ARKANSAS DEPARTMENT OF TRANSPORTATION

SCOTT E. BENNETT, P.E. - DIRECTOR
PRELIMINARY DESIGN SCHEMATIC

I-49 PROJECT
CRAWFORD AND SEBASTIAN COUNTIES

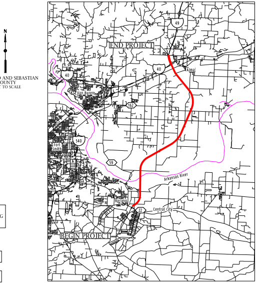
I-49
FROM HIGHWAY 22 TO INTERSTATE 40

PROJECT LENGTH - 14.3 MILES

ROADWAY TYPE	DESIGN SPEED
MAIN LANES	70 MPH
DIRECT CONNECTORS	40 MPH - 50 MPH
DIAGONAL/DIRECTIONAL RAMPS	40 MPH - 50 MPH
LOOP RAMPS	30 MPH - 35 MPH
CROSS STREETS	40 MPH

I-49 PROJECT
HIGHWAY CLASSIFICATION
URBAN FREEWAY

CRAWFORD AND SEBASTIAN
COUNTY
NOT TO SCALE


N
49
END PROJECT
40
Alma
40
Van Buren
162
540
Fort Smith
59
Arkansas River
Barling
22
Central City
BEGIN PROJECT

PRELIMINARY SUBJECT TO CHANGE BASED ON FURTHER DEVELOPMENTS RESULTING FROM PUBLIC INPUT AND TECHNICAL REVIEW.

NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.

DATE APPROVED ☐

DATE SUBMITTED ☐

DATE REVISED ☐

DATE: APRIL 26, 2018
PREPARED BY HNTB
UNDER THE SUPERVISION OF:
RUSSELL K. OZMER, P.E.

LICENSE NO. 17220

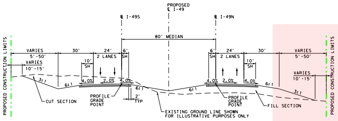
TABLE OF CONTENTS:

	ROLL
PLAN/PROFILE	1-8
PROFILES	9

0 100 200
HORIZONTAL
0 20 40
VERTICAL

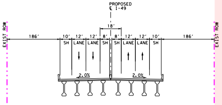
SHEET 2 OF 9

HNTB Corporation
The HNTB Companies
Engineers Architects Planners

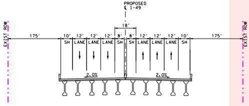

PROPOSED
℄ I-49
℄ I-49S
℄ I-49N
80' MEDIAN
PROPOSED CONSTRUCTION LIMITS
VARIES
5'-50'
VARIES
10'-15'
30'
24'
2 LANES
6'
SH
10'
SH
4.0%
2.0%
4.0%
3:1
6:1
6:1
6:1
6:1
3:1
CUT SECTION
PROFILE GRADE POINT
2' TYP
EXISTING GROUND LINE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY
FILL SECTION
PROPOSED CONSTRUCTION LIMITS

PROPOSED I-49

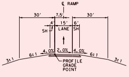
THIS TYPICAL SECTION DOES NOT REFLECT RAMPS, AUXILIARY LANES OR LANE CONFIGURATION AT INTERSECTIONS.
SECTION IS SHOWN TO ILLUSTRATE TYPICAL LANE CONFIGURATION FOR THE LENGTH OF THIS PROJECT.
SECTION SHOWN ALSO DOES NOT REFLECT CROSS SLOPE CHANGES.


PROPOSED
℄ I-49
18'
EXIST ROW
186'
10' SH
12' LANE
12' LANE
8' SH
8' SH
12' LANE
12' LANE
10' SH
186'
2.0%
2.0%
EXIST ROW

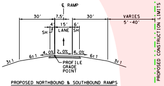
PROPOSED BRIDGE OVER ARKANSAS RIVER


PROPOSED
℄ I-49
18'
EXIST ROW
175'
10' SH
12' LANE
12' LANE
12' LANE
8' SH
8' SH
12' LANE
12' LANE
12' LANE
10' SH
175'
2.0%
2.0%
EXIST ROW

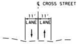
PROPOSED BRIDGE OVER ARKANSAS RIVER
WITH ACCELERATION AND DECELERATION LANES


℄ RAMP
30'
7.5'
30'
4'
15'
6'
SH
LANE
SH
4.0%
2.0%
4.0%
3:1
6:1
6:1
3:1
PROFILE
GRADE
POINT

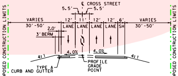
PROPOSED NORTHBOUND & SOUTHBOUND LOOP RAMPS
SHOWN IN DIRECTION OF TRAFFIC


℄ RAMP
30'
7.5'
30'
VARIES
5'-40'
4'
15'
6'
SH
LANE
SH
4.0%
2.0%
4.0%
3:1
6:1
6:1
3:1
PROFILE
GRADE
POINT
PROPOSED CONSTRUCTION LIMITS

PROPOSED NORTHBOUND & SOUTHBOUND RAMPS
SHOWN IN DIRECTION OF TRAFFIC


℄ CROSS STREET
11'
11'
LANE
LANE

EXISTING GUN CLUB RD


PROPOSED CONSTRUCTION LIMITS
℄ CROSS STREET
5.5'
5.5'
VARIES
30'-50'
12'
11'
12'
12'
6'
VARIES
30'-50'
LANE
LANE
LANE
LANE
SH
2.0'
3' BERM
4.0%
4.0%
4:1
4:1
TYPE A
CURB AND GUTTER
PROFILE
GRADE
POINT
PROPOSED CONSTRUCTION LIMITS

PROPOSED CROSS STREET AT GUN CLUB RD

CURVE NO.	STATION	COORDINATE		BEARING / DELTA	LENGTH	TANGENT	RADIUS
		NORTHING	EASTING		(FT)	(FT)	(FT)
℄ I-49 ML (DESIGN SPEED: 70 MPH)							
I-49 ML C-2	P.C. 261+49.08	382982.1595	632372.6352	N 0°34'10.71" E			
	P.I. 294+47.85	386280.7691	632405.4314	59°54'03.87" RT	5985.3736	3298.7726	5725.05
	P.T. 321+34.45	387906.6297	635275.7063	N 60°28'14.57" E			

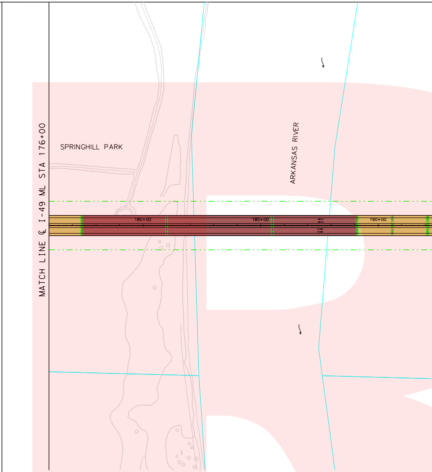
CURVE NO.	STATION	COORDINATE		BEARING / DELTA	LENGTH	TANGENT	RADIUS
		NORTHING	EASTING		(FT)	(FT)	(FT)
℄ GUN CLUB RD (DESIGN SPEED: 40 MPH)							
GUN CLUB C-1	P.C. 29+06.89	382520.6586	632453.6625	S 87°28'17.14" E			
	P.I. 29+62.76	382518.1935	632509.4854	0°38'25.08" RT	111.7533	55.8772	10000
	P.T. 30+18.64	382515.1046	632565.2771	S 86°49'52.06" E			

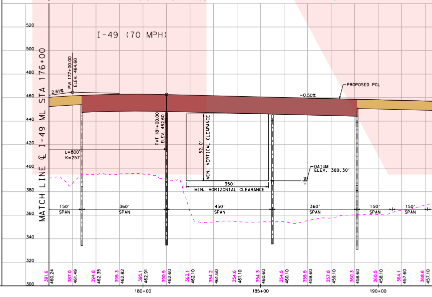
CURVE NO.	STATION	COORDINATE		BEARING / DELTA	LENGTH	TANGENT	RADIUS
		NORTHING	EASTING		(FT)	(FT)	(FT)
℄ NE LOOP RAMP AT GUN CLUB RD (DESIGN SPEED: 35 MPH)							
NE LP AT GC C-1	P.C. 10+00.00	382390.2488	632404.252	N 0°34'10.71" E			
	P.I. 11+43.18	382533.4169	632405.6754	4°00'00.00" RT	286.234	143.1752	4100
	P.T. 12+86.23	382676.1369	632417.0823	N 4°34'10.71" E			
NE LP AT GC C-2	P.C. 16+04.62	382993.514	632442.4486	N 4°34'10.71" E			
	P.I. 22+12.43	383599.3857	632490.8728	110°42'36.29" RT	811.5473	607.8037	420
	P.C.C. 24+16.17	383339.8305	633040.4694	S 64°43'13.01" E			
NE LP AT GC C-3	P.C.C. 24+16.17	383339.8305	633040.4694	S 64°43'13.01" E			
	P.I. 28+07.01	383172.929	633393.876	91°36'38.40" RT	607.585	390.8354	380
	P.C.C. 30+23.76	382824.3533	633217.107	S 26°53'25.40" W			
NE LP AT GC C-4	P.C.C. 30+23.76	382824.3533	633217.107	S 26°53'25.40" W			
	P.I. 33+40.28	382521.5699	633063.56	66°16'42.54" RT	601.5244	339.4915	520
	P.T. 36+02.31	382540.3367	632724.5877	N 86°49'52.06" W			

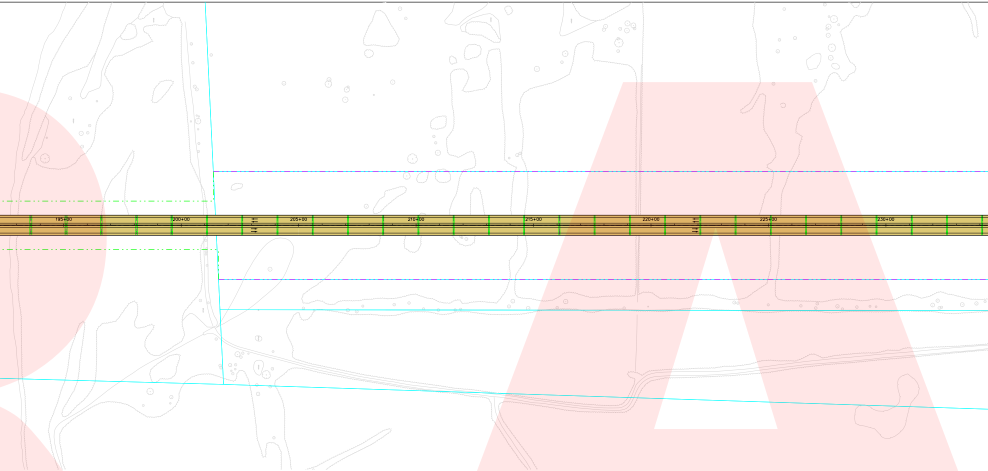
CURVE NO.	STATION	COORDINATE		BEARING / DELTA	LENGTH	TANGENT	RADIUS
		NORTHING	EASTING		(FT)	(FT)	(FT)
℄ NE RAMP AT GUN CLUB RD (DESIGN SPEED: 50 MPH)							
NE RP AT GC C-1	P.C. 16+05.66	383079.056	633335.4733	N 3°10'07.94" E			
	P.I. 19+13.95	383386.8666	633352.5148	34°16'01.86" LT	598.0752	308.2821	1000
	P.T. 22+03.74	383650.8431	633193.2846	N 31°05'53.92" W			
NE RP AT GC C-2	P.C. 26+93.01	384069.7986	632940.5713	N 31°05'53.92" W			
	P.I. 30+88.19	384408.1846	632736.4575	43°07'33.31" RT	752.6893	395.1804	1000
	P.C.C. 34+45.70	384794.6897	632818.8063	N 12°01'39.39" E			
NE RP AT GC C-3	P.C.C. 34+45.70	384794.6897	632818.8063	N 12°01'39.39" E			
	P.I. 38+83.72	385223.097	632910.0829	16°17'33.03" RT	870.1351	438.0231	3060
	P.T. 43+15.84	385608.6935	633117.8799	N 28°19'12.42" E			

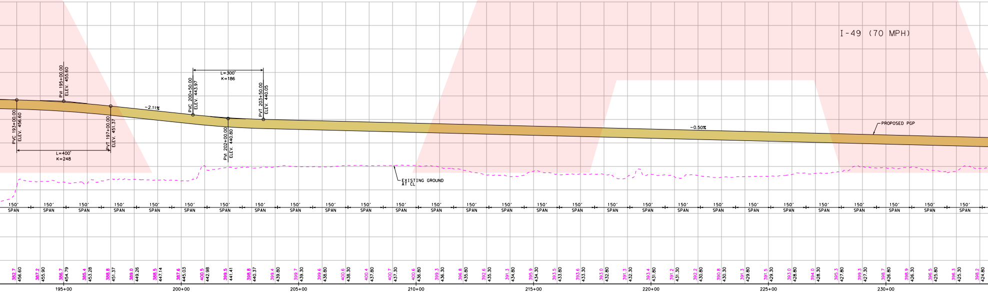
CURVE NO.	STATION	COORDINATE		BEARING / DELTA	LENGTH	TANGENT	RADIUS
		NORTHING	EASTING		(FT)	(FT)	(FT)
℄ NW LOOP RAMP AT GUN CLUB RD (DESIGN SPEED: 35 MPH)							
NW LP AT GC C-1	P.C. 10+00.00	382576.618	631957.1503	N 87°28'17.14" W			
	P.I. 10+90.85	382580.626	631866.3911	18°25'45.82" RT	180.126	90.8476	560
	P.C.C. 11+80.13	382613.1207	631781.5537	N 69°02'31.32" W			
NW LP AT GC C-2	P.C.C. 11+80.13	382613.1207	631781.5537	N 69°02'31.32" W			
	P.I. 14+33.08	382703.5965	631545.3382	70°11'12.12" RT	440.996	252.9498	360
	P.T. 16+21.12	382956.4958	631550.3914	N 1°08'40.80" E			
NW LP AT GC C-3	P.C. 18+53.65	383188.9738	631555.0365	N 1°08'40.79" E			
	P.I. 18+95.92	383231.2365	631555.8809	1°23'02.07" RT	84.5381	42.2711	3500
	P.T. 19+38.18	383273.4664	631557.7458	N 2°31'42.86" E			
NW LP AT GC C-4	P.C. 20+50.14	383385.3134	631562.6851	N 2°31'42.86" E			
	P.I. 67+39.57	388070.1731	631769.5712	171°27'47.42" RT	1047.4089	4689.4256	350
	P.T. 30+97.55	383406.5074	632260.4217	S 6°00'29.72" E			
NW LP AT GC C-5	P.C. 36+02.08	382904.7525	632313.2313	S 6°00'29.72" E			
	P.I. 37+86.54	382721.2996	632332.5398	6°34'40.43" RT	368.5271	184.4662	3210
	P.T. 39+70.60	382536.8425	632330.7058	S 0°34'10.70" W			

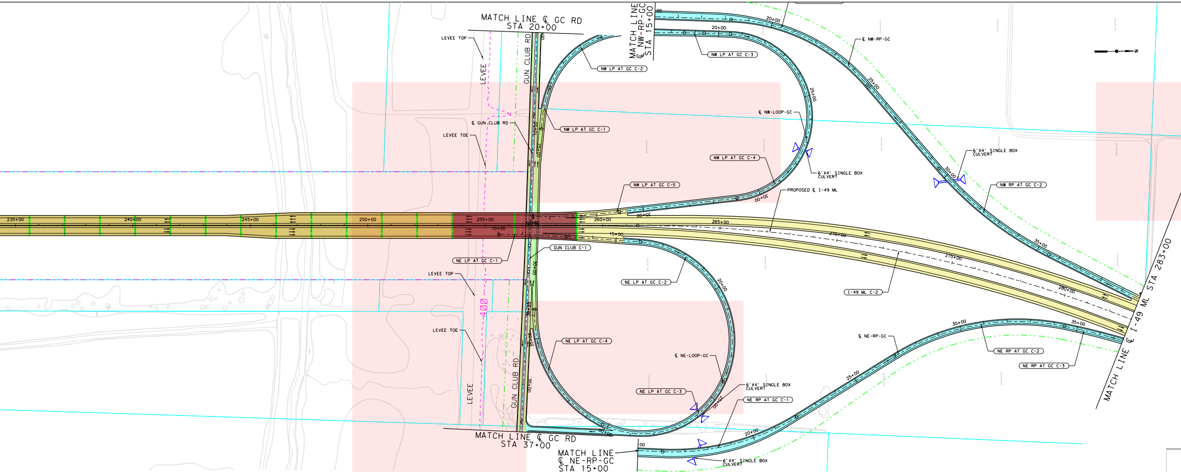
CURVE NO.	STATION	COORDINATE		BEARING / DELTA	LENGTH	TANGENT	RADIUS
		NORTHING	EASTING		(FT)	(FT)	(FT)
℄ NW RAMP AT GUN CLUB RD (DESIGN SPEED: 50 MPH)							
NW RP AT GC C-1	P.C. 18+24.51	383388.0928	631499.7464	N 2°31'42.86" E			
	P.I. 21+75.96	383739.2015	631515.2516	47°25'59.09" RT	662.2907	351.4509	800
	P.T. 24+86.80	383965.29	631784.3273	N 49°57'41.94" E			
NW RP AT GC C-2	P.C. 29+55.70	384266.9371	632143.3281	N 49°57'41.94" E			
	P.I. 32+58.82	384461.9307	632375.3967	22°50'54.76" LT	598.1735	303.1144	1500
	P.T. 35+53.88	384731.7354	632513.5407	N 27°06'47.19" E			


MATCH LINE ℄ I-49 ML STA 176+00
SPRINGHILL PARK
ARKANSAS RIVER
180+00
185+00
190+00


MATCH LINE ℄ I-49 ML STA 176+00
I-49 (70 MPH)
520
500
480
460
440
420
400
380
360
340
320
300
2.61%
PVI 177+00.00
ELEV. 464.60
PVT 181+00.00
ELEV. 462.60
L=800'
K=257
-0.50%
PROPOSED PGL
52.0'
MIN. VERTICAL CLEARANCE
350'
MIN. HORIZONTAL CLEARANCE
DATUM
ELEV. 389.30'
150'
SPAN
360'
SPAN
450'
SPAN
360'
SPAN
150'
SPAN
150'
SPAN
391.6
460.24
387.0
461.49
394.8
462.35
395.3
462.82
395.1
462.91
390.5
462.60
363.1
462.10
354.2
461.60
354.6
461.10
354.3
460.60
354.5
460.10
355.5
459.60
357.8
459.10
360.3
458.60
360.5
458.10
364.1
457.60
368.6
457.10
180+00
185+00
190+00


195+00
200+00
205+00
210+00
215+00
220+00
225+00
230+00


I-49 (70 MPH)
PVI 195+00.00
ELEV. 455.60
PVC 193+00.00
ELEV. 456.60
PVT 197+00.00
ELEV. 451.37
L=400'
K=248
-2.11%
PVC 200+50.00
ELEV. 443.97
L=300'
K=186
PVT 203+50.00
ELEV. 440.05
PVI 202+00.00
ELEV. 440.80
-0.50%
PROPOSED PGP
EXISTING GROUND
AT CL
150' SPAN
382.7 456.60
387.2 455.90
386.7 454.79
385.4 453.28
388.8 451.37
389.0 449.26
388.5 447.14
387.6 445.03
400.5 442.98
399.5 441.41
398.8 440.37
399.4 439.80
399.7 439.30
399.6 438.80
400.6 438.30
400.4 437.80
400.7 437.30
400.6 436.80
399.3 436.30
396.8 435.80
392.6 435.30
391.3 434.80
395.9 434.30
393.5 433.80
393.6 433.30
393.0 432.80
391.3 432.30
393.4 431.80
391.2 431.30
392.2 430.80
390.8 430.30
391.3 429.80
391.5 429.30
393.0 428.80
394.0 428.30
395.3 427.80
399.3 427.30
398.7 426.80
398.9 426.30
396.5 425.80
396.3 425.30
398.2 424.80
195+00
200+00
205+00
210+00
215+00
220+00
225+00
230+00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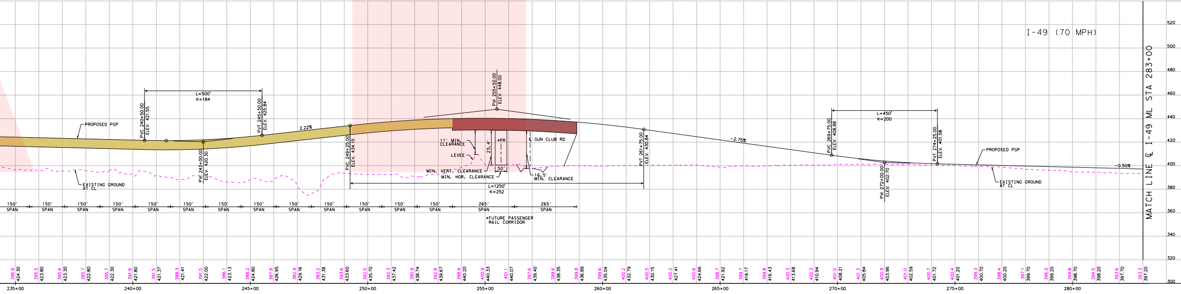
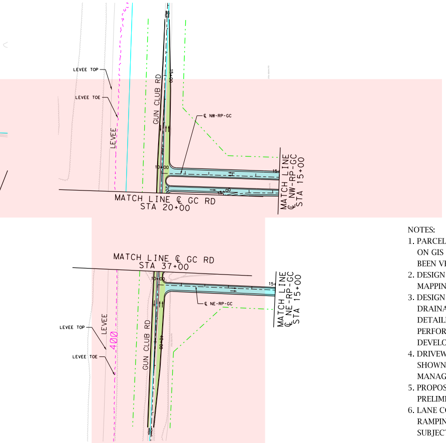
STA 20+00
MATCH LINE ℄ NW-RP-GC
STA 15+00
LEVEE TOP
LEVEE
GUN CLUB RD
NW LP AT GC C-2
NW LP AT GC C-3
℄ NW-RP-GC
℄ GUN CLUB RD
NW LP AT GC C-1
LEVEE TOE
℄ NW-LOOP-GC
NW LP AT GC C-4
6'X4' SINGLE BOX CULVERT
6'X4' SINGLE BOX CULVERT
NW RP AT GC C-2
NW LP AT GC C-5
PROPOSED ℄ I-49 ML
235+00
240+00
245+00
250+00
255+00
260+00
265+00
270+00
275+00
280+00
NE LP AT GC C-1
GUN CLUB C-1
LEVEE TOP
NE LP AT GC C-2
I-49 ML C-2
400
LEVEE TOE
NE LP AT GC C-4
℄ NE-RP-GC
NE RP AT GC C-2
NE RP AT GC C-3
℄ NE-LOOP-GC
6'X4' SINGLE BOX CULVERT
NE LP AT GC C-3
NE RP AT GC C-1
LEVEE
GUN CLUB RD
MATCH LINE ℄ GC RD
STA 37+00
MATCH LINE
℄ NE-RP-GC
STA 15+00
6'X4' SINGLE BOX CULVERT
MATCH LINE ℄ I-49 ML STA 283+00
N

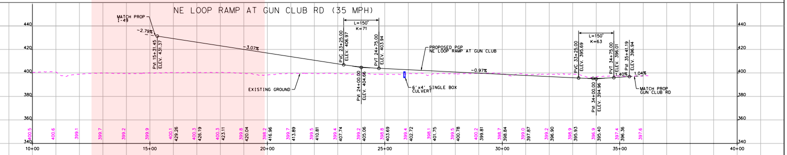

I-49 (70 MPH)
520
500
480
460
440
420
400
380
360
340
320
300
L=500'
K=184
PVC 240+50.00 ELEV. 421.55
PVT 245+50.00 ELEV. 425.84
PVI 243+00.00 ELEV. 420.30
PROPOSED PGP
2.22%
PVC 249+25.00 ELEV. 434.15
PVI 255+50.00 ELEV. 448.00
11' MIN. CLEARANCE
23.4'
*PR
℄ GUN CLUB RD
LEVEE
50'
MIN. VERT. CLEARANCE
MIN. HOR. CLEARANCE
16.5' MIN. CLEARANCE
L=1250'
K=252
PVT 261+75.00 ELEV. 430.84
-2.75%
L=450'
K=200
PVC 269+75.00 ELEV. 408.88
PVI 272+00.00 ELEV. 402.70
PVT 274+25.00 ELEV. 401.58
PROPOSED PGP
-0.50%
EXISTING GROUND AT CL
EXISTING GROUND AT CL
150' SPAN
150' SPAN
150' SPAN
150' SPAN
150' SPAN
150' SPAN
150' SPAN
150' SPAN
150' SPAN
150' SPAN
150' SPAN
150' SPAN
150' SPAN
265' SPAN
265' SPAN
*FUTURE PASSENGER RAIL CORRIDOR
MATCH LINE ℄ I-49 ML STA 283+00
396.8 424.30
395.5 423.80
395.6 423.30
395.7 422.80
395.7 422.30
391.8 421.80
391.5 421.37
388.3 421.41
391.5 422.00
386.1 423.13
388.2 424.80
387.8 426.95
382.9 429.16
383.2 431.38
393.6 433.60
392.5 435.70
392.3 437.42
390.9 438.74
392.8 439.67
398.8 440.20
400.9 440.33
401.1 440.07
397.6 439.40
399.6 438.35
399.8 436.89
399.6 435.04
400.2 432.79
400.5 430.15
400.2 427.41
400.6 424.66
398.7 421.92
399.7 419.17
399.8 416.43
400.3 413.68
400.3 410.94
401.0 408.21
401.3 405.84
400.9 403.96
401.0 402.59
400.7 401.72
400.4 401.20
399.3 400.70
398.4 400.20
397.1 399.70
396.0 399.20
394.8 398.70
394.5 398.20
393.6 397.70
393.3 397.20
235+00
240+00
245+00
250+00
255+00
260+00
265+00
270+00
275+00
280+00

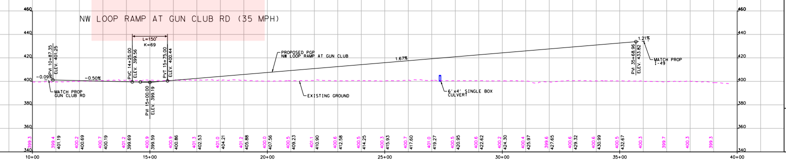

LEVEE TOP
LEVEE TOE
LEVEE
GUN CLUB RD
℄ NW-RP-GC
MATCH LINE ℄ GC RD
STA 20+00
MATCH LINE
℄ NW-RP-GC
STA 15+00
MATCH LINE ℄ GC RD
STA 37+00
MATCH LINE
℄ NE-RP-GC
STA 15+00
℄ NE-RP-GC
LEVEE TOP
LEVEE TOE
LEVEE
400
GUN CLUB RD

NOTES:
1. PARCELS SHOWN ARE BASED ON GIS DATA AND HAVE NOT BEEN VERIFIED BY FIELD SURVEY.
2. DESIGN BASED ON LiDAR MAPPING 2017/2018.
3. DESIGN BASED ON AVAILABLE DRAINAGE CONSTRAINT INFORMATION. DETAILED DRAINAGE ANALYSIS TO BE PERFORMED IN SUBSEQUENT PROJECT DEVELOPMENT PHASES.
4. DRIVEWAY LOCATIONS ARE NOT SHOWN AND SUBJECT TO ACCESS MANAGEMENT POLICIES.
5. PROPOSED CONSTRUCTION LIMITS ARE PRELIMINARY AND SUBJECT TO CHANGE.
6. LANE CONFIGURATION LAYOUT AND RAMPING SCHEME IS PRELIMINARY AND SUBJECT TO CHANGE.

LEGEND

🟨	Main Lanes
🟥	Direct Connector
🟩	Cross-Streets
🟦	Ramps (Diagonal/Directional/Loop)
🟨	Concrete Bridge Structure
🟫	Steel Bridge Structure
— · —	Bridge Substructure
- - -	Existing Storm Drain
—	Proposed Storm Drain
⬜	Bicycle / Pedestrian
⬛	Driveway / Cul-De-Sac
🟪	Potential Impacts
🟦	Zone A / AE Floodplain
⬜	Zone X Floodplain
▨	Zone AE Floodway
🟪	Cemetery
- · -	Existing STATE ROW
- · -	Proposed Construction Limits
— · —	Proposed Centerline / Baseline
—	Proposed Retaining Wall
🟩	Project By Others
▨	Drainage Easement
—	Property Line
▨	Removal





ARKANSAS DEPARTMENT OF TRANSPORTATION

SCOTT E. BENNETT, P.E. - DIRECTOR
PRELIMINARY DESIGN SCHEMATIC

I-49 PROJECT
CRAWFORD AND SEBASTIAN COUNTIES

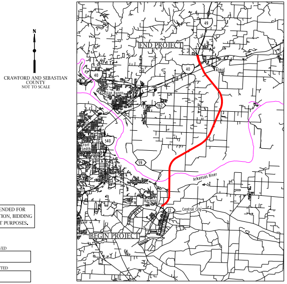
I-49
FROM HIGHWAY 22 TO INTERSTATE 40

PROJECT LENGTH - 14.3 MILES

ROADWAY TYPE	DESIGN SPEED
MAIN LANES	70 MPH
DIRECT CONNECTORS	40 MPH - 50 MPH
DIAGONAL/DIRECTIONAL RAMPS	40 MPH - 50 MPH
LOOP RAMPS	30 MPH - 35 MPH
CROSS STREETS	40 MPH

I-49 PROJECT
HIGHWAY CLASSIFICATION

URBAN FREEWAY


N
CRAWFORD AND SEBASTIAN COUNTY
NOT TO SCALE
END PROJECT
BEGIN PROJECT
49
40
Alma
Van Buren
162
540
Fort Smith
59
Arkansas River
Barling
22
Central City

PRELIMINARY SUBJECT TO CHANGE BASED ON FURTHER DEVELOPMENTS RESULTING FROM PUBLIC INPUT AND TECHNICAL REVIEW.

NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.

DATE APPROVED

DATE SUBMITTED

DATE REVISED

0 100 200
HORIZONTAL
0 20 40
VERTICAL

DATE: APRIL 26, 2018
PREPARED BY HNTB
UNDER THE SUPERVISION OF:
RUSSELL K. OZMER, P.E.

LICENSE NO. 17220

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HNTB
HNTB Corporation
The HNTB Companies
Engineers Architects Planners

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ARKANSAS DEPARTMENT OF TRANSPORTATION