AHEAD (XW20-3)	A	0	3	0	
ROAD CLOSED 500 FT (XW20-3)	A	0	1	0	
ROAD CLOSED 1000 FT (XW20-3)	A	0	1	0	
ONE LANE ROAD AHEAD (XW20-4)	A	2	0	2	
FLAGGER (XW20-7)	A	2	0	2	
ROAD CLOSED - LOCAL TRAFFIC ONLY (R11-3a)	A	0	3	0	
SPEEDING PENALTY (XW2-6-A)	A	0	3	0	
END CONSTRUCTION (XG20-2)	A	2	0	2	
TOTAL		6	18	6	
	TOTAL CONSTRUCTION SIGN, A				18 EACH
PUMPKINVINE HILL RD	D	0	6	0	
TOTAL		0	6	0	
	TOTAL CONSTRUCTION SIGN, D				6 EACH
ROAD CLOSURE SIGN ASSEMBLY		0	6	0	6 EACH
BARRICADE, III-B		0	216	112	216 LFT



DETAIL "A"



LEGEND

ROAD CLOSED AHEAD / PUMPKINVINE HILL RD — K — XW20-3 48" x 48"

ROAD CLOSED AHEAD — L — XW20-3 48" x 48"

ROAD CONSTRUCTION AHEAD / PUMPKINVINE HILL RD — M — XW20-3 48" x 48"

ROAD CLOSED W/ 2 TYPE III-B BARRICADES — N — R11-2 48" x 30"

ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY W/ 1 TYPE III-B BARRICADES — R — R11-3a 60" x 30"

ROAD CLOSED 1000 FT — S — XW20-3 48" x 48"

ROAD CLOSED 500 FT — T — XW20-3 48" x 48"

ROAD CONSTRUCTION AHEAD — U — XW20-1 48" x 48"

Speeding Max $1000 Reckless Driving Max 6 Yrs — V — XW2-6-A 78" x 42"

LEGEND

- CONSTRUCTION SIGN
- TYPE III-B BARRICADE
- CONSTRUCTION AREA

JASON M. MATHIAS REGISTERED NO. PE10911235 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — Jason Mathias — 10/30/2023
DESIGN ENGINEER — DATE

DESIGNED: MJS — DRAWN: MJS
CHECKED: JMM — CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
PHASE 2

SCALE	BRIDGE FILE
N.T.S.	N/A
	DESIGNATION
	2001541
	SHEETS
	5 of 18
CONTRACT	PROJECT
B-41467	2001541

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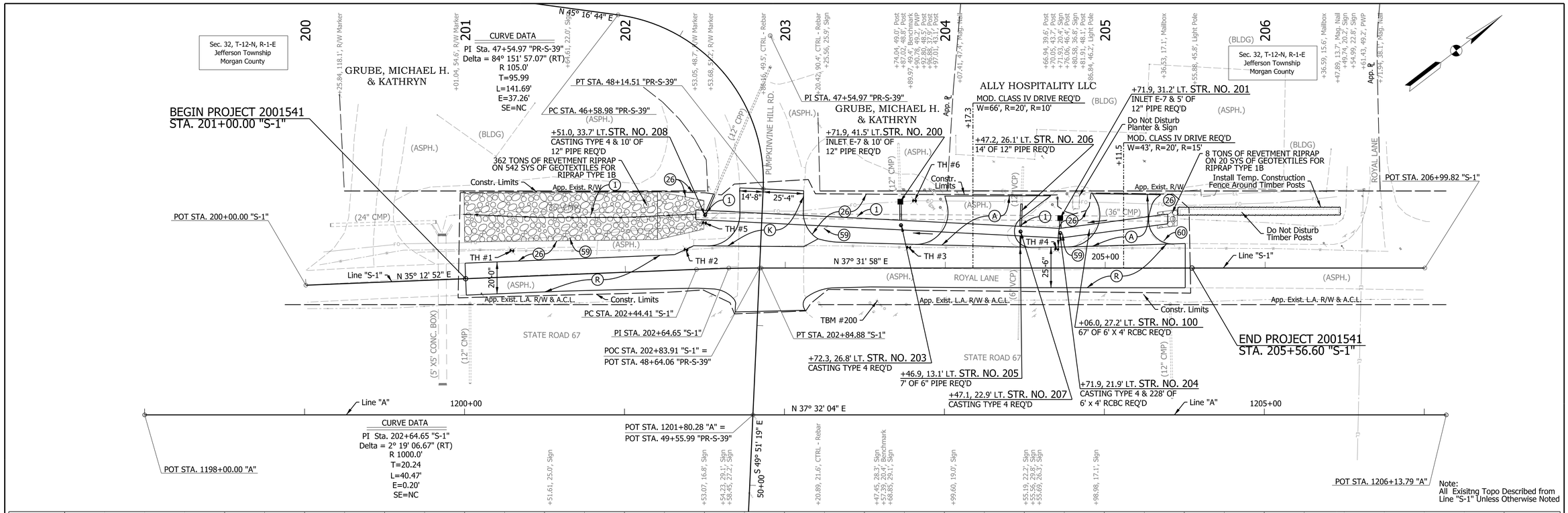

LEGEND

(K) FULL DEPTH HMA
165 LBS/SYD QC/QA-HMA, 3, 64, SURFACE, 9.5 mm ON
275 LBS/SYD QC/QA-HMA, 3, 64, INTERMEDIATE, 19.0 mm ON
660 LBS/SYD QC/QA-HMA, 3, 64, BASE, 25.0 mm ON
SUBGRADE TREATMENT TYPE IC ON
GEOTEXTILE FOR PAVEMENT TYPE 2B

(R) 165 LBS/SYD QC/QA-HMA, 3, 64, SURFACE, 9.5 mm ON
1.5" ASPHALT MILLING

(A) HMA FOR APPROACHES, TYPE B,
165 LBS/SYD HMA SURFACE, TYPE B, ON
275 LBS/SYD HMA INTERMEDIATE, TYPE B, ON
660 LBS/SYD HMA BASE, TYPE B, ON
SUBGRADE TREATMENT TYPE II
GEOGRID, TYPE 1B

(1) REMOVE

(26) SODDING (NURSERY)

(59) REMOVE EXISTING SHEET SIGN & RELOCATE ON NEW SUPPORTS

(60) MAILBOX ASSEMBLY, SINGLE

JASON M. MATHIAS
REGISTERED
NO. PE10911235
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 10/30/2023 DATE

DESIGNED: MJS | DRAWN: MJS
CHECKED: JMM | CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
STA. 1198+00.00 "A" TO STA. 1206+13.79 "A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	N/A
VERTICAL SCALE	DESIGNATION
1" = 5'	2001541
SURVEY BOOK	SHEET NO.
	6 of 18
CONTRACT	PROJECT
B-41467	2001541

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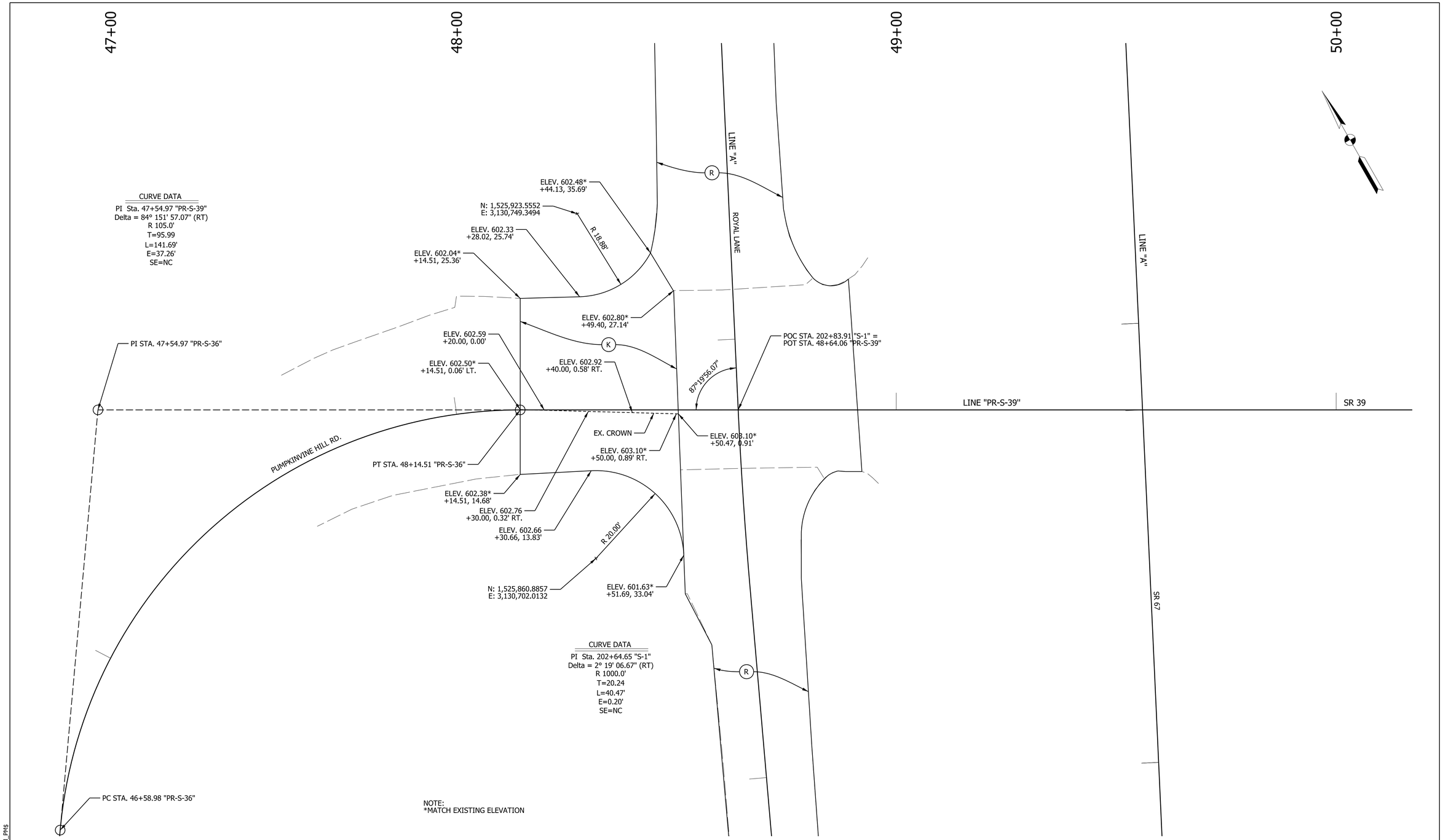

LEGEND

(K) FULL DEPTH HMA
165 LBS/SYD QC/QA-HMA, 3, 64, SURFACE, 9.5 mm ON
275 LBS/SYD QC/QA-HMA, 3, 64, INTERMEDIATE, 19.0 mm ON
660 LBS/SYD QC/QA-HMA, 3, 64, BASE, 25.0 mm ON
SUBGRADE TREATMENT TYPE IC ON
GEOTEXTILE FOR PAVEMENT TYPE 2B

(R) 165 LBS/SYD QC/QA-HMA, 3, 64, SURFACE, 9.5 mm ON
1.5" ASPHALT MILLING

JASON M. MATHIAS
REGISTERED
NO. PE10911235
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 10/30/2023 DATE

DESIGNED: MJS | DRAWN: MJS
CHECKED: JMM | CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

APPROACH DETAIL
PUMPKINVINE HILL RD.

SCALE	BRIDGE FILE
1"= 10'	N/A
	DESIGNATION
	2001541
	SHEETS
	7 of 18
CONTRACT	PROJECT
B-41467	2001541

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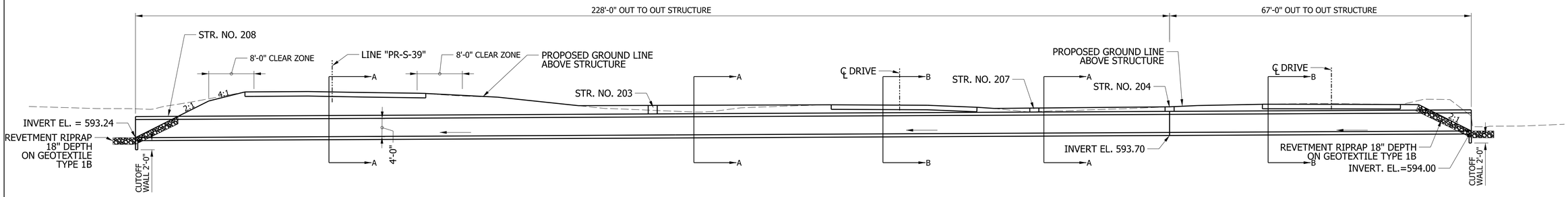
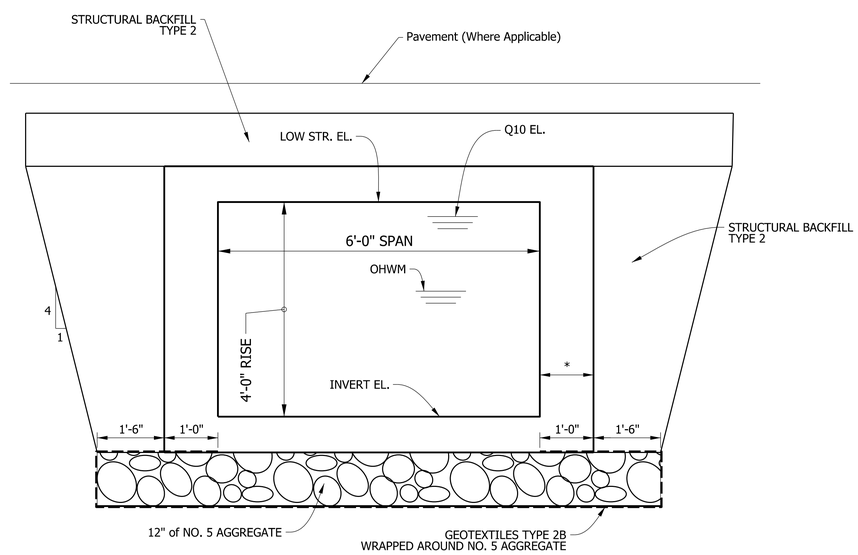


ELEVATION

SCALE: 1/16" = 1'-0"

SOIL PARAMETERS	
Factored Bearing Resistance, q_r (psf)	2160
Resistance Factor, ϕ	0.45
Nominal Bearing Resistance, Q_n (psf)	4800
Friction Angle between wingwall and soil backfill (Type II Backfill), δ	20°
Friction Factor between the footing and foundation soil, f	N/A
Cohesion of the foundation soil, C (psf)	N/A
Adhesion of the foundation soil, Ca (psf)	N/A
Angle of Internal Friction of the foundation soil, ϕ	29°

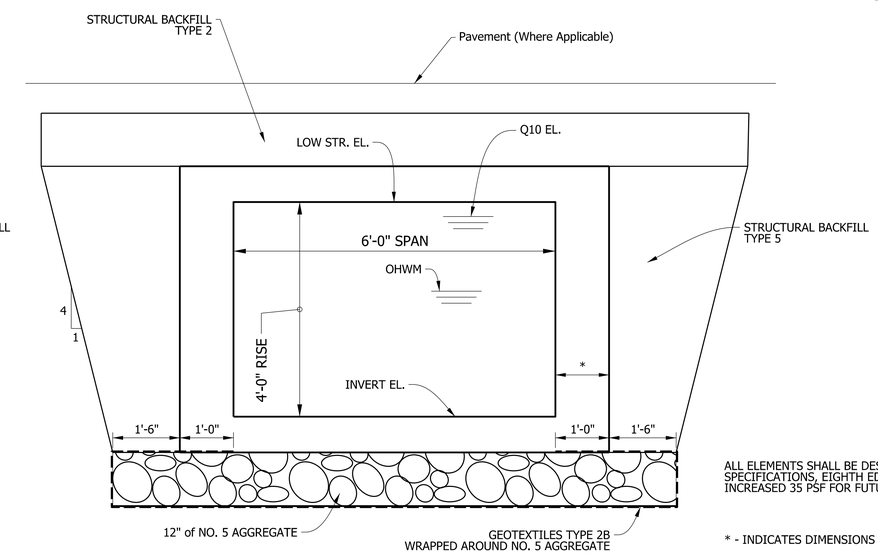


SECTION "A-A"

SCALE: 3/4" = 1'-0"

STA. 202+45.40 TO STA. 203+97.55 "S-1"

STA. 204+43.61 TO STA. 204+92.88 "S-1"



SECTION "B-B"

SCALE: 3/4" = 1'-0"

STA. 203+97.55 TO STA. 204+43.61 "S-1"

STA. 204+92.88 TO STA. 205+39.01 "S-1"

HYDRAULIC DATA TABLE

ITEM	UNIT	PROPOSED STRUCTURE
DRAINAGE AREA	Ac	84
Q10 BACKWATER	ft	3.12
Q10 VELOCITY	ft/sec	5.33
WATERWAY OPENING BELOW Q100	Sft	18.00
MIN. LOW STR. ELEV.	ft	597.59
Q10 HEADWATER ELEV.	ft	597.79
Q10 DISCHARGE	cfs	96
ROADWAY OVERFLOW	Sft	0

DESIGN DATA

ALL ELEMENTS SHALL BE DESIGNED FOR HL-93 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, EIGHTH EDITION (2017), AND ALL SUBSEQUENT INTERIM SPECIFICATIONS. DEAD LOAD INCREASED 35 PSF FOR FUTURE WEARING SURFACE.

NOTES

* - INDICATES DIMENSIONS TO BE DETERMINED BY THE PRECAST MANUFACTURER.

CONTRACTOR SHALL VERIFY THE EXISTING FLOWLINE ELEVATION TO SET THE APPROPRIATE SUMP DEPTH.

JASON M. MATHIAS REGISTERED NO. PE10911235 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 10/30/2023 DATE

DESIGNED: MJS DRAWN: MJS

CHECKED: JMM CHECKED: JMM

INDIANA DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS 6'-0" SPAN x 4'-0" RISE

SCALE	BRIDGE FILE
AS NOTED	N/A
	DESIGNATION
	2001541
	SHEETS
	8 of 18
CONTRACT	PROJECT
B-41467	2001541

Plot: 10/30/2023 7:45 PM $AM_PMS

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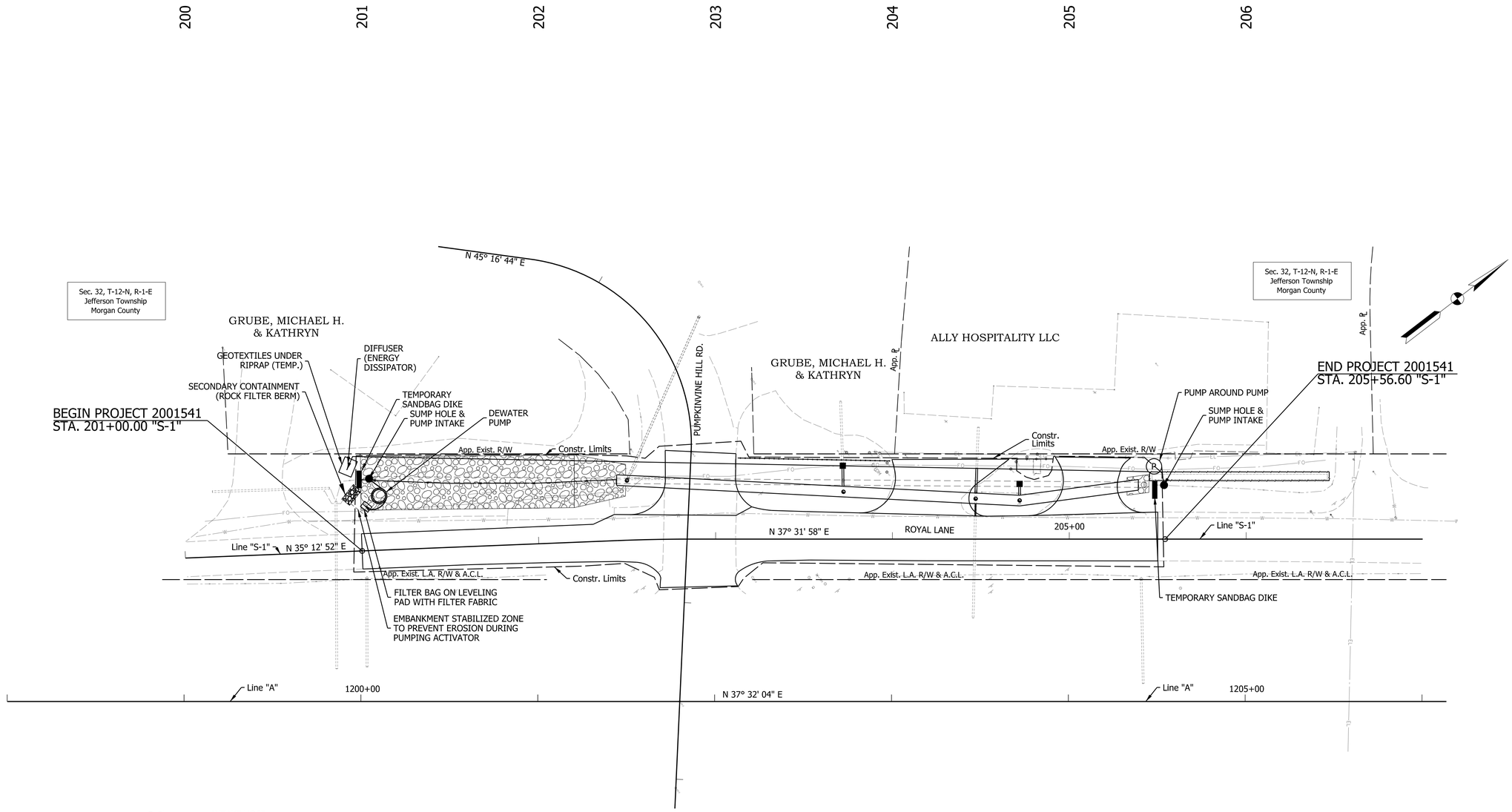

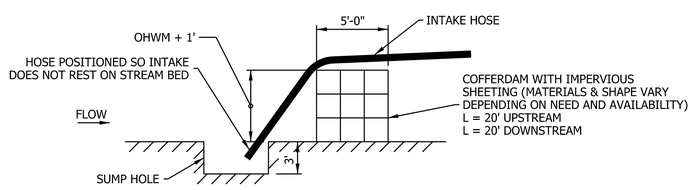

COFFERDAM / SUMP HOLE
WORK AREA

Erosion Control Summary Table

Stations	Lt/Rt	Temporary Filter Sock	Erosion Control Blanket	Pump Around	Temporary Check Dam
Sta. 201+00.00 "S-1" to Sta. 205+56.60 "S-1"	Lt			1 EACH	
Sta. 203+12.50 "S-1" to Sta. 203+99.00 "S-1"	Lt	87 LFT			
Sta. 204+67.50 "S-1" to Sta. 204+91.00 "S-1"	Lt	24 LFT			
TOTAL:		111 LFT	SYS	1 EACH	TON

LEGEND

- TEMPORARY SANDBAG DIKE
- (P) PUMP AROUND PUMP
- DEWATER PUMP
- FILTER SOCK

JASON M. MATHIAS
REGISTERED
NO.
PE10911235
STATE OF
INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Jason Mathias — DESIGN ENGINEER — DATE 10/30/2023

DESIGNED: MJS | DRAWN: MJS
CHECKED: JMM | CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL DETAIL

SCALE	BRIDGE FILE
1" = 30'	N/A
	DESIGNATION
	2001541
	SHEETS
	9 of 18
CONTRACT	PROJECT
B-41467	2001541

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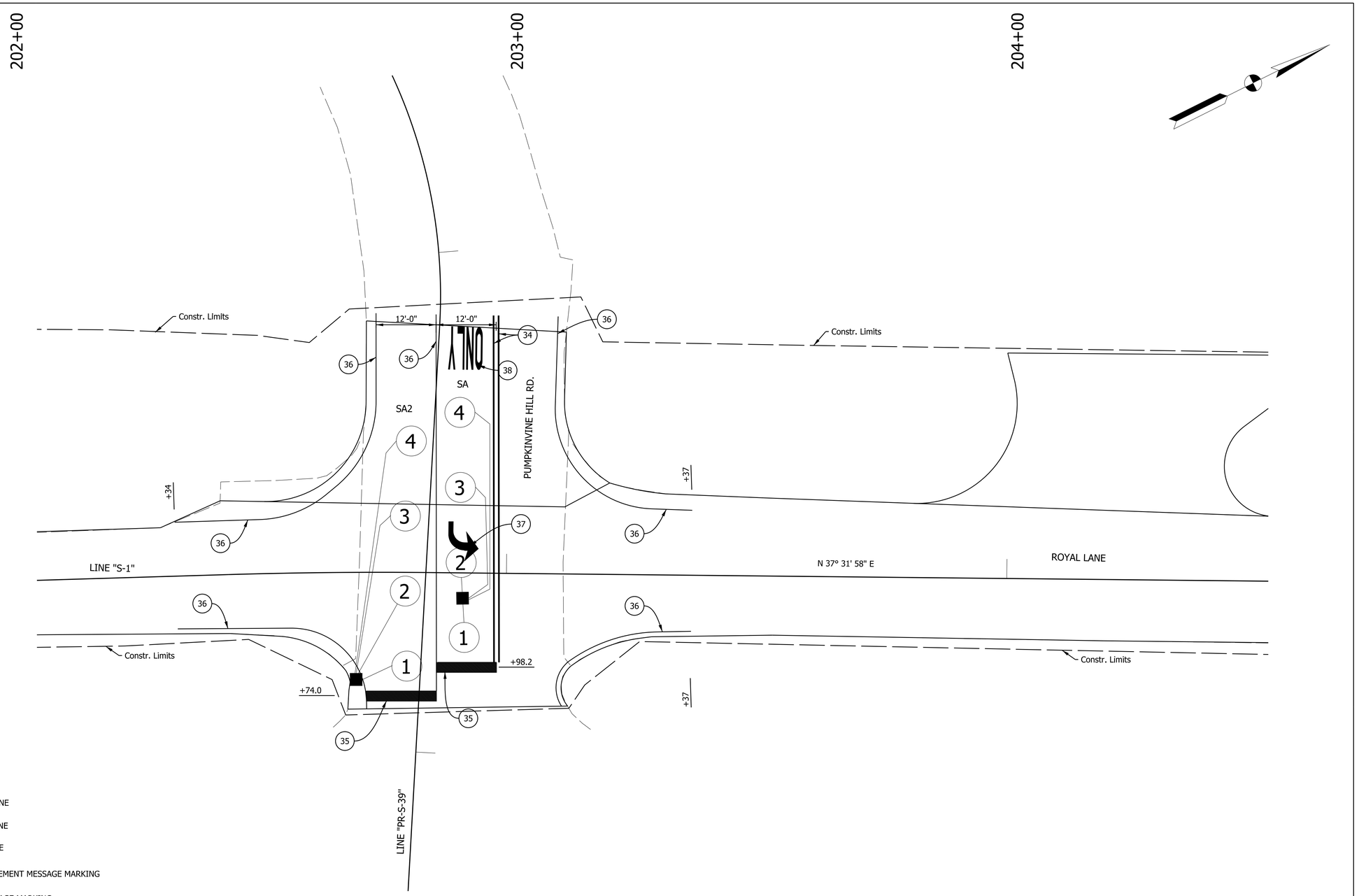

LEGEND

- PROPOSED TRAFFIC SIGNAL LOOP
- PROPOSED DETECTOR HOUSING
- (34) 6 IN. SOLID YELLOW MULTI-COMPONENT LINE
- (35) 24 IN. SOLID WHITE MULTI-COMPONENT LINE
- (36) 6 IN. SOLID WHITE MULTI-COMPONENT LINE
- (37) LANE INDICATION MULTI-COMPONENT PAVEMENT MESSAGE MARKING
- (38) ONLY MULTI-COMPONENT PAVEMENT MESSAGE MARKING

JASON M. MATHIAS REGISTERED NO. PE10911235 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — Jason Mathias — 10/30/2023
DESIGN ENGINEER — DATE

DESIGNED: MJS — DRAWN: MJS
CHECKED: JMM — CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

SIGNAL DETAIL AND
PAVEMENT MARKINGS

SCALE	BRIDGE FILE
1"= 10'	N/A
	DESIGNATION
	2001541
	SHEETS
	10 of 18
CONTRACT	PROJECT
B-41467	2001541

Plot: 10/30/2023 8:12 PM AM_PM
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Model: _MODEL_

Transverse Markings & Pavement Message Markings										
Start Station	End Station	Transverse Marking, Multi-Component,					PMM, Multi-Component,			Remarks
		Stop Line, White, 24 in	Crosswalk Line, White, 6 in	Solid, Cross-hatch Line, Yellow, 12 in	Solid, Cross-hatch Line, Yellow, 24 in	Solid, Cross-hatch Line, White, 12 in	Lane Indication Arrow	Word (ONLY)	Word (RXR)	
		(lft)	(lft)	(lft)	(lft)	(lft)	(ea)	(ea)	(ea)	
48+82 "PR-S-39"	48+84 "PR-S-39"	12								
48+88 "PR-S-39"	48+90 "PR-S-39"	14								
48+54 "PR-S-39"	48+61 "PR-S-39"						1			
48+15 "PR-S-39"	48+23 "PR-S-39"							1		
	Totals	26					1	1		

TRAFFIC SIGNAL EQUIPMENT SUMMARY TABLE

Approximate Station/ Location	# of 4-Loop Installations	# of Single Loop Installations *	Signal Cable, Roadway Loop, Copper 1C/14 Ga	Saw Cut for Roadway Loop and Sealant	Signal Detector Housing	Detector Housing, Remove	Signal Cable, Detector Lead-in, Copper 2C/16 Ga	Conduit, Steel, Galvanized, 2 In	Remarks
			lft	lft	ea	ea	lft	lft	
202+69.88 "S-1"					1	1			
202+91.29 "S-1"					1	1			
202+80.21 "S-1"	1		460	160					
202+91.70 "S-1"	1		460	160					

PAVEMENT MARKINGS SUMMARY TABLE

Lines & SRPMs																	
Start Station	End Station	Edge Line	Lane Lines	Centerline	Lane Lines	Edge Line	Line, Multi-Component,							Grooving for Pavement Markings	Temp. Pavement Markings, 4 in	SRPMs, Remove	SRPMs
							Solid, Yellow, 6 in	Broken, Yellow, 6 in	Solid, White, 6 in	Broken, White, 6 in	Dotted, White, 8 in	Solid, Yellow, 8 in	Solid, White, 8 in				
							(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(lft)	(ea)	(ea)
48+13 "PR-S-39"	48+57 "PR-S-39"	No				Yes			71					71			
48+12 "PR-S-39"	48+88 "PR-S-39"	No		No Passing Both	LT Turn	No	140		76					216			
48+12 "PR-S-39"	48+49 "PR-S-39"	Yes				No			58					58			
48+78 "PR-S-39"	48+91 "PR-S-39"	No				Yes			48					48			
48+73 "PR-S-39"	48+89 "PR-S-39"	Yes				No			36					36			
						Totals	140		289					429			

JASON M. MATHIAS
REGISTERED
NO. PE10911235
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 10/30/2023

DESIGNED: MJS DRAWN: MJS
CHECKED: JMM CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

SIGNAL & PAVEMENT MARKING TABLE

SCALE	BRIDGE FILE
N/A	N/A
	DESIGNATION
	2001541
	SHEETS
	11 of 18
CONTRACT	PROJECT
B-41467	2001541

Plot: 10/30/2023 8:13 PM $AM_PMS

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Model: _MODEL_

PAVEMENT QUANTITIES AND APPROACH TABLE

LOCATION	DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH	LENGTH	RADII	DISTANCE BEYOND R/W LINE	SURFACE BEYOND R/W LINE: COMPACTED AGGREGATE BASE	SURFACE BEYOND R/W LINE: HMA	SURFACE BEYOND R/W LINE: CONCRETE	GRADE 1	GRADE 2	GRADE 3	GRADE 4	EXCAVATION: CUT	EXCAVATION: FILL	QC/QA-HMA: QC/QA-HMA 3, 64, SURFACE 9.5 mm	QC/QA-HMA: QC/QA-HMA 3, 64, INTERMEDIATE. 19.0 mm	QC/QA-HMA: QC/QA-HMA 3, 64, BASE 25.0 mm	HMA FOR APPROACHES, TYPE B: HMA SURFACE, TYPE B	HMA FOR APPROACHES, TYPE B: HMA INTERMEDIATE, TYPE B	HMA FOR APPROACHES, TYPE B: HMA BASE, TYPE B	HMA FOR APPROACHES, TYPE B: 2, 64, INTERMD. 19.0 mm	HMA FOR APPROACHES, TYPE B: 3, 64, SURFACE. 12.5 mm	HMA FOR RESURFACING, TYPE C	HMA MATERIALS: HMA MATERIAL FOR SIDEWALK	HMA MATERIALS: HMA MATERIAL FOR TACK COAT	COMPACTED AGGREGATE No. 53, BASE: DEPTH 4"	COMPACTED AGGREGATE No. 53, BASE: DEPTH 6"	COMPACTED AGGREGATE No. 53: DEPTH VAR.	COMPACTED AGGREGATE No. 53: DEPTH	GEOGRID, TYPE IB	GEOTEXTILE FOR PAVEMENT TYPE 2B	6" PCCP FOR APPROACHES	9" PCCP FOR APPROACHES	MILLING, ASPHALT, 1.5"	JOINT ADHESIVE, SURFACE	JOINT ADHESIVE, INTERMEDIATE	LIQUID ASPHALT SEALANT	SUBGRADE TREATMENT, TYPE IC	SUBGRADE TREATMENT, TYPE II	REMARKS
															LBS. PER SYD																									
		FT	FT	FT	FT	SYS	SYS	SYS	%	%	%	%	CYS	CYS	TON	TON	TON	TON	TON	TON	TON	TON	TON	TON	SYS	TON	TON	TON	SYS	SYS	SYS	SYS	SYS	SYS	LFT	LFT	LFT	SYS	SYS	
MAINLINE																																								
Sta. 48+12.40 "PR-S-39" to Sta. 48+50.43 "PR-S-39"	Mainline														15	24	59								532						213				36	36	36	192		Pumpkinvine Hill Road
Sta. 201+00.00 "S-1" to Sta. 205+50.00 "S-1"	Mainline														109										1312									1312	450		450			Royal Lane
Sta. 204+17.30 "S-1", Lt.	Mod. Class IV Drive	66.0	31.2	20, 10					-4.0%	-7.6%	1.8%							15	25	60										180								180	
Sta. 205+11.50 "S-1", Lt.	Mod. Class IV Drive	43.0	32.0	20, 15					-4.0%	-2.4%	0.6%							11	18	43										129								129	
TOTAL															124	24	59	26	43	103	0	0	0	0	1844	0	0	0	0	309	213	0	0	1312	486	36	486	192	309	
															TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	SYS	TONS	SYS	TONS	TONS	TONS	SYS	SYS	SYS	SYS	SYS	SYS	LFT	LFT	LFT	SYS	SYS	

JASON M. MATHIAS
REGISTERED
NO. PE10911235
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 10/30/2023

DESIGNED: MJS DRAWN: MJS
CHECKED: JMM CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

APPROACH TABLE

SCALE	BRIDGE FILE
N/A	N/A
	DESIGNATION
	2001541
	SHEETS
	12 of 18
CONTRACT	PROJECT
B-41467	2001541

Plot: 10/30/2023 9:11 PM $AM_PMS

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Model: _MODEL_

STRUCTURE DATA

STRUCTURE NO.	LOCATION STATION	LOCATION LEFT	LOCATION CROSS	LOCATION RIGHT	STRUCTURE TYPE	SIZE IN.	PIPE TYPE	LENGTH FT.	SKEW	FLOW LINE COVER FT.	FLOW LINE UP STREAM ELEV.	FLOW LINE DOWN STREAM ELEV.	SERVICE LIFE YR.	SITE DESIGNATION	pH	BACKFILL METHOD	STRUCTURE BACKFILL, TYPE 2 CYS	STRUCTURE BACKFILL, TYPE 5 CYS	COMPACTED AGGREGATE NO. 5 CYS	REVETMENT RIPRAP TONS	CLASS I RIPRAP TONS	GEOTEXTILE FOR RIPRAP, TYPE 1B SYS	GEOTEXTILE FOR RIPRAP TYPE 2B SYS	PIPE, REMOVE LFT	GRATED BOX END SECTION TYPE	GRATED BOX END SECTION SLOPE	GRATED BOX END SECTION EA.	SAFETY METAL END SECTION TYPE	SAFETY METAL END SECTION SLOPE	SAFETY METAL END SECTION EA.	CONNECT TO STR. NO.	REMARKS
100	205+06.00 'S-1'	X			CULVERT	72 x 48		67			594.00	593.70	50	A	7.0		82	39	25	8		20	149	436							204	
200	203+71.91 'S-1'	X			INLET E-7	12	2	10		1.0	597.20	594.77	50	A	7.0		3														203	
201	204+71.90 'S-1'	X			INLET E-7	12	2	5		1.1	597.70	595.00	50	A	7.0		2														204	
203	203+71.90 'S-1'	X			CASTING TYPE 4								50	A	7.0		280														OUT	
204	204+71.90 'S-1'	X			CULVERT	72 x 48		228			593.70	593.24	50	A	7.0		152	54	84	362		542	507								OUT	INSTALL CASTING TYPE 4
205	204+46.87 'S-1'	X			UNDERDRAIN OUTLET	6	4	7		2.0	594.59	594.52	50	A	7.0		2							13							OUT	CONTRACTOR TO FIELD VERIFY
206	204+47.15 'S-1'	X			PIPE	12	2	14		2.0	595.58	595.44	50	A	7.0		5							14							OUT	CONTRACTOR TO FIELD VERIFY
207	204+47.08 'S-1'	X			CASTING TYPE 4								50	A	7.0																OUT	
208	202+50.98 'S-1'	X			CASTING TYPE 4	12	2	10		2.0	595.93	595.00					7							13							OUT	CONTRACTOR TO FIELD VERIFY
																TOTAL:	533	93	109	370		562	656	476								

PIPE MATERIAL

	STRUCTURE NUMBER		200, 201	206, 208														
	PIPE TYPE / SHAPE (CIR or DEF)		CIR	CIR														
INT. DES.	SMOOTH PIPE SIZE		12	12														
	CORRUGATED PIPE SIZE																	
	SEMI-SMOOTH PIPE SIZE																	
CONC.	RCP/RCHEP (S)	CLASS	II	II														
		$D_{0.01}$ RATING	1000	1000														
	NON-REINFORCED CONCRETE PIPE, CLASS 3 (S)			X														
PLASTIC PIPE	CORRUGATED PE PIPE, TYPE S (S)*			X														
	PROFILE WALL (RIBBED) PE PIPE (S)*																	
	PROFILE WALL (CLOSED) PE PIPE (S)*																	
	SMOOTH WALL PE PIPE (S)* / MAXIMUM DR			26														
	CORRUGATED PP PIPE (S)			X														
	PROFILE WALL PVC PIPE (S)			X														
	SMOOTH WALL PVC PIPE (S)*			X														
CLAY	VITRIFIED CLAY PIPE, EXTRA STRENGTH (S)			X														
CORRUGATED STEEL PIPE / PIPE-ARCH	FULLY BIT. PAVED & LINED (S)	CORR.PROFILE																
		THICKNESS																
	ZINC COATED (C)	CORR. PROFILE																
		THICKNESS																
	ZINC COATED W/ BPI (C)	CORR. PROFILE																
		THICKNESS																
	ALUM. COATED TYPE 2 (C)	CORR. PROFILE																
		THICKNESS																
	POLYMER PRECOATED GALVANIZED (C)	CORR. PROFILE																
		THICKNESS																
	POLYMER PRECOATED GALVANIZED CORRUGATED STEEL PIPE TYPE 1A (S)	CORR. PROFILE																
		THICKNESS																
COR. ALUM. PIPE/ P-ARCH	CORRUGATED ALUM. ALLOY (C)	CORR. PROFILE																
		THICKNESS																
	CORRUGATED ALUM. ALLOY W/ BPI (C)	CORR. PROFILE																
		THICKNESS																
SPIRAL RIB STEEL PIPE	ZINC COATED (SS)	RIB PROFILE																
		THICKNESS																
	ZINC COATED W/ BPI (SS)	RIB PROFILE																
		THICKNESS																
	ALUM. COATED TYPE 2 (SS)	RIB PROFILE																
		THICKNESS																
	POLYMER PRECOATED GALVANIZED (SS)	RIB PROFILE																
		THICKNESS																
STRUCTURAL PLATE PIPE / PIPE-ARCH	STR. PLATE ALUMINUM ALLOY (C)	CORR. PROFILE																
		THICKNESS																
	STR. PLATE ALUMINUM ALLOY W/ CFP (C)	CORR. PROFILE																
		THICKNESS																
	STR. PLATE STEEL (C)	CORR. PROFILE																
		THICKNESS **																
	STR. PLATE STEEL W/ CFP (C)	CORR. PROFILE																
		THICKNESS **																

LEGEND

PIPE MATERIAL

RCP	Reinforced Concrete Pipe
RCHEP	Reinforced Concrete Horizontal Elliptical Pipe
PE	Polyethylene
DR	Dimension Ratio
PVC	Polyvinyl Chloride
PP	Polypropylene
CORR	Corrugation
ALUM	Aluminum
STR	Structural
(LS)	Lock Seam Pipe Required

PIPE PROTECTION

BPI	Bituminous Paved Invert
CFP	Concrete Field Paving
BIT	Bituminous

SHAPE

CIR	Circular Pipe
DEF	Deformed Pipe

INTERIOR DESIGNATION

(S)	Smooth Pipe Material
(C)	Corrugated Pipe Material
(SS)	Semi-Smooth Pipe Material

PIPE SIZE

Circular pipe is shown as diameter in inches
Deformed pipe is shown as area in square feet

* Refer to Standard Drawings 715-PHCL-20 through -22 for nominal diameter appropriate for pay item diameter.

** Tabulated thickness refers to top and side plates. For pipes and pipe-arches with a thickness less than .280 in., bottom plates shall be of next greater available thickness.

JASON M. MATHIAS REGISTERED NO. PE10911235 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Jason Mathias 10/30/2023
DESIGN ENGINEER DATE

DESIGNED: MJS DRAWN: MJS
CHECKED: JMM CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

STRUCTURE DATA TABLE &
PIPE MATERIAL TABLE

SCALE	BRIDGE FILE
N/A	N/A
	DESIGNATION
	2001541
	SHEETS
	13 of 18
CONTRACT	PROJECT
B-41467	2001541

Plot: 10/30/2023 9:25 PM $AM_PMS

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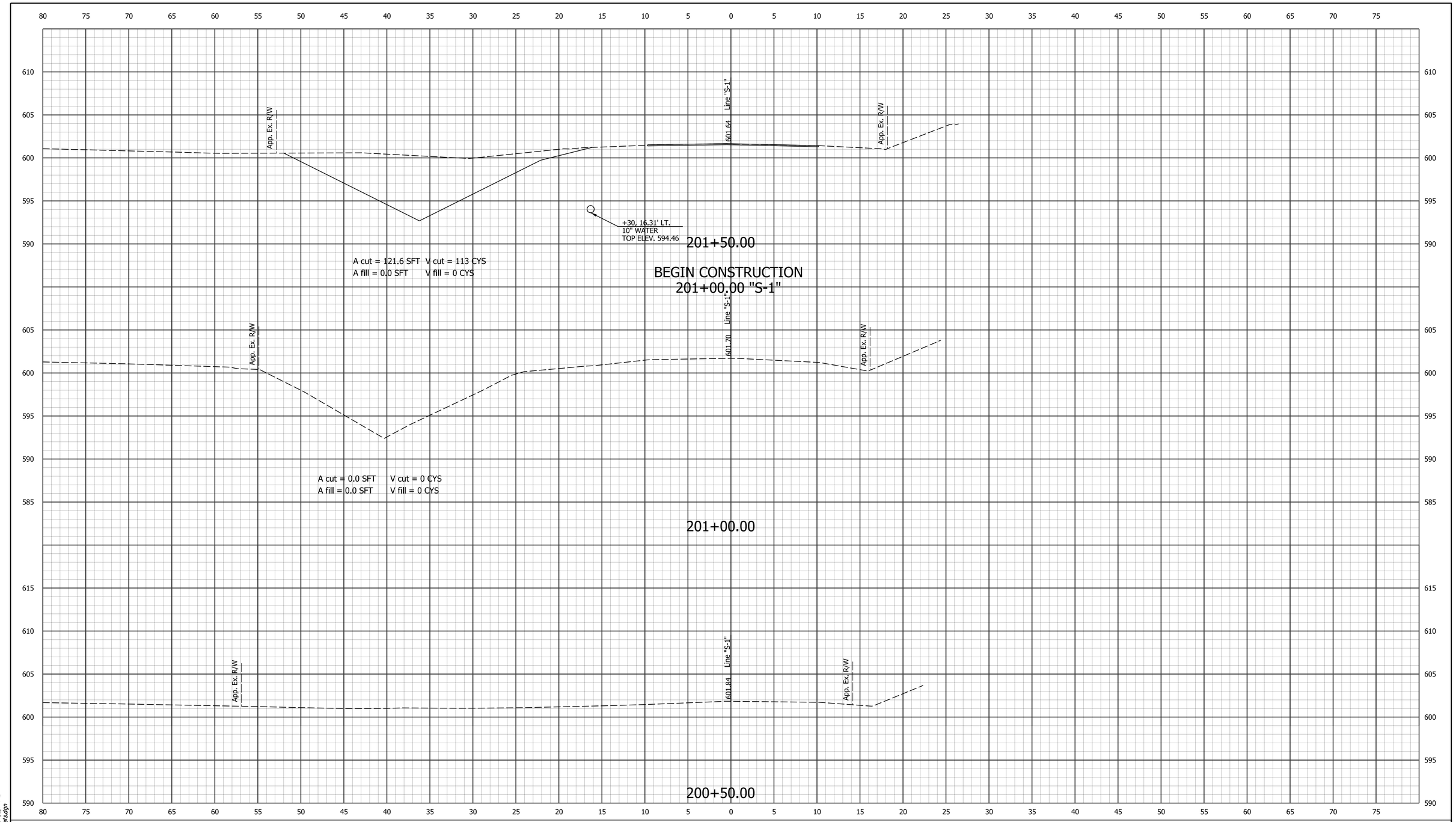

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RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: MJS DRAWN: MJS

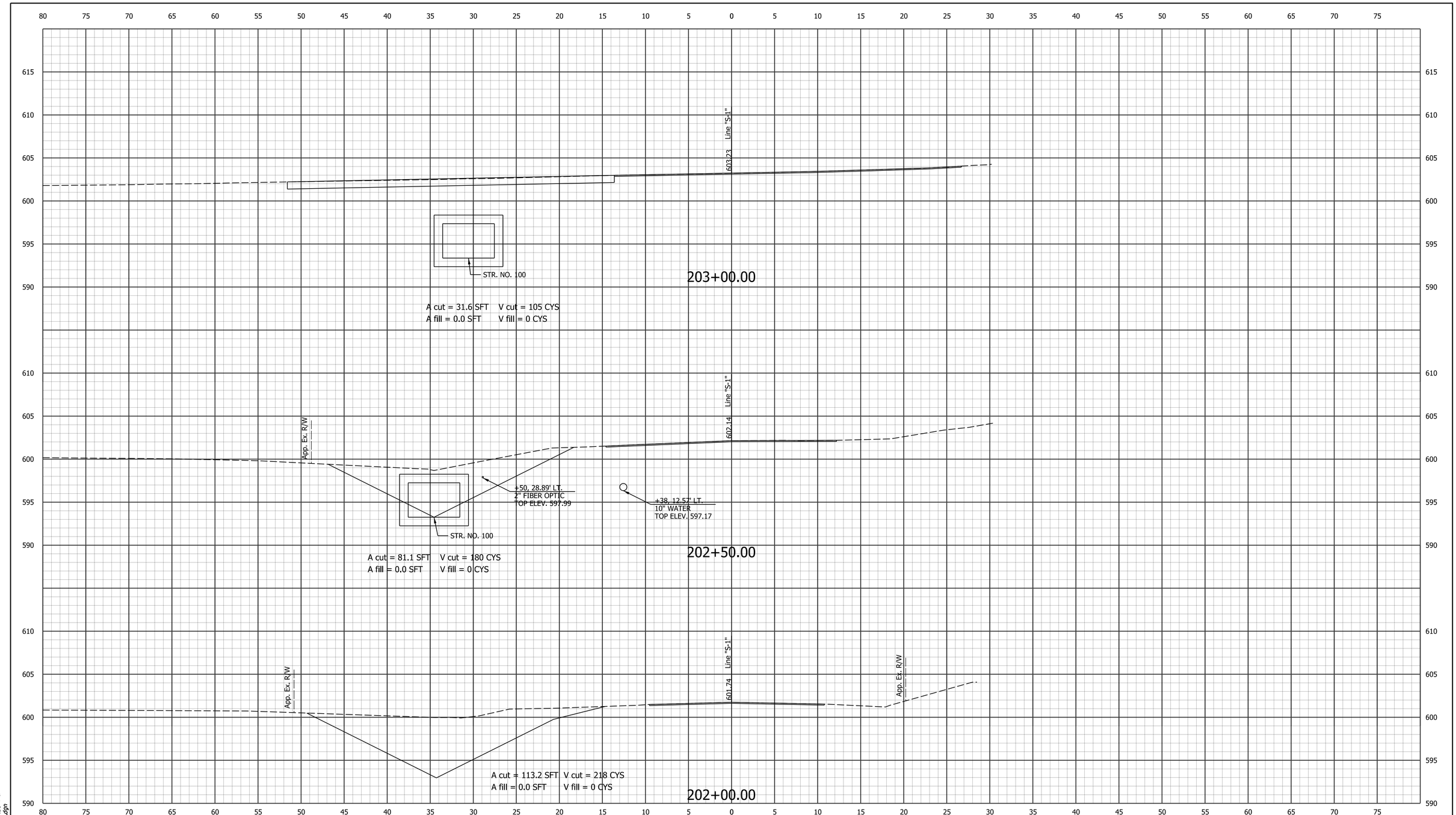
CHECKED: JMM CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "S-1"
STA. 200+50.00 TO STA.201+50.00

HORIZONTAL SCALE	BRIDGE FILE
1" = 5'	N/A
VERTICAL SCALE	DESIGNATION
1" = 5'	2001541

SURVEY BOOK	DWG. NO.	SHEET NO.
	XS-1	14 of 18
CONTRACT	PROJECT	
B-41467	2001541	



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RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: MJS DRAWN: MJS

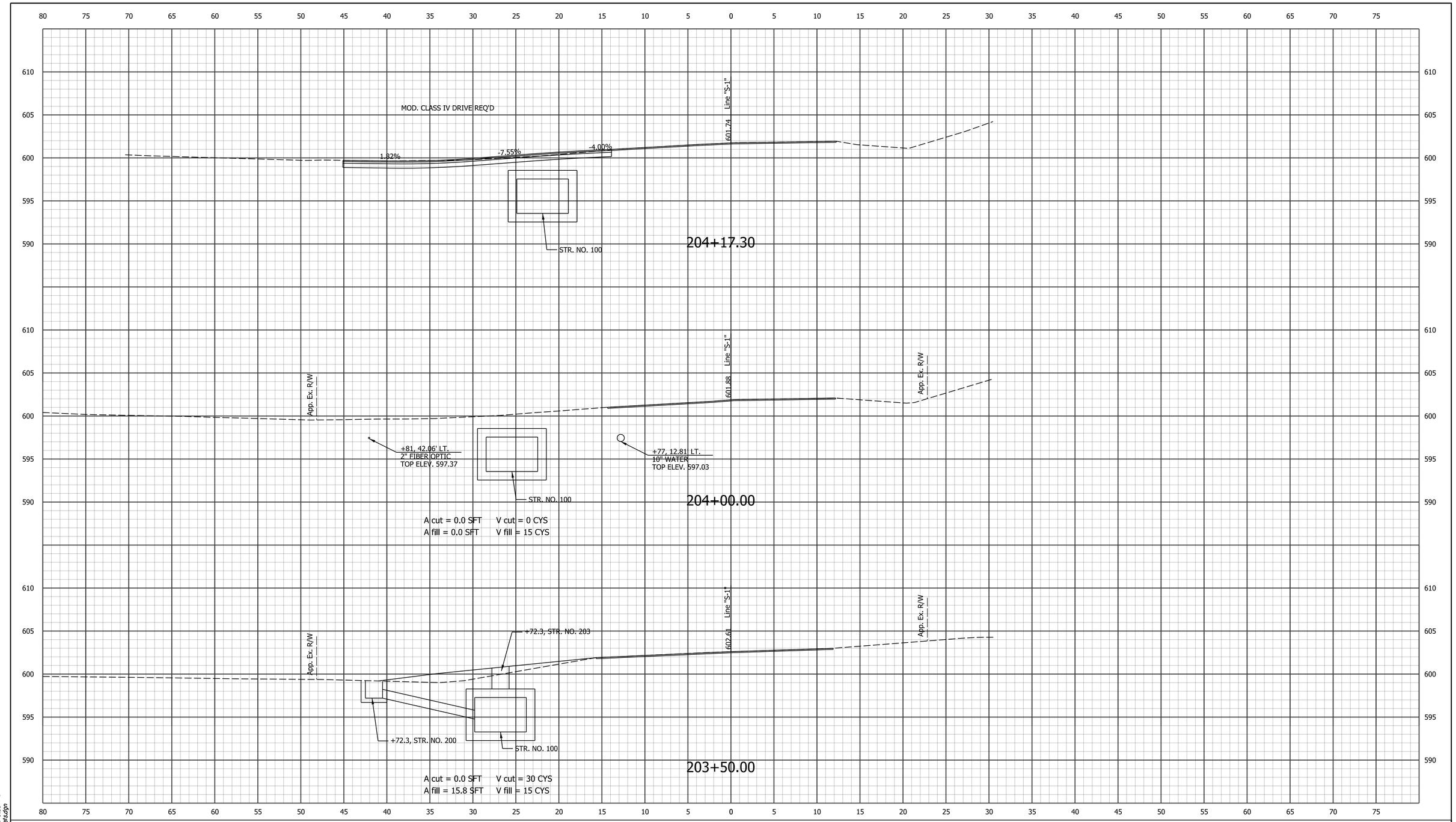
CHECKED: JMM CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "S-1"
STA. 202+00.00 TO STA.203+00.00

HORIZONTAL SCALE	BRIDGE FILE
1" = 5'	N/A
VERTICAL SCALE	DESIGNATION
1" = 5'	2001541

SURVEY BOOK	DWG. NO.	SHEET NO.
	XS-2	15 of 18
CONTRACT	PROJECT	
B-41467	2001541	



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DESIGN ENGINEER DATE

DESIGNED: MJS DRAWN: MJS

CHECKED: JMM CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "S-1"
STA. 203+50.00 TO STA.204+17.30

HORIZONTAL SCALE	BRIDGE FILE
1" = 5'	N/A
VERTICAL SCALE	DESIGNATION
1" = 5'	2001541

SURVEY BOOK	DWG. NO.	SHEET NO.
	XS-3	16 of 18
CONTRACT	PROJECT	
B-41467	2001541	

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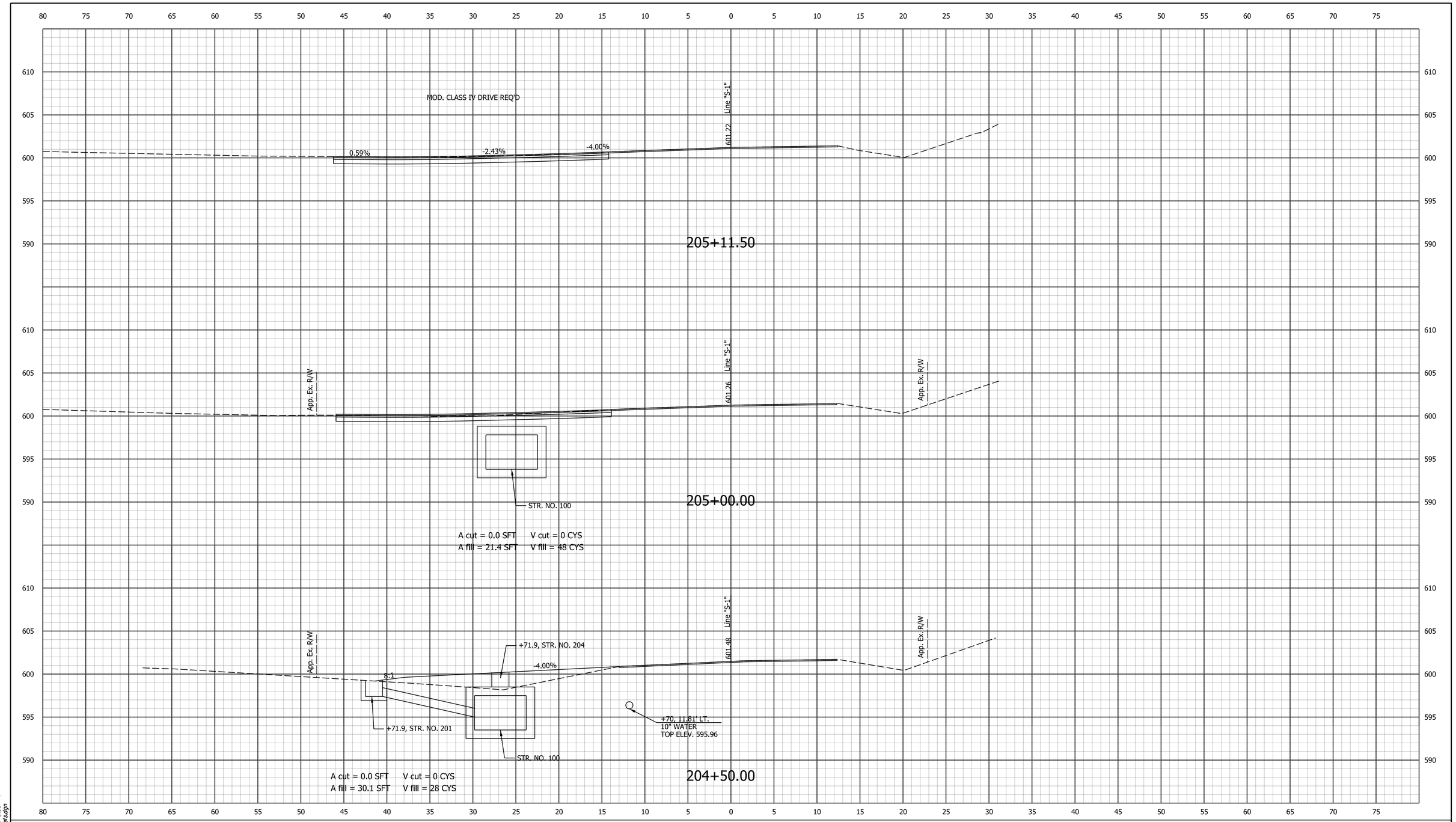

RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: MJS DRAWN: MJS

CHECKED: JMM CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "S-1"
STA. 204+50.00 TO STA.205+11.50

HORIZONTAL SCALE	BRIDGE FILE
1" = 5'	N/A
VERTICAL SCALE	DESIGNATION
1" = 5'	2001541

SURVEY BOOK	DWG. NO.	SHEET NO.
	XS-4	17 of 18
CONTRACT	PROJECT	
B-41467	2001541	

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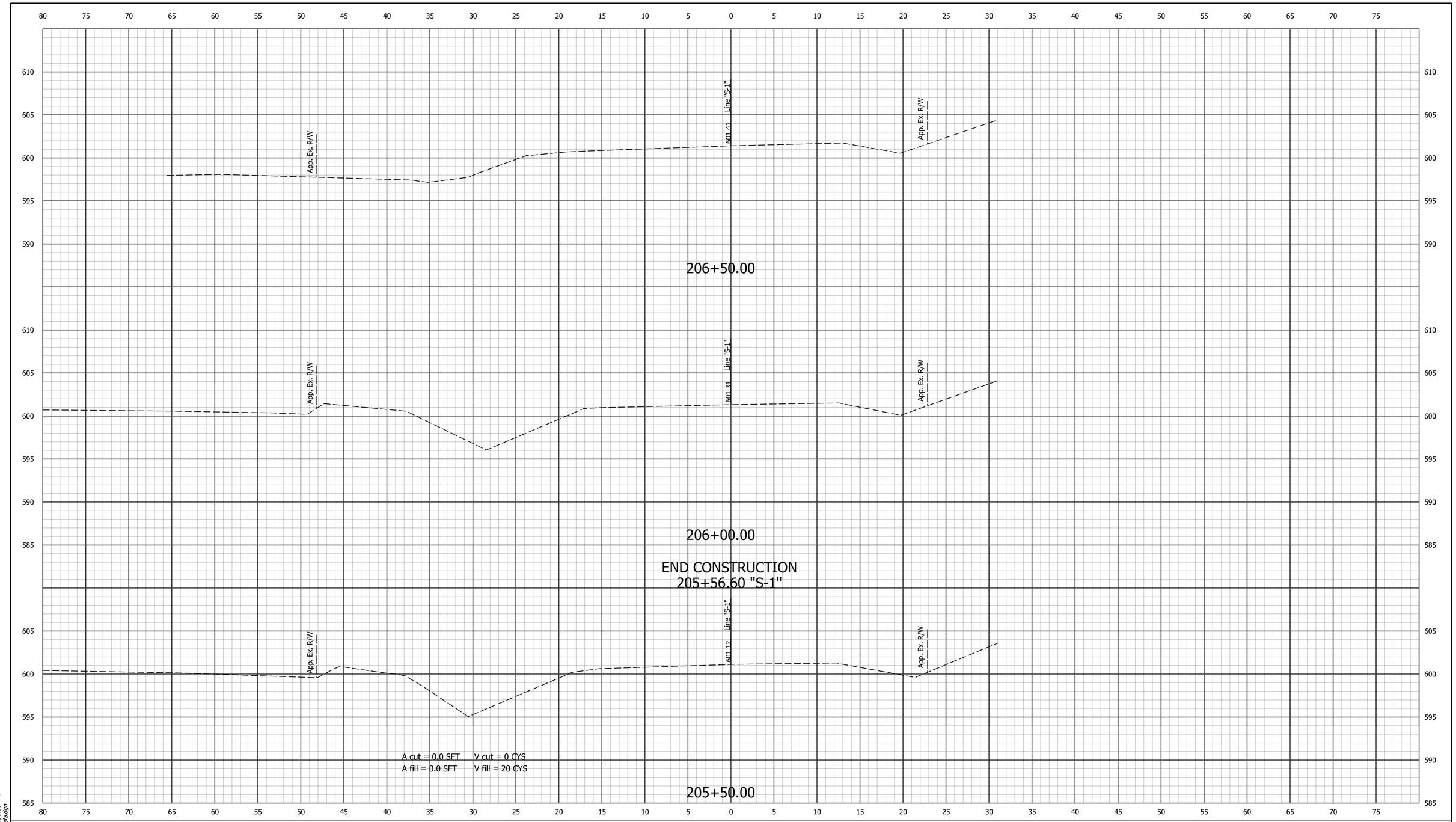

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RECOMMENDED FOR APPROVAL

DESIGN ENGINEER DATE

DESIGNED: MJS DRAWN: MJS

CHECKED: JMM CHECKED: JMM

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "S-1"
STA. 205+50.00 TO STA.206+50.00

HORIZONTAL SCALE	BRIDGE FILE
1" = 5'	N/A
VERTICAL SCALE	DESIGNATION
1" = 5'	2001541

SURVEY BOOK	DWG. NO.	SHEET NO.
	XS-5	18 of 18
CONTRACT	PROJECT	
B-41467	2001541	