

PROJECT	DESIGNATION
2002000	2002000
CONTRACT	BRIDGE FILE
B-43453	018-04-10730

INDIANA DEPARTMENT OF TRANSPORTATION



STRUCTURE INFORMATION				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
018-04-10730	Precast Reinforced Concrete Three-Sided Flat Top Culvert	34'-3" Span 12'-4" Rise 7° Lt. Skew	Greenwood Ditch	369+72 Line "A"

TRAFFIC DATA	
A.A.D.T. (2024)	719 V.P.D.
A.A.D.T. (2044)	847 V.P.D.
D.H.V (2044)	91 V.P.H.
DIRECTIONAL DISTRIBUTION	46.47 %
TRUCKS	20.00 % A.A.D.T. 23.91 % D.H.V.

DESIGN DATA	
DESIGN SPEED	55 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	MAJOR COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE

BRIDGE PLANS

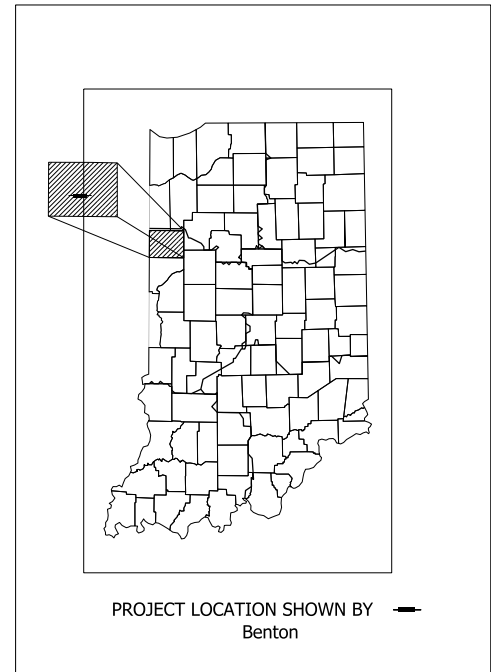
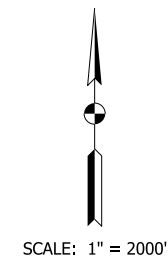
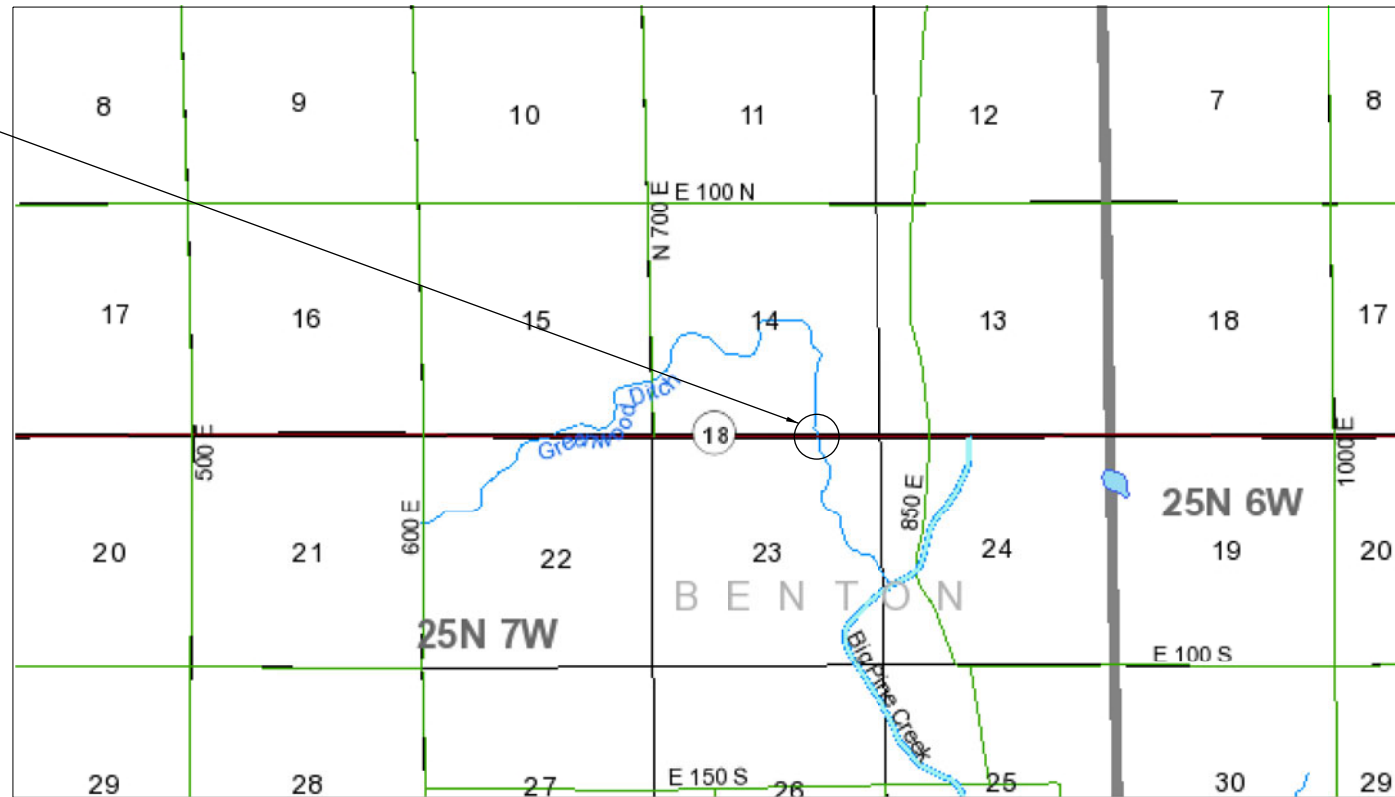
FOR SPANS OVER 20 FEET

ROUTE: SR 18

PROJECT NO. 2002000 P.E.
2002000 R/W
2002000 CONST.

Bridge Replacement on SR18 over Greenwood Ditch
Located 6.84 Miles East of US 52,
Section 14 & 23, T-25-N, R-7-W, Pine Township, Benton County, Indiana

Project Location
Bridge File No. 018-04-10730
Begin Project Sta. 366+77, Line "A"
End Project Sta. 372+50, Line "A"



LATITUDE: N 40°36'22" LONGITUDE: W 87°10'36"

BRIDGE LENGTH:	0.007	MI.
ROADWAY LENGTH:	0.102	MI.
TOTAL LENGTH:	0.109	MI.
MAX. GRADE:	3.31	%

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

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PLANS PREPARED BY: Martha Chernet, P.E. (317) 233-2067
PHONE NUMBER

CERTIFIED BY: _____ DATE _____

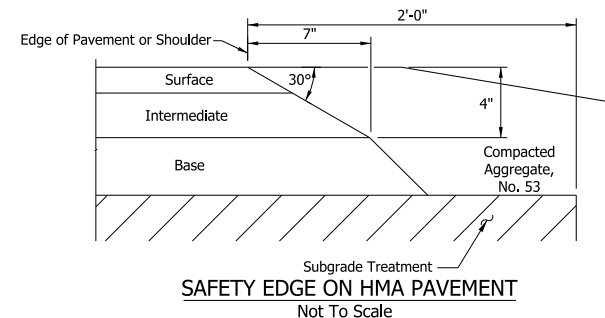
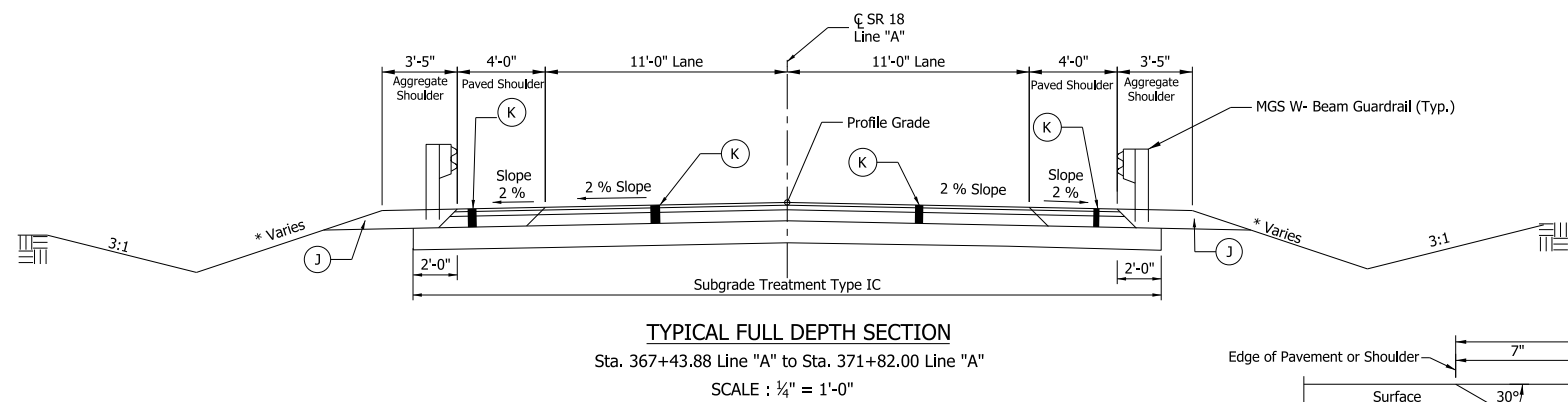
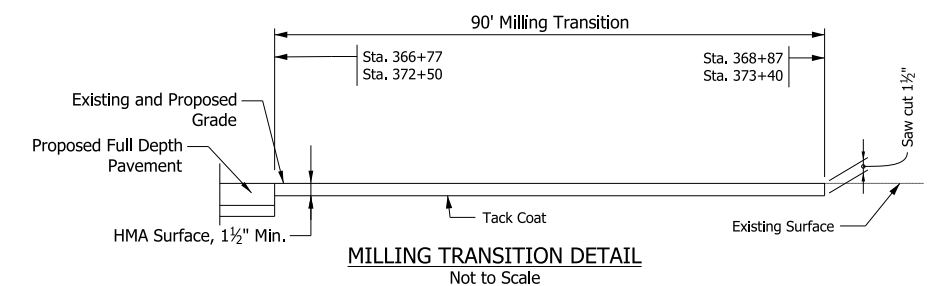
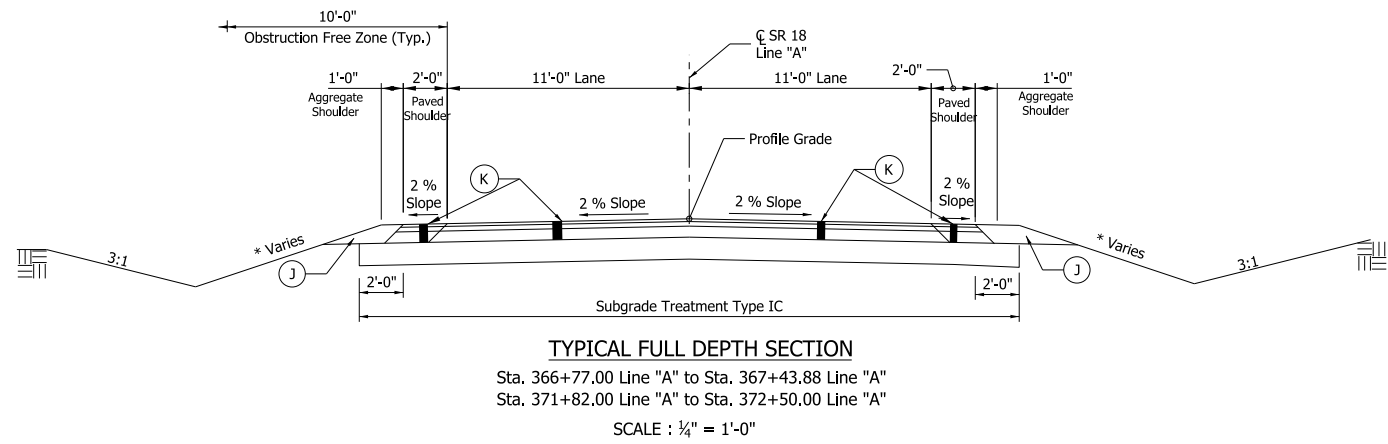
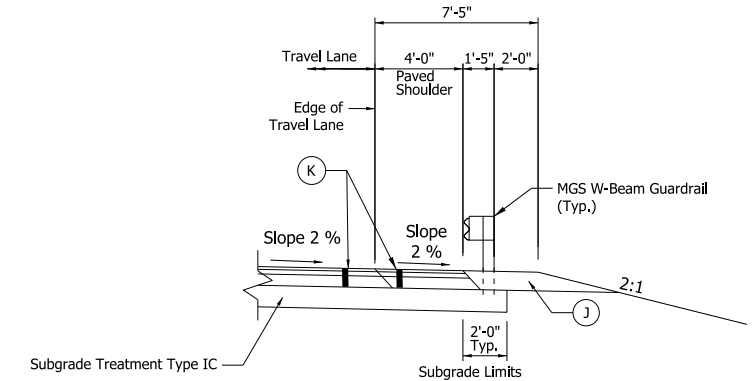
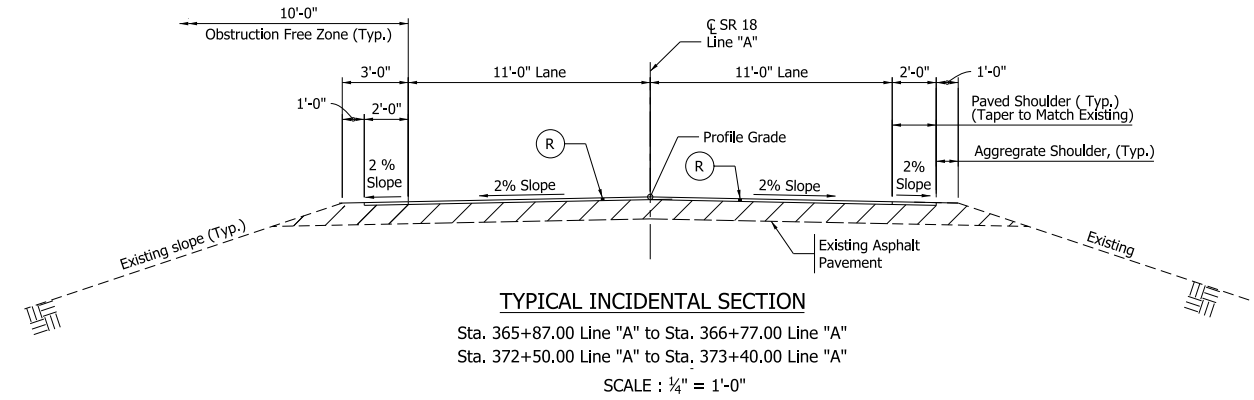
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INDIANA DEPARTMENT OF TRANSPORTATION

BRIDGE FILE	
018-04-10730	DESIGNATION
2002000	2002000
SURVEY BOOK	
ELECTRONIC	1 of 19 SHEETS
CONTRACT	PROJECT
B-43453	2002000

LEGEND:

- (K) 165 lb/sys QC/QA - HMA, 3, 64, Surface, 9.5 mm, on 275 lb/sys QC/QA - HMA, 3, 64, Intermediate, 19 mm on 660 lb/sys QC/QA - HMA, 3, 64, Base, 25 mm, on Subgrade Treatment Type IC on Geotextile for Pavement Type 2B
- (J) Variable Depth Compacted Aggregate, size # 53
- (R) 165 lbs/sys QC/QA - HMA, 3, 64, Surface, 9.5 mm on tack coat.



Note
 For Guardrail Limits, See Plan and Profile Sheet No. 6 and Approach Detail sheet No. 7
 For additional information on ditches and embankment slopes, see Cross-Section Sheets No. 12 - 18

* Embankment Slopes Varies	
Left	Right
Slope 3:1 from Sta. 366+77.00 to Sta. 367+43.38	Slope 4:1 from Sta. 366+77 to Sta. 367+45.00
Slope Sta. 3:1 to 2:1 from 367+43.38 to Sta. 367+93.88	Slope 4:1 to 2:1 from Sta. 367+45.00 to Sta. 367+95.00
Slope 2:1 from Sta. 367+93.38 to Sta. 371+41.00	Slope 2:1 from Sta. 367+95.00 to Sta. 371+31.38
Slope 2:1 to 4:1 from Sta. 371+41.00 to Sta. 371+91.00	Slope 2:1 to 4:1 from Sta. 371+31.38 to Sta. 371+81.38
Slope 3:1 from Sta. 371+91.00 to Sta. 372+50	Slope 4:1 from Sta. 371+81.38 to Sta. 372+50.00

DATE	REVISION

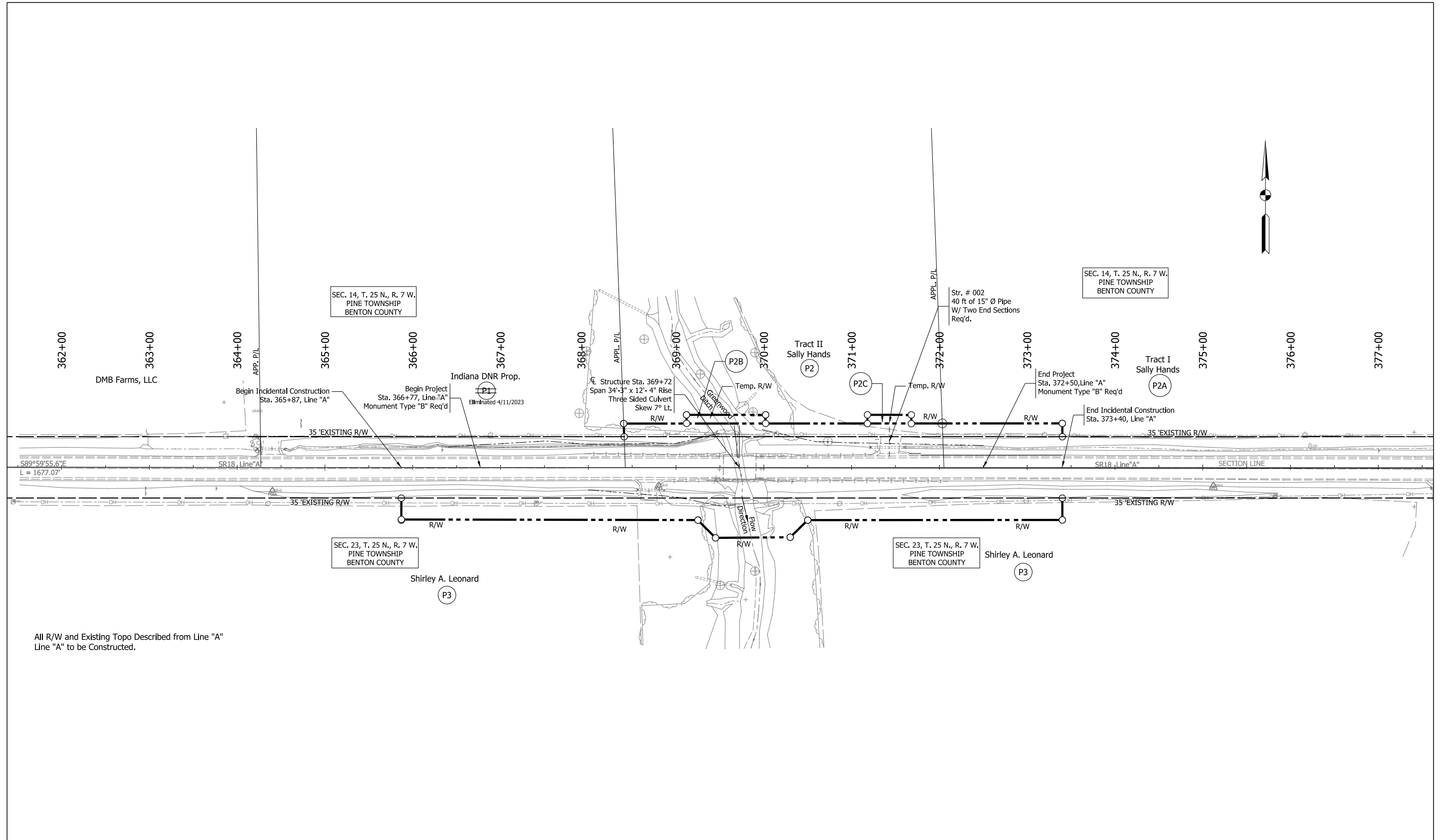
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MTC	12/2022	DRAWN: TLA
CHECKED: MH	12/2022	CHECKED: MTC

INDIANA
 DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE	BRIDGE FILE
N/A	018-04-10730
	DESIGNATION
	2002000
SURVEY BOOK	SHEETS
ELECTRONIC	3 of 19
CONTRACT	PROJECT
B-43453	2002000

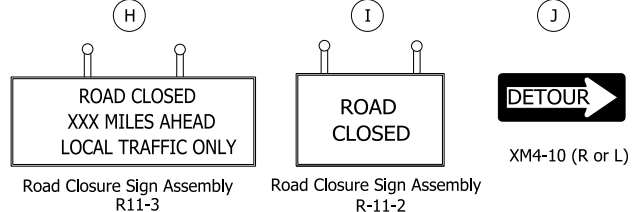
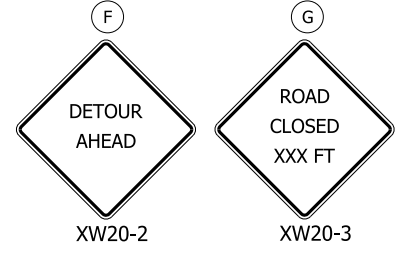
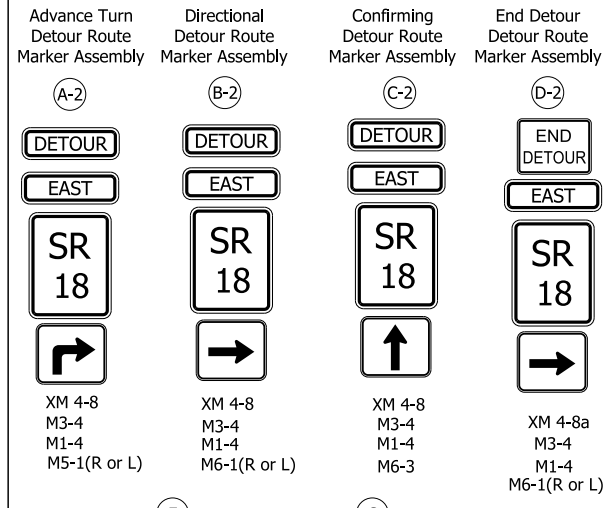
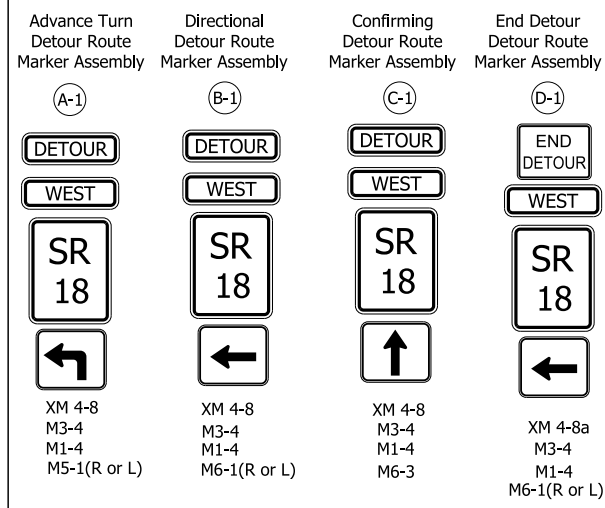
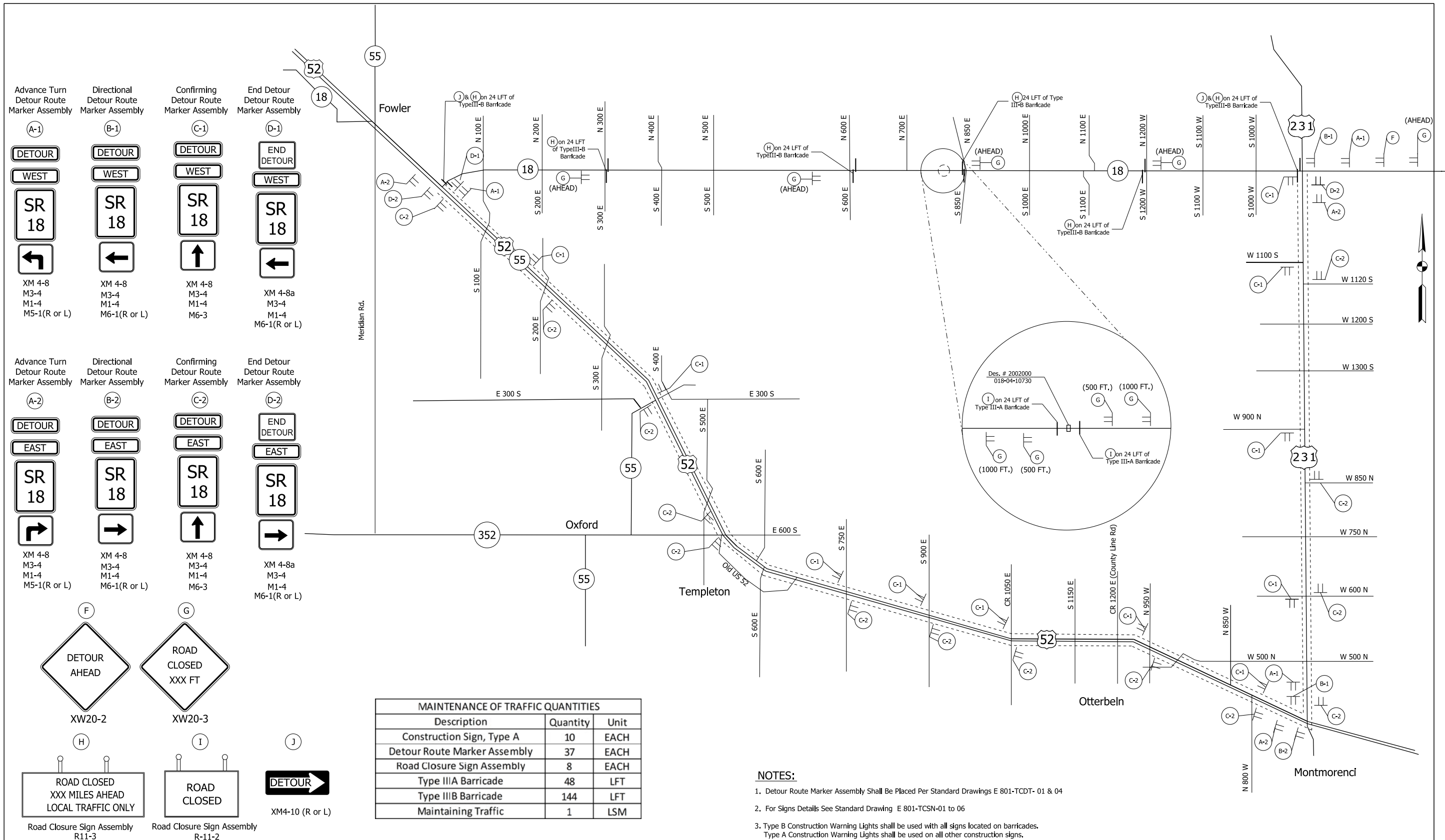
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All R/W and Existing Topo Described from Line "A" Line "A" to be Constructed.

DATE	REVISION	RECOMMENDED FOR APPROVAL		DESIGN ENGINEER		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE	BRIDGE FILE
						PLAT NO. 1		Horz. 1" = 50'	018-04-10730
									DESIGNATION
									2002000
									SURVEY BOOK
									4 of 19
									SHEETS
									PROJECT
									2002000

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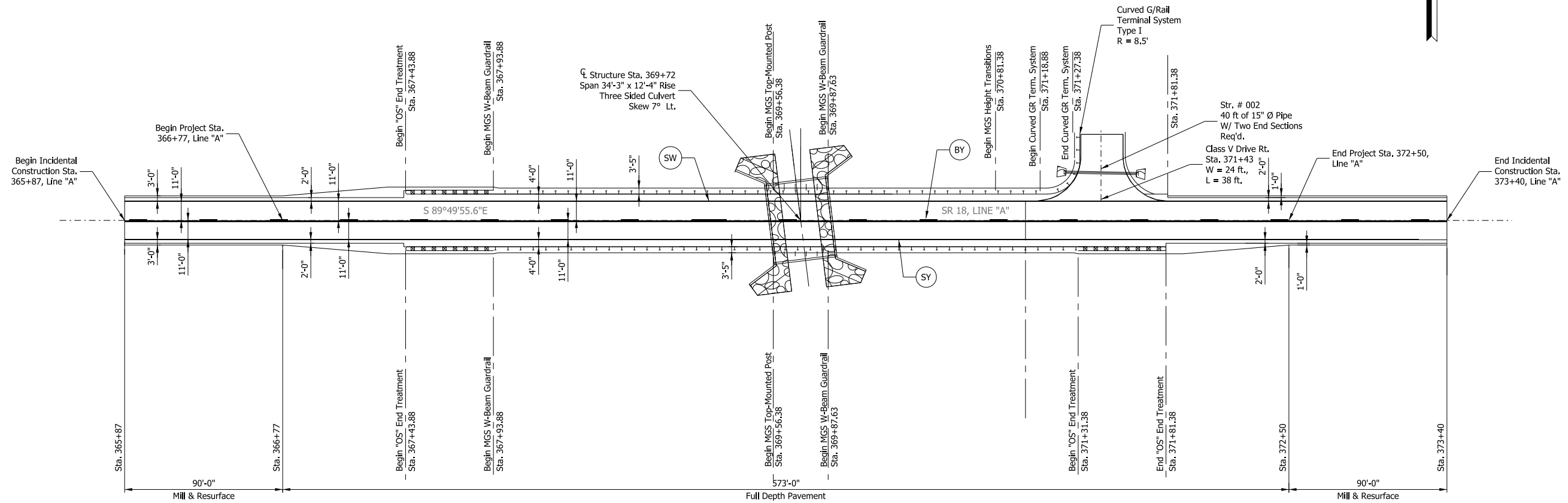


MAINTENANCE OF TRAFFIC QUANTITIES		
Description	Quantity	Unit
Construction Sign, Type A	10	EACH
Detour Route Marker Assembly	37	EACH
Road Closure Sign Assembly	8	EACH
Type IIIA Barricade	48	LFT
Type IIIB Barricade	144	LFT
Maintaining Traffic	1	LSM

- NOTES:**
1. Detour Route Marker Assembly Shall Be Placed Per Standard Drawings E 801-TCDT- 01 & 04
 2. For Signs Details See Standard Drawing E 801-TCSN-01 to 06
 3. Type B Construction Warning Lights shall be used with all signs located on barricades. Type A Construction Warning Lights shall be used on all other construction signs.

DATE	REVISION	RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	SCALE	BRIDGE FILE
						N/A	018-04-10730
		DESIGNED: MTC	4/2022	DRAWN: TLA	4/2022		DESIGNATION
		CHECKED: MH	4/2022	CHECKED: MTC	4/2022		2002000
MAINTENANCE OF TRAFFIC						SURVEY BOOK	SHEETS
						ELECTRONIC	5 of 19
						CONTRACT	PROJECT
						B-43453	2002000

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ROADWAY AND GUARDRAIL LAYOUT
Scale: 1" = 30'-0"

LEGEND

- (SW) Solid White, 1506 LFT
- (SY) Solid Yellow Line, 753 LFT
- (BY) Broken Yellow Line, 188 LFT

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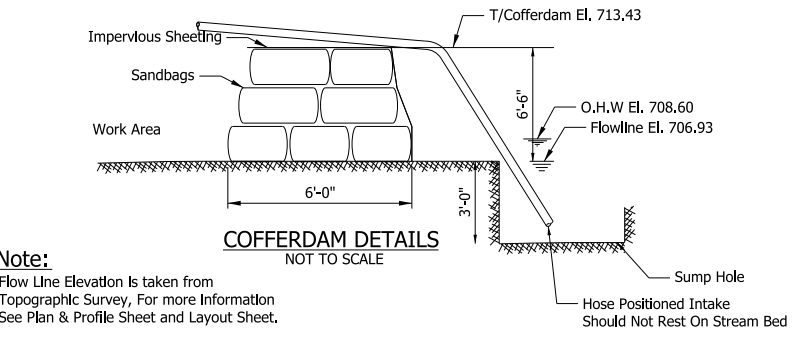
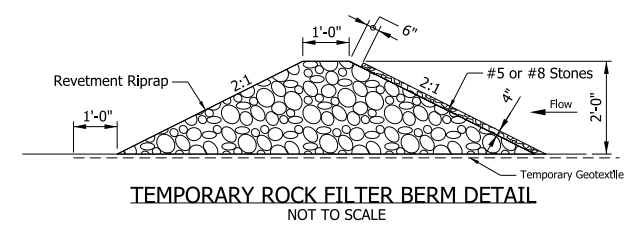
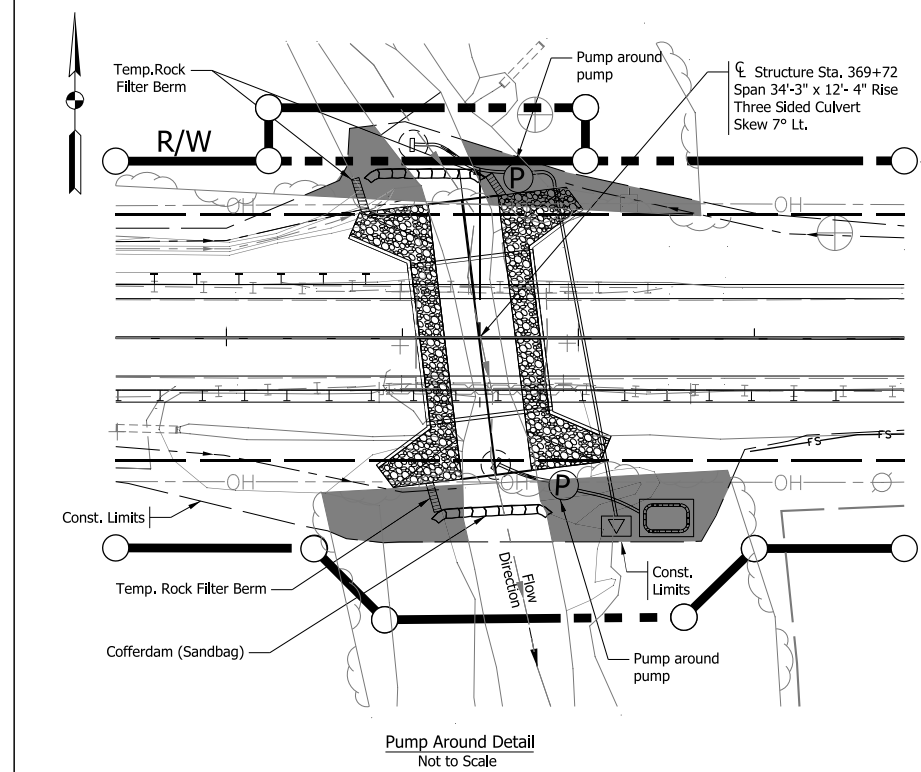
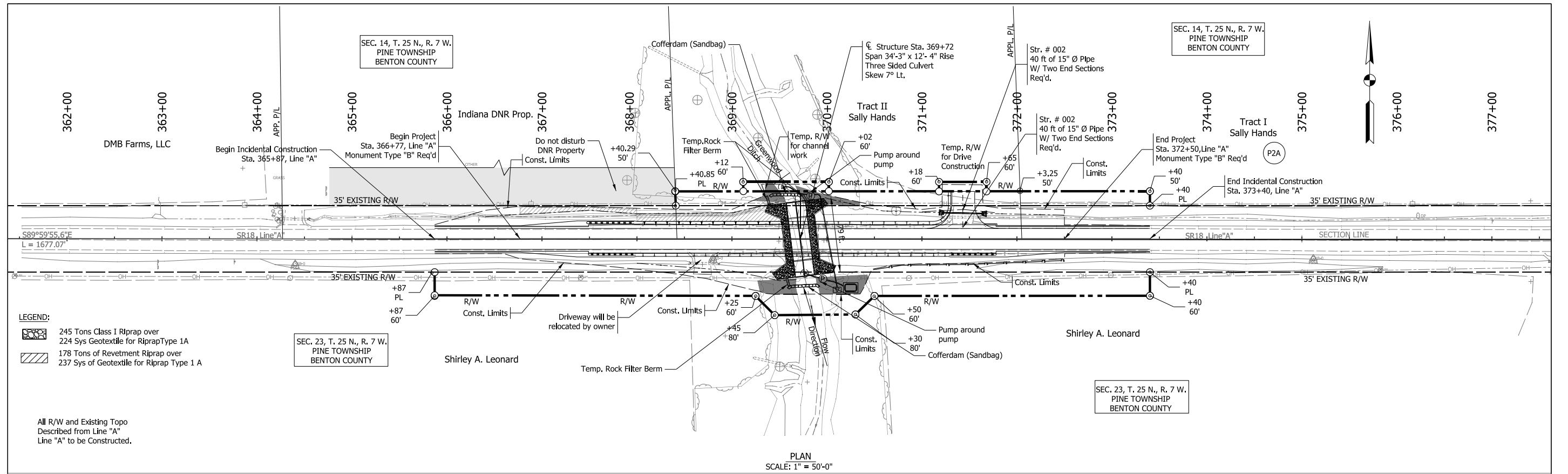
DATE	REVISION

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: MTC 1/2023	DRAWN: TLA 1/2023	
CHECKED: MH 1/2023	CHECKED: MTC 1/2023	

INDIANA DEPARTMENT OF TRANSPORTATION

APPROACH DETAIL

SCALE AS NOTED	BRIDGE FILE 018-04-10730
	DESIGNATION 2002000
	SHEETS 7 of 19
CONTRACT B-43453	PROJECT 2002000



Note:
Flow Line Elevation Is taken from Topographic Survey, For more Information See Plan & Profile Sheet and Layout Sheet.

Estimated Quantity For Temporary Sand Bags Below OHW (Temporary Cofferdam) is 0.008 acre.

- LEGEND**
- Temporary Check Dam
 - Temporary Filter Sock
 - Temporary Rock Filter Berm
 - Pump Around
 - Filter Bags on #5 or #8 Stone
 - Temporary Sandbag Cofferdam
 - Temporary Sump Hole
 - Temporary Diffuser (Energy Dissipator), (Riprap)
 - Hose Intake
 - Tree Clearing (0.055 ac. Total.)

NOTES:

Temporary seeding shall be applied at the end of the day to any disturbed soils due to construction operations, and due to any loose or moist soils where additional work is not scheduled for at least 7 days and as directed by the engineer.

For Temporary Check Dams See Std Dwg E-205-TECD-06, 07, & 08
For Filter Sock placement See Std Dwg E-205-TECP-10

DATE	REVISION

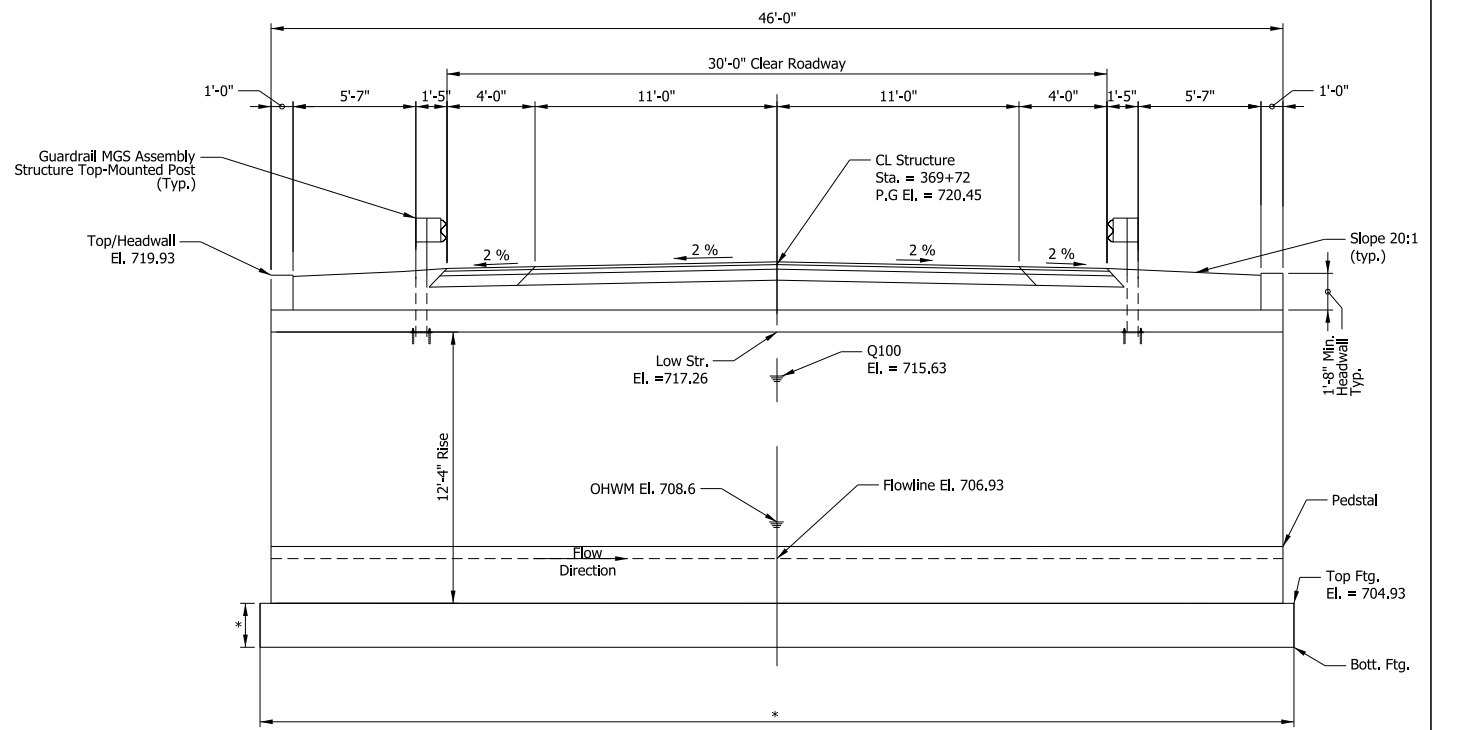
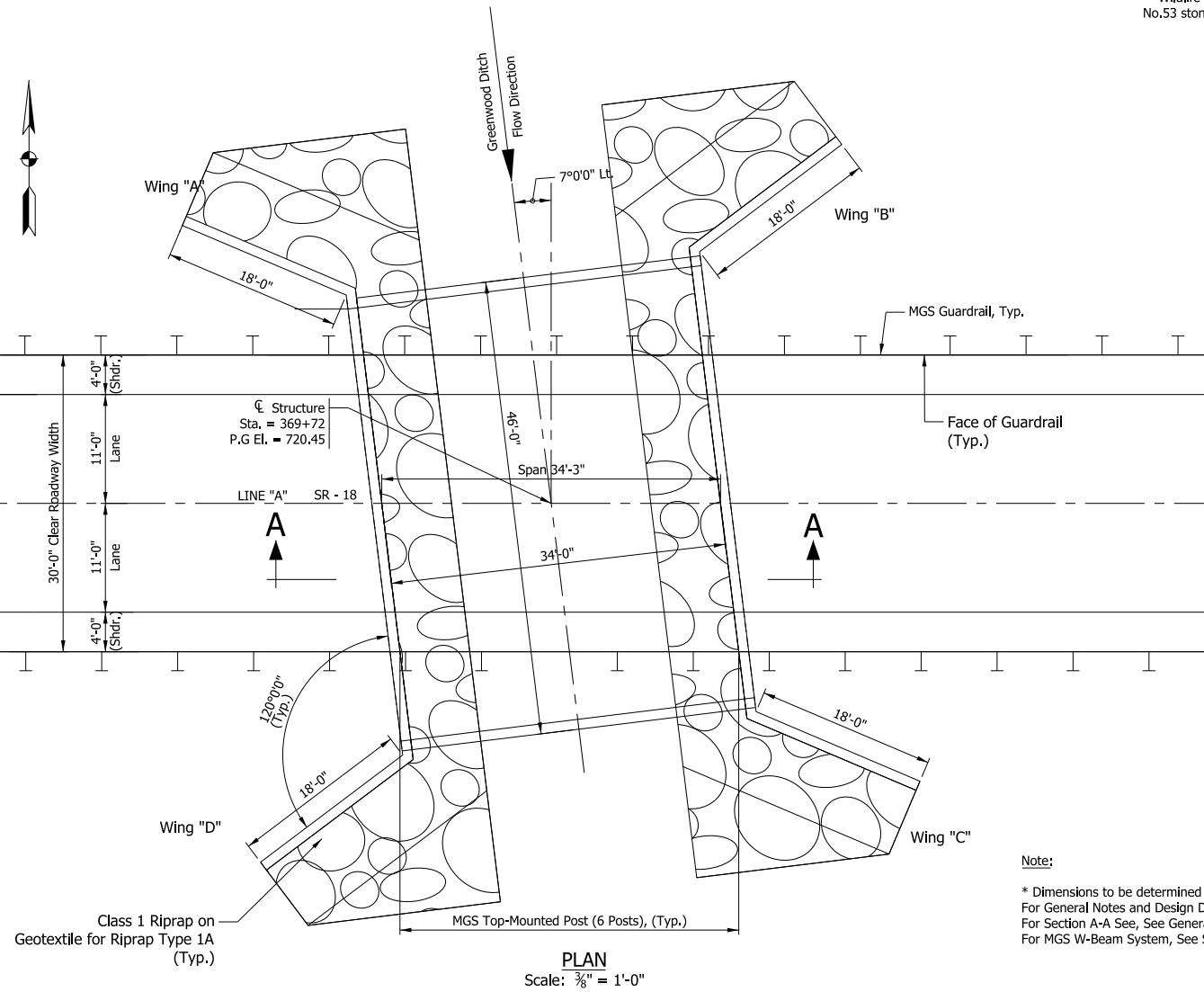
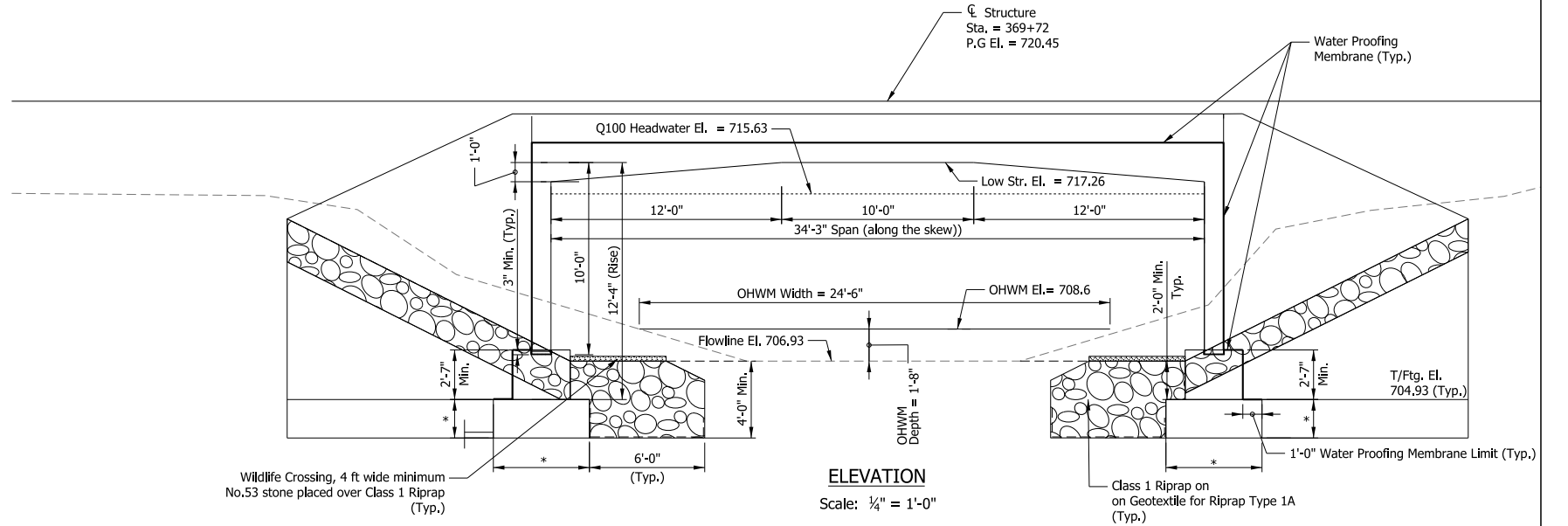
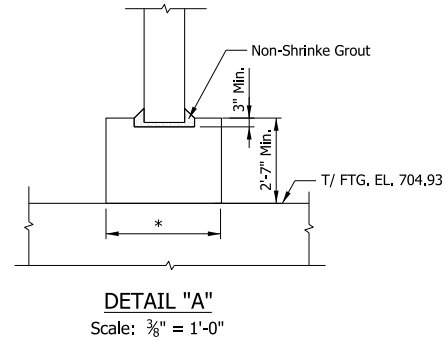
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MTC	1/2023	DRAWN: MTC
CHECKED: MH	1/2023	CHECKED: DR

INDIANA DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION AND SEDIMENT CONTROL DETAIL SHEET

SCALE	BRIDGE FILE
Horz. 1" = 50'	018-04-10730
Vert. 1" = 10'	DESIGNATION
	2002000
SURVEY BOOK	SHEETS
ELECTRONIC	8 of 19
CONTRACT	PROJECT
B-43453	2002000

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Note:
* Dimensions to be determined by precast manufacturer
For General Notes and Design Data, See General Plan Sheet No. 2
For Section A-A See, See General Plan Sheet No. 2
For MGS W-Beam System, See Standard D E 601-MGSA-1 to10

PRECAST REINFORCED CONCRETE
FLAT TOPPED THREE - SIDED CULVERT
34'-3" SPAN X 12'- 4" RISE , SKEW 7° Lt.
30'-0" CLEAR ROADWAY
OVER GREENWOOD DITCH ON SR 18,
IN BENTON COUNTY, INDIANA

DATE	REVISION

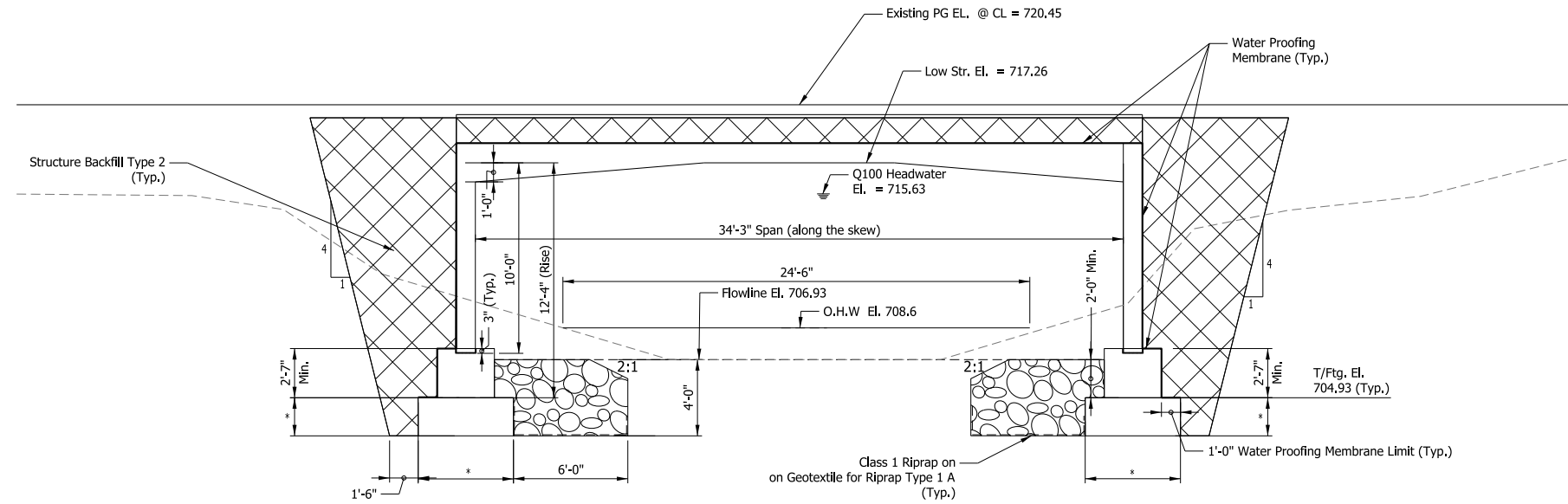
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MTC	6/2022	DRAWN: TLA
CHECKED: MH	6/2022	CHECKED: MTC

INDIANA
DEPARTMENT OF TRANSPORTATION

**GENERAL PLAN
SHEET NO. 1**

SCALE	BRIDGE FILE
As Noted	018-04-10730
	DESIGNATION
	2002000
SURVEY BOOK	SHEETS
ELECTRONIC	10 of 19
CONTRACT	PROJECT
B-43453	2002000

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SECTION A-A

Scale: 1/4" = 1'-0"

GENERAL NOTES:

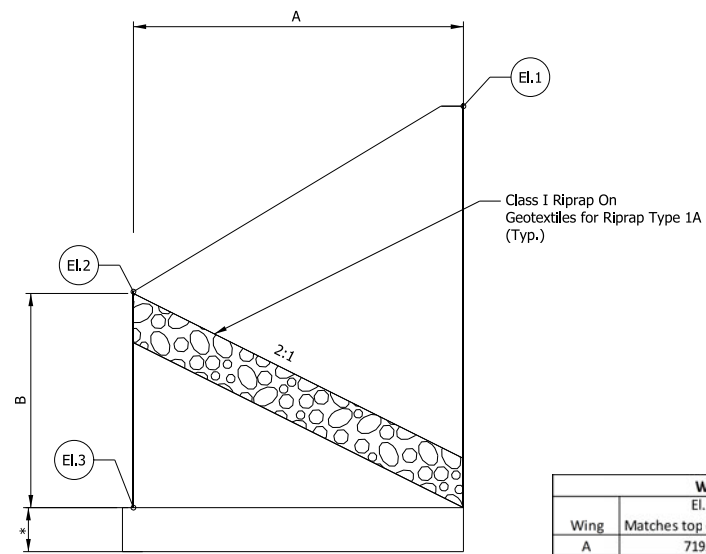
1. All exposed faces of the Headwall and wingwalls shall receive Surface Seal.
2. A Three - Sided Arch Topped or True Arch Structure will not be permitted at this location.
3. For guardrail MGS assembly details see Standard Drawing E 601-MGSA-10 & E 601-MGSA-12
4. Bottom of Footing Elevation for Three - Sided Culvert should be at least 4 ft below flow line elevation.
5. Contractor Shall Verify the existing flow line elevation to set the appropriate proposed flow line

DESIGN DATA:

Live Load Designed for HL-93 Loading in Accordance with AASHTO LRFD Bridge Design Specifications 9th Edition, 2020 (LRFD 9)
Dead load increased 35 psf for future wearing surface.

Note:

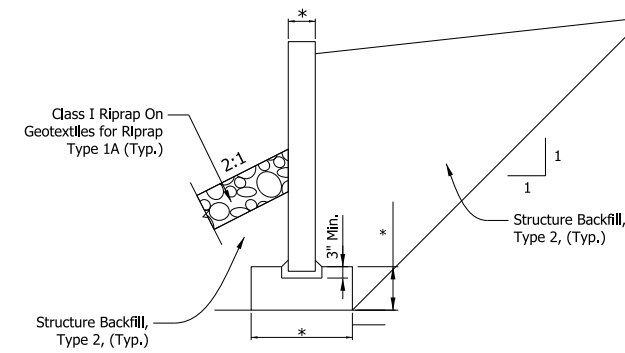
* Dimensions to be determined by precast manufacturer



WINGWALL ELEVATION

Scale: 1/4" = 1'-0"

WINGWALL DIMENSION TABLE					
EI. 1					
Wing	Matches top of headwall	EI. 2	EI. 3	A	B
A	719.93	715.27	703.94	18'-0"	10'-4"
B	719.93	715.45	703.94	18'-0"	11'-6"
C	719.93	715.45	703.94	18'-0"	11'-6"
D	719.93	715.27	703.94	18'-0"	10'-4"



WINGWALL SECTION

Scale: 3" = 1'-0"

PRECAST REINFORCED CONCRETE
FLAT TOPPED THREE - SIDED CULVERT
34'-3" SPAN X 12'-4" RISE, SKEW 7° LT.
30'-0" CLEAR ROADWAY
OVER GREENWOOD DITCH ON SR 18,
IN BENTON COUNTY, INDIANA

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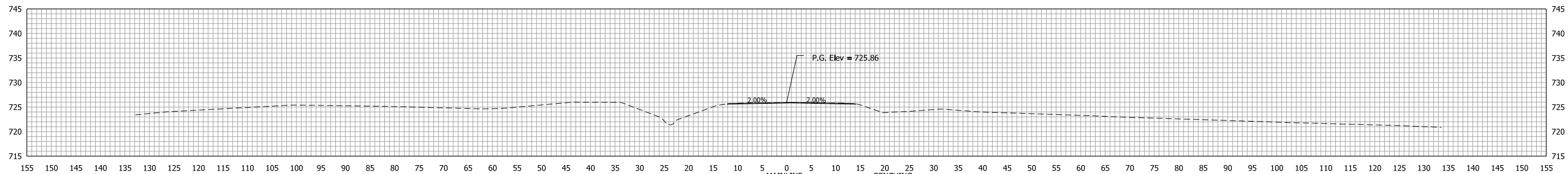
DATE	REVISION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MTC	6/2022	DRAWN: TLA
6/2022	CHECKED: MH	6/2022
6/2022	CHECKED: MTC	6/2022

INDIANA
DEPARTMENT OF TRANSPORTATION

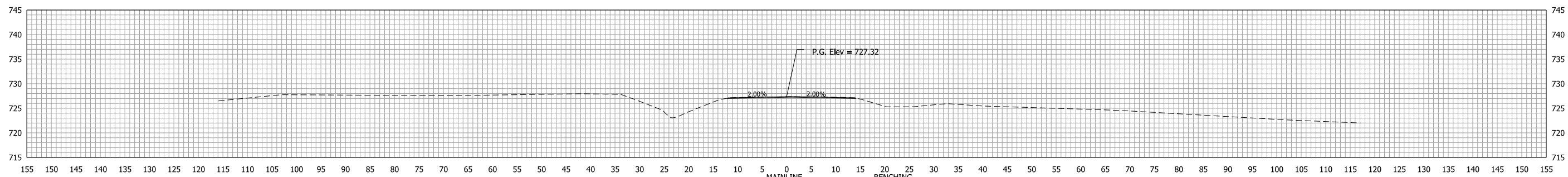
GENERAL PLAN
SHEET NO. 2

SCALE	BRIDGE FILE
As Noted	018-04-10730
	DESIGNATION
	2002000
SURVEY BOOK	SHEETS
ELECTRONIC	11 of 19
CONTRACT	PROJECT
B-43453	2002000



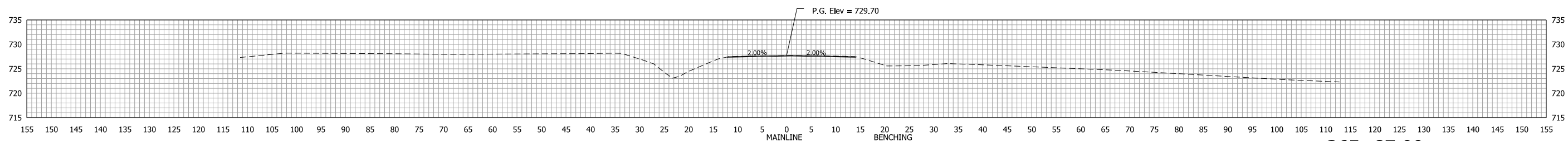
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366+50.00



MAINLINE			BENCHING		
Ac = 5.5 SFT	Af = 0.1 SFT	Ab = 0.00 SFT	Vc = 1 CYS	Vf = 0 CYS	Vb = 0.00 CYS

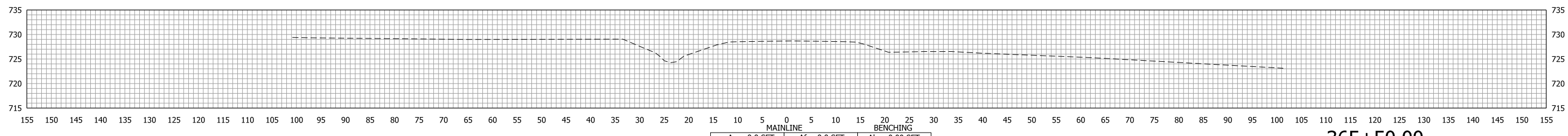
366+00.00



MAINLINE			BENCHING		
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Begin Incidental Sta. 365+87, Line "A"

365+87.00



MAINLINE			BENCHING		
Ac = 0.0 SFT	Af = 0.0 SFT	Ab = 0.00 SFT	Vc = 0 CYS	Vf = 0 CYS	Vb = 0.00 CYS

365+50.00

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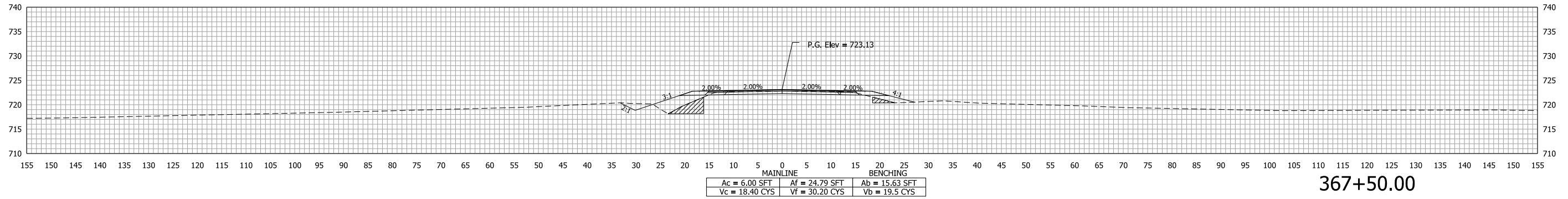
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MTC	1/2023	1/2023
CHECKED: DR	1/2023	1/2023

INDIANA
DEPARTMENT OF TRANSPORTATION

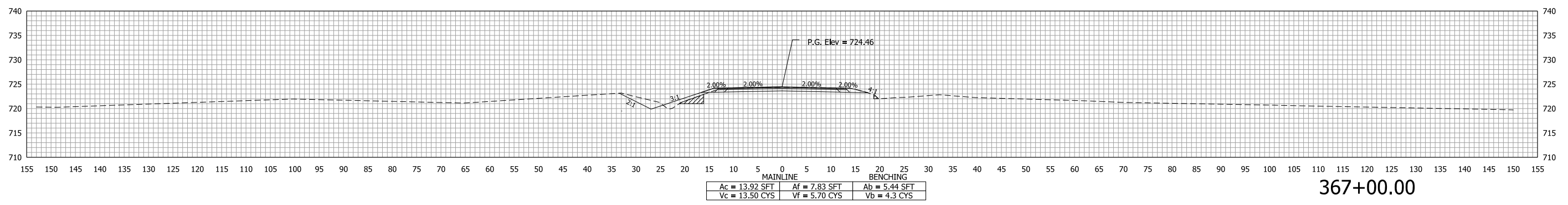
CROSS SECTIONS
LINE "A"

SCALE 1"=10'	BRIDGE FILE 018-04-10730
	DESIGNATION 2002000
SURVEY BOOK ELECTRONIC	SHEETS 13 of 19
CONTRACT B-43453	PROJECT 2002000

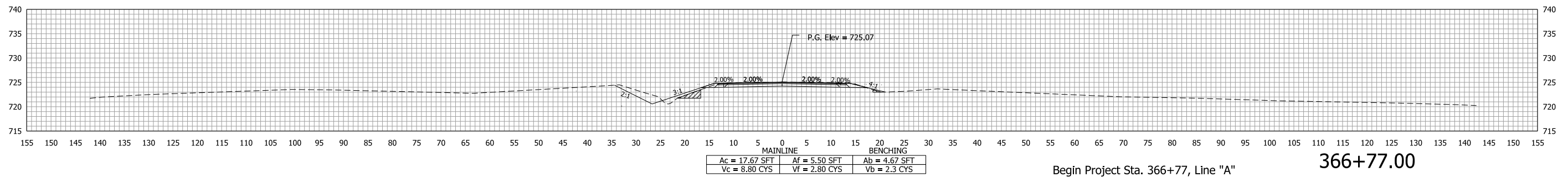
STA. 365+50.00 TO STA. 366+50.00



367+50.00



367+00.00



Begin Project Sta. 366+77, Line "A"

366+77.00

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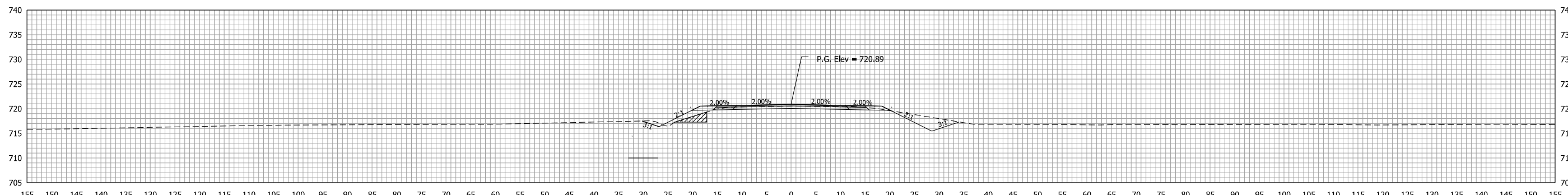
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DESIGNED: MTC	1/2023	1/2023
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INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "A"

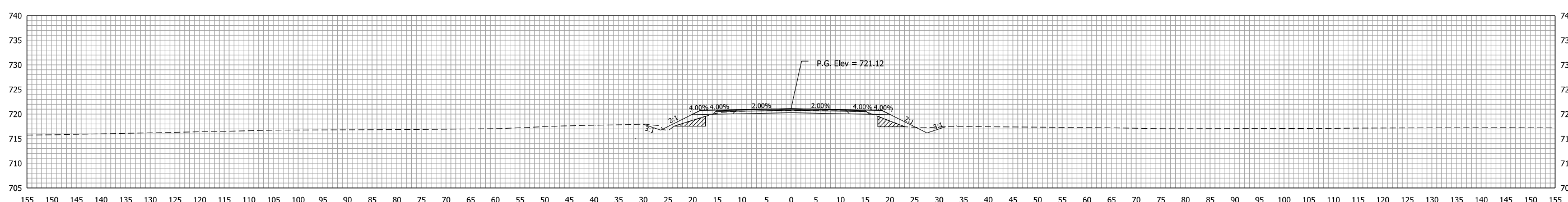
SCALE 1"=10'	BRIDGE FILE 018-04-10730
	DESIGNATION 2002000
SURVEY BOOK ELECTRONIC	SHEETS 14 of 19
CONTRACT B-43453	PROJECT 2002000

STA. 366+77.00 TO STA. 367+50.00



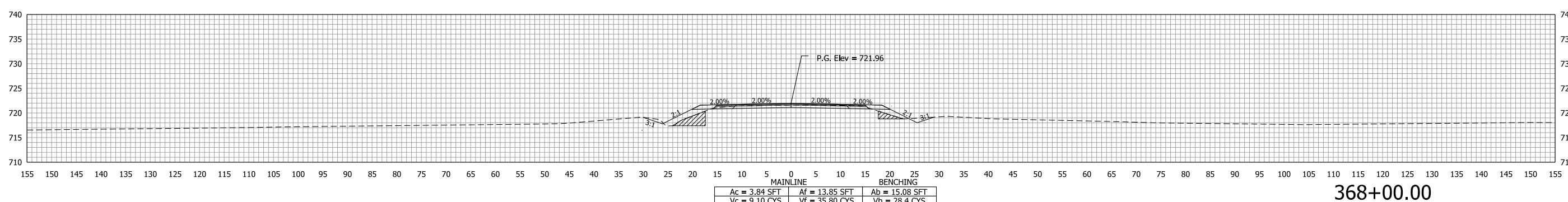
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Ac = 2.02 SFT	Af = 63.67 SFT	Ab = 6.75 SFT			
Vc = 2.50 CYS	Vf = 27.30 CYS	Vb = 6.7 CYS			

368+69.00



MAINLINE			BENCHING		
Ac = 5.07 SFT	Af = 13.90 SFT	Ab = 12.28 SFT			
Vc = 8.30 CYS	Vf = 25.70 CYS	Vb = 25.3 CYS			

368+50.00



MAINLINE			BENCHING		
Ac = 3.84 SFT	Af = 13.85 SFT	Ab = 15.08 SFT			
Vc = 9.10 CYS	Vf = 35.80 CYS	Vb = 28.4 CYS			

368+00.00

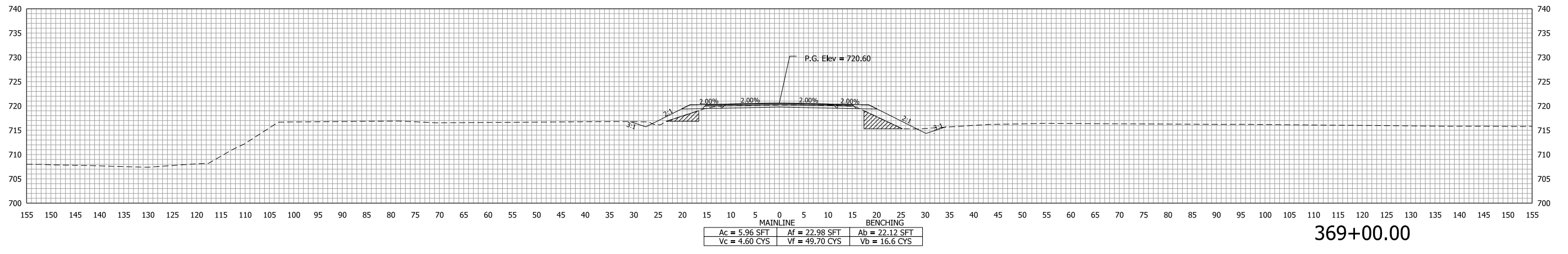
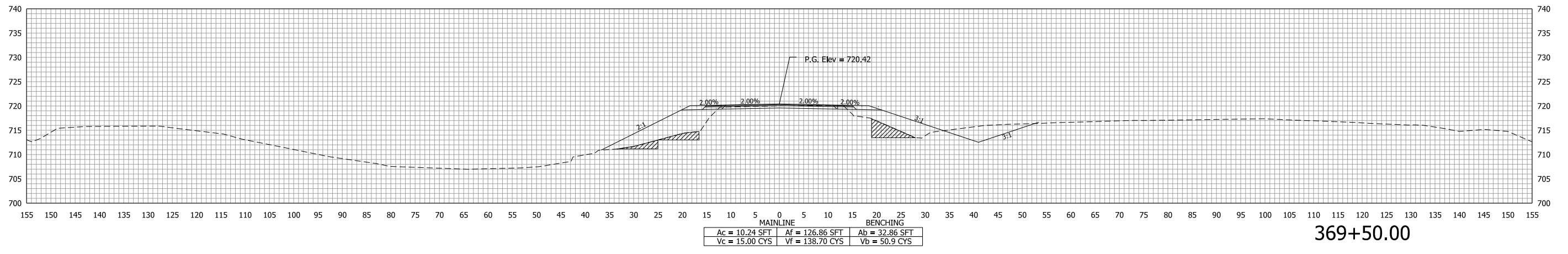
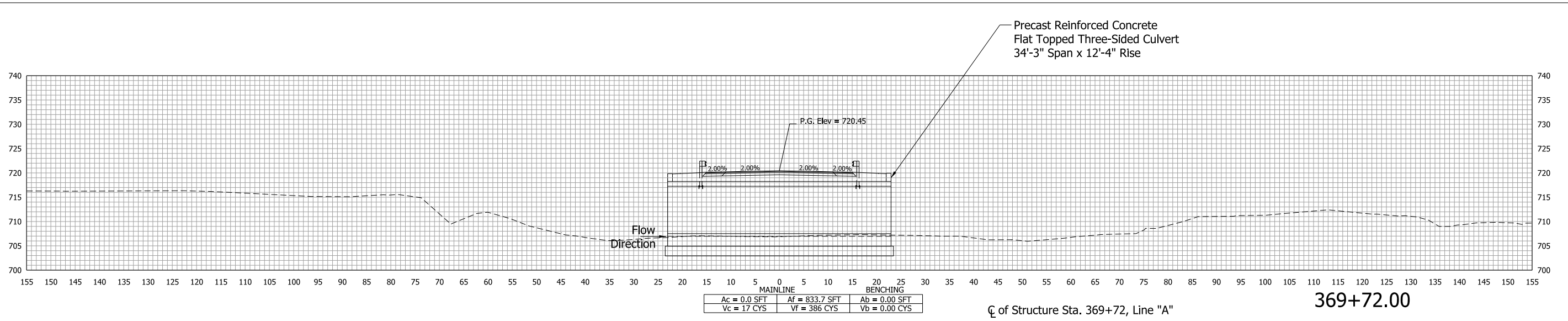
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DESIGNED: MTC	1/2023	DRAWN: MTC
CHECKED: DR	1/2023	CHECKED: DR

INDIANA DEPARTMENT OF TRANSPORTATION	
CROSS SECTIONS LINE "A"	

SCALE 1"=10'	BRIDGE FILE 018-04-10730
	DESIGNATION 2002000
SURVEY BOOK ELECTRONIC	SHEETS 15 of 19
CONTRACT B-43453	PROJECT 2002000

STA. 368+00.00 TO STA. 368+69.00



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Model: Line A_1

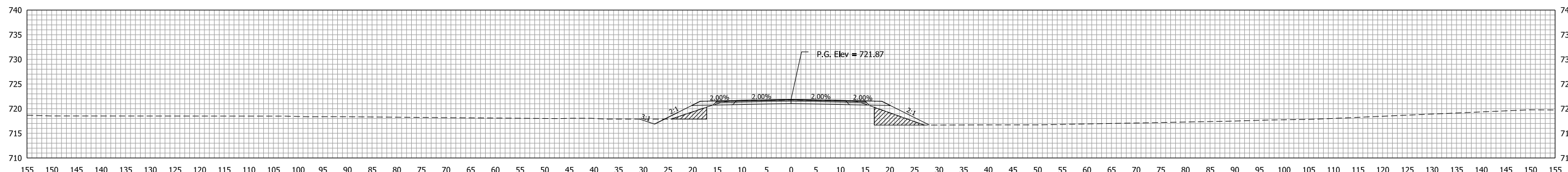
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MTC	1/2023	DRAWN: MTC 1/2023
CHECKED: DR	1/2023	CHECKED: DR 1/2023

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "A"

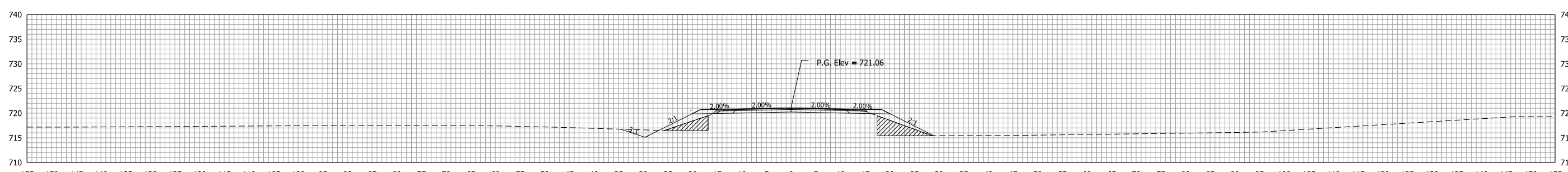
SCALE 1"=10'	BRIDGE FILE 018-04-10730
	DESIGNATION 2002000
SURVEY BOOK ELECTRONIC	SHEETS 16 of 19
CONTRACT B-43453	PROJECT 2002000

STA. 369+00.00 TO STA. 369+72.00



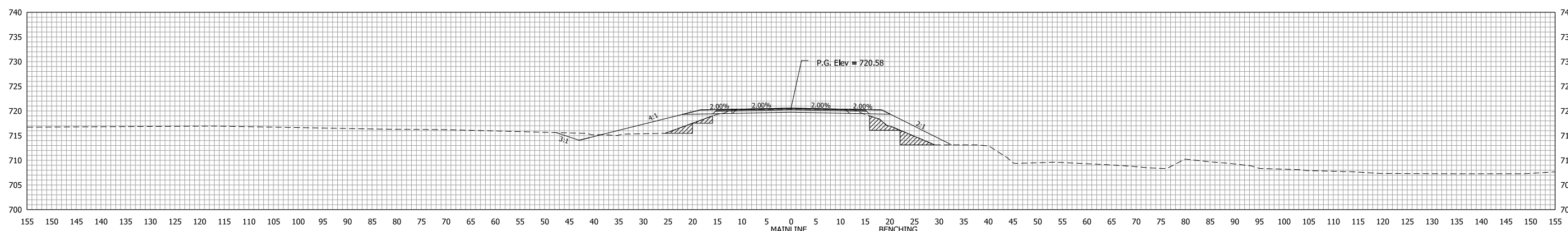
MAINLINE		BENCHING	
Ac = 2.54 SFT	Af = 18.42 SFT	Ab = 27.17 SFT	
Vc = 7.70 CYS	Vf = 34.00 CYS	Vb = 58.6 CYS	

371+00.00



MAINLINE		BENCHING	
Ac = 5.81 SFT	Af = 18.31 SFT	Ab = 36.14 SFT	
Vc = 11.40 CYS	Vf = 77.50 CYS	Vb = 59.5 CYS	

370+50.00



MAINLINE		BENCHING	
Ac = 6.45 SFT	Af = 65.41 SFT	Ab = 28.15 SFT	
Vc = 3.30 CYS	Vf = 33.90 CYS	Vb = 14.6 CYS	

370+00.00

Pkt: 8/28/2023 9:22 AM

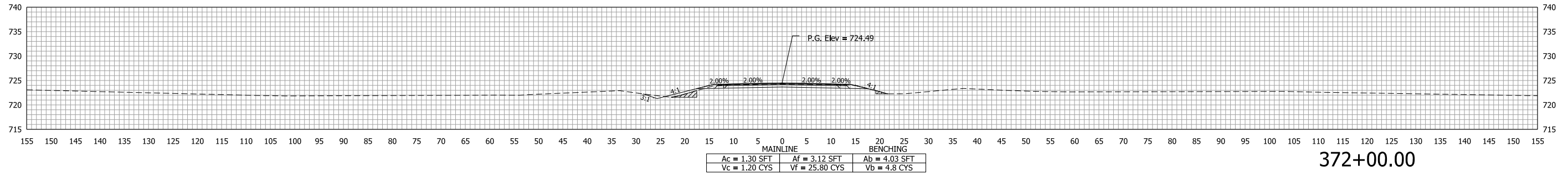
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MTC	1/2023	1/2023
CHECKED: DR	1/2023	1/2023

INDIANA
DEPARTMENT OF TRANSPORTATION

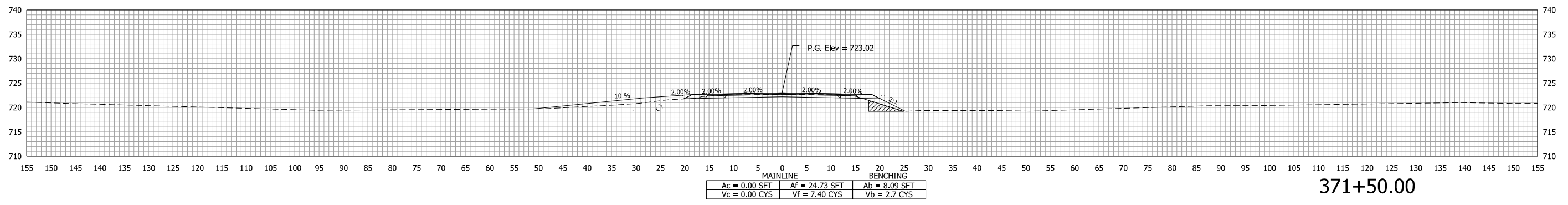
CROSS SECTIONS
LINE "A"

SCALE 1"=10'	BRIDGE FILE 018-04-10730
	DESIGNATION 2002000
SURVEY BOOK ELECTRONIC	SHEETS 17 of 19
CONTRACT B-43453	PROJECT 2002000

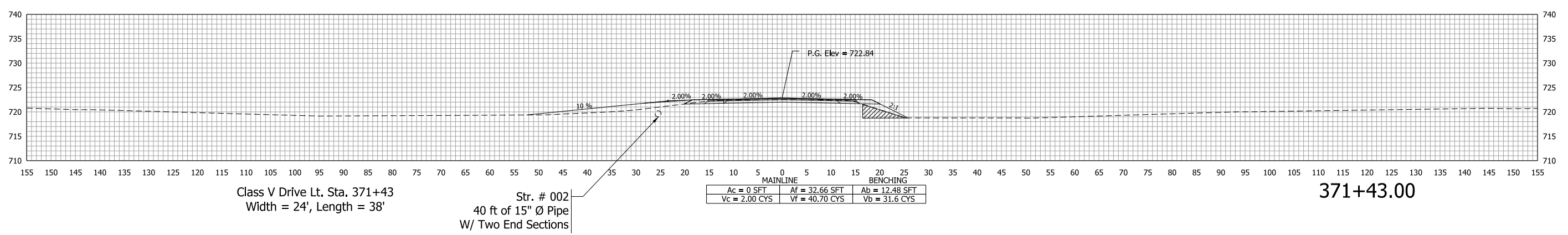
STA. 370+00.00 TO STA. 371+00.00



372+00.00



371+50.00



Class V Drive Lt. Sta. 371+43
Width = 24', Length = 38'

Str. # 002
40 ft of 15" Ø Pipe
W/ Two End Sections

371+43.00

Pkt: 8/28/2023 9:22 AM

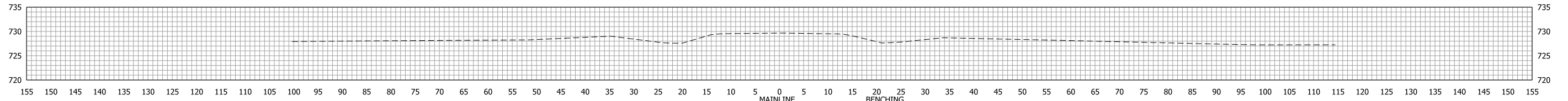
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Model: Line A_1

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MTC	1/2023	DRAWN: MTC
CHECKED: DR	1/2023	CHECKED: DR

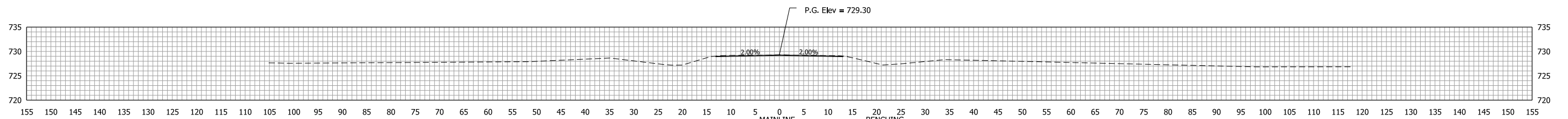
INDIANA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS LINE "A"

SCALE 1"=10'	BRIDGE FILE 018-04-10730
	DESIGNATION 2002000
SURVEY BOOK ELECTRONIC	SHEETS 18 of 19
CONTRACT B-43453	PROJECT 2002000

STA. 371+43.00 TO STA. 372+00.00

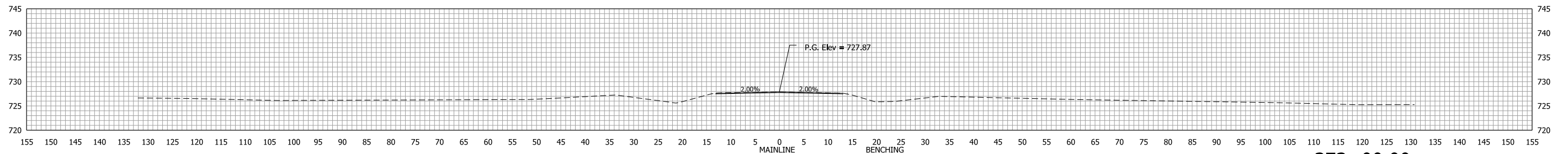


373+50.00

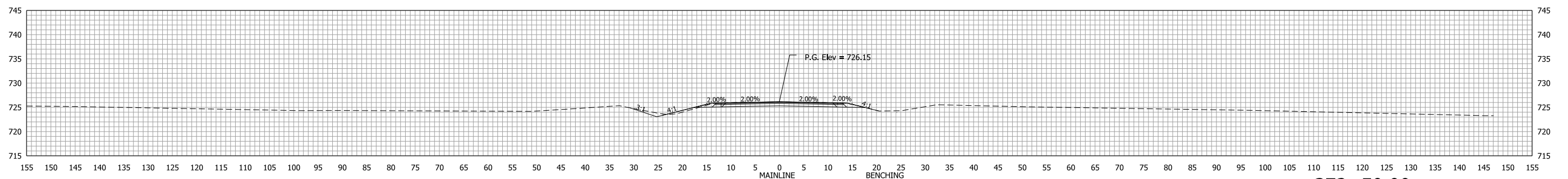


373+40.00

End Incidental Construction Sta. 373+44, Line "A"



373+00.00



372+50.00

End Project Sta. 372+50, Line "A"

Pkt: 8/28/2023 9:23 AM

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: MTC	1/2023	1/2023
CHECKED: DR	1/2023	1/2023

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "A"

SCALE 1"=10'	BRIDGE FILE 018-04-10730
	DESIGNATION 2002000
SURVEY BOOK ELECTRONIC	SHEETS 19 of 19
CONTRACT B-43453	PROJECT 2002000