RED ROCK
CONSULTING

Report of Geotechnical Investigation

OF

I-35 PAVEMENT AND SUBGRADE SURVEY
MCCLAIN COUNTY, OKLAHOMA

35589(04)

Prepared For:

Olsson Associates
11600 Broadway Extension, Suite 300
Oklahoma City, Oklahoma 73114
Attention: Mr. Russell Beaty, PE

Prepared By:

Red Rock Consulting, LLC
PO Box 30591
Edmond, Oklahoma 73003
(405) 562-3328

June 23, 2023
Project No. 22118

RED ROCK
CONSULTING

June 23, 2023

Olsson Associates
11600 Broadway Extension, Suite 300
Oklahoma City, Oklahoma 73114

Attention: Mr. Russell Beaty, PE

Re: Report of Geotechnical Investigation
I-35 Pavement and Subgrade Survey
35589(04)
McClain County, Oklahoma
Project No. 22118

Dear Mr. Beaty:

I am pleased to submit herewith this report entitled "Geotechnical Investigation, I-35 Pavement and Subgrade Survey, 35589(04), McClain County, Oklahoma".

In an effort to provide a more environmentally friendly service, this report has been provided electronically.

It has been our pleasure to assist you with this project. Should you have any questions regarding the contents of this report, please contact Red Rock Consulting.

Yours very truly,
RED ROCK CONSULTING, LLC
CA No. 5707 Exp. 06/30/23

Emma Coggin, EI
Project Specialist

Jeremy Basler, PE
Geotechnical Manager
Oklahoma PE No. 20233

REGISTERED PROFESSIONAL ENGINEER
JEREMY BASLER
6-23-2023
20233
OKLAHOMA

REPORT OF GEOTECHNICAL INVESTIGATION

I-35 PAVEMENT AND SUBGRADE SURVEY
MCCLAIN COUNTY, OKLAHOMA

35589(04)

PROJECT NO. 22118

APPENDICES

REPORT OF GEOTECHNICAL INVESTIGATION

I-35 PAVEMENT AND SUBGRADE SURVEY
MCCLAIN COUNTY, OKLAHOMA

35589(04)

PROJECT NO. 22118

INTRODUCTION

General

This report presents the results of the geotechnical investigation performed for the potential overlay or reconstruction of the existing pavement of the I-35 mainline along the current alignment from 1.0 mile south of Ladd Road extending north approximately 4.7 miles in McClain County, Oklahoma.

Proposed Construction

The proposed project will include the potential overlay or reconstruction of the existing pavement of the I-35 mainline along the current alignment from 1.0 mile south of Ladd Road extending north approximately 4.7 miles in McClain County, Oklahoma. The project also includes the widening of the existing pavement of I-35 in the center median and outside lanes to accommodate adding one lane of traffic in each direction.

The purpose of this investigation is to evaluate the existing pavement, base and subgrade materials at the site and to provide information pertaining to the geotechnical aspects of the proposed project.

Scope of Work

The scope of this investigation includes the following:

1. Review of previous geotechnical and geological information of sites near this site. This was augmented with data obtained during the field investigation phase of the project.

2. Evaluation of the existing pavement using Falling Weight Deflectometer (FWD) testing

3. Investigation of the subsurface soils of the mainline pavement by coring, drilling, sampling and testing a total of 46 boreholes within the planned project area

4. A laboratory testing program consisting of moisture content, Atterberg limits, and full sieve tests on the soils encountered

FIELD AND LABORATORY INVESTIGATIONS

Field Exploration

Falling Weight Deflectometer (FWD) testing was performed by Naji Khoury on December 6th, 2022 along the existing I-35 in accordance with Oklahoma Department of Transportation's (ODOT) Geotechnical Specifications for Roadway Design (2011). The tests were performed in the outside wheel path of the outside lane approximately every 500 feet or less per lane, staggered at a spacing of 250 feet or less between the northbound and southbound lanes. After completing the FWD testing, the data was analyzed and the structural properties of the pavement and subgrade layers were provided for each testing location. The full FWD report is presented in Appendix D.

Following the FWD testing, the subsurface exploration program consisted of coring and sampling 46 borings in the roadway. The subsurface exploration was performed by Red Rock Consulting on December 16th, 19th, 20th, 27th and 28th, 2022. The borings were located in the field by a representative of Red Rock Consulting by using GPS coordinates that correlated with marked locations that were provided by Naji Khoury. The GPS coordinates of each boring is included in the Core Logs in Appendix C. The locations of the borings should be considered accurate only to the degree implied by the methods used to define them.

Twenty three (23) borings were located within the pavement of I-35 northbound and twenty three (23) borings within the pavement of I-35 southbound. The roadway borings were located at selected FWD test locations, which were recommended by Naji Khoury. The approximate locations of the borings are shown on the Boring Location Diagrams in Appendix A.

The pavement at each boring location was cored with a 4-inch barrel using a coring machine which was mounted on the back of a trailer for the 4-inch samples. Measured pavement thicknesses are shown on the Pavement Core Data and Subgrade Soils Chart in Appendix B. Photographs of the cores and existing pavement are included on the Core Logs and Pavement Photographs in Appendix C. Correlation between the pavement thickness, FWD test locations and stations along the project length are included in the FWD report in Appendix D.

Following the coring of the pavement, the roadway boring locations were then drilled to depths of approximately 36 inches or refusal beneath the existing pavement. The borings were drilled using a HD99 Hydraulic Earth Drill.

Representative samples of the subgrade materials were obtained from the auger cuttings at depths shown on the Pavement Core Data and Subgrade Soils in Appendix B.

Samples were collected and transported back to the lab for further classification and testing. The final Pavement Core Data and Subgrade Soils Chart was developed from the draft logs, observations and test results of the samples returned to the laboratory. The stratigraphic contacts indicated are only for the specific dates and locations reported, and therefore, are not necessarily representative of other locations and times.

Laboratory Testing

Representative soil samples were tested to refine the field classifications and evaluate physical properties of the soils which may affect the geotechnical aspects of project design and construction.

The laboratory testing program included the following:

- Moisture content (AASHTO T265)
- Liquid limit (AASHTO T89)
- Plastic limit (AASHTO T90)
- Particle size analysis of soils (AASHTO T88)

The results of the physical laboratory tests conducted on the subgrade soils are shown on the Pavement Core Data and Subgrade Soils Chart in Appendix B. The laboratory results in entirety are included in Appendix E.

The above laboratory tests were performed in general accordance with applicable AASHTO procedures, or generally accepted practice. It should be noted that reference to AASHTO procedures does not imply that all cross-referenced procedures in AASHTO standards have been used, or that all AASHTO procedures used have been followed exactly. Only those AASHTO procedures and/or portions of procedures, which, in the professional judgment of the geotechnical engineer of record for this report, are applicable, appropriate, and necessary for this particular project, have been used or followed.

SITE DESCRIPTION

Surface Conditions

At the time of the field exploration, I-35 was a four lane divided Asphalt Concrete paved roadway with a grass median for the entire length of the project. The project area was partially developed with a few businesses and a small airport near the SH 74 interchange. Continuing south along I-35 was primarily agricultural fields and a few residences. The town of Goldsby was located towards the northern end of the job.

Traffic was high on I-35 during drilling operations. Large trucks consisted of approximately half of the traffic. Traffic control was required to drill the borings.

The existing pavement was in fair to good condition. A recent asphalt overlay was observed across the northern half of the project length along the northbound and southbound lanes. Minor to moderate transverse cracking and minor longitudinal cracking were observed.

For the Boring Location Diagrams, refer to Appendix A. For more detailed descriptions of the pavement distress, refer to the notes column in the Pavement Core Data and Subgrade Soils Chart in Appendix B and the Pavement Photographs in Appendix C. For photographs of the pavement cores and the existing pavement, refer to Appendix C.

Site Geology

The geology of the project site was researched using the “Division Three Engineering Classification of Geological Materials”, published by the Oklahoma Department of Transportation (ODOT) and the Geologic Map of the “Hydrologic Atlas 4 of Oklahoma,” Reconnaissance of the Water Resources of the Oklahoma City quadrangle, central Oklahoma,” by Roy H. Bingham and Robert L. Moore, U.S. Geological Survey, 1975.

ODOT PUBLICATION

Division Three of the “Engineering Classification of Geological Materials”, published by the Oklahoma Department of Transportation (ODOT) indicates the project site consists of Alluvium (Qas) and Terrace deposits (Qts) underlain by the Hennessey Unit (Phy).

Terrace deposits consist of sand, silt, clay, gravel, or mixtures of these. These materials were deposited by streams or wind and may be found adjacent to most streams.

The Hennessey unit consists of red platy to blocky clay shales and mudstone. The mudstones are hard and appear blocky. The red clay shale of the Hennessey unit is characterized by numerous bands or streaks of gray, white, or light green color ranging from a few inches to four feet in thickness. Small spheres of light green color up to 10 inches in diameter are an odd characteristic of the unit.

The total thickness of the unit varies from 400 to 600 feet. The Hennessey unit outcrops in a 5 to 20 mile wide north-south band across Cleveland, McClain, and Garvin Counties in Division three.

Topographically, the unit is near level to gently rolling prairies, but most of the more level outcrops of the unit are cultivated.

USGS MAP

According to the USGS geologic map, the project consists of Alluvium (Qal) and Terrace deposits (Qt) which are underlain by Purcell Sandstone (Pp).

Terrace deposits consist of lenticular beds of sand, silt, clay, and gravel. Thickness ranges from a few feet to about 100 feet and probably averages about 50 feet along major streams. These deposits are major aquifers along Cimarron, Canadian, and North Canadian Rivers.

Purcell Sandstone consists of red-brown to maroon fine- to coarse-grained sandstone, mudstone conglomerate, and red-brown shale. Thickness, 150 feet.

Subsurface Conditions

Information collected from the core locations explored indicates that the existing pavement of I-35 along the project consisted of Asphalt Concrete. The total thickness of the full depth asphalt concrete in the roadway cores ranged between 9.25 to 16.5 inches. A cement stabilized subgrade was encountered underneath cores C-1 to C-18 and C-29 to C-46, ranging from 4.5 to 10 inches. Aggregate base was encountered underneath the remaining cores C-19 to C-28, ranging from 6 to 10 inches.

The condition of the existing surface pavement and the pavement cores are described in the Pavement Core Data and Subgrade Soils Chart in Appendix B and the Core Logs in Appendix C.

Beneath the pavement section, the subgrade materials consisted of silty, clayey sand with various amounts of gravel, clayey sand, sandy silt, silty sand with various amounts

of gravel and lean clay with various amounts of sand and silt. The subgrade materials encountered in the borings classified as A-1-b, A-2-4, A-4 and A-6 soils. The subgrade materials extended to the boring termination depth of 36 inches below the pavement, except for borings C-4, C-5, C-21 to C-23, C-37, C-40 and C-41 where auger refusal was encountered between 17.5 and 52 inches below the pavement. The subgrade materials appeared to be native to the site. The subgrade in borings C-19 and C-20 had an organic smell. Subsurface conditions are described in greater detail on the Pavement Data and Subgrade Soils Chart in Appendix B and on the Core Logs in Appendix C. Laboratory results of the subsurface materials tested are included in Appendix E.

Groundwater Conditions

Groundwater conditions were monitored in the borings during and following coring/boring and sampling. Groundwater was not encountered in any of the borings during these times.

To obtain more accurate groundwater level information, long-term observations in a well or piezometer that is sealed from the influence of surface water would be needed. Fluctuations in groundwater levels can occur due to seasonal variations in the amount of rainfall, runoff, altered drainage paths, and other factors not evident at the time borings were advanced. Consequently, the contractor should be aware of this possibility while constructing this project.

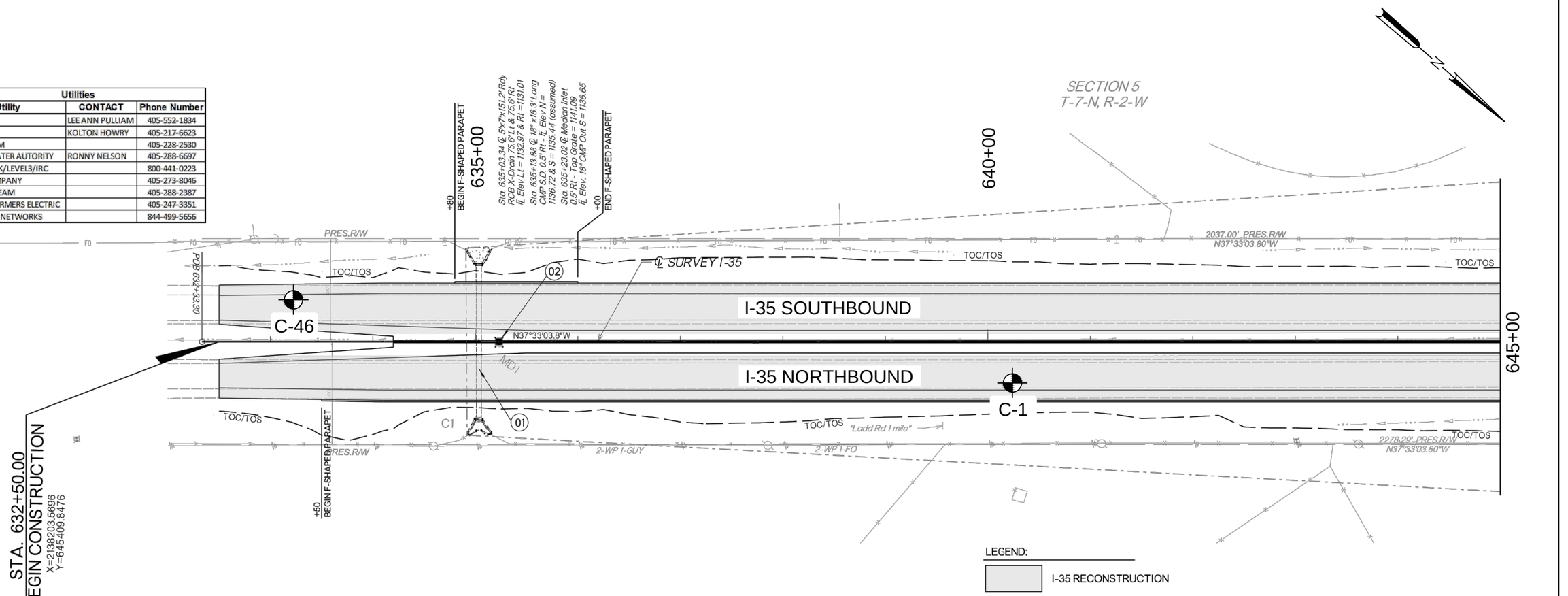
CLOSURE

The data presented in this report are based on the negotiated scope for this project and site conditions as they existed at the time of the field exploration. The conditions encountered in the exploratory borings are assumed to be representative of the subsurface conditions within the study area.

This report was prepared for the exclusive use of Olsson Associates, ODOT, and their agents and consultants. It should be made available to prospective contractors for information and factual data only and not as a warranty of subsurface conditions similar to those interpreted from the Pavement Core Data and Subgrade Soils Chart or discussions presented herein.

APPENDIX A

Utilities		
Utility	**CONTACT**	**Phone Number**
ONG	LEE ANN PULLIAM	405-552-1834
OEC	KOLTON HOWRY	405-217-6623
WINDSTREAM		405-228-2530
GOLDSBY WATER AUTORITY	RONNY NELSON	405-288-6697
CENTURYLINK/LEVEL3/IRC		800-441-0223
HILL OIL COMPANY		405-273-8046
DCP MIDSTREAM		405-288-2387
WESTERN FARMERS ELECTRIC		405-247-3351
TRACE FIBER NETWORKS		844-499-5656



Boring	Station	I-35 CL Survey
C-46	633+22	40' left
C-1	640+24	40' right

Stations and offsets estimated from plans provided by Olsson Associates

RED ROCK CONSULTING
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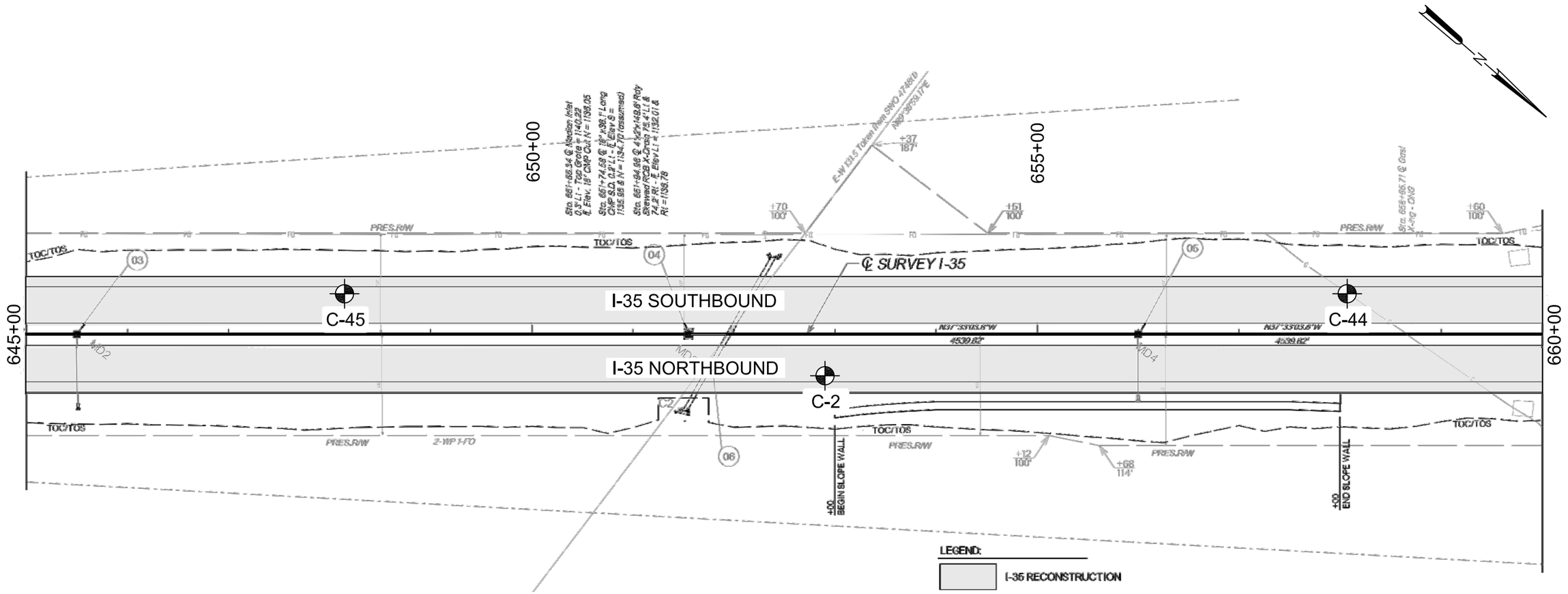
(405) 562-3328

BORING LOCATION DIAGRAM
I-35 PAVEMENT AND SUBGRADE SURVEY
MCCLAIN COUNTY, OKLAHOMA
J/P 35589(04)

Project Mngr:	EDC	RRC Project No.	22118
Designed By:	DLW	Scale:	NOT TO SCALE
Checked By:	JWB	Date:	1/11/2023
Approved By:	JWB	Page No:	1/17



Boring	Station	I-35 CL Survey
C-45	648+15	40' left
C-2	652+91	40' right
C-44	658+08	40' left

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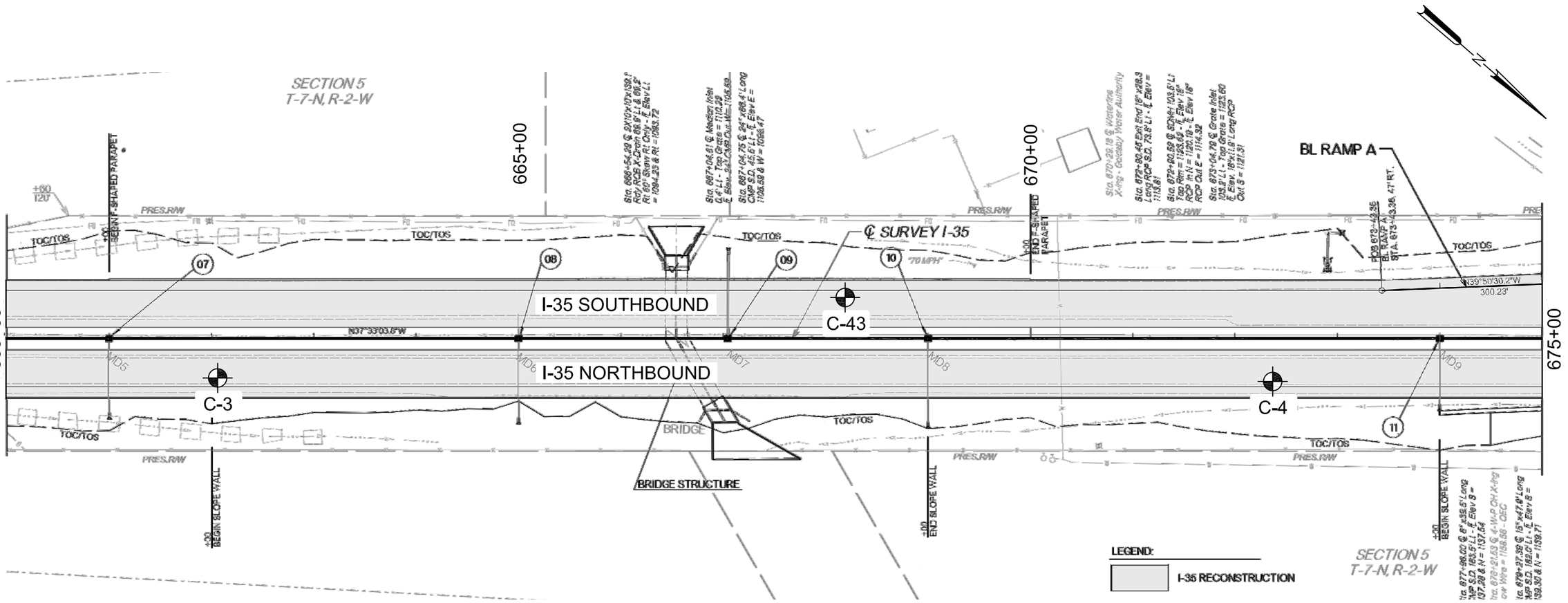

Boring	Station	I-35 CL Survey
C-3	662+06	40' right
C-43	668+19	40' left
C-4	672+36	40' right

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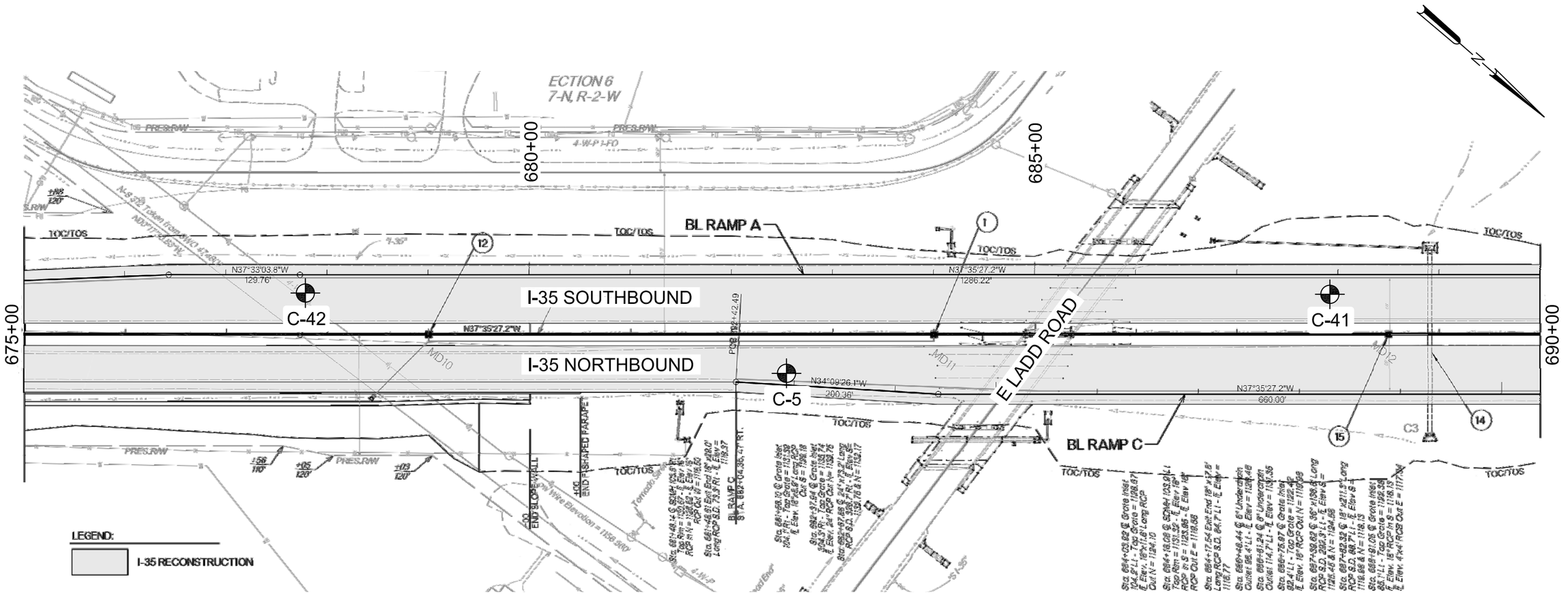

Boring	Station	I-35 CL Survey
C-42	677+79	40' left
C-5	682+54	40' right
C-41	687+92	41' left

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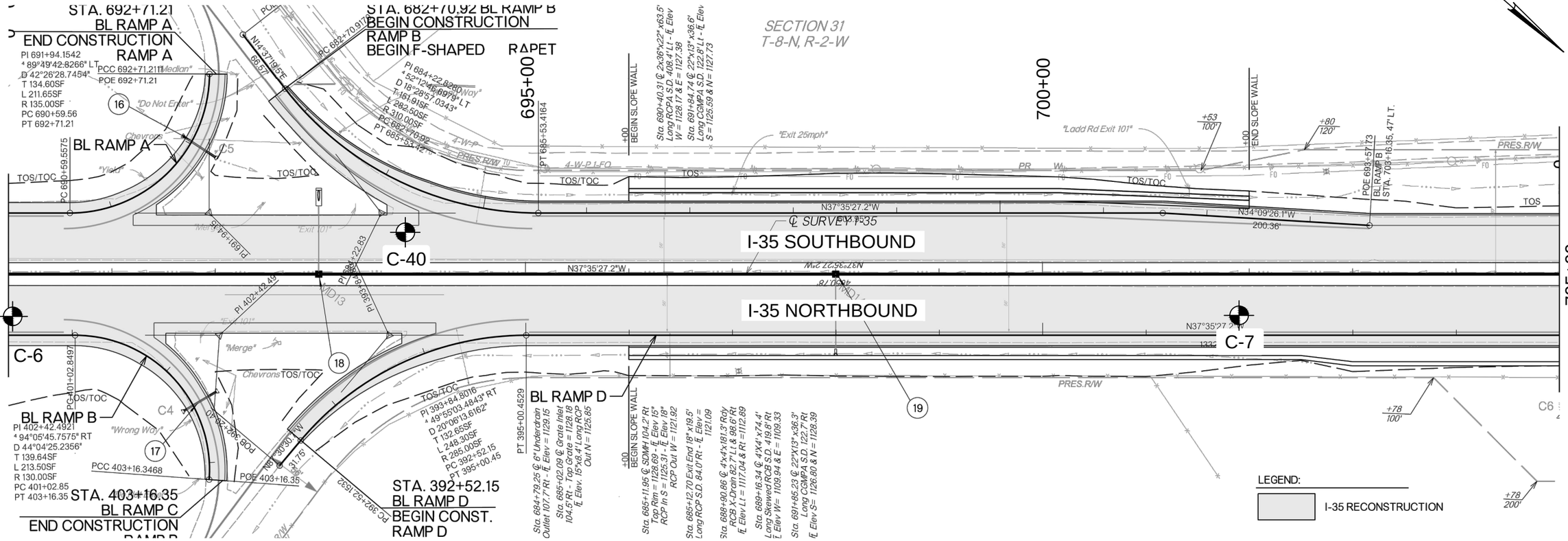

Boring	Station	I-35 CL Survey
C-6	690+04	40' right
C-40	693+85	40' left
C-7	701+90	40' right

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BORING LOCATION DIAGRAM
I-35 PAVEMENT AND SUBGRADE SURVEY
DISTRICT 3, MCCLAIN COUNTY, OKLAHOMA
J/P 35589(04)

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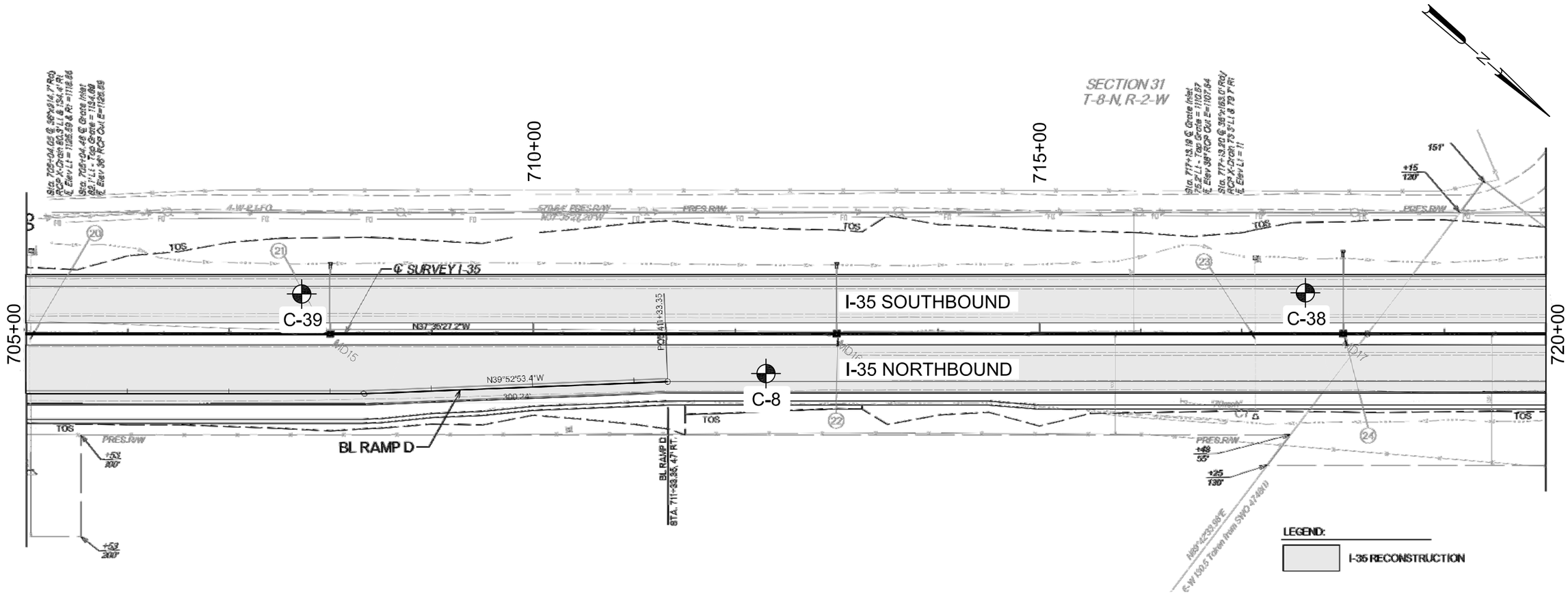

Boring	Station	I-35 CL Survey
C-39	707+72	40' left
C-8	712+30	40' right
C-38	717+64	40' left

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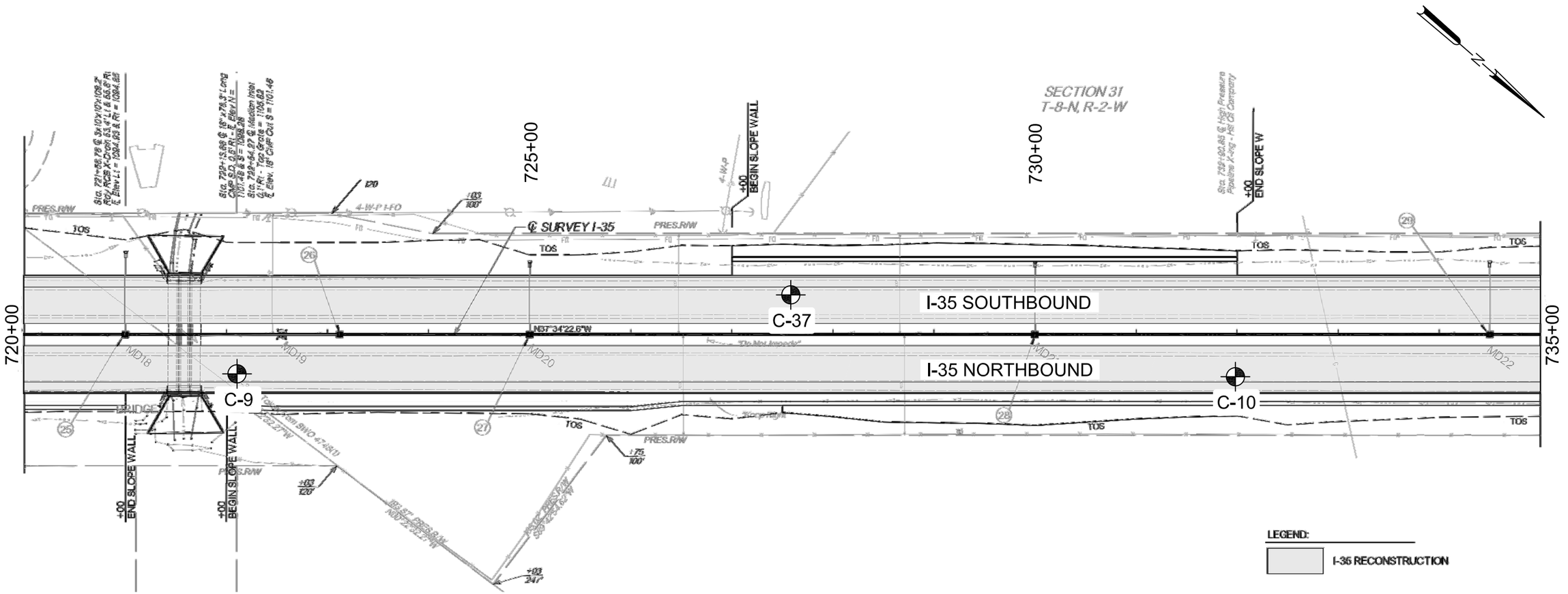

Boring	Station	I-35 CL Survey
C-9	722+10	40' right
C-37	727+60	40' left
C-10	731+99	40' right

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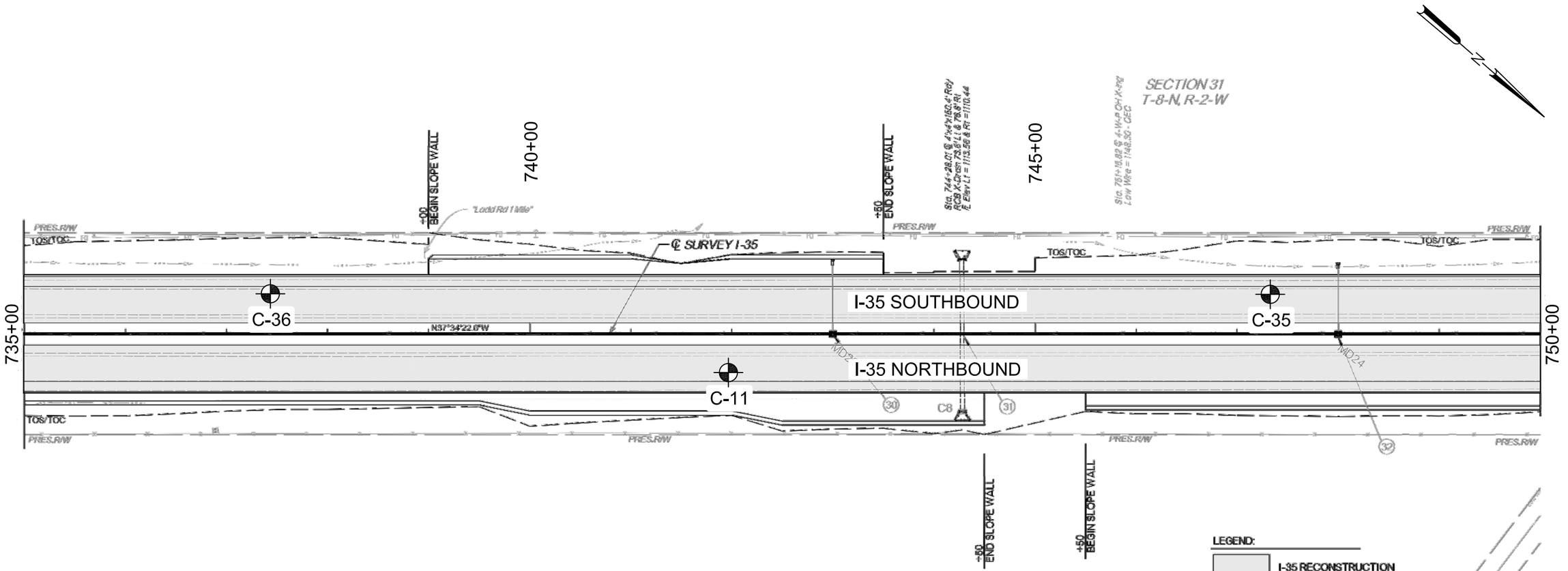

Boring	Station	I-35 CL Survey
C-36	737+44	40' left
C-11	741+97	40' right
C-35	747+34	40' left

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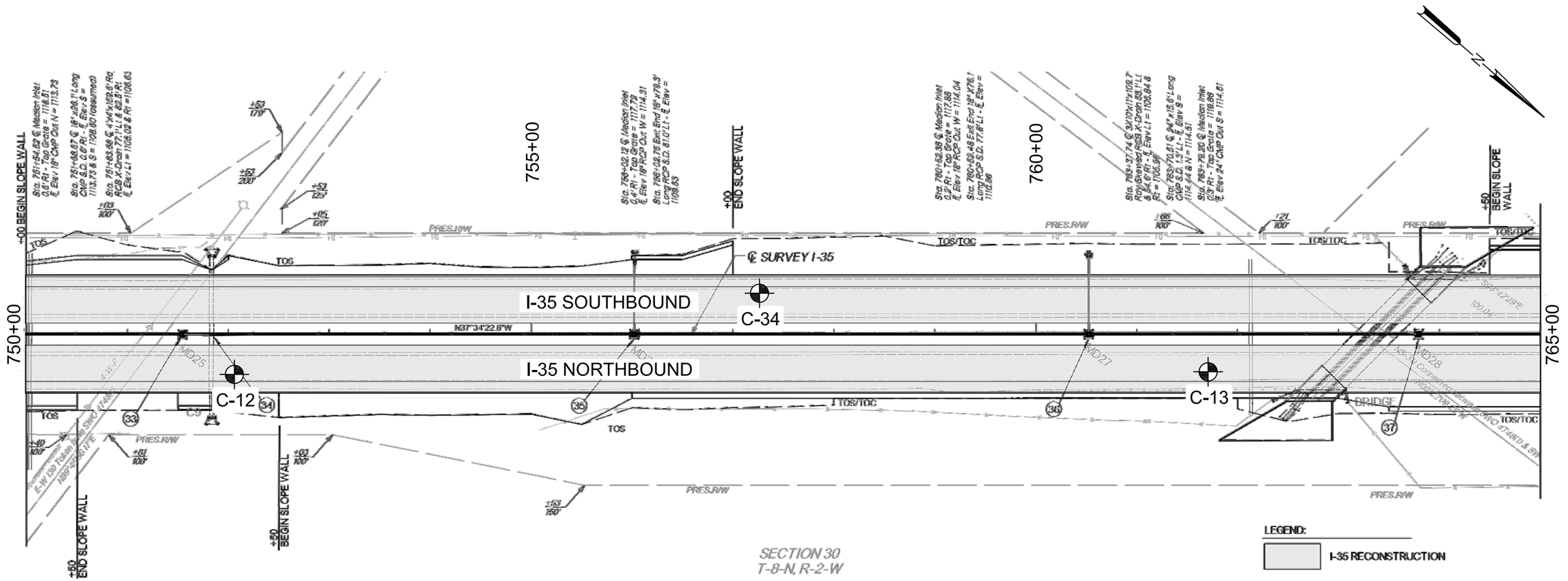

SECTION 30
T-8-N, R-2-W

LEGEND:

I-35 RECONSTRUCTION

Boring	Station	I-35 CL Survey
C-12	752+06	40' right
C-34	757+26	40' left
C-13	761+72	40' right

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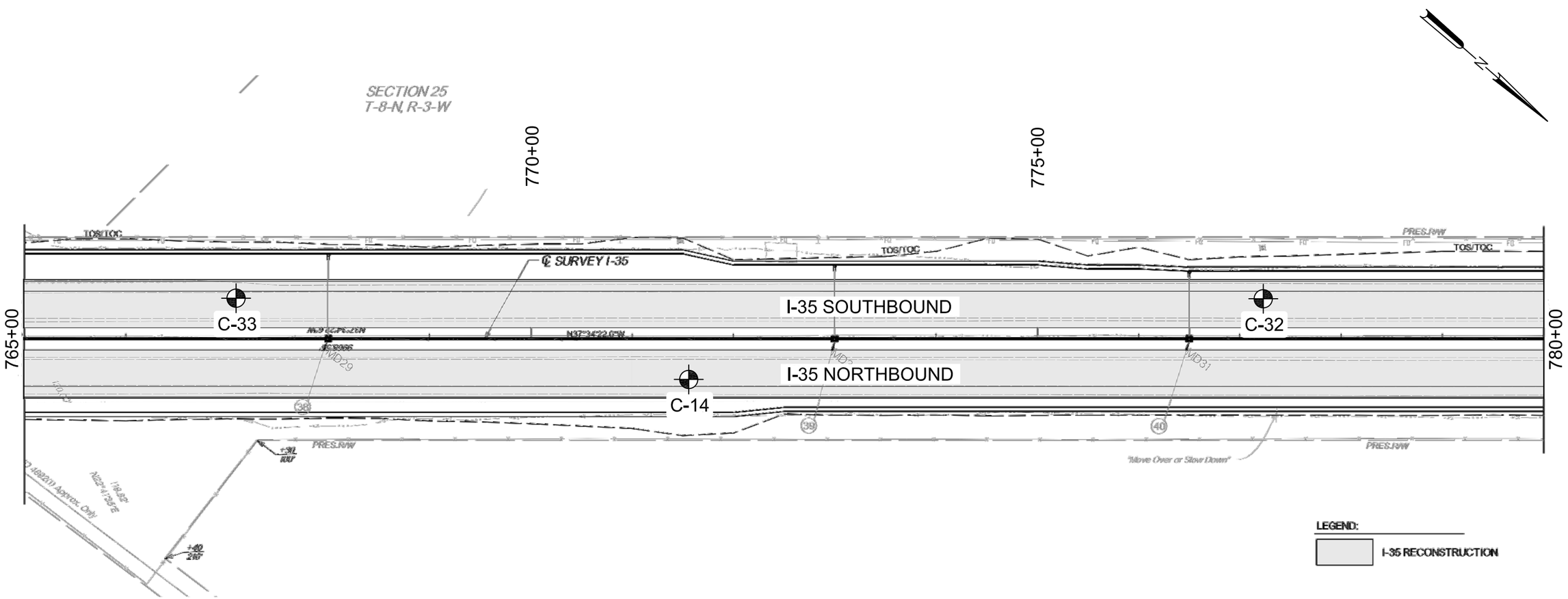

Boring	Station	I-35 CL Survey
C-33	767+10	40' left
C-14	771+57	40' right
C-32	777+24	40' left

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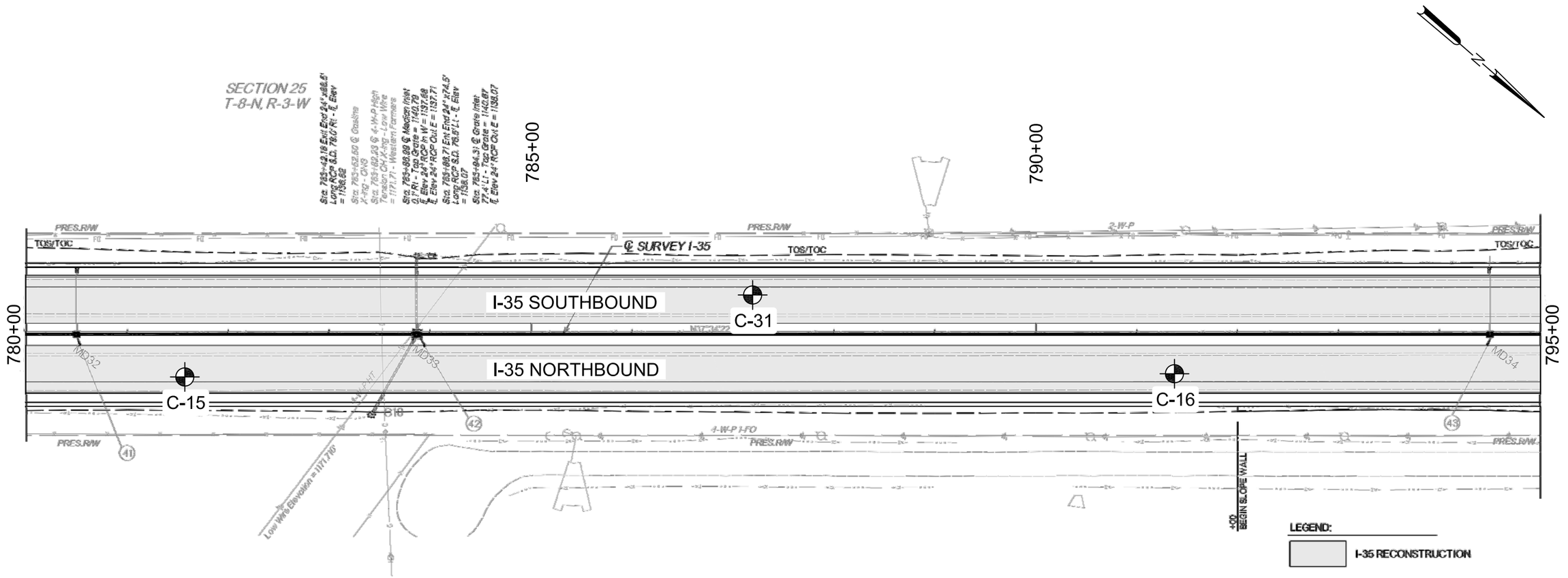

Boring	Station	I-35 CL Survey
C-15	781+57	40' right
C-31	787+20	40' left
C-16	791+38	40' right

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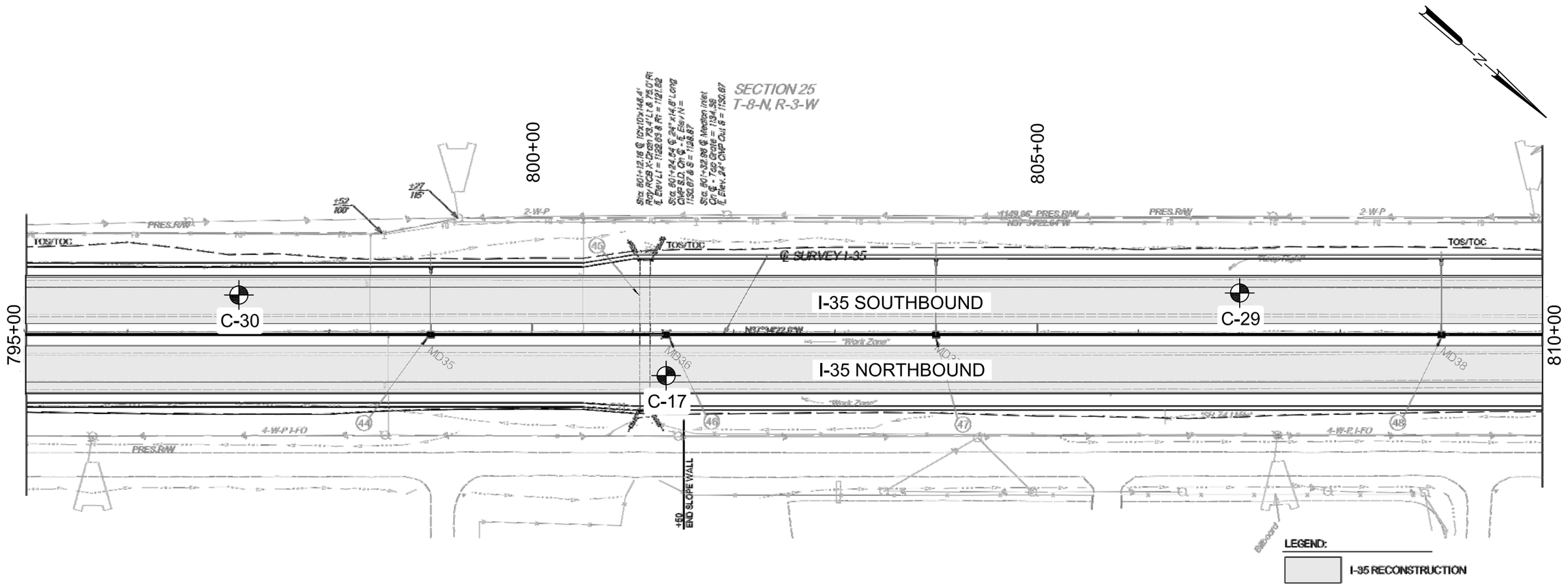

Boring	Station	I-35 CL Survey
C-30	797+11	40' left
C-17	801+33	40' right
C-29	807+01	40' left

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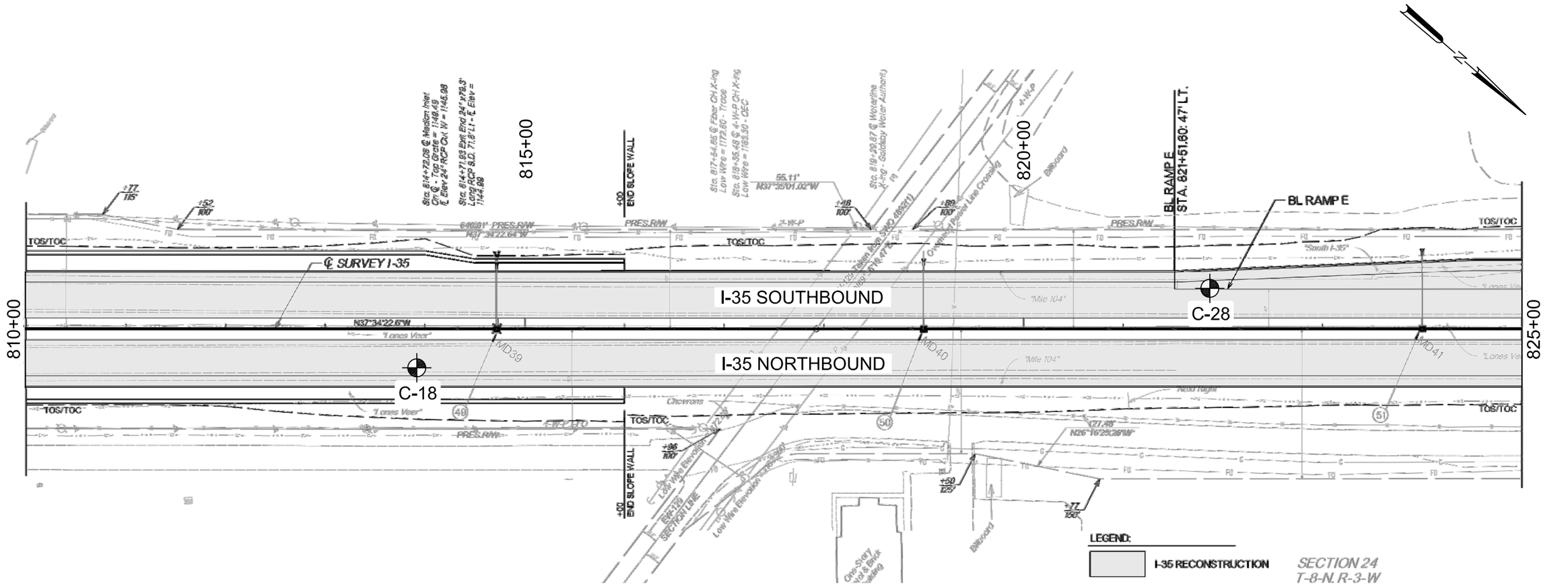

Boring	Station	I-35 CL Survey
C-18	813+93	40' right
C-28	821+87	40' left

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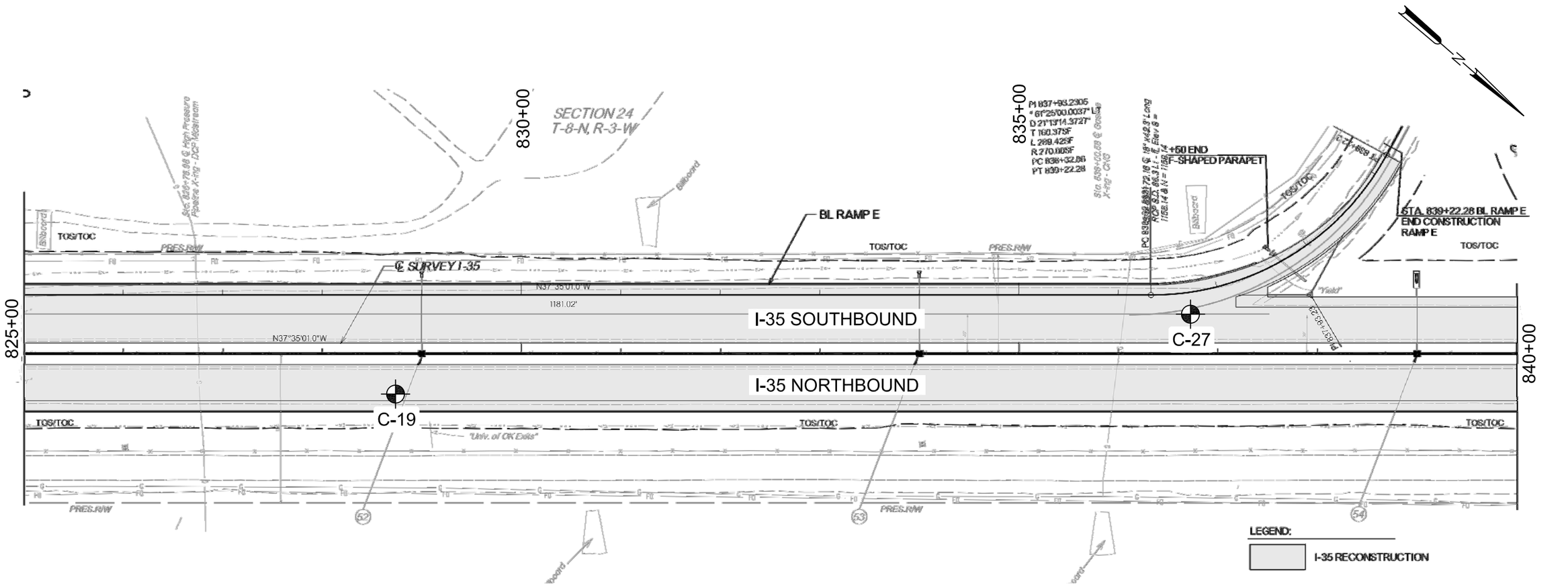

Boring	Station	I-35 CL Survey
C-19	828+73	40' right
C-27	836+73	40' left

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Project Mngr:	EDC	RRC Project No.	22118
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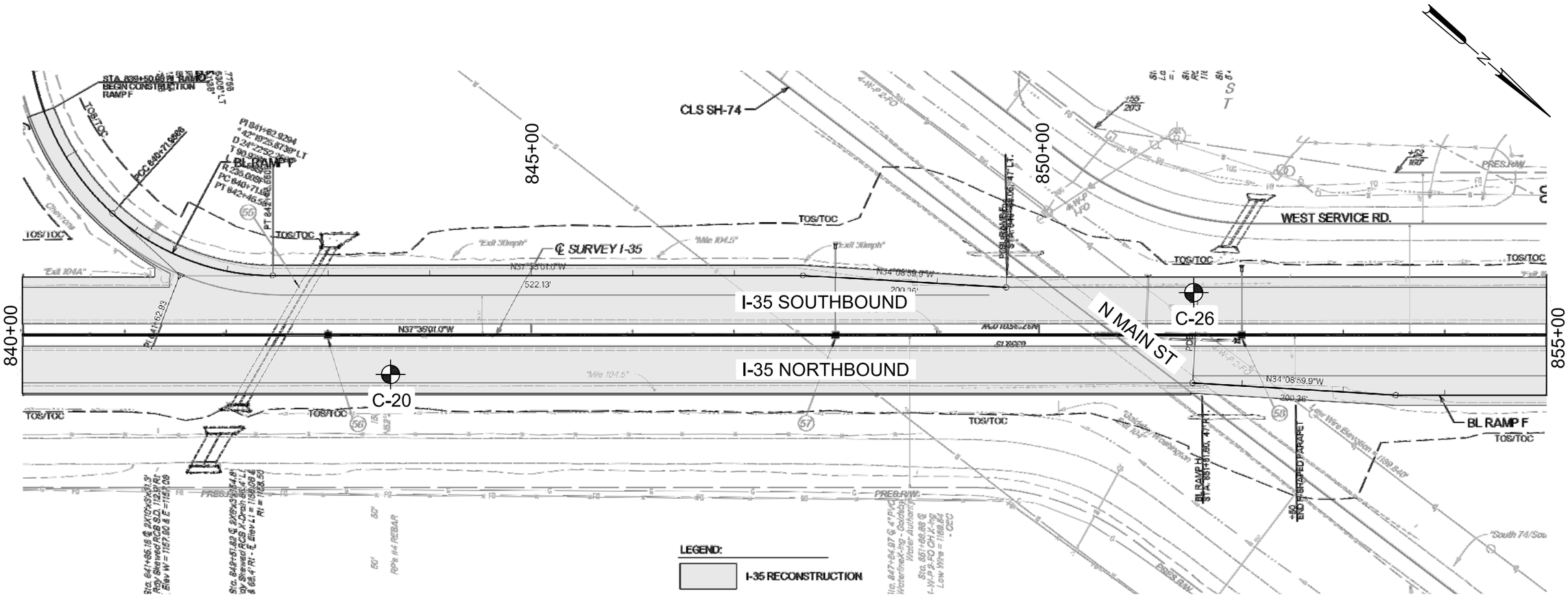
Checked By:	JWB	Date:	1/11/2023
Approved By:	JWB	Page No:	14/17



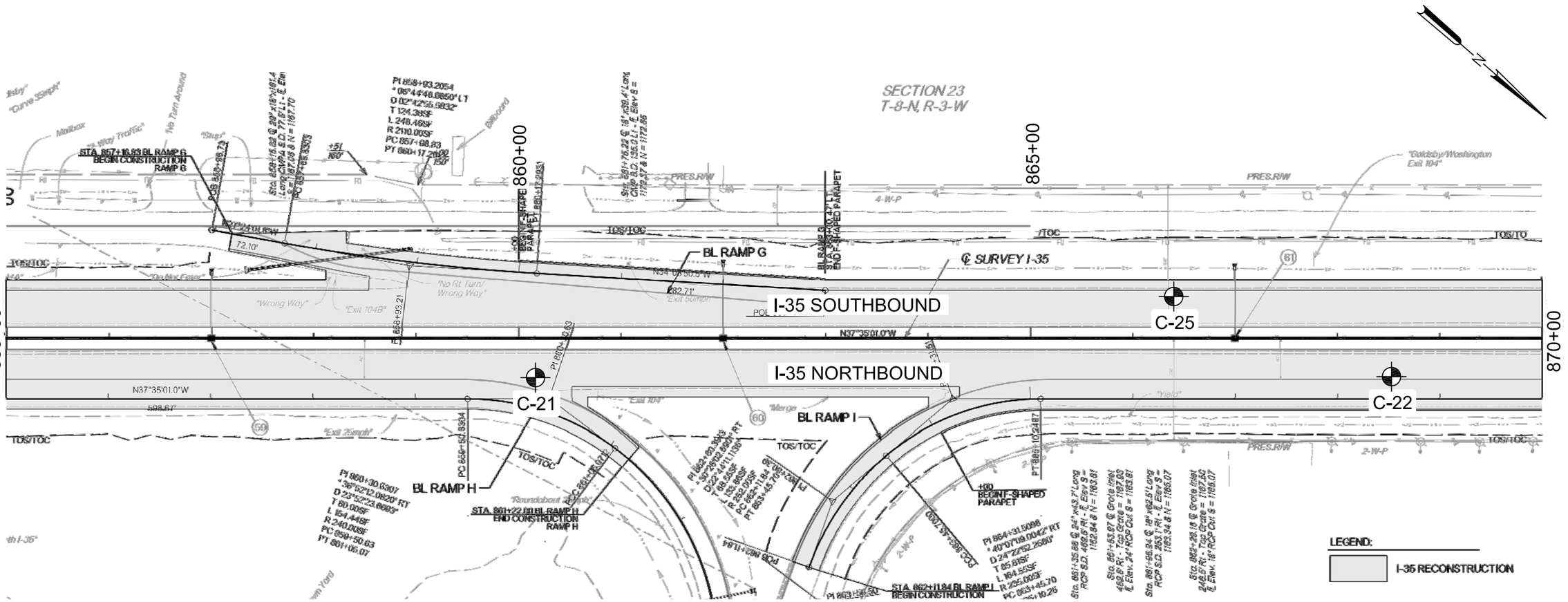
Boring	Station	I-35 CL Survey
C-20	843+61	40' right
C-26	851+52	40' left

Stations and offsets estimated from plans provided by Olsson Associates

RED ROCK CONSULTING
PO Box 30591
Edmond, Oklahoma 73003
(405) 562-3328

BORING LOCATION DIAGRAM
I-35 PAVEMENT AND SUBGRADE SURVEY
MCCLAIN COUNTY, OKLAHOMA
J/P 35589(04)

Project Mngr:	EDC	RRC Project No.	22118
Designed By:	DLW	Scale:	NOT TO SCALE
Checked By:	JWB	Date:	1/11/2023
Approved By:	JWB	Page No:	15/17



Boring	Station	I-35 CL Survey
C-21	860+17	40' right
C-25	866+41	40' left
C-22	868+53	40' right

Stations and offsets estimated from plans provided by Olsson Associates

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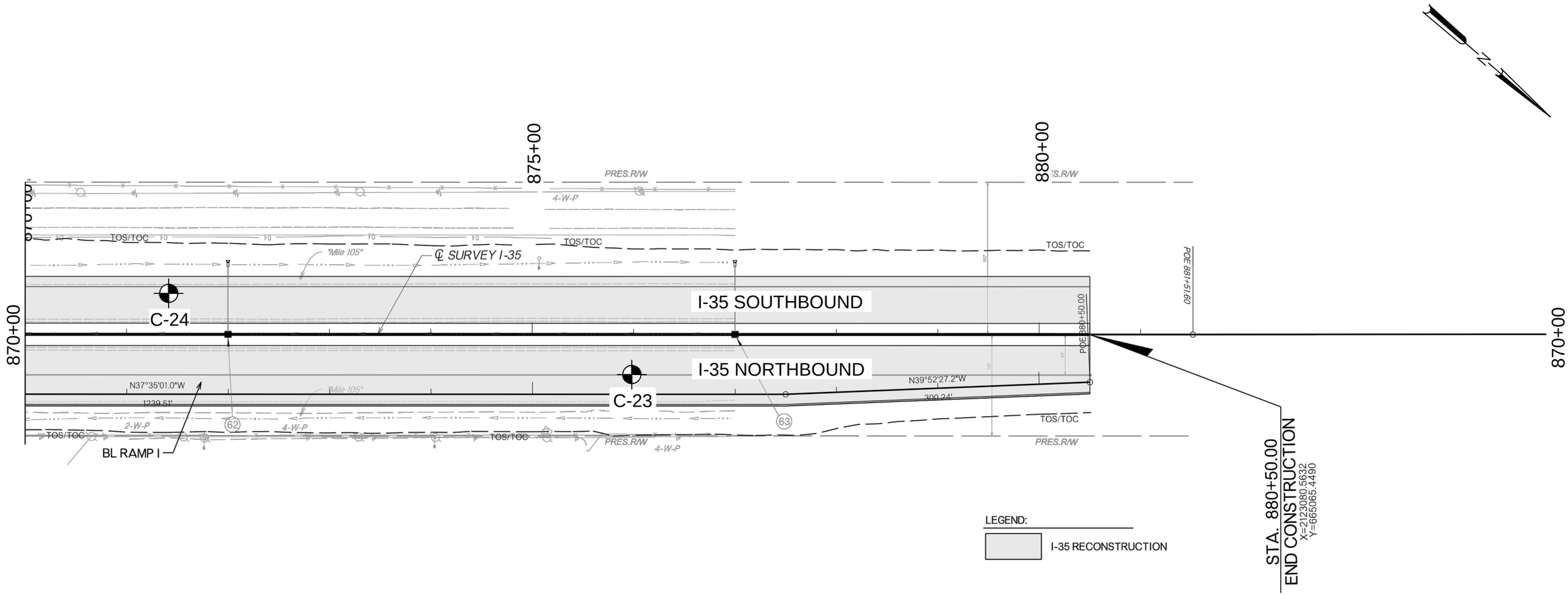
BORING LOCATION DIAGRAM
I-35 PAVEMENT AND SUBGRADE SURVEY
MCCLAIN COUNTY, OKLAHOMA
J/P 35589(04)

Project Mngr:	EDC	RRC Project No.	22118
Designed By:	DLW	Scale:	NOT TO SCALE
Checked By:	JWB	Date:	1/11/2023
Approved By:	JWB	Page No:	16/17



LEGEND:

I-35 RECONSTRUCTION

Boring	Station	I-35 CL Survey
C-24	871+41	40' left
C-23	875+98	40' right

Stations and offsets estimated from plans provided by Olsson Associates

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BORING LOCATION DIAGRAM
I-35 PAVEMENT AND SUBGRADE SURVEY
DISTRICT 3, MCCLAIN COUNTY, OKLAHOMA
J/P 35589(04)

Project Mngr:	EDC	RRC Project No.	22118
Designed By:	DLW	Scale:	NOT TO SCALE
Checked By:	JWB	Date:	1/11/2023
Approved By:	JWB	Page No:	17/17

APPENDIX B

Surveyed By: Dawson Wiseman
Date Surveyed: December 16, 19, 20, 27 and 28, 2022

RED ROCK CONSULTING

RRC Project No: 22118
J/P No: 35589(04)
Location: McClain County, Oklahoma

Pavement Core Data and Subgrade Soils Chart

Boring	Field No.	Soil Group	Station	I-35 CL	Description	Depth (in)	LL	PI	Percent Passing				OSI	MC %	Notes
									# 4	# 10	# 40	# 200			
C-1			640+24	40' right	**15" ASPHALT CONCRETE**	0-15	tack layer at 11 inches								
					7" CEMENT STABILIZED SUBGRADE	15-22									
	1A	A-4(0)			**SANDY SILTY CLAY (CL-ML),** brown	22-46	22	5	99	98	89	53.9	4.0	19	•Minor severity transverse cracking
	1B				**SANDY SILTY CLAY (CL-ML),** red	46-58								16	
C-2			652+91	40' right	**16" ASPHALT CONCRETE**	0-16	separation at 8 inches, tack layer at 11 inches								
					8" CEMENT STABILIZED SUBGRADE	16-24									
	2A				**SILTY, CLAYEY SAND (SC-SM),** brown	24-42								13	
	2B	A-4(1)			**SANDY SILTY CLAY (CL-ML),** reddish brown	42-60	21	7	99	99	88	60.2	5.4	11	
C-3			662+06	40' right	**15" ASPHALT CONCRETE**	0-15	separation at 3, 8 and 11 1/2 inches, minor stripping at 3, 8 and 11 1/2 to 15 inches								
					8" CEMENT STABILIZED SUBGRADE	15-23									
	3A				**SANDY SILTY CLAY (CL-ML),** brown	23-41								14	
	3B	A-4(1)			**SANDY SILTY CLAY (CL-ML),** reddish brown	41-59	20	7	98	97	89	58.8	5.2	12	
C-4			672+36	40' right	**14 1/2" ASPHALT CONCRETE**	0-14.5	separation at 6 1/2 inches, tack layer at 10 1/2 inches								
					6" CEMENT STABILIZED SUBGRADE	14.5-20.5									•Minor severity transverse cracking
	4A	A-4(0)			**SILTY, CLAYEY SAND (SC-SM),** reddish brown	20.5-50.5	19	5	100	99	91	47.1	2.8	12	
					*Auger refusal at 50.5 inches										
C-5			682+54	40' right	**14" ASPHALT CONCRETE**	0-14	tack layer at 11 inches								
					8" CEMENT STABILIZED SUBGRADE	14-22									
	5A	A-4(0)			**SILTY, CLAYEY SAND (SC-SM),** brown	22-40	20	4	99	97	83	44.2	2.1	14	
	5B				**SANDY LEAN CLAY (CL),** reddish brown	40-52								16	
					*Auger refusal at 52 inches										
C-6			690+04	40' right	**14" ASPHALT CONCRETE**	0-14	tack layer at 10 inches								
					8" CEMENT STABILIZED SUBGRADE	14-22									
	6A				**CLAYEY SAND (SC),** brown	22-40								14	
	6B	A-6(9)			**LEAN CLAY with SAND (CL),** brown	40-58	29	15	99	99	96	77.4	11.8	18	
C-7			701+90	C-7	**14 1/2" ASPHALT CONCRETE**	0-14.5	separation at 2 inches, tack layer at 9 inches								
					4 1/2" CEMENT STABILIZED SUBGRADE	14.5-19									•Minor severity longitudinal cracking
	7A	A-4(1)			**CLAYEY SAND (SC),** brown	19-55	21	10	97	95	81	45.9	4.2	13	

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RRC Project No: 22118
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Pavement Core Data and Subgrade Soils Chart

Boring	Field No.	Soil Group	Station	I-35 CL	Description	Depth (in)	LL	PI	Percent Passing				OSI	MC %	Notes
									# 4	# 10	# 40	# 200			
C-8			712+30	40' right	**14" ASPHALT CONCRETE**	0-14	separation at 3 inches, tack layer at 11 inches								
					10" CEMENT STABILIZED SUBGRADE	14-24									
	8A	A-4(0)			**SILTY SAND (SM),** brown	24-48	NV	NP	96	92	81	39	0.0	14	
	8B				**SANDY LEAN CLAY (CL),** reddish brown	48-60								15	
C-9			722+10	40' right	**14 1/2" ASPHALT CONCRETE**	0-14.5	separation at 3 inches, tack layer at 11 inches								
					8" CEMENT STABILIZED SUBGRADE	14.5-22.5									•Minor severity transverse cracking
	9A				**SANDY SILT (ML),** brown	22.5-52.5								12	
	9B	A-4(2)			**SANDY LEAN CLAY (CL),** brown	52.5-58.5	21	10	98	97	88	56.8	6.3	12	
C-10			731+99	40' right	**14" ASPHALT CONCRETE**	0-14	separation at 2 1/2 inches, tack layer at 9 inches								
					9" CEMENT STABILIZED SUBGRADE	14-23									•Minor severity transverse cracking
	10A	A-2-4			**SILTY SAND (SM),** brown	23-41	16	3	100	99	85	34.7	0.6	11	
	10B				**SANDY LEAN CLAY (CL),** reddish brown	41-59								12	
C-11			741+97	40' right	**13 1/2" ASPHALT CONCRETE**	0-13.5	separation at 2 1/2 inches, tack layer at 9 1/2 inches								
					10" CEMENT STABILIZED SUBGRADE	13.5-23.5									•Moderate severity transverse cracking
	11A				**SILTY, CLAYEY SAND (SC-SM),** brown	23.5-47.5								14	
	11B	A-6(12)			**LEAN CLAY with SAND (CL),** reddish brown	47.5-59.5	32	20	100	100	94	74.9	14.4	17	
C-12			752+06	40' right	**15 1/2" ASPHALT CONCRETE**	0-15.5	separation at 2 1/2 and 8 inches, moderate stripping at 8 inches, tack layer at 10 inches								
					10" CEMENT STABILIZED SUBGRADE	15.5-25.5									
	12A				**SILTY, CLAYEY SAND (SC-SM),** brown	25.5-49.5								13	
	12B	A-4(4)			**SANDY LEAN CLAY (CL),** brown	49.5-61.5	24	10	98	97	92	69.8	8.2	16	
C-13			761+72	40' right	**16 1/2" ASPHALT CONCRETE**	0-16.5	separation at 9 1/2 inches, tack layer at 11 inches								
					8" CEMENT STABILIZED SUBGRADE	16.5-24.5									
	13A	A-4(0)			**SILTY, CLAYEY SAND (SC-SM),** brown	24.5-48.5	19	5	100	99	84	36.3	1.2	12	
	13B				**SANDY LEAN CLAY (CL),** brown	48.5-60.5								13	
C-14			771+57	40' right	**13" ASPHALT CONCRETE**	0-13	separation at 10 inches, tack layer at 11 inches								
					6" CEMENT STABILIZED SUBGRADE	13-19									•Recent asphalt overlay
	14A	A-2-4			**SILTY SAND (SM),** brown	19-52	NV	NP	98	96	82	31.9	0.0	11	
	14B				**LEAN CLAY with SAND (CL),** brown	52-55								16	

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RED ROCK CONSULTING

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J/P No: 35589(04)
Location: McClain County, Oklahoma

Pavement Core Data and Subgrade Soils Chart

Boring	Field No.	Soil Group	Station	I-35 CL	Description	Depth (in)	LL	PI	Percent Passing				OSI	MC %	Notes
									# 4	# 10	# 40	# 200			
C-15			781+57	40' right	**12" ASPHALT CONCRETE**	0-12	separation at 4 1/4 inches, tack layer at 7 inches								
					9" CEMENT STABILIZED SUBGRADE	12-21									•Recent asphalt overlay
	15A				**SANDY SILT (ML),** brown	21-45								12	
	15B	A-6(7)			**LEAN CLAY with SAND (CL),** brown	45-57	27	12	100	100	96	79.4	10.2	16	
C-16			791+38	40' right	**11" ASPHALT CONCRETE**	0-11	tack layer at 6 inches								
					7" CEMENT STABILIZED SUBGRADE	11-17									•Recent asphalt overlay
	16A	A-4(0)			**SANDY SILT (ML),** light brown	17-35	19	3	99	95	82	39.7	2.8	15	
	16B				**SANDY SILT (ML),** brown	35-53								15	
C-17			801+33	40' right	**11" ASPHALT CONCRETE**	0-11	separation at 6 1/4 inches								
					10" CEMENT STABILIZED SUBGRADE	11-21									•Recent asphalt overlay
	17A				**SILTY SAND (SM),** light brown	21-39								13	
	17B	A-4(6)			**LEAN CLAY with SAND (CL),** dark brown	39-57	26	10	100	99	97	81.8	9.2	18	
C-18			813+93	40' right	**12" ASPHALT CONCRETE**	0-12	separation at 2 1/2 inches, tack layer at 7 1/4 inches								
					10" CEMENT STABILIZED SUBGRADE	12-22									•Recent asphalt overlay
	18A	A-4(0)			**SANDY SILT (ML),** light brown	22-46	19	3	100	99	88	52.6	2.8	14	
	18B				**SANDY LEAN CLAY (CL),** brown	46-58								14	
C-19			828+73	40' right	**11 1/2" ASPHALT CONCRETE**	0-11.5	tack layer at 7 1/4 inches								
					10" AGGREGATE BASE	11.5-21.5									•Recent asphalt overlay
	19A				**SILTY SAND (SM),** dark brown, organic smell	21.5-45.5								12	
	19B	A-4(4)			**LEAN CLAY with SAND (CL),** dark brown, organic smell	45.5-57.5	23	8	97	95	91	76.5	7.8	12	
C-20			843+61	40' right	**10" ASPHALT CONCRETE**	0-10	tack layer at 5 1/2 inches								
					6" AGGREGATE BASE	10-16									•Recent asphalt overlay
	20A	A-2-4			**SILTY SAND (SM),** light brown	16-40	NV	NP	97	93	81	32.7	0.0	8	
	20B				**SILTY, CLAYEY SAND (SC-SM),** dark brown, organic smell	40-52								14	

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Pavement Core Data and Subgrade Soils Chart

Boring	Field No.	Soil Group	Station	I-35 CL	Description	Depth (in)	LL	PI	Percent Passing				OSI	MC %	Notes
									# 4	# 10	# 40	# 200			
C-21			860+17	40' right	**9 1/4" ASPHALT CONCRETE**	0-9.25	tack layer at 5 inches								
					8" AGGREGATE BASE	9.25-17.25									
	21A				**SILTY, CLAYEY SAND (SC-SM), light brown**	17.25-41.25								10	•Recent asphalt overlay
	22B	A-4(1)			**CLAYEY SAND (SC), dark brown**	41.25-47.25	21	8	94	91	80	48.1	4.0	11	
					*Auger refusal at 47.25 inches										
C-22			868+53	40' right	**13" ASPHALT CONCRETE**	0-13	separation at 2 1/2 and 9 inches, deterioration at 2 1/2 inches								
					6" AGGREGATE BASE	13-19									•Recent asphalt overlay
	22A	A-2-4			**SILTY, CLAYEY SAND (SC-SM),** light brown	19-31	19	6	93	83	62	30.2	0.9	17	
					*Auger refusal at 31 inches										
C-23			875+98	40' right	**10" ASPHALT CONCRETE**	0-10	tack layer at 5 1/2 inches								
					10" AGGREGATE BASE	10-20									•Recent asphalt overlay
	23A	A-1-b			**SILTY, CLAYEY SAND with GRAVEL(SC-SM),** light brown	20-32	17	4	78	69	50	21.3	0.3	15	
					*Auger refusal at 32 inches										
C-24			871+41	40' left	**11" ASPHALT CONCRETE**	0-11	separation at 9 1/2 inches								
					8" AGGREGATE BASE	11-19									•Recent asphalt overlay
	24A				**SILTY SAND (SM),** brown	19-43								5	
	24B	A-4(3)			**SILTY CLAY with SAND (CL-ML),** reddish brown	43-55	23	6	98	96	93	79.6	7.0	10	
C-25			866+41	40' left	**11" ASPHALT CONCRETE**	0-11	tack layer at 6 1/2 inches, separation at 9 inches								
					8" AGGREGATE BASE	11-19									•Recent asphalt overlay
	25A				**SILTY SAND with GRAVEL (SM),** brown	19-43								5	
	25B	A-4(3)			**SILTY CLAY with SAND (CL-ML),** brown	43-55	22	7	100	99	95	78.6	7.2	11	
C-26			851+52	40' left	**9 1/4" ASPHALT CONCRETE**	0-9.25	separation and minor stripping at 4 1/4 inches, deterioration at 8 inches								
					8" AGGREGATE BASE	9.25-17.25									•Recent asphalt overlay
	26A	A-2-4			**SILTY SAND with GRAVEL (SM),** brown	17.25-29.25	NV	NP	83	74	57	28.7	0.0	8	
	26B				**SANDY SILT (ML),** brown	29.25-53.25								11	

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RED ROCK CONSULTING

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J/P No: 35589(04)
Location: McClain County, Oklahoma

Pavement Core Data and Subgrade Soils Chart

Boring	Field No.	Soil Group	Station	I-35 CL	Description	Depth (in)	LL	PI	Percent Passing				OSI	MC %	Notes
									# 4	# 10	# 40	# 200			
C-27			836+73	40' left	**12" ASPHALT CONCRETE**	0-12	tack layer at 9 inches								
					8" AGGREGATE BASE	12-20									•Recent asphalt overlay
	27A				**SILTY SAND with GRAVEL (SM),** light brown	20-32								6	
	27B	A-4(0)			**SANDY SILT (ML),** brown	32-56	NV	NP	100	99	92	51.3	0.0	10	
C-28			821+87	40' left	**11" ASPHALT CONCRETE**	0-11	separation at 5 1/2 inches								
					6" AGGREGATE BASE	11-17									•Recent asphalt overlay
	28A	A-2-4			**SILTY SAND (SM),** brown	17-41	NV	NP	94	90	75	30.4	0.0	6	
	28B				**LEAN CLAY with SAND (CL),** brown	41-53								12	
C-29			807+01	40' left	**13" ASPHALT CONCRETE**	0-13	separation at 8 1/2 inches								
					6" CEMENT STABILIZED SUBGRADE	13-19									•Recent asphalt overlay
	29A				**SILTY SAND (SM),** brown	19-43								13	
	29B	A-4(5)			**LEAN CLAY with SAND(CL),** dark brown	43-55	24	9	100	100	96	78.1	8.4	14	
C-30			797+11	40' left	**11" ASPHALT CONCRETE**	0-11	separation at 6 1/2 inches, severe stripping from 8 to 11 inches								
					8" CEMENT STABILIZED SUBGRADE	11-19									•Recent asphalt overlay
	30A				**SILTY SAND (SM),** brown	19-31								12	
	30B	A-4(0)			**SILTY, CLAYEY SAND (SC-SM),** brown	31-43	19	4	99	99	90	46.3	2.3	9	
	30C				**SANDY LEAN CLAY (CL),** brown	43-55								15	
C-31			787+20	40' left	**12" ASPHALT CONCRETE**	0-12	separation at 4 1/2 inches, tack layer at 7 inches								
					6 1/2" CEMENT STABILIZED SUBGRADE	12-18.5									•Recent asphalt overlay
	31A				**CLAYEY SAND (SC),** brown	18.5-42.5								12	
	31B	A-4(1)			**SANDY SILTY CLAY (CL-ML),** dark brown to black	42.5-54.5	21	5	100	99	93	67.6	5.4	13	
C-32			777+24	40' left	**11 1/2" ASPHALT CONCRETE**	0-11.5	tack layer at 7 inches								
					6" CEMENT STABILIZED SUBGRADE	11.5-17.5									•Recent asphalt overlay
	32A				**SILTY, CLAYEY SAND (SC-SM),** brown	17.5-29.5								16	
	32B	A-6(6)			**LEAN CLAY with SAND (CL),** brown	29.5-53.5	25	11	100	99	95	74.7	9.4	15	

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Boring	Field No.	Soil Group	Station	I-35 CL	Description	Depth (in)	LL	PI	Percent Passing				OSI	MC %	Notes
									# 4	# 10	# 40	# 200			
C-33			767+10	40' left	**11" ASPHALT CONCRETE**	0-11	tack layer at 6 inches								
					7" CEMENT STABILIZED SUBGRADE	11-18									•Recent asphalt overlay
	33A				**SILTY SAND (SM),** light brown	18-42								13	
	33B	A-4(1)			**SANDY SILTY CLAY (CL-ML),** light brown	42-54	20	6	100	99	92	63.5	5.2	14	
C-34			757+26	40' left	**15" ASPHALT CONCRETE**	0-15	tack layer at 6 inches, separation at 11 inches								
					5" CEMENT STABILIZED SUBGRADE	15-20									•Minor severity transverse cracking
	34A				**SILTY SAND (SM),** brown	20-44								9	
	34B	A-4(0)			**SILTY, CLAYEY SAND (SC-SM),** reddish brown	44-56	20	6	99	98	86	47.6	3.2	13	
C-35			747+34	40' left	**14" ASPHALT CONCRETE**	0-14	separation at 7 inches, tack layer at 9 1/2 inches								
					7" CEMENT STABILIZED SUBGRADE	14-21									•Minor severity transverse cracking
	35A	A-2-4			**SILTY SAND (SM),** brown	21-39	NV	NP	98	96	81	31.4	0.0	14	
	35B				**SANDY LEAN CLAY (CL),** brown	39-50								17	
C-36			737+44	40' left	**15 1/2" ASPHALT CONCRETE**	0-15.5	separation at 2 1/2 and 8 inches, tack layer at 11 inches								
					7" CEMENT STABILIZED SUBGRADE	15.5-22.5									•Minor severity transverse cracking
	36A				**SILTY SAND (SM),** brown	22.5-46.5								12	
	36B	A-4(4)			**SANDY LEAN CLAY (CL),** brown	46.5-58.5	24	10	100	99	93	68.3	8.0	14	
C-37			727+60	40' left	**14 1/2" ASPHALT CONCRETE**	0-14.5	separation at 2 1/2 inches, tack layer at 10 inches								
					7 1/2" CEMENT STABILIZED SUBGRADE	14.5-22									
	37A	A-4(0)			**SILTY SAND (SM),** reddish brown	22-46	NV	NP	100	98	85	38.2	0.0	11	•Minor severity transverse cracking
	37B				**SANDY LEAN CLAY (CL),** reddish brown	46-52								11	
					*Auger refusal at 52 inches										
C-38			717+64	40' left	**14" ASPHALT CONCRETE**	0-14	separation at 3 inches, tack layer at 10 1/2 inches								
					7 1/2" CEMENT STABILIZED SUBGRADE	14-21.5									
	38A				**SILTY SAND (SM),** brown	21.5-51.5								13	
	38B	A-4(2)			**SANDY LEAN CLAY (CL),** brown	51.5-57.5	23	9	100	99	90	57.3	6.2	13	

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Pavement Core Data and Subgrade Soils Chart

Boring	Field No.	Soil Group	Station	I-35 CL	Description	Depth (in)	LL	PI	Percent Passing				OSI	MC %	Notes
									# 4	# 10	# 40	# 200			
C-39			707+72	40' left	**14" ASPHALT CONCRETE**	0-14	separation at 9 inches								
					8" CEMENT STABILIZED SUBGRADE	14-22									
	39A	A-4(0)			**SILTY SAND (SM),** brown	22-40	NV	NP	100	99	86	35.8	0.0	13	
	39B				**SANDY LEAN CLAY (CL),** brown	40-58								13	
C-40			693+85	40' left	**12 1/2" ASPHALT CONCRETE**	0-12.5	tack layer at 7 1/2 inches								
					5" CEMENT STABILIZED SUBGRADE	12.5-17.5									
					*Auger refusal at 17.5 inches										
C-41			687+92	41' left	**12" ASPHALT CONCRETE**	0-12									
					6" CEMENT STABILIZED SUBGRADE	12-18									
	41A	A-4(3)			**SANDY LEAN CLAY (CL),** red	18-42	24	9	97	96	89	61.1	6.7	15	
					*Auger refusal at 42 inches										
C-42			677+79	40' left	**14" ASPHALT CONCRETE**	0-14	separation at 6 1/2 inches, tack layer at 9 3/4 inches								
					8" CEMENT STABILIZED SUBGRADE	14-22									
	42A	A-4(0)			**SILTY, CLAYEY SAND (SC-SM),** brown	22-46	20	4	99	97	85	46.2	2.4	13	
	42B				**SANDY LEAN CLAY (CL),** reddish brown	46-58								15	
C-43			668+19	40' left	**15 1/2" ASPHALT CONCRETE**	0-15.5	separation and severe stripping at 7 inches tack layer at 11 1/2 inches								
					8" CEMENT STABILIZED SUBGRADE	15.5-23.5									•Minor severity transverse cracking
	43A				**SANDY SILTY CLAY (CL-ML),** brown	23.5-47.5								16	
	43B	A-4(3)			**SANDY LEAN CLAY (CL),** reddish brown	47.5-59.5	24	9	100	100	94	64.7	7.2	14	
C-44			658+08	40' left	**15 1/2" ASPHALT CONCRETE**	0-15.5	separation at 6 1/2 inches, separation and deterioration at 11 inches								
					8" CEMENT STABILIZED SUBGRADE	15.5-23.5									•Minor severity transverse cracking
	44A	A-4(0)			**SANDY SILTY CLAY (CL-ML),** brown	23.5-41.5	21	5	100	99	89	55.9	4.2	16	
	44B				**SANDY LEAN CLAY (CL),** brown	41.5-59.5								16	

Surveyed By: Dawson Wiseman
Date Surveyed: December 16, 19, 20, 27 and 28, 2022

RED ROCK CONSULTING

RRC Project No: 22118
J/P No: 35589(04)
Location: McClain County, Oklahoma

Pavement Core Data and Subgrade Soils Chart

Boring	Field No.	Soil Group	Station	I-35 CL	Description	Depth (in)	LL	PI	Percent Passing				OSI	MC %	Notes
									# 4	# 10	# 40	# 200			
C-45			648+15	40' left	**14 3/4" ASPHALT CONCRETE**	0-14.75	separation at 8 inches, tack layer at 10 inches								
					8 1/2" CEMENT STABILIZED SUBGRADE	14.75-23.25									•Minor severity transverse cracking
	45A	A-4(0)			**SILTY, CLAYEY SAND (SC-SM),** reddish brown	23.25-53.25	19	5	99	98	82	42.8	2.1	13	
	45B				**SANDY LEAN CLAY (CL),** reddish brown	53.25-59.25								10	
C-46			633+22	40' left	**16" ASPHALT CONCRETE**	0-16	separation at 10 1/2 inches								
					8" CEMENT STABILIZED SUBGRADE	16-24									•Minor severity transverse cracking
	46A				**SILTY, CLAYEY SAND (SC-SM),** reddish brown	24-54								14	
	46B	A-4(5)			**LEAN CLAY with SAND (CL),** brown	54-60	25	10	100	99	95	76.1	9.0	16	

APPENDIX C

Top

Coring
C-1

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-1
Station	640+24
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.107261
Longitude	-97.434100

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	10	Type B		
	Asphalt Concrete	2	Type C, tack layer at 11 inches		
	Asphalt Concrete	3	Type A		
	Total Core Thickness	15			
2	CEMENT STABILIZED SUBGRADE	7			
3	SANDY SILTY CLAY (CL-ML), brown	24		A-4(0)	4
4	SANDY SILTY CLAY (CL-ML), red	12			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☐ Separation ☑ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-2

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-2
Station	652+91
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.109989
Longitude	-97.436700

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	11	Type B, separation at 8 inches		
	Asphalt Concrete	2	Type C, tack layer at 12 inches		
	Asphalt Concrete	3	Type B		
	Total Core Thickness	16			
2	CEMENT STABILIZED SUBGRADE	8			
3	SILTY, CLAYEY SAND (SC-SM), brown	18			
4	SANDY SILTY CLAY (CL-ML), reddish brown	18		A-4(1)	5.4

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Coring
C-3

Top

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-3
Station	662+06
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.112131
Longitude	-97.438600

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	10 1/2	Type B, separation and minor stripping at 3 and 8 inches		
	Asphalt Concrete	1	Type C, separation at 11 1/2 inches		
	Asphalt Concrete	3 1/2	Type B, minor stripping from 11 1/2 to 15 inches		
	Total Core Thickness	15			
2	CEMENT STABILIZED SUBGRADE	8			
3	SANDY SILTY CLAY (CL-ML), brown	18			
4	SANDY SILTY CLAY (CL-ML), reddish brown	18		A-4(1)	5.2

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☑ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Coring
C-4

Top

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-4
Station	672+36
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.114300
Longitude	-97.440600

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	9 1/2	Type B, separation at 6 1/2 inches		
	Asphalt Concrete	2 1/2	Type C, tack layer at 10 1/2 inches		
	Asphalt Concrete	2 1/2	Type B		
	Total Core Thickness	14 1/2			
2	CEMENT STABILIZED SUBGRADE	6			
3	SILTY, CLAYEY SAND (SC-SM), reddish brown	30		A-4(0)	2.8
	*Auger refusal at 50.5 inches				

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-5

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-5
Station	682+54
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.116489
Longitude	-97.442700

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	10	Type B		
	Asphalt Concrete	2	Type C, tack layer at 11 inches		
	Asphalt Concrete	2	Type B		
	Total Core Thickness	14			
2	CEMENT STABILIZED SUBGRADE	8			
3	SILTY, CLAYEY SAND (SC-SM), brown	18		A-4(0)	2.1
4	SANDY LEAN CLAY (CL), reddish brown	12			
	*Auger refusal at 52 inches				

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☐ Separation ☑ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Coring
C-6

Top

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-6
Station	690+04
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.118111
Longitude	-97.444200

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics		
1	Asphalt Concrete	9	Type B		
	Asphalt Concrete	2 1/2	Type C, tack layer at 10 inches		
	Asphalt Concrete	2 1/2	Type B		
	Total Core Thickness	14			
				AASHTO	OSI
2	CEMENT STABILIZED SUBGRADE	8			
3	CLAYEY SAND (SC), brown	18			
4	LEAN CLAY with SAND (CL), brown	18		A-6(9)	11.8

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☐ Separation ☑ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-7

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-7
Station	701+90
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.120811
Longitude	-97.446700

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	8	Type B, separation at 2 inches		
	Asphalt Concrete	2 1/2	Type C, tack layer at 9 inches		
	Asphalt Concrete	4	Type B		
	Total Core Thickness	14 1/2			
2	CEMENT STABILIZED SUBGRADE	4 1/2			
3	CLAYEY SAND (SC), brown	36		A-4(1)	4.2

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-8

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-8
Station	712+30
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.123031
Longitude	-97.448700

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	10 1/4	Type B, separation at 3 inches		
	Asphalt Concrete	2	Type C, tack layer at 11 inches		
	Asphalt Concrete	1 3/4	Type A		
	Total Core Thickness	14			
2	CEMENT STABILIZED SUBGRADE	10			
3	SILTY SAND (SM), brown	24		A-4(0)	0
4	SANDY LEAN CLAY (CL), reddish brown	12			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Coring
C-9

Top

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-9
Station	722+10
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.125150
Longitude	-97.450700

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics		
1	Asphalt Concrete	10	Type B, separation at 3 inches		
	Asphalt Concrete	2	Type C, tack layer at 11 inches		
	Asphalt Concrete	2 1/2	Type A		
	Total Core Thickness	14 1/2			
				AASHTO	OSI
2	CEMENT STABILIZED SUBGRADE	8			
3	SANDY SILT (ML), brown	30			
4	SANDY LEAN CLAY (CL), brown	6		A-4(2)	6.3

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Coring
C-10

Top

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-10
Station	731+99
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.127319
Longitude	-97.452700

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	8	Type B, separation at 2 1/2 inches		
	Asphalt Concrete	2	Type C, tack layer at 9 inches		
	Asphalt Concrete	4	Type A		
	Total Core Thickness	14			
2	CEMENT STABILIZED SUBGRADE	9			
3	SILTY SAND (SM), brown	18		A-2-4	0.59
4	SANDY LEAN CLAY (CL), reddish brown	18			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-11

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-11
Station	741+97
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.129511
Longitude	-97.454770

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics		
1	Asphalt Concrete	8 1/2	Type B, separation at 2 1/2 inches		
	Asphalt Concrete	2 1/2	Type C, tack layer at 9 1/2 inches		
	Asphalt Concrete	2 1/2	Type A		
	Total Core Thickness	13 1/2			
				AASHTO	OSI
2	CEMENT STABILIZED SUBGRADE	10			
3	SILTY, CLAYEY SAND (SC-SM), brown	24			
4	LEAN CLAY with SAND (CL), reddish brown	12		A-6(12)	14.4

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-12

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-12
Station	752+06
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.131669
Longitude	-97.456700

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	9 1/2	Type B, separation at 2 1/2 and 8 inches, moderate stripping at 8 inches		
	Asphalt Concrete	2 1/2	Type C, tack layer at 10 inches		
	Asphalt Concrete	3 1/2	Type A		
	Total Core Thickness	15 1/2			
2	CEMENT STABILIZED SUBGRADE	10			
3	SILTY, CLAYEY SAND (SC-SM), brown	24			
4	SANDY LEAN CLAY (CL), brown	12		A-4(4)	8.2

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☑ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-13

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-13
Station	761+72
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.133831
Longitude	-97.458700

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	10	Type B, separation and minor stripping at 9 1/2 inches		
	Asphalt Concrete	3	Type C, tack layer at 11 inches		
	Asphalt Concrete	3 1/2	Type A		
	Total Core Thickness	16 1/2			
2	CEMENT STABILIZED SUBGRADE	8			
3	SILTY, CLAYEY SAND (SC-SM), brown	24		A-4(0)	1.2
4	SANDY LEAN CLAY (CL), brown	12			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☑ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-14

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-14
Station	771+57
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.136000
Longitude	-97.460700

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	5	Type B, separation at 10 inches		
	Asphalt Concrete	2 1/2	Type C, tack layer at 11 inches		
	Asphalt Concrete	5 1/2	Type A		
	*3 inches destroyed in core barrel				
	Total Core Thickness	13			
2	CEMENT STABILIZED SUBGRADE	6			
3	SILTY SAND (SM), brown	33		A-2-4	0
4	LEAN CLAY with SAND (CL), brown	3			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-15

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-15
Station	781+57
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.138181
Longitude	-97.462700

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	6	Type B, separation at 4 1/4 inches		
	Asphalt Concrete	2	Type C, tack layer at 7 inches		
	Asphalt Concrete	4	Type A		
	Total Core Thickness	12			
2	CEMENT STABILIZED SUBGRADE	9			
3	SANDY SILT (ML), brown	24			
4	LEAN CLAY with SAND (CL), brown	12		A-6(7)	10.2

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Coring
C-16

Top

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-16
Station	791+38
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.140350
Longitude	-97.464700

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	5	Type B		
	Asphalt Concrete	2 1/2	Type C, tack layer at 6 inches		
	Asphalt Concrete	3 1/2	Type A		
	Total Core Thickness	11			
2	CEMENT STABILIZED SUBGRADE	7			
3	SANDY SILT (ML), light brown	18		A-4(0)	2.8
4	SANDY SILT (ML), brown	18			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☐ Separation ☑ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-17

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-17
Station	801+33
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.142500
Longitude	-97.466700

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	5	Type B		
	Asphalt Concrete	2 1/2	Type C, separation at 6 1/4 inches		
	Asphalt Concrete	3 1/2	Type A		
	Total Core Thickness	11			
2	CEMENT STABILIZED SUBGRADE	10			
3	SILTY SAND (SM), light brown	18			
4	LEAN CLAY with SAND (CL), dark brown	18		A-4(6)	9.2

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-18

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-18
Station	813+93
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.145219
Longitude	-97.469300

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	6 1/2	Type B, separation at 2 1/2 inches		
	Asphalt Concrete	2 1/2	Type C, tack layer at 7 1/4 inches		
	Asphalt Concrete	3	Type A		
	Total Core Thickness	12			
2	CEMENT STABILIZED SUBGRADE	10			
3	SANDY SILT (ML), light brown	24		A-4(0)	2.8
4	SANDY LEAN CLAY (CL), brown	12			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-19

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-19
Station	828+73
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.148461
Longitude	-97.472300

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics		
1	Asphalt Concrete	5 1/2	Type B		
	Asphalt Concrete	2	Type C, tack layer at 7 1/4 inches		
	Asphalt Concrete	4	Type A		
	Total Core Thickness	11 1/2			
				AASHTO	OSI
2	AGGREGATE BASE	10			
3	SILTY SAND (SM), dark brown, organic smell	24			
4	LEAN CLAY with SAND (CL), dark brown, organic smell	12		A-4(4)	7.8

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☐ Yes ☑ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-20

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-20
Station	843+61
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.135053
Longitude	-97.475300

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	5	Type B		
	Asphalt Concrete	1/2	Type C, tack layer at 5 1/2 inches		
	Asphalt Concrete	2	Type B		
	Asphalt Concrete	2 1/2	Type A		
	Total Core Thickness	10			
2	AGGREGATE BASE	6			
3	SILTY SAND (SM), light brown	24		A-2-4	0
4	SILTY, CLAYEY SAND (SC-SM), dark brown, organic smell	12			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☐ Separation ☑ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☐ Yes ☑ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-21

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-21
Station	860+17
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.155275
Longitude	-97.478611

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	4	Type B,		
	Asphalt Concrete	2	Type C, tack layer at 5 inches		
	Asphalt Concrete	3 1/4	Type A		
	Total Core Thickness	9 1/4			
2	AGGREGATE BASE	8			
3	SILTY, CLAYEY SAND (SC-SM), light brown	24			
4	CLAYEY SAND (SC), dark brown	6		A-4(1)	4
	*Auger refusal at 47.25 inches				

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☐ Separation ☑ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☐ Yes ☑ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-22

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-22
Station	868+53
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.157150
Longitude	-97.480400

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics		
1	Asphalt Concrete	8	Type B, separation and deterioration at 2 1/2 inches		
	Asphalt Concrete	2	Type C, separation at 9 inches		
	Asphalt Concrete	3	Type A		
	Total Core Thickness	13			
				AASHTO	OSI
2	AGGREGATE BASE	6			
3	SILTY, CLAYEY SAND (SC-SM), light brown	12		A-2-4	0.91
	*Auger refusal at 31 inches				

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☐ Yes ☑ No ☐ Unknown

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Top

Coring
C-23

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' right
Core	C-23
Station	875+98
Coring Location	Outer Wheel Path
Lane Direction	NB
Latitude	35.158769
Longitude	-97.481900

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics		
1	Asphalt Concrete	5	Type B,		
	Asphalt Concrete	2	Type C, tack layer at 5 1/2 inches		
	Asphalt Concrete	3	Type A		
	Total Core Thickness	10			
				AASHTO	OSI
2	AGGREGATE BASE	10			
3	SILTY, CLAYEY SAND with GRAVEL (SC-SM), light brown	12		A-1-b	0.25
	*Auger refusal at 32 inches				

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☐ Separation ☑ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☐ Yes ☑ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-24

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-24
Station	871+41
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.157669
Longitude	-97.481100

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	5 1/2	Type B		
	Asphalt Concrete	2 1/2	Type C		
	Asphalt Concrete	3	Type A, separation at 9 1/2 inches		
	Total Core Thickness	11			
2	AGGREGATE BASE	8			
3	SILTY SAND (SM), brown	24			
4	SILTY CLAY with SAND (CL-ML), reddish brown	12		A-4(3)	7

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☐ Yes ☑ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-25

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-25
Station	866+41
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.156581
Longitude	-97.480100

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics		
1	Asphalt Concrete	6	Type B		
	Asphalt Concrete	2	Type C, tack layer at 6 1/2 inches		
	Asphalt Concrete	3	Type A, separation at 9 inches		
	Total Core Thickness	11			
				AASHTO	OSI
2	AGGREGATE BASE	8			
3	SILTY SAND with GRAVEL (SM), brown	24			
4	SILTY CLAY with SAND (CL-ML), brown	12		A-4(3)	7.2

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☐ Yes ☑ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-26

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-26
Station	851+52
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.153331
Longitude	-97.477100

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	3 1/2	Type B		
	Asphalt Concrete	3/4	Type C, separation and minor stripping at 4 1/4 inches		
	Asphalt Concrete	5	Type A, deterioration at 8 inches		
	Total Core Thickness	9 1/4			
2	AGGREGATE BASE	8			
3	SILTY SAND with GRAVEL (SM), brown	12		A-2-4	0
4	SANDY SILT (ML), brown	24			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☑ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☐ Yes ☑ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-27

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-27
Station	836+73
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.150069
Longitude	-97.474100

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	8	Type B		
	Asphalt Concrete	1	Type C, tack layer at 9 inches		
	Asphalt Concrete	3	Type A		
	Total Core Thickness	12			
2	AGGREGATE BASE	8			
3	SILTY SAND with GRAVEL (SM), light brown	12			
4	SANDY SILT (ML), brown	24		A-4(0)	0

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☐ Separation ☑ N/A

Honeycomb or "D" Cracking in PCC: ☑ Honeycomb ☐ "D" ☐ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☐ Yes ☑ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-28

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-28
Station	821+87
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.146819
Longitude	-97.471100

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	5	Type B		
	Asphalt Concrete	2 1/4	Type C, separation at 5 1/2 inches		
	Asphalt Concrete	3 3/4	Type A		
	Total Core Thickness	11			
2	AGGREGATE BASE	6			
3	SILTY SAND (SM), brown	24		A-2-4	0
4	LEAN CLAY with SAND (CL), brown	12			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☐ Yes ☑ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-29

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-29
Station	807+01
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.143561
Longitude	-97.468100

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	7 1/2	Type B		
	Asphalt Concrete	2 1/2	Type C, separation at 8 1/2 inches		
	Asphalt Concrete	3	Type A		
	Total Core Thickness	13			
2	CEMENT STABILIZED SUBGRADE	6			
3	SILTY SAND (SM), brown	24			
4	LEAN CLAY with SAND (CL), dark brown	12		A-4(5)	8.4

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-30

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-30
Station	797+11
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.141389
Longitude	-97.466100

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	5 1/2	Type B		
	Asphalt Concrete	1 1/2	Type C, separation at 6 1/2 inches		
	Asphalt Concrete	4	Type A, severe stripping from 8 to 11 inches		
	Total Core Thickness	11			
2	CEMENT STABILZED SUBGRADE	8			
3	SILTY SAND (SM), brown	12			
4	SILTY, CLAYEY SAND (SC-SM), brown	12		A-4(0)	2.3
5	SANDY LEAN CLAY (CL), brown	12			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

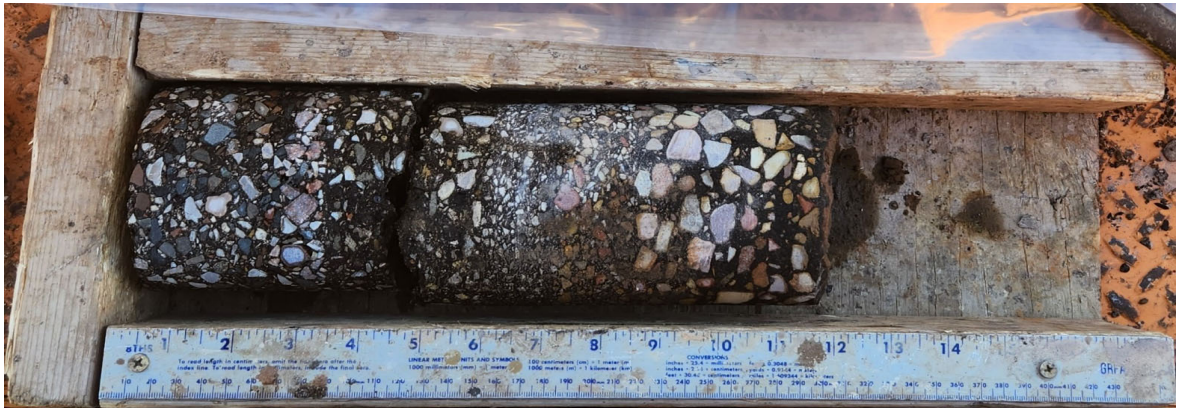
Stripping and/or Separation: ☑ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top



Coring
C-31

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-31
Station	787+20
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.139219
Longitude	-97.464100

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	6	Type B, separation at 4 1/2 inches		
	Asphalt Concrete	2 1/2	Type C, tack layer at 7 inches		
	Asphalt Concrete	3 1/2	Type A		
	Total Core Thickness	12			
2	CEMENT STABILZED SUBGRADE	6 1/2			
3	CLAYEY SAND (SC), brown	24			
4	SANDY SILTY CLAY (CL-ML), dark brown to black	12		A-4(1)	5.4

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

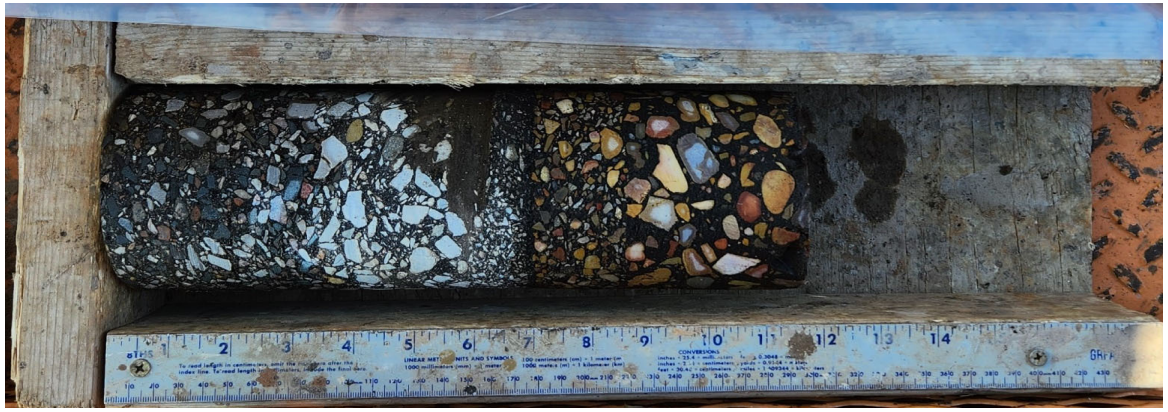
Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top



Coring
C-32

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-32
Station	777+24
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.137050
Longitude	-97.462100

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	6	Type B		
	Asphalt Concrete	2 1/2	Type C, tack layer at 7 inches		
	Asphalt Concrete	3	Type A		
	Total Core Thickness	11 1/2			
2	CEMENT STABILZED SUBGRADE	6			
3	SILTY, CLAYEY SAND (SC-SM), brown	12			
4	LEAN CLAY with SAND (CL), brown	24		A-6(6)	9.4

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☐ Separation ☑ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

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Top

Coring
C-33

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-33
Station	767+10
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.134881
Longitude	-97.460000

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	5 1/2	Type B		
	Asphalt Concrete	2	Type C, tack layer at 6 inches		
	Asphalt Concrete	3 1/2	Type A		
	Total Core Thickness	11			
2	CEMENT STABILZED SUBGRADE	7			
3	SILTY SAND (SM), light brown	24			
4	SANDY SILTY CLAY (CL-ML), light brown	12		A-4(1)	5.2

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☐ Separation ☑ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

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Top

Coring
C-34

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-34
Station	757+26
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.132711
Longitude	-97.458000

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics		
1	Asphalt Concrete	10	Type B		
	Asphalt Concrete	1	Type C, tack layer at 6 inches		
	Asphalt Concrete	4	Type A, separation at 11 inches		
	*4 inches destroyed in barrel				
	Total Core Thickness	15			
				AASHTO	OSI
2	CEMENT STABILZED SUBGRADE	5			
3	SILTY SAND (SM), brown	24			
4	SILTY, CLAYEY SAND (SC-SM), reddish brown	12		A-4(0)	3.2

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

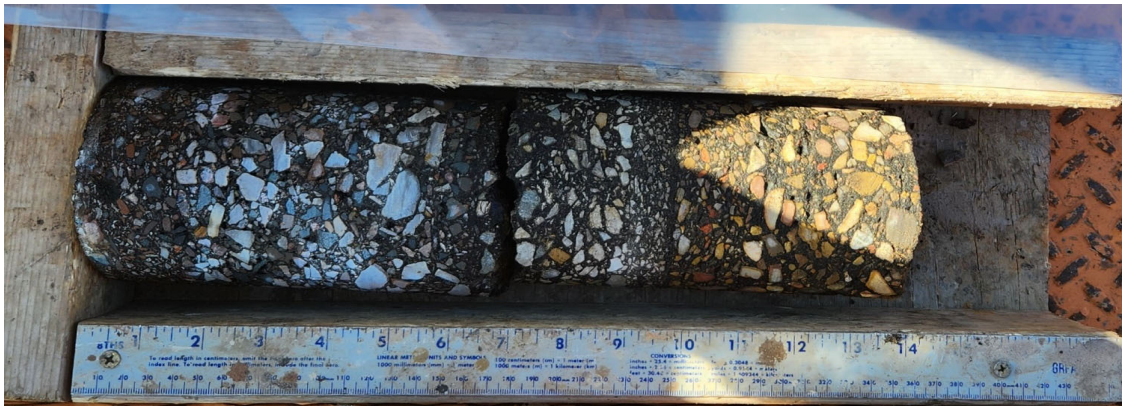
Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top



Coring
C-35

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-35
Station	747+34
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.130550
Longitude	-97.456000

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	9	Type B, separation at 7 inches		
	Asphalt Concrete	2	Type C, tack layer at 9 1/2 inches		
	Asphalt Concrete	3	Type A		
	Total Core Thickness	14			
2	CEMENT STABILZED SUBGRADE	7			
3	SILTY SAND (SM), brown	18		A-2-4	0
4	SANDY LEAN CLAY (CL), brown	18			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-36

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-36
Station	737+44
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.128369
Longitude	-97.454000

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	10	Type B, separation at 2 1/2 and 8 inches		
	Asphalt Concrete	2	Type C, tack layer at 11 inches		
	Asphalt Concrete	3 1/2	Type A		
	Total Core Thickness	15 1/2			
2	CEMENT STABILZED SUBGRADE	7			
3	SILTY SAND (SM), brown	24			
4	SANDY LEAN CLAY (CL), brown	12		A-4(4)	8

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

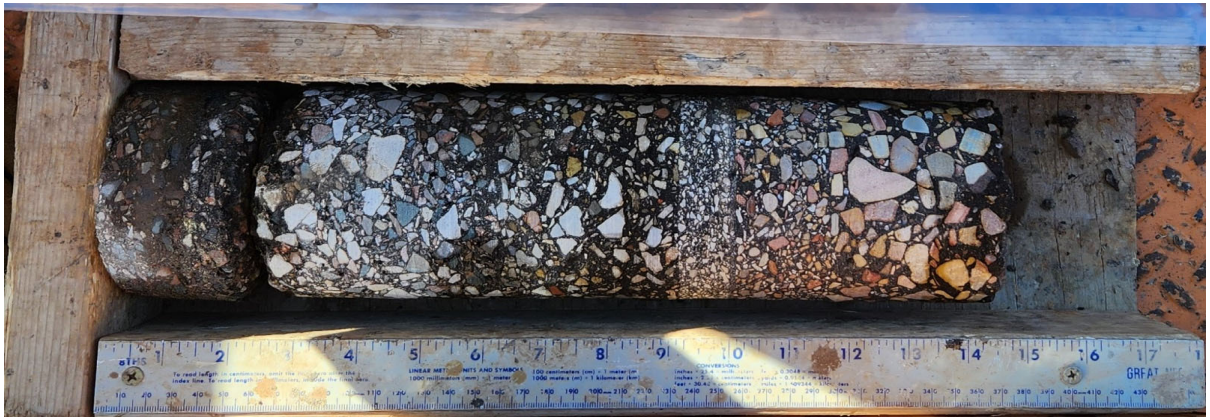
Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top



Coring
C-37

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-37
Station	727+60
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.126200
Longitude	-97.452000

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	9	Type B, separation at 2 1/2 inches		
	Asphalt Concrete	2 1/2	Type C, tack layer at 10 inches		
	Asphalt Concrete	3	Type A		
	Total Core Thickness	14 1/2			
2	CEMENT STABILZED SUBGRADE	7 1/2			
3	SILTY SAND (SM), reddish brown	24		A-4(0)	0
4	SANDY LEAN CLAY (CL), reddish brown	6			
	*Auger refusal at 52 inches				

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

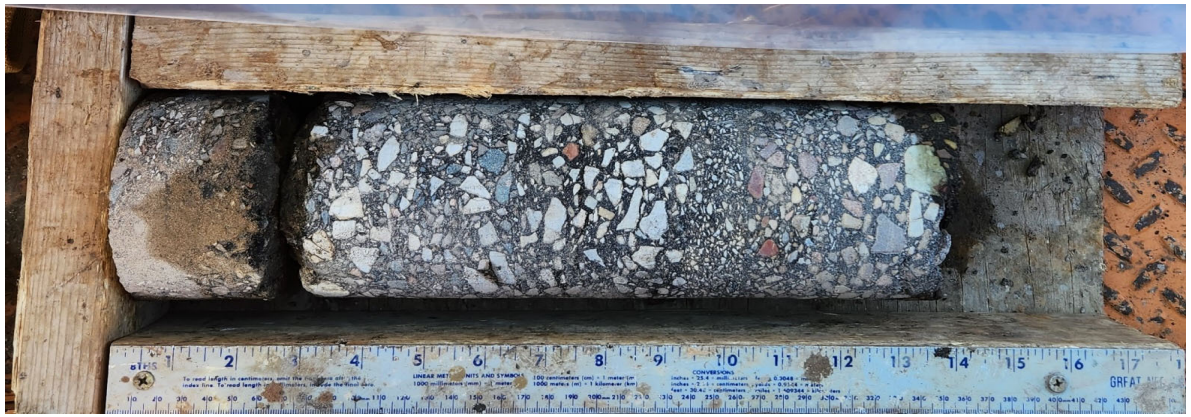
Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top



Coring
C-38

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-38
Station	717+64
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.124031
Longitude	-97.450000

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	9 1/2	Type B, separation at 3 inches		
	Asphalt Concrete	2	Type C, tack layer at 10 1/2 inches		
	Asphalt Concrete	2 1/2	Type A		
	Total Core Thickness	14			
2	CEMENT STABILZED SUBGRADE	7 1/2			
3	SILTY SAND (SM), brown	30			
4	SANDY LEAN CLAY (CL), brown	6		A-4(2)	6.2

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-39

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-39
Station	707+72
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.121869
Longitude	-97.448000

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	8 3/4	Type B,		
	Asphalt Concrete	2	Type C, separation at 9 inches		
	Asphalt Concrete	3 1/4	Type A		
	Total Core Thickness	14			
2	CEMENT STABILZED SUBGRADE	8			
3	SILTY SAND (SM), brown	18		A-4(0)	0
4	SANDY LEAN CLAY (CL), brown	18			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

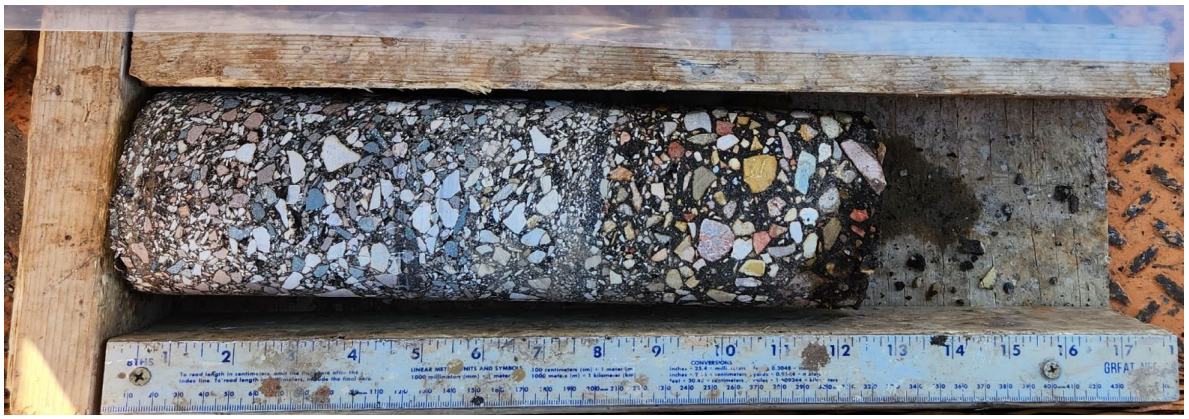
Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top



Coring
C-40

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-40
Station	693+85
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.118819
Longitude	-97.445200

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics
1	Asphalt Concrete	7 1/2	Type B,
	Asphalt Concrete	1 1/2	Type C, tack layer at 7 1/2 inches
	Asphalt Concrete	3 1/2	Type A
	Total Core Thickness	12 1/2	
			AASHTO OSI
2	CEMENT STABILZED SUBGRADE	5	
	*Auger refusal at 17.5 inches		

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☐ Separation ☑ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-41

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	41' left
Core	C-41
Station	687+92
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.117519
Longitude	-97.444000

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	
1	Asphalt Concrete	12	Type B	
	Total Core Thickness	12		
			AASHTO	OSI
2	CEMENT STABILZED SUBGRADE	6		
3	SANDY LEAN CLAY (CL), red	24	A-4(3)	6.7
	*Auger refusal at 42 inches			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☐ Separation ☑ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-42

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-42
Station	677+79
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.115339
Longitude	-97.441900

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	9	Type B, separation at 6 1/2 inches		
	Asphalt Concrete	2 1/2	Type C, tack layer at 9 3/4 inches		
	Asphalt Concrete	2 1/2	Type A		
	Total Core Thickness	14			
2	CEMENT STABILZED SUBGRADE	8			
3	SILTY, CLAYEY SAND (SC-SM), brown	24		A-4(0)	2.4
4	SANDY LEAN CLAY (CL), reddish brown	12			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-43

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-43
Station	668+19
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.113189
Longitude	-97.440000

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics		
1	Asphalt Concrete	10 1/2	Type B, separation and severe stripping at 7 inches		
	Asphalt Concrete	3	Type C, tack layer at 11 1/2 inches		
	Asphalt Concrete	2	Type A		
	Total Core Thickness	15 1/2			
				AASHTO	OSI
2	CEMENT STABILZED SUBGRADE	8			
3	SANDY SILTY CLAY (CL-ML), brown	24			
4	SANDY LEAN CLAY (CL), reddish brown	12		A-4(3)	7.2

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☑ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-44

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-44
Station	658+08
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.111019
Longitude	-97.437900

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	10	Type B, separation at 6 1/2 inches		
	Asphalt Concrete	2 1/4	Type C, separation and deterioration at 11 inches		
	Asphalt Concrete	3 1/4	Type A		
	Total Core Thickness	15 1/2			
2	CEMENT STABILZED SUBGRADE	8			
3	SANDY SILTY CLAY (CL-ML), brown	18		A-4(0)	4.2
4	SANDY LEAN CLAY (CL), brown	18			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☑ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-45

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-45
Station	648+15
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.108850
Longitude	-97.435900

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	9 1/2	Type B, separation at 8 inches		
	Asphalt Concrete	1 1/2	Type C, tack layer at 10 inches		
	Asphalt Concrete	3 3/4	Type A		
	Total Core Thickness	14 3/4			
2	CEMENT STABILZED SUBGRADE	8 1/2			
3	SILTY, CLAYEY SAND (SC-SM), reddish brown	30		A-4(0)	2.1
4	SANDY LEAN CLAY (CL), reddish brown	6			

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

RED ROCK CONSULTING

Top

Coring
C-46

Surveyed By: Dawson Wiseman

Date Surveyed: December 16, 19, 20, 27 and 28, 2022

CORE LOG

RRC No.	22118
State Aid Project No.	35589(04)
Location	I-35
County	McClain
I-35 CL	40' left
Core	C-46
Station	633+22
Coring Location	Outer Wheel Path
Lane Direction	SB
Latitude	35.105589
Longitude	-97.432900

CORE LAYER DATA (FROM TOP TO BOTTOM)

Sample No.	Layer Type	Layer Thickness (in.)	Layer Characteristics	AASHTO	OSI
1	Asphalt Concrete	9 1/2	Type B,		
	Asphalt Concrete	2 1/2	Type C, separation at 10 1/2 inches		
	Asphalt Concrete	4	Type A		
	Total Core Thickness	16			
2	CEMENT STABILZED SUBGRADE	8			
3	SILTY, CLAYEY SAND (SC-SM), reddish brown	30			
4	LEAN CLAY with SAND (CL), brown	6		A-4(5)	9

*Asphalt type based on visual observation only

CORE DATA

Surface Material Type: ☑ A.C. ☐ P.C.C. ☐ Continuously Reinforced Concrete

Stripping and/or Separation: ☐ Stripping ☑ Separation ☐ N/A

Honeycomb or "D" Cracking in PCC: ☐ Honeycomb ☐ "D" ☑ N/A

Stabilized Subgrade Beneath Pavement or Sub-base? ☑ Yes ☐ No ☐ Unknown

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Pavement Photographs

Photo #1 Minor severity transverse cracking near C-1.

Photo #2 No cracking observed near C-2.

Photo #3 No cracking observed near C-3.

Photo #4 Minor severity transverse cracking near C-4.

Photo #5 No cracking observed near C-5.

Photo #6 No cracking observed near C-6.

Photo #7 Minor severity longitudinal cracking near C-7.

Photo #8 No cracking observed near C-8.

Photo #9 Minor severity transverse cracking near C-9.

Photo #10 Minor severity transverse cracking near C-10.

Photo #11 Moderate severity transverse cracking near C-11.

Photo #12 No cracking observed near C-12.

Photo #13 No cracking observed near C-13.

Photo #14 Recent asphalt overlay near C-14.

Photo #15 Recent asphalt overlay near C-15.

Photo #16 Recent asphalt overlay near C-16.

Photo #17 Recent asphalt overlay near C-17.

Photo #18 Recent asphalt overlay near C-18.

Photo #19 Recent asphalt overlay near C-19.

Photo #20 Recent asphalt overlay near C-20.

Photo #21 Recent asphalt overlay near C-21.

Photo #22 Recent asphalt overlay near C-22.

Photo #23 Recent asphalt overlay near C-23.

Photo #24 Recent asphalt overlay near C-24.

Photo #25 Recent asphalt overlay near C-25.

Photo #26 Recent asphalt overlay near C-26.

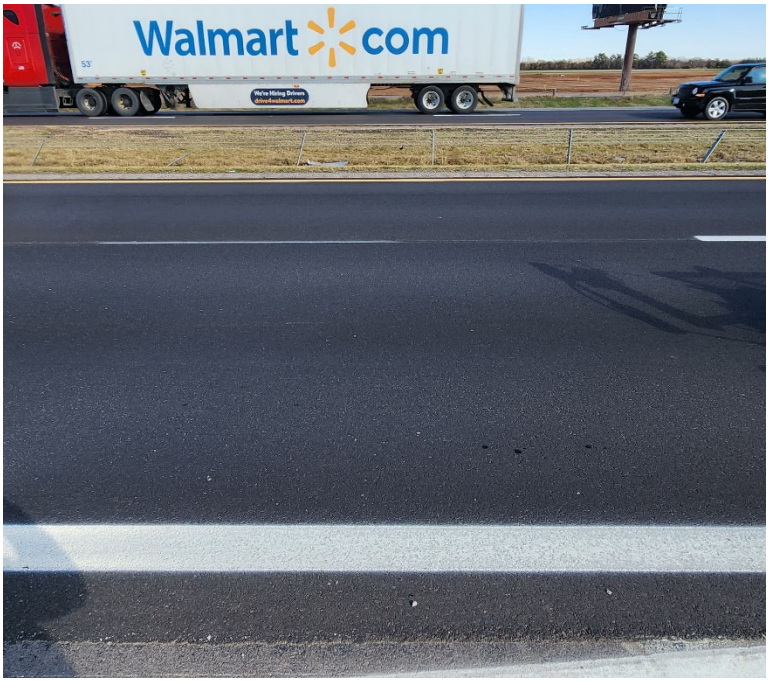


Photo #27 Recent asphalt overlay near C-27.

Photo #28 Recent asphalt overlay near C-28.

Photo #29 Recent asphalt overlay near C-29.

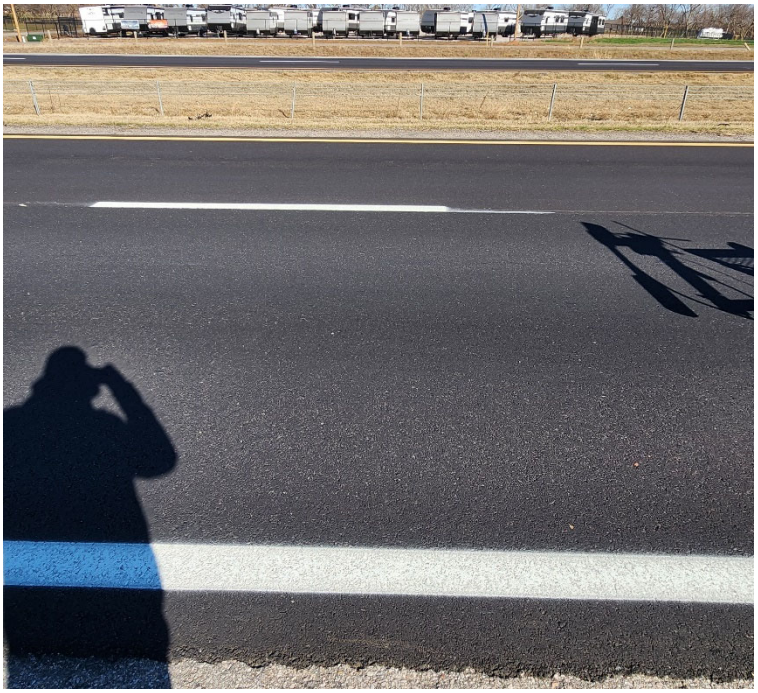


Photo #30 Recent asphalt overlay near C-30.

Photo #31 Recent asphalt overlay near C-31.

Photo #32 Recent asphalt overlay near C-32.

Photo #33 Recent asphalt overlay near C-33.

Photo #34 Minor severity transverse cracking near C-34.

Photo #35 Minor severity transverse cracking near C-35.

Photo #36 Minor severity transverse cracking near C-36.

Photo #37 Minor severity transverse cracking near C-37.

Photo #38 No cracking observed near C-38.

Photo #39 No cracking observed near C-39.

Photo #40 No cracking observed near C-40.

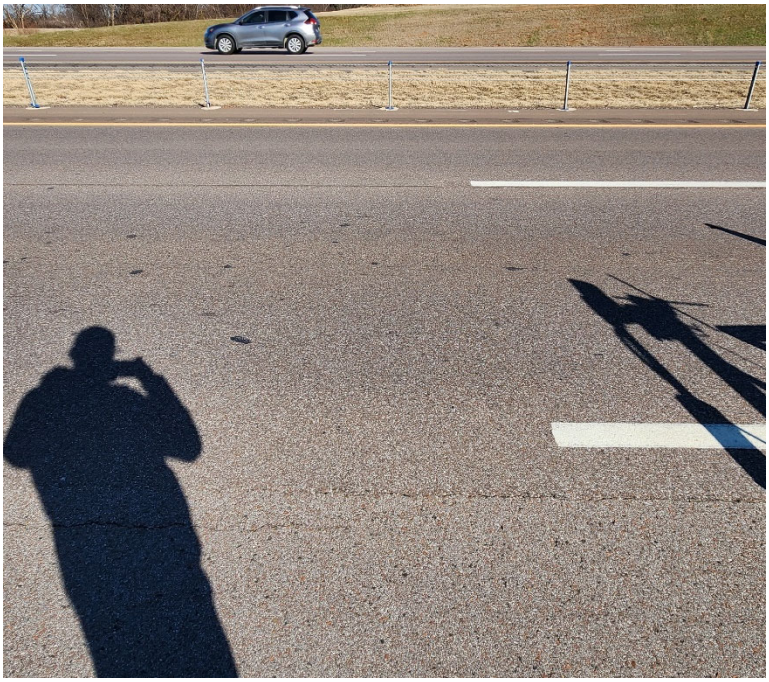


Photo #41 No cracking observed near C-41.

Photo #42 No cracking observed near C-42.

Photo #43 Minor severity transverse cracking near C-43.

Photo #44 Minor severity transverse cracking near C-44.

Photo #45 Minor severity transverse cracking near C-45.

Photo #46 Minor severity transverse cracking near C-46.

APPENDIX D

FALLING WEIGHT DEFLECTOMETER MODULUS TESTING

I-35, McCLAIN COUNTY, OK

Prepared for

RED ROCK CONSULTING, LLC
PO Box 30591
Edmond, OK 73003

Prepared by

EINCK, Corp

Maryland Office
1850 York Rd, Suite E (REAR)
Timonium, MD 21093

Oklahoma Office
6906 E 191st Street S
Bixby, OK 74008

June 23, 2023

June 23, 2023

To: RED ROCK CONSULTING, LLC
PO Box 30591
Edmond, OK 73003

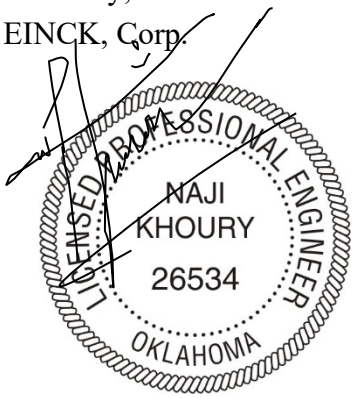
Subject: Falling Weight Deflectometer
I-35 McClain County, Oklahoma

Dear Ms. Coggin,

We are pleased to submit this report summarizing the Falling Weight Deflectometer (FWD) field results conducted on December 06, 2022 on I-35 McClain County (JP35589-04), Oklahoma. The purpose of the FWD survey/testing was to back-calculate the modulus of encountered layers of the tested pavement for the referenced project.

We thank you for giving us the opportunity to work on this project. Should you have any questions or need additional information, please contact us and will be glad to address/provide.

Sincerely,
EINCK, Corp.



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1. Introduction

EINCK, Corp, conducted falling weight deflectometer (FWD) testing on I-35 in McClain County, Oklahoma. The testing section extends approximately 4.7 miles, refer to Figure 1. The purpose of the study was to perform FWD survey and estimate pavement section moduli using back-calculation technique. We did not perform any other field testing such as visual inspection of the existing pavement, coring/borings, or dynamic cone penetration testing.

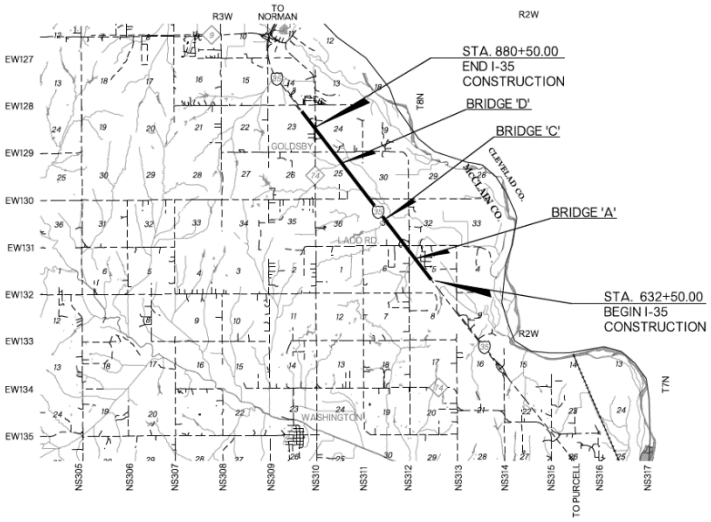


Figure 1 – Project Section I-35 (Provided by Redrock)

2. Procedure and Field-Testing Operation

EINCK, Corp used JILS-20 FWD equipment for this project. We performed FWD testing in accordance with the ASTM standards (D4694 - 09 and D4695 – 03) and *ODOT Geotechnical Specifications for Roadway Design (ODOT Specs.)*. The deflection tests consisted of two seating drops and four recording drops per test location. We used a load of approximately 15,000 lbs. EINCK, Corp performed the FWD testing at an interval of approximately 500 feet along each lane (North and South-bound) and approximately 250 feet in staggered pattern for both lanes. The testing was divided into two sections, I-35 Northbound (NB) outer lane and Southbound (SB) outer lane. The testing length for each section was approximately 4.7 miles. Test locations were along the right wheel of the driving lane. We performed a total of 116 test locations along the existing sections of I-35 with 67 tests for the NB lane, and 49 tests for the SB lane. The FWD test locations are shown in Appendix A.

3. Pavement Structure

Following our FWD testing survey, a total of forty-six (46) pavement cores were obtained by

RedRock. The provided pavement core information is presented in Table 1. Note that the back-calculation procedure is sensitive and dependent on the thickness of the provided individual pavement layers. A limited number of cores along with the different pavement sections identified influence the back-calculation results and their reliability. No dynamic cone penetrometer (DCP) testing was performed by EINCK, Corp nor obtained from RedRock.

Table 1 – Pavement Core Information (provided by RedRock)

Lane	Boring	Station No.+	Latitude+	Longitude+	AC Thickness (in.)	Aggregate Base (in.)	Cement Stabilized Subgrade (in.)	Subgrade
Northbound	C-1	640+24	35.1073	-97.4341	15.00	N/E	7.00	SANDY SILTY CLAY (CL-ML), brown, SANDY SILTY CLAY (CL-ML), red
	C-2	652+91	35.1100	-97.4367	16.00	N/E	8.00	SILTY, CLAYEY SAND (SC-SM), brown, SANDY SILTY CLAY (CL-ML), reddish brown
	C-3	662+06	35.1121	-97.4386	15.00	N/E	8.00	SANDY SILTY CLAY (CL-ML), brown, SANDY SILTY CLAY (CL-ML), reddish brown
	C-4	672+36	35.1143	-97.4406	14.50	N/E	6.00	SILTY, CLAYEY SAND (SC-SM), reddish brown, *Auger refusal at 50.5 inches
	C-5	682+54	35.1165	-97.4427	14.00	N/E	8.00	SILTY, CLAYEY SAND (SC-SM), brown, SANDY LEAN CLAY (CL), reddish brown, *Auger refusal at 52 inches
	C-6	690+04	35.1181	-97.4442	14.00	N/E	8.00	CLAYEY SAND (SC), brown, LEAN CLAY with SAND (CL), brown
	C-7	701+90	35.1208	-97.4467	14.50	N/E	4.50	CLAYEY SAND (SC), brown
	C-8	712+30	35.1230	-97.4487	14.00	N/E	10.00	SILTY SAND (SM), brown, SANDY LEAN CLAY (CL), reddish brown
	C-9	722+10	35.1252	-97.4507	14.50	N/E	8.00	SANDY SILT (ML), brown, SANDY LEAN CLAY (CL), brown
	C-10	731+99	35.1273	-97.4527	14.00	N/E	9.00	SILTY SAND (SM), brown, SANDY LEAN CLAY (CL), reddish brown
	C-11	741+97	35.1295	-97.4547	13.50	N/E	10.00	SILTY, CLAYEY SAND (SC-SM), brown, LEAN CLAY with SAND (CL), reddish brown
	C-12	752+06	35.1317	-97.4567	15.50	N/E	10.00	SILTY, CLAYEY SAND (SC-SM), brown, SANDY LEAN CLAY (CL), brown
	C-13	761+72	35.1338	-97.4587	16.50	N/E	8.00	SILTY, CLAYEY SAND (SC-SM), brown, SANDY LEAN CLAY (CL), brown
	C-14	771+57	35.1360	-97.4607	13.00	N/E	6.00	SILTY SAND (SM), brown, LEAN CLAY with SAND (CL), brown
	C-15	781+57	35.1382	-97.4627	12.00	N/E	9.00	SANDY SILT (ML), brown, LEAN CLAY with SAND (CL), brown
	C-16	791+38	35.1403	-97.4647	11.00	N/E	7.00	SANDY SILT (ML), light brown, SANDY SILT (ML), brown
	C-17	801+33	35.1425	-97.4667	11.00	N/E	10.00	SILTY SAND (SM), light brown, LEAN CLAY with SAND (CL), dark brown
	C-18	813+93	35.1452	-97.4693	12.00	N/E	10.00	SANDY SILT (ML), light brown, SANDY LEAN CLAY (CL), brown
	C-19	828+73	35.1485	-97.4723	11.50	10.00	N/E	SILTY SAND (SM), dark brown, organic smell, LEAN CLAY with SAND (CL), dark brown, organic smell
	C-20	843+61	35.1517	-97.4753	10.00	6.00	N/E	SILTY SAND (SM), light brown, SILTY, CLAYEY SAND (SC-SM), dark brown, organic smell
	C-21	860+17	35.1553	-97.4786	9.25	8.00	N/E	SILTY, CLAYEY SAND (SC-SM), light brown, CLAYEY SAND (SC), dark brown, *Auger refusal at 47.25 inches
	C-22	868+53	35.1571	-97.4804	13.00	6.00	N/E	SILTY, CLAYEY SAND (SC-SM), light brown, *Auger refusal at 31 inches
	C-23	875+98	35.1588	-97.4819	10.00	10.00	N/E	SILTY, CLAYEY SAND with GRAVEL (SC-SM), light brown, *Auger refusal at 32 inches
Southbound	C-24	871+25	35.1577	-97.4811	11.00	8.00	N/E	SILTY SAND (SM), brown, SILTY CLAY with SAND (CL-ML), reddish brown
	C-25	866+41	35.1566	-97.4801	11.00	8.00	N/E	SILTY SAND with GRAVEL (SM), brown, SILTY CLAY with SAND (CL-ML), brown
	C-26	851+52	35.1533	-97.4771	9.25	8.00	N/E	SILTY SAND with GRAVEL (SM), brown, SANDY SILT (ML), brown
	C-27	836+73	35.1501	-97.4741	12.00	8.00	N/E	SILTY SAND with GRAVEL (SM), light brown, SANDY SILT (ML), brown
	C-28	821+87	35.1468	-97.4711	11.00	6.00	N/E	SILTY SAND (SM), brown, LEAN CLAY with SAND (CL), brown
	C-29	807+01	35.1436	-97.4681	13.00	N/E	6.00	SILTY SAND (SM), brown, LEAN CLAY with SAND (CL), dark brown
	C-30	797+11	35.1414	-97.4661	11.00	N/E	8.00	SILTY SAND (SM), brown, SILTY, CLAYEY SAND (SC-SM), brown, SANDY LEAN CLAY (CL), brown
	C-31	787+20	35.1392	-97.4641	12.00	N/E	6.50	CLAYEY SAND (SC), brown, SANDY SILTY CLAY (CL-ML), dark brown to black
	C-32	777+24	35.1370	-97.4621	11.50	N/E	6.00	SILTY, CLAYEY SAND (SC-SM), brown, LEAN CLAY with SAND (CL), brown
	C-33	767+10	35.1349	-97.4600	11.00	N/E	7.00	SILTY SAND (SM), light brown, SANDY SILTY CLAY (CL-ML), light brown
	C-34	757+26	35.1327	-97.4580	15.00	N/E	5.00	SILTY SAND (SM), brown, SILTY, CLAYEY SAND (SC-SM), reddish brown
	C-35	747+34	35.1305	-97.4560	14.00	N/E	7.00	SILTY SAND (SM), brown, SANDY LEAN CLAY (CL), brown
	C-36	737+44	35.1284	-97.4540	15.50	N/E	7.00	SILTY SAND (SM), brown, SANDY LEAN CLAY (CL), brown
	C-37	727+60	35.1262	-97.4520	14.50	N/E	7.50	SILTY SAND (SM), reddish brown, SANDY LEAN CLAY (CL), reddish brown, *Auger refusal at 52 inches
	C-38	717+64	35.1240	-97.4500	14.00	N/E	7.50	SILTY SAND (SM), brown, SANDY LEAN CLAY (CL), brown
	C-39	707+72	35.1219	-97.4480	14.00	N/E	8.00	SILTY SAND (SM), brown, SANDY LEAN CLAY (CL), brown
	C-40	693+85	35.1188	-97.4452	12.50	N/E	5.00	*Auger refusal at 17.5 inches
	C-41	687+92	35.1175	-97.4440	12.00	N/E	6.00	SANDY LEAN CLAY (CL), red, *Auger refusal at 42 inches
	C-42	677+79	35.1153	-97.4419	14.00	N/E	8.00	SILTY, CLAYEY SAND (SC-SM), brown, SANDY LEAN CLAY (CL), reddish brown
	C-43	668+19	35.1132	-97.4400	15.50	N/E	8.00	SANDY SILTY CLAY (CL-ML), brown, SANDY LEAN CLAY (CL), reddish brown
	C-44	658+08	35.1110	-97.4379	15.50	N/E	8.00	SANDY SILTY CLAY (CL-ML), brown, SANDY LEAN CLAY (CL), brown
	C-45	648+15	35.1089	-97.4359	14.75	N/E	8.50	SILTY, CLAYEY SAND (SC-SM), reddish brown, SANDY LEAN CLAY (CL), reddish brown
	C-46	633+22	35.1056	-97.4329	16.00	N/E	8.00	SILTY, CLAYEY SAND (SC-SM), reddish brown, LEAN CLAY with SAND (CL), brown

+ GPS and Station No. should not be used in any planning

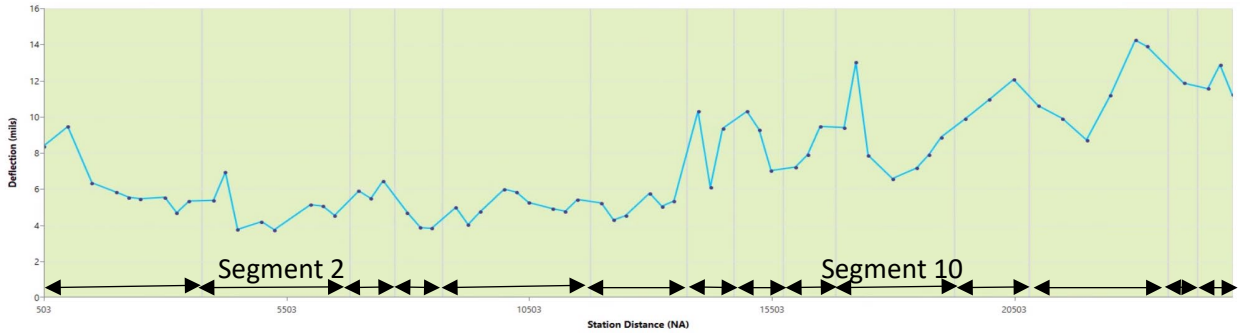
N/E: Not Encountered as per Redrock

4. Back-calculation Analyses

We performed back-calculation analyses using AASHTO Back-calculation Tool (BCT). We used a flexible cross section in our back-calculation BCT analyses including the asphalt layer, aggregate base, cement stabilized subgrade, and/or a 2-ft compacted subgrade layer on top of an infinite half-space subgrade layer. This is based on a study by Federal Highway Administration (FHWA), *Publication NO. FHWA-HRT-16-010* (Bruinsma et al., 2017). The study showed that a four-layer system with a 2-ft (0.6-m) compacted subgrade layer on top of an infinite half-space subgrade: (a)

provided the lower root mean square (RMS) values among the other layer combinations considered; and (b) can be the most realistic design inputs for the MEPDG software.

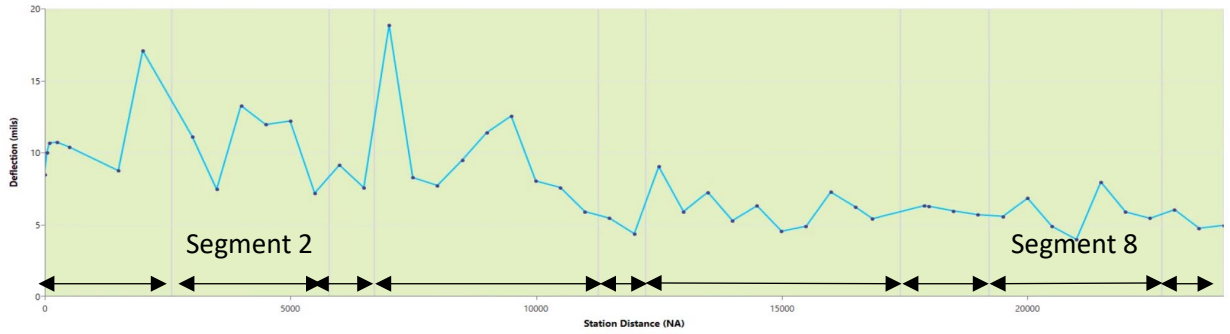
Selected/typical seed, minimum, and maximum values for layer moduli as well as assumed Poisson's ratio values are presented in Figures 2 and 3 for NB and SB lanes, respectively. Based on the FWD deflection data and the pavement thicknesses, the NB lane was divided into fourteen segments (Figure 2) and SB was divided into nine segments (Figure 3). We plotted the back-calculated moduli with station locations for both NB and SB lanes in Figures 4 and 5, respectively. We also summarized the results for the NB and SB lanes in Tables 2 and 3, respectively. The FWD field testing data are presented in Appendix B.



Number of Layers 4 Has Stiff Layer

Layer	Layer Type	Layer Thickness (in)	Poisson's Ratio	Minimum Modulus (ksi)	Maximum Modulus (ksi)	Mean (Seed) Modulus (ksi)	Fixed
Layer 1	AC (AC)	9.63	0.35	200	1000	1000	
Layer 2	Granular Base (Typical)	7	0.4	20	50	50	
Layer 3	Subgrade (Fine Grained)	24	0.45	5	25	15	
Layer 4	Subgrade (Fine Grained)	0	0.45	5	100	15	

Figure 2 – NB lane pavement segments, input layer modulus and Poisson's ratio values for back-calculation



Number of Layers 4 Has Stiff Layer

Layer	Layer Type	Layer Thickness (in)	Poisson's Ratio	Minimum Modulus (ksi)	Maximum Modulus (ksi)	Mean (Seed) Modulus (ksi)	Fixed
Layer 1	AC (AC)	14.4	0.35	200	2000	1000	
Layer 2	Treated Base (Lime Treated)	7.4	0.35	15	80	50	
Layer 3	Subgrade (Fine Grained)	24	0.45	5	25	15	
Layer 4	Subgrade (Fine Grained)	0	0.45	5	50	15	

Figure 3 – SB lane pavement segments, input layer modulus and Poisson's ratio values for back-calculation

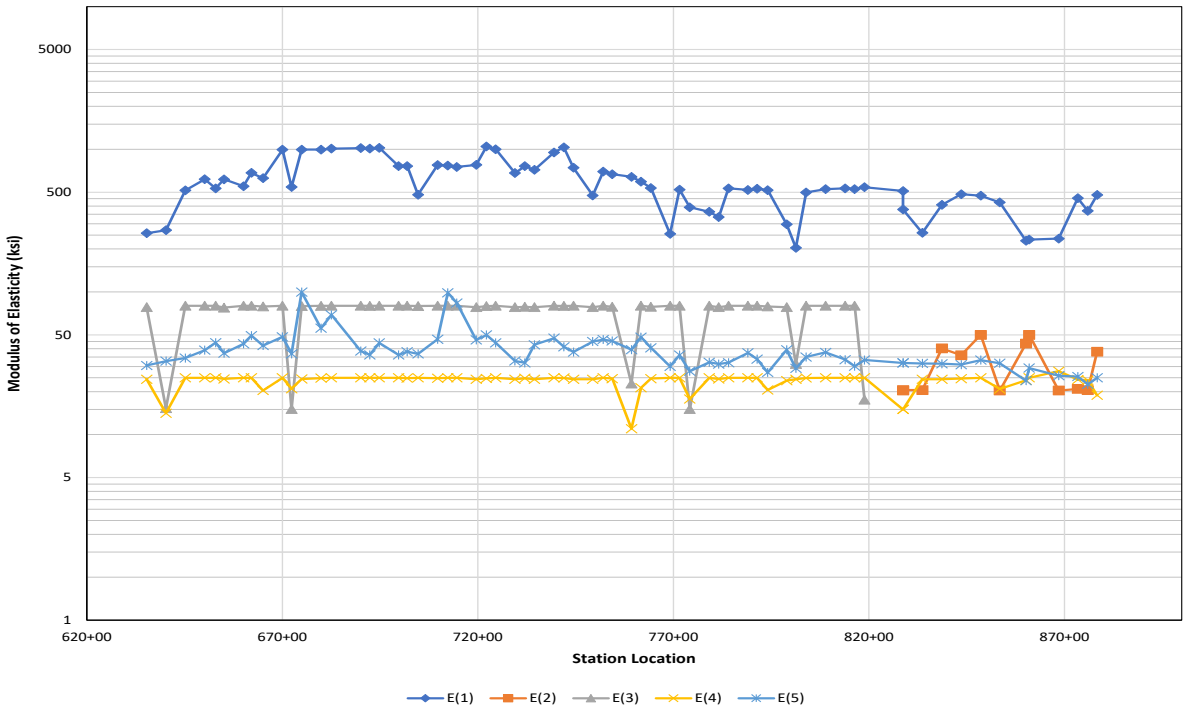


Figure 4 – NB lane back-calculated modulus versus station locations

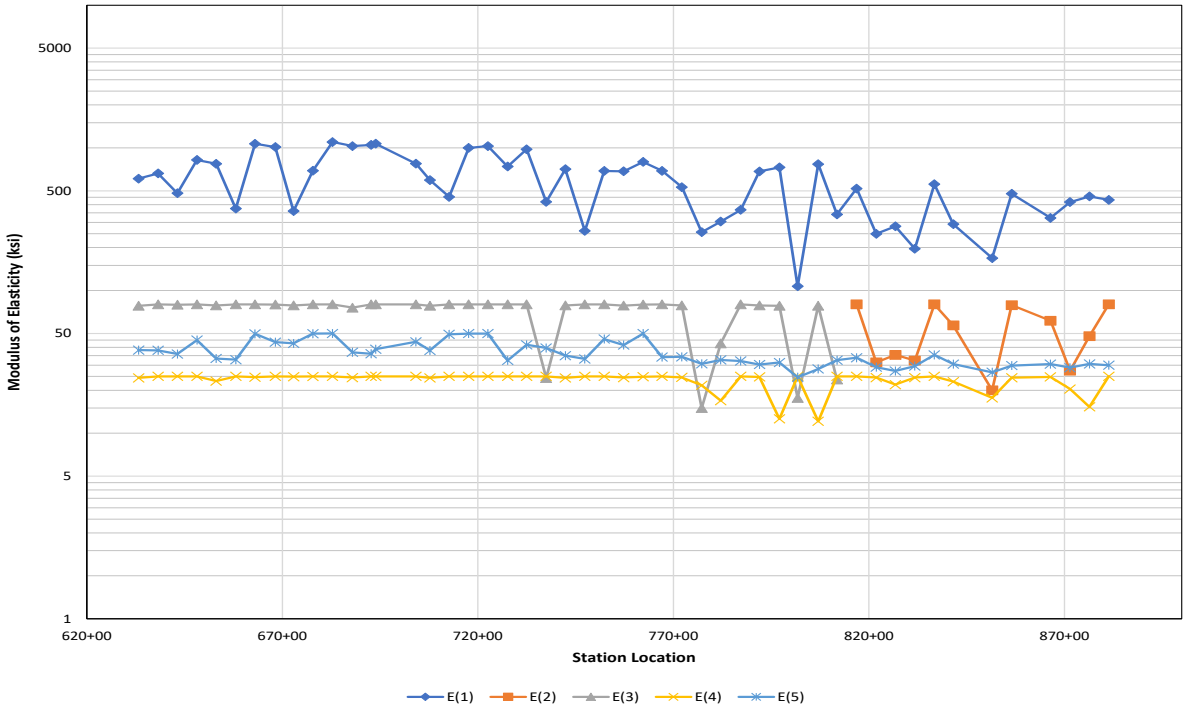


Figure 5 – SB lane back-calculated modulus versus station locations

Table 2 – NB lane back-calculation analysis results

Station No.	HMA Thickness (in)	Aggregate Base Thickness (in)	Cement Stabilized Subgrade (in)	Asphalt Temperature (°F)	Asphalt	Adjusted @ 70°F	Aggregate Base	Cement Stabilized Subgrade	2-ft Subgrade	Infinite Subgrade
					E(1) (ksi)	E(1) (ksi)	E(2) (ksi)	E(3) (ksi)	E(4) (ksi)	E(5) (ksi)
635+28	15.33	N/E	7.67	50.0	566	258	N/E	78.2	24.4	30.5
640+24	15.33	N/E	7.67	50.2	589	271	N/E	15.3	14.1	32.7
645+18	15.33	N/E	7.67	49.8	1136	515	N/E	80.0	25.0	34.4
650+15	15.33	N/E	7.67	49.8	1361	616	N/E	80.0	25.0	39.0
652+91	15.33	N/E	7.67	49.8	1175	532	N/E	80.0	25.0	44.1
655+09	15.33	N/E	7.67	50.0	1352	616	N/E	77.6	24.6	37.2
660+05	15.33	N/E	7.67	49.8	1215	551	N/E	80.0	25.0	43.3
662+06	15.33	N/E	7.67	50.0	1499	683	N/E	80.0	25.0	49.4
665+04	15.33	N/E	7.67	50.0	1375	627	N/E	79.1	20.4	42.1
670+03	14.17	N/E	7.33	52.2	1995	993	N/E	80.0	25.0	48.5
672+36	14.17	N/E	7.33	52.2	1093	544	N/E	15.1	21.0	36.8
674+94	14.17	N/E	7.33	52.2	2000	995	N/E	79.6	24.5	99.9
679+87	14.17	N/E	7.33	52.2	2000	995	N/E	79.8	24.9	55.7
682+54	14.17	N/E	7.33	52.6	2000	1010	N/E	80.0	25.0	69.0
690+04	14.17	N/E	7.33	52.9	1990	1018	N/E	80.0	25.0	38.6
692+34	14.17	N/E	7.33	52.6	2000	1010	N/E	79.8	25.0	36.2
694+78	14.17	N/E	7.33	52.9	2000	1024	N/E	80.0	25.0	43.9
699+72	14.50	N/E	4.50	52.7	1499	762	N/E	80.0	25.0	36.2
701+90	14.50	N/E	4.50	52.7	1500	763	N/E	80.0	24.9	38.1
704+69	14.50	N/E	4.50	52.9	938	480	N/E	79.7	25.0	36.8
709+68	14.00	N/E	10.00	53.1	1500	774	N/E	79.9	24.8	46.6
712+30	14.00	N/E	10.00	52.9	1500	768	N/E	80.0	25.0	98.6
714+60	14.00	N/E	10.00	52.4	1500	751	N/E	80.0	25.0	83.6
719+56	14.00	N/E	9.00	52.7	1528	777	N/E	78.2	24.4	46.1
722+18	14.00	N/E	9.00	53.5	2000	1046	N/E	79.6	24.8	49.9
724+55	14.00	N/E	9.00	52.7	1968	1001	N/E	80.0	25.0	44.0
729+47	14.00	N/E	9.00	52.7	1339	681	N/E	78.2	24.4	32.8
731+99	14.00	N/E	9.00	52.6	1508	762	N/E	78.7	24.8	31.9
734+45	14.00	N/E	9.00	52.6	1419	717	N/E	78.2	24.4	42.6
739+48	14.00	N/E	9.00	52.9	1856	950	N/E	80.0	25.0	47.5
741+97	14.00	N/E	9.00	53.1	2000	1032	N/E	79.8	24.9	41.3
744+45	14.00	N/E	9.00	52.9	1451	743	N/E	80.0	24.4	37.9
749+35	16.00	N/E	9.00	50.3	1027	475	N/E	78.2	24.4	44.9
752+06	16.00	N/E	9.00	50.5	1500	698	N/E	80.0	25.0	46.4
754+34	16.00	N/E	9.00	50.2	1455	669	N/E	78.7	24.7	45.3
759+27	16.00	N/E	9.00	50.2	1394	640	N/E	22.8	11.0	39.4
761+72	16.00	N/E	9.00	50.3	1283	593	N/E	80.0	21.3	48.2
764+22	16.00	N/E	9.00	50.5	1151	535	N/E	78.7	24.7	40.6
769+15	13.00	N/E	6.00	53.1	495	255	N/E	80.0	25.0	30.1
771+57	13.00	N/E	6.00	53.4	1000	522	N/E	80.0	25.0	36.0
774+16	13.00	N/E	6.00	53.4	751	392	N/E	15.1	17.8	27.8
779+17	12.00	N/E	9.00	53.4	699	364	N/E	80.0	25.0	32.1
781+57	12.00	N/E	9.00	53.4	641	334	N/E	78.2	24.5	31.2
784+08	12.00	N/E	9.00	53.9	1000	532	N/E	80.0	25.0	32.0
789+06	11.00	N/E	7.00	53.2	1000	518	N/E	80.0	25.0	37.4
791+38	11.00	N/E	7.00	53.7	1000	529	N/E	80.0	25.0	33.8
794+11	11.00	N/E	7.00	53.2	998	517	N/E	79.1	20.6	27.3
798+97	11.50	N/E	10.00	53.4	571	298	N/E	78.2	23.9	39.3
801+33	11.50	N/E	10.00	53.4	391	204	N/E	31.3	24.4	29.1
803+92	11.50	N/E	10.00	52.3	1000	499	N/E	80.0	25.0	35.0
808+89	11.50	N/E	10.00	53.6	1000	526	N/E	80.0	25.0	37.7
813+93	11.50	N/E	10.00	53.9	1000	532	N/E	80.0	25.0	33.5
816+33	11.50	N/E	10.00	53.6	1000	526	N/E	80.0	25.0	30.1
818+86	11.50	N/E	10.00	54.4	1000	542	N/E	17.6	25.0	33.3
828+73	11.50	10.00	N/E	53.2	983	510	20.4	N/E	15.0	31.8
828+71	11.50	10.00	N/E	53.2	729	378	20.5	N/E	15.0	31.8
833+66	11.50	10.00	N/E	53.2	500	259	20.5	N/E	24.4	31.5
838+67	9.63	7.00	N/E	51.9	827	407	40.2	N/E	24.4	31.4
843+61	9.63	7.00	N/E	51.8	989	484	36.0	N/E	24.7	31.0
848+59	9.63	7.00	N/E	50.9	1000	472	50.0	N/E	25.0	33.3
853+44	9.63	7.00	N/E	51.6	873	424	20.4	N/E	20.9	31.6
860+17	9.63	7.00	N/E	51.6	471	229	43.4	N/E	24.0	23.9
860+97	9.63	7.00	N/E	50.7	496	233	50.0	N/E	25.0	29.3
868+53	13.00	6.00	N/E	52.7	465	237	20.4	N/E	27.9	25.9
873+42	10.00	10.00	N/E	51.8	928	454	20.9	N/E	24.3	25.5
875+98	10.00	10.00	N/E	51.8	755	370	20.5	N/E	24.0	22.5
878+35	10.00	10.00	N/E	51.8	977	478	38.1	N/E	18.9	25.0
Average	13.17	8.31	8.19	52.2	1197	596	31	73	23.7	39.7
Stdev	2.00	1.65	1.46	1.3	469	237	12	19	3	14
COV	15.16	19.89	17.79	2.5	39	40	40	26	13	36

N/E: Not Encountered by Redrock

Subgrade moduli are not factored, per AASHTO/FHWA and MEPDG the adjustment factor varies with pavement type and ranges from 0.1 to 0.5

Table 3 – SB lane back-calculation analysis results

Station No.	HMA Thickness (in)	Aggregate Base Thickness (in)	Cement Stabilized Subgrade (in)	Asphalt Temperature (°F)	Asphalt	Adjusted @ 70°F	Aggregate Base	Cement Stabilized Subgrade	2-ft Subgrade	Infinite Subgrade
					E(1) (ksi)	E(1) (ksi)	E(2) (ksi)	E(3) (ksi)	E(4) (ksi)	E(5) (ksi)
881+33	10.42	8.00	N/E	48.6	1000	432	80.0	N/E	25.0	29.9
876+39	10.42	8.00	N/E	50.7	973	457	47.9	N/E	15.3	30.6
871+41	10.42	8.00	N/E	50.0	912	417	27.4	N/E	20.4	28.8
866+41	10.42	8.00	N/E	50.4	698	323	61.4	N/E	24.8	30.5
856+50	10.42	8.00	N/E	51.1	1000	476	79.0	N/E	24.5	29.8
851+52	10.42	8.00	N/E	52.8	331	169	20.0	N/E	17.7	26.7
841+57	11.50	7.00	N/E	54.7	531	292	56.9	N/E	23.0	30.5
836+73	11.50	7.00	N/E	55.0	1000	556	80.0	N/E	25.0	35.4
831+72	11.50	7.00	N/E	54.2	364	196	32.3	N/E	24.6	29.5
826+74	11.50	7.00	N/E	54.4	520	282	35.4	N/E	21.9	27.3
821+87	11.50	7.00	N/E	53.6	475	250	31.4	N/E	24.6	29.0
816+83	11.50	7.00	N/E	53.2	1000	518	80.0	N/E	25.0	33.8
811+83	13.00	N/E	6.00	53.2	659	342	N/E	23.8	25.0	32.5
807+01	13.00	N/E	6.00	53.2	1484	770	N/E	78.2	12.1	28.2
801+76	11.38	N/E	6.88	53.1	208	107	N/E	17.7	25.0	24.7
797+11	11.38	N/E	6.88	53.4	1398	729	N/E	78.2	12.6	31.3
792+00	11.38	N/E	6.88	53.1	1327	684	N/E	78.7	24.8	30.3
787+20	11.38	N/E	6.88	53.6	699	367	N/E	80.0	25.0	32.1
782+08	11.38	N/E	6.88	53.7	576	305	N/E	42.6	16.9	32.6
777+24	11.38	N/E	6.88	53.6	488	257	N/E	15.0	21.7	30.7
772+14	11.38	N/E	6.88	52.9	1038	531	N/E	78.7	24.6	34.3
767+10	11.38	N/E	6.88	52.3	1384	690	N/E	80.0	25.0	34.2
762+23	11.38	N/E	6.88	53.9	1500	798	N/E	79.8	24.9	50.0
757+26	15.00	N/E	5.00	51.2	1432	685	N/E	78.5	24.6	41.5
752+29	15.00	N/E	5.00	50.2	1500	689	N/E	80.0	25.0	45.7
747+34	14.40	N/E	7.40	51.9	533	262	N/E	80.0	25.0	33.2
742+36	14.40	N/E	7.40	52.2	1425	709	N/E	78.7	24.4	35.0
737+44	14.40	N/E	7.40	52.6	828	418	N/E	24.3	25.0	39.6
732+45	14.40	N/E	7.40	54.2	1818	978	N/E	80.0	25.0	41.6
727+60	14.40	N/E	7.40	52.7	1456	740	N/E	80.0	25.0	32.3
722+54	14.40	N/E	7.40	53.1	1992	1029	N/E	80.0	25.0	49.9
717+64	14.40	N/E	7.40	52.4	1995	999	N/E	80.0	25.0	49.9
712+62	14.40	N/E	7.40	52.9	886	454	N/E	80.0	25.0	49.3
707+72	14.40	N/E	7.40	53.1	1153	595	N/E	78.2	24.4	38.0
704+16	14.40	N/E	7.40	53.1	1501	775	N/E	80.0	25.0	43.7
693+85	12.25	N/E	5.50	54.1	1997	1070	N/E	80.0	25.0	38.8
692+71	12.25	N/E	5.50	53.6	1996	1049	N/E	80.0	25.0	36.1
687+92	12.25	N/E	5.50	54.2	1910	1029	N/E	75.9	24.6	36.9
682+82	12.25	N/E	5.50	54.7	2000	1099	N/E	80.0	25.0	50.0
677+79	14.94	N/E	8.12	54.4	1273	691	N/E	80.0	25.0	49.8
672+86	14.94	N/E	8.12	51.5	745	360	N/E	78.7	24.9	42.6
668+19	14.94	N/E	8.12	54.9	1828	1013	N/E	79.7	25.0	43.5
663+00	14.94	N/E	8.12	54.0	1999	1068	N/E	80.0	24.7	49.7
658+08	14.94	N/E	8.12	53.1	727	375	N/E	80.0	25.0	32.8
653+06	14.94	N/E	8.12	54.7	1407	773	N/E	78.7	23.2	33.4
648+15	14.94	N/E	8.12	53.7	1558	822	N/E	80.0	25.0	44.9
643+15	16.00	N/E	8.00	51.4	998	481	N/E	79.5	25.0	35.9
638+21	16.00	N/E	8.00	49.2	1500	662	N/E	80.0	25.0	38.1
633+22	16.00	N/E	8.00	47.6	1466	608	N/E	78.2	24.4	38.2
Average	12.97	7.50	7.05	52.8	1173	600	53	72	23.6	36.6
Stdev	1.83	0.52	0.95	1.7	521	278	23	19	3	7
COV	14.09	6.96	13.47	3.2	44	46	44	27	13	20

N/E: Not Encountered by Redrock

Subgrade moduli are not factored, per AASHTO/FHWA and MEPDG the adjustment factor varies with pavement type and ranges from 0.1 to 0.5

5. Limitations

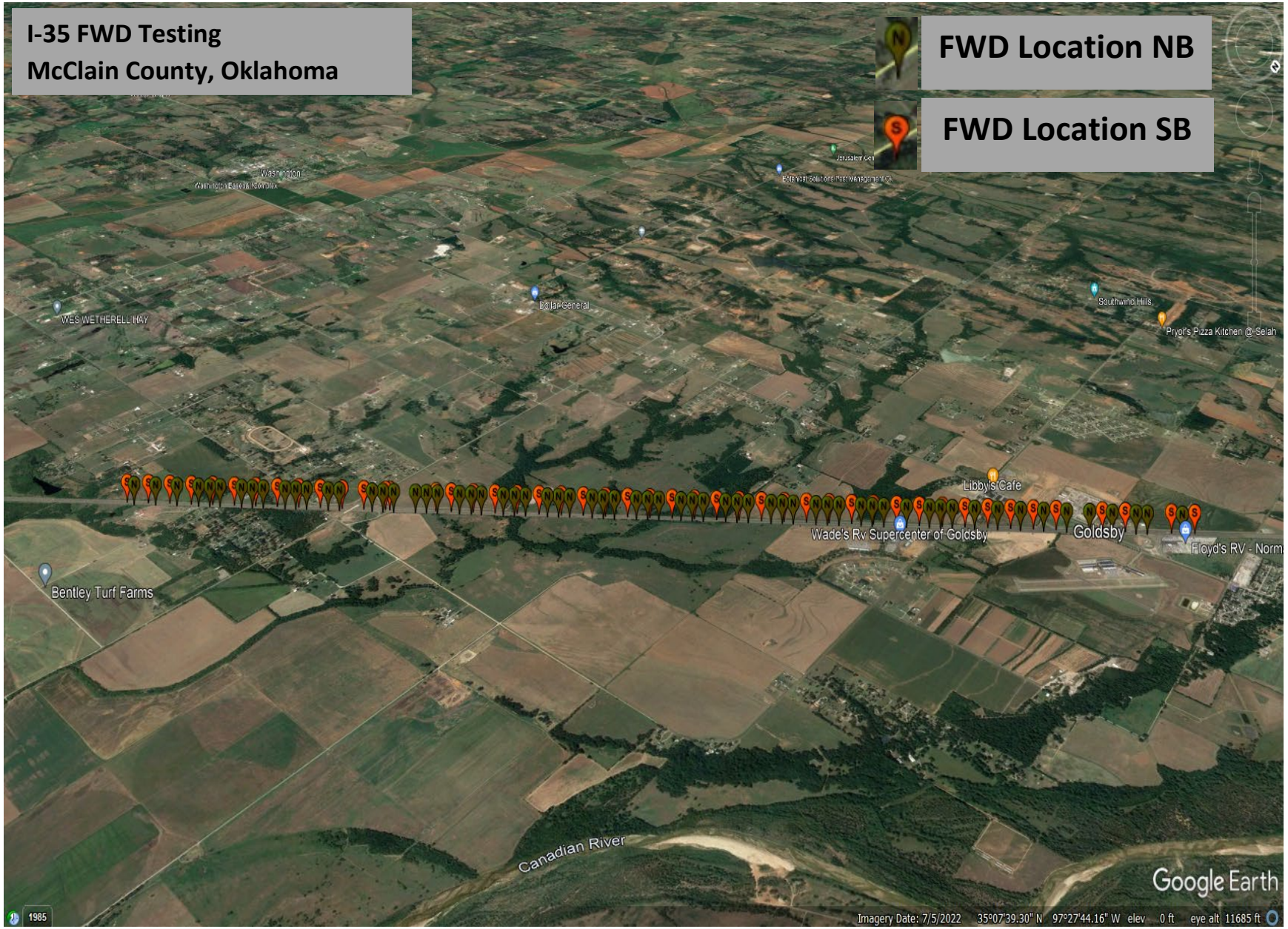
The procedures and methodologies used to complete this project are consistent with standard and/or accepted/recognized practices in similar pavement and geotechnical investigations. EINCK, Corp assumes no responsibility for survey limitations due to inherent technological limitations and interpretations made by others based on work performed by or recommendations made by us.

6. References

Bruinsma, J. E., VandeSBossche, J.M., Chatti, K., and Smith, K.D., (2017) Using Falling Weight Deflectometer Data with Mechanistic Empirical Design and Analysis, Volume II: Case Study Reports, Final Report, Submitted to FHWA, *Publication NO. FHWA-HRT-16-010* March 2017.

MDOT (1994) Temperature Adjustment Factor for Falling Weight Deflectometer Deflections on Full Depth Asphalt Concrete Pavements, Missouri Department of Transportation, RDT 96-002, November 1994.

APPENDIX A – FWD TEST LOCATIONS


I-35 FWD Testing
McClain County, Oklahoma
FWD Location NB
FWD Location SB
WES WETHERELL HAY
Dollar General
Southwind Hills
Pryor's Pizza Kitchen @ Selah
Libby's Cafe
Wade's Rv Supercenter of Goldsby
Goldsby
Floyd's RV - Norm
Bentley Turf Farms
Canadian River
Google Earth
Imagery Date: 7/5/2022 35°07'39.30" N 97°27'44.16" W elev 0 ft eye alt 11685 ft

APPENDIX B – FWD FIELD TESTING DATA

NORTHBOUND (NB) DATA

M5
Date-Time: 12/ 6/2022 11:19:12
Sensors: chop chop chop chop chop chop chop chop
Weight/spring: 3
Location: remote
Temp: 52.83
Operator: Ryan
Comments:
1 1 503.000 1 15.33 8.34 6.64 6.04 5.30 4.77 3.75 3.09 2.48 51.7
1 1 503.000 1 15.23 8.22 6.60 5.97 5.28 4.72 3.76 3.11 2.46 51.7
1 1 503.000 1 15.18 8.16 6.62 5.94 5.26 4.73 3.75 3.12 2.46 51.7
1 1 503.000 1 15.05 8.10 6.54 5.92 5.23 4.72 3.73 3.06 2.44 51.7
1 1 503.000 1 15.13 8.12 6.57 5.95 5.24 4.70 3.71 3.07 2.46 51.7
1 1 503.000 1 15.13 8.10 6.51 5.92 5.21 4.70 3.72 3.10 2.48 51.7
Drop Sequence Completed Time: 11:20   Air Temp (F): 52.8
GPS: Quality : DGPS Fix   Latitude = 35 deg6.370580 N   Longitude = 97
deg25.986891   W   PDOP = 2.50
Note:
2 1 1003.000 1 14.98 9.42 7.94 7.20 6.52 5.78 4.31 3.40 2.61 52.1
2 1 1003.000 1 14.73 9.23 7.79 7.13 6.40 5.69 4.25 3.32 2.55 52.1
2 1 1003.000 1 14.81 9.22 7.80 7.13 6.42 5.69 4.24 3.37 2.59 52.1
2 1 1003.000 1 14.83 9.24 7.80 7.20 6.45 5.76 4.29 3.37 2.58 52.1
2 1 1003.000 1 14.91 9.23 7.80 7.17 6.43 5.76 4.27 3.39 2.60 52.1
2 1 1003.000 1 14.88 9.25 7.74 7.21 6.48 5.74 4.29 3.38 2.60 52.1
Drop Sequence Completed Time: 11:21   Air Temp (F): 50.6
GPS: Quality : DGPS Fix   Latitude = 35 deg6.435513 N   Longitude = 97
deg26.047093   W   PDOP = 2.50
Note:
3 1 1501.000 1 15.03 6.31 5.09 4.58 4.21 3.93 3.23 2.75 2.24 51.4
3 1 1501.000 1 14.91 6.18 5.03 4.56 4.19 3.89 3.21 2.72 2.24 51.4
3 1 1501.000 1 14.93 6.11 4.97 4.56 4.18 3.87 3.19 2.69 2.23 51.4
3 1 1501.000 1 14.91 6.11 4.97 4.54 4.14 3.88 3.21 2.71 2.24 51.4
3 1 1501.000 1 15.03 6.09 4.97 4.56 4.16 3.86 3.20 2.72 2.23 51.4
3 1 1501.000 1 14.93 6.05 4.97 4.51 4.13 3.83 3.17 2.68 2.21 51.4
Drop Sequence Completed Time: 11:22   Air Temp (F): 52.3
GPS: Quality : DGPS Fix   Latitude = 35 deg6.500251 N   Longitude = 97
deg26.107291   W   PDOP = 2.50
Note:
4 1 2002.000 1 15.08 5.79 4.55 4.18 3.76 3.43 2.80 2.46 1.68 51.4
4 1 2002.000 1 14.98 5.61 4.49 4.12 3.73 3.37 2.81 2.42 2.04 51.4
4 1 2002.000 1 14.88 5.49 4.47 4.09 3.70 3.36 2.79 2.43 2.05 51.4
4 1 2002.000 1 14.88 5.45 4.45 4.08 3.68 3.36 2.77 2.43 2.03 51.4
4 1 2002.000 1 14.91 5.43 4.47 4.07 3.70 3.38 2.77 2.45 2.05 51.4
4 1 2002.000 1 15.01 5.43 4.48 4.08 3.67 3.35 2.78 2.44 2.06 51.4
Drop Sequence Completed Time: 11:23   Air Temp (F): 50.4
GPS: Quality : DGPS Fix   Latitude = 35 deg6.565458 N   Longitude = 97
deg26.167633   W   PDOP = 2.50
Note:
5 1 2264.000 1 15.15 5.51 4.50 4.12 3.70 3.35 2.66 2.25 1.89 51.4
5 1 2264.000 1 14.93 5.41 4.44 4.01 3.61 3.27 2.61 2.22 1.85 51.4

5 1 2264.000 1 14.91 5.40 4.42 4.04 3.63 3.30 2.61 2.23 1.84 51.4
5 1 2264.000 1 14.91 5.39 4.41 4.03 3.61 3.26 2.60 2.22 1.84 51.4
5 1 2264.000 1 14.86 5.42 4.41 4.04 3.63 3.29 2.62 2.23 1.82 51.4
5 1 2264.000 1 14.83 5.35 4.37 3.99 3.61 3.27 2.59 2.21 1.82 51.4
Drop Sequence Completed Time: 11:24   Air Temp (F): 53.2
GPS: Quality : DGPS Fix   Latitude = 35 deg6.599397 N   Longitude = 97
deg26.199057   W   PDOP = 2.50
Note:
6 1 2500.000 1 15.18 5.43 4.68 4.35 3.96 3.63 2.96 2.51 2.10 51.7
6 1 2500.000 1 15.13 5.43 4.70 4.37 4.00 3.65 2.98 2.59 2.16 51.7
6 1 2500.000 1 14.93 5.33 4.57 4.26 3.92 3.56 2.92 2.50 2.07 51.7
6 1 2500.000 1 14.93 5.31 4.59 4.27 3.90 3.55 2.91 2.50 2.09 51.7
6 1 2500.000 1 14.98 5.32 4.57 4.29 3.91 3.58 2.93 2.51 2.09 51.7
6 1 2500.000 1 14.88 5.33 4.57 4.28 3.91 3.59 2.95 2.53 2.09 51.7
Drop Sequence Completed Time: 11:25   Air Temp (F): 52.8
GPS: Quality : DGPS Fix   Latitude = 35 deg6.630080 N   Longitude = 97
deg26.227571   W   PDOP = 1.90
Note:
7 1 3002.000 1 15.10 5.51 4.40 4.05 3.71 3.42 2.78 2.31 1.84 51.4
7 1 3002.000 1 14.96 5.51 4.36 4.02 3.68 3.37 2.74 2.29 1.83 51.4
7 1 3002.000 1 14.93 5.45 4.33 3.95 3.64 3.36 2.72 2.27 1.82 51.4
7 1 3002.000 1 14.83 5.42 4.30 3.92 3.63 3.34 2.72 2.24 1.85 51.4
7 1 3002.000 1 15.03 5.44 4.34 3.97 3.64 3.38 2.71 2.27 1.82 51.4
7 1 3002.000 1 14.98 5.46 4.36 3.98 3.65 3.36 2.73 2.27 1.81 51.4
Drop Sequence Completed Time: 11:27   Air Temp (F): 53.3
GPS: Quality : DGPS Fix   Latitude = 35 deg6.695461 N   Longitude = 97
deg26.287902   W   PDOP = 1.90
Note:
8 1 3248.000 1 15.28 4.65 3.89 3.58 3.29 3.05 2.46 2.11 1.73 51.7
8 1 3248.000 1 15.01 4.56 3.85 3.51 3.23 3.00 2.45 2.09 1.71 51.7
8 1 3248.000 1 14.93 4.52 3.78 3.49 3.20 2.97 2.42 2.09 1.68 51.7
8 1 3248.000 1 14.98 4.50 3.79 3.49 3.21 2.96 2.44 2.08 1.68 51.7
8 1 3248.000 1 15.03 4.51 3.78 3.50 3.20 2.95 2.41 2.06 1.70 51.7
8 1 3248.000 1 14.91 4.51 3.79 3.49 3.20 2.95 2.43 2.03 1.69 51.7
Drop Sequence Completed Time: 11:28   Air Temp (F): 52.3
GPS: Quality : DGPS Fix   Latitude = 35 deg6.727641 N   Longitude = 97
deg26.317700   W   PDOP = 1.90
Note:
9 1 3503.000 1 15.23 5.30 4.52 4.16 3.80 3.55 2.98 2.36 1.93 51.7
9 1 3503.000 1 15.03 5.23 4.48 4.12 3.76 3.49 2.96 2.36 1.96 51.7
9 1 3503.000 1 14.88 5.16 4.40 4.05 3.69 3.48 2.90 2.35 1.91 51.7
9 1 3503.000 1 14.98 5.15 4.40 4.05 3.68 3.44 2.90 2.28 1.83 51.7
9 1 3503.000 1 14.96 5.14 4.42 4.08 3.72 3.48 2.92 2.35 1.91 51.7
9 1 3503.000 1 15.05 5.20 4.44 4.08 3.74 3.50 2.91 2.32 1.89 51.7
Drop Sequence Completed Time: 11:29   Air Temp (F): 54.0
GPS: Quality : DGPS Fix   Latitude = 35 deg6.760792 N   Longitude = 97
deg26.348358   W   PDOP = 1.90
Note:
10 1 4005.000 1 15.13 5.34 3.91 3.45 3.10 2.85 2.45 2.12 1.81 51.4
10 1 4005.000 1 14.83 5.16 3.82 3.38 3.02 2.81 2.36 2.08 1.75 51.4

10 1 4005.000 1 14.81 5.15 3.82 3.38 3.04 2.79 2.37 2.07 1.81 51.4
10 1 4005.000 1 14.93 5.17 3.84 3.38 3.06 2.83 2.40 2.08 1.84 51.4
10 1 4005.000 1 14.83 5.05 3.75 3.31 2.98 2.75 2.30 2.02 1.80 51.4
10 1 4005.000 1 14.96 5.16 3.83 3.42 3.06 2.85 2.40 2.04 1.80 51.4
Drop Sequence Completed Time: 11:30   Air Temp (F): 53.5
GPS: Quality : DGPS Fix   Latitude = 35 deg6.826261 N   Longitude = 97
deg26.408804   W   PDOP = 1.90
Note:
11 1 4251.000 1 14.98 6.90 6.06 5.66 5.15 4.77 3.51 2.85 2.28 51.4
11 1 4251.000 1 15.03 6.91 6.11 5.67 5.17 4.76 3.56 2.85 2.30 51.4
11 1 4251.000 1 14.91 6.84 6.00 5.61 5.08 4.70 3.48 2.83 2.27 51.4
11 1 4251.000 1 14.66 6.76 5.96 5.51 5.04 4.65 3.45 2.77 2.24 51.4
11 1 4251.000 1 14.76 6.81 5.98 5.55 5.06 4.67 3.48 2.79 2.24 51.4
11 1 4251.000 1 14.71 6.80 5.94 5.57 5.09 4.71 3.49 2.79 2.28 51.4
Drop Sequence Completed Time: 11:31   Air Temp (F): 52.8
GPS: Quality : DGPS Fix   Latitude = 35 deg6.858224 N   Longitude = 97
deg26.438395   W   PDOP = 1.90
Note:
12 1 4503.000 1 15.23 3.73 2.79 2.49 2.20 1.98 1.51 1.14 0.83 51.4
12 1 4503.000 1 14.83 3.64 2.72 2.43 2.16 1.93 1.47 1.12 0.82 51.4
12 1 4503.000 1 14.93 3.63 2.73 2.42 2.16 1.93 1.46 1.13 0.82 51.4
12 1 4503.000 1 14.76 3.58 2.70 2.43 2.15 1.90 1.45 1.10 0.81 51.4
12 1 4503.000 1 14.91 3.59 2.71 2.43 2.17 1.95 1.48 1.12 0.80 51.4
12 1 4503.000 1 14.81 3.56 2.70 2.40 2.14 1.94 1.46 1.11 0.84 51.4
Drop Sequence Completed Time: 11:31   Air Temp (F): 53.9
GPS: Quality : DGPS Fix   Latitude = 35 deg6.890895 N   Longitude = 97
deg26.468554   W   PDOP = 1.90
Note:
13 1 4999.000 1 15.13 4.16 3.49 3.27 2.98 2.78 2.31 1.94 1.60 51.4
13 1 4999.000 1 15.03 4.09 3.44 3.20 2.95 2.74 2.26 1.93 1.56 51.4
13 1 4999.000 1 14.91 4.06 3.40 3.20 2.94 2.73 2.28 1.91 1.56 51.4
13 1 4999.000 1 14.86 4.04 3.40 3.17 2.91 2.72 2.25 1.89 1.55 51.4
13 1 4999.000 1 14.76 4.02 3.41 3.19 2.91 2.70 2.21 1.89 1.51 51.4
13 1 4999.000 1 14.91 4.09 3.41 3.21 2.94 2.73 2.27 1.91 1.52 51.4
Drop Sequence Completed Time: 11:33   Air Temp (F): 53.3
GPS: Quality : DGPS Fix   Latitude = 35 deg6.955522 N   Longitude = 97
deg26.528336   W   PDOP = 1.90
Note:
14 1 5258.000 1 14.93 3.71 3.19 2.99 2.71 2.51 2.00 1.65 1.29 52.1
14 1 5258.000 1 15.20 3.72 3.19 2.99 2.75 2.51 2.00 1.68 1.30 52.1
14 1 5258.000 1 14.88 3.67 3.14 2.92 2.68 2.43 1.96 1.61 1.27 52.1
14 1 5258.000 1 14.88 3.67 3.16 2.93 2.67 2.47 1.99 1.61 1.27 52.1
14 1 5258.000 1 14.71 3.64 3.09 2.93 2.64 2.40 1.96 1.61 1.26 52.1
14 1 5258.000 1 14.76 3.64 3.13 2.93 2.67 2.45 1.96 1.63 1.24 52.1
Drop Sequence Completed Time: 11:33   Air Temp (F): 54.0
GPS: Quality : DGPS Fix   Latitude = 35 deg6.989131 N   Longitude = 97
deg26.559688   W   PDOP = 1.90
Note:
15 1 6006.000 1 15.03 5.10 4.32 4.01 3.68 3.38 2.80 2.46 2.07 52.7
15 1 6006.000 1 14.61 4.90 4.16 3.89 3.56 3.27 2.69 2.39 2.01 52.7

15 1 6006.000 1 14.66 4.92 4.18 3.90 3.56 3.28 2.72 2.38 2.03 52.7
15 1 6006.000 1 14.68 4.89 4.16 3.87 3.55 3.27 2.70 2.39 2.03 52.7
15 1 6006.000 1 14.51 4.84 4.11 3.84 3.52 3.22 2.70 2.35 2.04 52.7
15 1 6006.000 1 14.63 4.88 4.17 3.89 3.59 3.29 2.70 2.32 2.03 52.7
Drop Sequence Completed Time: 11:35   Air Temp (F): 54.6
GPS: Quality : DGPS Fix   Latitude = 35 deg7.086523 N   Longitude = 97
deg26.650013   W   PDOP = 1.90
Note:
16 1 6257.000 1 14.98 5.02 4.24 4.00 3.76 3.51 2.95 2.60 2.16 52.1
16 1 6257.000 1 14.98 5.00 4.22 4.01 3.77 3.53 2.97 2.58 2.19 52.1
16 1 6257.000 1 14.81 5.00 4.22 3.97 3.73 3.50 2.97 2.58 2.14 52.1
16 1 6257.000 1 14.93 5.00 4.23 3.96 3.74 3.50 2.96 2.56 2.17 52.1
16 1 6257.000 1 14.76 4.94 4.19 3.94 3.72 3.50 2.95 2.58 2.14 52.1
16 1 6257.000 1 14.93 5.00 4.18 4.00 3.73 3.49 2.95 2.57 2.17 52.1
Drop Sequence Completed Time: 11:35   Air Temp (F): 53.3
GPS: Quality : DGPS Fix   Latitude = 35 deg7.119272 N   Longitude = 97
deg26.679844   W   PDOP = 1.90
Note:
17 1 6501.000 1 14.88 4.51 3.87 3.65 3.45 3.28 2.73 2.29 1.86 52.7
17 1 6501.000 1 14.76 4.45 3.83 3.62 3.42 3.24 2.76 2.25 1.83 52.7
17 1 6501.000 1 14.56 4.41 3.79 3.56 3.36 3.19 2.71 2.22 1.81 52.7
17 1 6501.000 1 14.68 4.35 3.73 3.49 3.32 3.14 2.65 2.14 1.77 52.7
17 1 6501.000 1 14.71 4.34 3.72 3.52 3.32 3.12 2.66 2.15 1.74 52.7
17 1 6501.000 1 14.71 4.38 3.74 3.57 3.36 3.21 2.71 2.19 1.79 52.7
Drop Sequence Completed Time: 11:36   Air Temp (F): 55.6
GPS: Quality : DGPS Fix   Latitude = 35 deg7.150988 N   Longitude = 97
deg26.709454   W   PDOP = 1.90
Note:
18 1 7001.000 1 14.91 5.86 4.67 4.22 3.87 3.60 2.98 2.56 2.15 52.4
18 1 7001.000 1 14.61 5.87 4.65 4.24 3.90 3.61 3.03 2.64 2.15 52.4
18 1 7001.000 1 14.56 5.77 4.60 4.16 3.83 3.57 2.98 2.57 2.13 52.4
18 1 7001.000 1 14.44 5.70 4.59 4.18 3.83 3.54 2.90 2.56 2.15 52.4
18 1 7001.000 1 14.44 5.70 4.57 4.14 3.80 3.54 2.96 2.55 2.15 52.4
18 1 7001.000 1 14.46 5.72 4.56 4.16 3.82 3.56 2.27 2.59 2.12 52.4
Drop Sequence Completed Time: 11:38   Air Temp (F): 54.6
GPS: Quality : DGPS Fix   Latitude = 35 deg7.215881 N   Longitude = 97
deg26.769580   W   PDOP = 1.90
Note:
19 1 7249.000 1 14.81 5.44 4.41 4.16 3.87 3.61 2.99 2.55 2.09 52.4
19 1 7249.000 1 14.61 5.38 4.40 4.13 3.85 3.59 2.98 2.56 2.07 52.4
19 1 7249.000 1 14.71 5.32 4.36 4.08 3.80 3.55 2.93 2.51 2.03 52.4
19 1 7249.000 1 14.58 5.27 4.34 4.08 3.78 3.52 2.93 2.50 2.04 52.4
19 1 7249.000 1 14.51 5.26 4.38 4.07 3.78 3.52 2.94 2.49 2.05 52.4
19 1 7249.000 1 14.56 5.33 4.40 4.14 3.85 3.58 2.95 2.51 2.05 52.4
Drop Sequence Completed Time: 11:39   Air Temp (F): 54.4
GPS: Quality : DGPS Fix   Latitude = 35 deg7.248320 N   Longitude = 97
deg26.799500   W   PDOP = 1.90
Note:
20 1 7502.000 1 14.81 6.43 5.58 5.14 4.59 3.97 3.05 2.55 2.11 52.7
20 1 7502.000 1 14.61 6.38 5.50 5.11 4.54 3.96 3.07 2.57 2.09 52.7

20 1 7502.000 1 14.51 6.31 5.47 5.09 4.50 3.90 3.01 2.52 2.07 52.7
20 1 7502.000 1 14.44 6.25 5.40 5.02 4.49 3.90 2.99 2.51 2.05 52.7
20 1 7502.000 1 14.56 6.28 5.47 5.03 4.49 3.88 3.01 2.52 2.06 52.7
20 1 7502.000 1 14.58 6.30 5.47 5.05 4.49 3.91 3.03 2.56 2.08 52.7
Drop Sequence Completed Time: 11:39   Air Temp (F): 53.7
GPS: Quality : DGPS Fix   Latitude = 35 deg7.281340 N   Longitude = 97
deg26.829867   W   PDOP = 1.90
Note:
21 1 8002.000 1 14.81 4.66 3.89 3.58 3.37 3.13 2.62 2.25 1.80 53.1
21 1 8002.000 1 14.63 4.63 3.82 3.60 3.36 3.16 2.62 2.24 1.82 53.1
21 1 8002.000 1 14.61 4.61 3.84 3.55 3.31 3.10 2.59 2.21 1.82 53.1
21 1 8002.000 1 14.51 4.59 3.84 3.51 3.30 3.12 2.60 2.23 1.87 53.1
21 1 8002.000 1 14.44 4.58 3.83 3.52 3.31 3.09 2.61 2.24 1.86 53.1
21 1 8002.000 1 14.41 4.49 3.73 3.46 3.28 3.06 2.54 2.15 1.82 53.1
Drop Sequence Completed Time: 11:41   Air Temp (F): 53.9
GPS: Quality : DGPS Fix   Latitude = 35 deg7.346645 N   Longitude = 97
deg26.890239   W   PDOP = 1.90
Note:
22 1 8271.000 1 14.91 3.83 2.94 2.64 2.28 2.02 1.52 1.17 0.87 52.7
22 1 8271.000 1 14.51 3.74 2.84 2.56 2.22 1.99 1.49 1.14 0.85 52.7
22 1 8271.000 1 14.51 3.70 2.79 2.53 2.23 1.98 1.49 1.12 0.84 52.7
22 1 8271.000 1 14.36 3.69 2.82 2.51 2.22 1.98 1.47 1.10 0.84 52.7
22 1 8271.000 1 14.58 3.70 2.86 2.60 2.25 1.98 1.48 1.16 0.87 52.7
22 1 8271.000 1 14.41 3.72 2.83 2.55 2.24 1.98 1.48 1.16 0.86 52.7
Drop Sequence Completed Time: 11:41   Air Temp (F): 54.0
GPS: Quality : DGPS Fix   Latitude = 35 deg7.381592 N   Longitude = 97
deg26.922515   W   PDOP = 1.90
Note:
23 1 8499.000 1 14.66 3.79 3.08 2.88 2.62 2.37 1.84 1.46 1.13 51.7
23 1 8499.000 1 14.49 3.75 3.04 2.81 2.57 2.32 1.83 1.47 1.12 51.7
23 1 8499.000 1 14.39 3.73 3.04 2.81 2.56 2.32 1.77 1.45 1.11 51.7
23 1 8499.000 1 14.39 3.68 2.99 2.71 2.49 2.25 1.75 1.39 1.08 51.7
23 1 8499.000 1 14.31 3.72 3.01 2.81 2.53 2.29 1.79 1.43 1.12 51.7
23 1 8499.000 1 14.39 3.69 3.05 2.80 2.53 2.28 1.81 1.43 1.10 51.7
Drop Sequence Completed Time: 11:42   Air Temp (F): 54.4
GPS: Quality : DGPS Fix   Latitude = 35 deg7.411168 N   Longitude = 97
deg26.950006   W   PDOP = 1.70
Note:
24 1 9000.000 1 14.66 4.95 4.15 3.83 3.51 3.21 2.54 2.14 1.70 52.4
24 1 9000.000 1 14.36 4.84 4.06 3.77 3.42 3.15 2.52 2.08 1.63 52.4
24 1 9000.000 1 14.44 4.86 4.11 3.84 3.47 3.16 2.54 2.12 1.68 52.4
24 1 9000.000 1 14.31 4.84 4.05 3.80 3.45 3.15 2.54 2.09 1.68 52.4
24 1 9000.000 1 14.44 4.85 4.08 3.79 3.50 3.19 2.54 2.08 1.60 52.4
24 1 9000.000 1 14.34 4.81 4.06 3.80 3.42 3.16 2.52 2.08 1.67 52.4
Drop Sequence Completed Time: 11:43   Air Temp (F): 53.3
GPS: Quality : DGPS Fix   Latitude = 35 deg7.476307 N   Longitude = 97
deg27.010350   W   PDOP = 1.70
Note:
25 1 9252.000 1 14.66 4.00 3.35 3.14 2.94 2.72 2.29 2.02 1.69 53.7
25 1 9252.000 1 14.49 3.92 3.30 3.11 2.89 2.69 2.22 1.97 1.66 53.7

25 1 9252.000 1 14.44 3.94 3.31 3.09 2.89 2.73 2.26 1.95 1.66 53.7
25 1 9252.000 1 14.44 3.98 3.30 3.04 2.84 2.70 2.30 1.92 1.63 53.7
25 1 9252.000 1 14.41 3.93 3.29 3.10 2.89 2.69 2.27 1.98 1.68 53.7
25 1 9252.000 1 14.24 3.89 3.30 3.08 2.84 2.69 2.24 1.96 1.66 53.7
Drop Sequence Completed Time: 11:44   Air Temp (F): 55.1
GPS: Quality : DGPS Fix   Latitude = 35 deg7.509248 N   Longitude = 97
deg27.040831   W   PDOP = 1.90
Note:
26 1 9502.000 1 14.53 4.71 3.87 3.59 3.30 3.07 2.51 2.15 1.78 52.4
26 1 9502.000 1 14.31 4.63 3.81 3.52 3.23 3.01 2.46 2.19 1.71 52.4
26 1 9502.000 1 14.46 4.69 3.85 3.56 3.29 3.06 2.53 2.14 1.71 52.4
26 1 9502.000 1 14.26 4.59 3.78 3.52 3.21 3.00 2.50 2.15 1.74 52.4
26 1 9502.000 1 14.49 4.61 3.83 3.56 3.24 3.00 2.49 2.14 1.79 52.4
26 1 9502.000 1 14.36 4.63 3.84 3.55 3.25 3.03 2.51 2.17 1.75 52.4
Drop Sequence Completed Time: 11:45   Air Temp (F): 55.2
GPS: Quality : DGPS Fix   Latitude = 35 deg7.541818 N   Longitude = 97
deg27.070823   W   PDOP = 2.00
Note:
27 1 9998.000 1 14.68 5.96 5.02 4.67 4.33 4.03 3.31 2.76 2.22 52.4
27 1 9998.000 1 14.31 5.78 4.88 4.55 4.24 3.93 3.24 2.72 2.17 52.4
27 1 9998.000 1 14.29 5.75 4.87 4.53 4.18 3.93 3.27 2.70 2.16 52.4
27 1 9998.000 1 14.14 5.70 4.81 4.47 4.17 3.83 3.20 2.67 2.15 52.4
27 1 9998.000 1 14.29 5.76 4.89 4.53 4.21 3.91 3.25 2.69 2.20 52.4
27 1 9998.000 1 14.24 5.73 4.86 4.52 4.20 3.88 3.24 2.67 2.19 52.4
Drop Sequence Completed Time: 11:46   Air Temp (F): 54.6
GPS: Quality : DGPS Fix   Latitude = 35 deg7.606361 N   Longitude = 97
deg27.130523   W   PDOP = 2.00
Note:
28 1 10249.000 1 14.56 5.79 4.91 4.62 4.25 3.98 3.28 2.81 2.33 52.1
28 1 10249.000 1 14.39 5.71 4.84 4.59 4.22 3.93 3.23 2.75 2.28 52.1
28 1 10249.000 1 14.34 5.64 4.82 4.54 4.22 3.89 3.22 2.74 2.29 52.1
28 1 10249.000 1 14.11 5.58 4.76 4.48 4.13 3.82 3.17 2.71 2.23 52.1
28 1 10249.000 1 14.39 5.67 4.84 4.49 4.17 3.87 3.12 2.76 2.24 52.1
28 1 10249.000 1 14.26 5.61 4.76 4.53 4.17 3.85 3.20 2.73 2.24 52.1
Drop Sequence Completed Time: 11:47   Air Temp (F): 54.4
GPS: Quality : DGPS Fix   Latitude = 35 deg7.639117 N   Longitude = 97
deg27.160571   W   PDOP = 2.00
Note:
29 1 10500.000 1 14.63 5.22 4.41 4.10 3.73 3.39 2.62 2.27 1.83 52.1
29 1 10500.000 1 14.39 5.11 4.29 4.00 3.66 3.35 2.68 2.28 1.77 52.1
29 1 10500.000 1 14.36 5.14 4.32 4.03 3.66 3.39 2.68 2.25 1.78 52.1
29 1 10500.000 1 14.41 5.11 4.31 3.97 3.65 3.39 2.68 2.22 1.76 52.1
29 1 10500.000 1 14.46 5.12 4.32 4.04 3.67 3.36 2.71 2.25 1.79 52.1
29 1 10500.000 1 14.41 5.09 4.30 4.00 3.69 3.34 2.68 2.20 1.79 52.1
Drop Sequence Completed Time: 11:48   Air Temp (F): 54.2
GPS: Quality : DGPS Fix   Latitude = 35 deg7.671849 N   Longitude = 97
deg27.190966   W   PDOP = 2.00
Note:
30 1 11005.000 1 14.78 4.87 3.90 3.59 3.30 3.06 2.48 2.11 1.72 52.7
30 1 11005.000 1 14.56 4.75 3.78 3.53 3.23 3.00 2.36 2.01 1.70 52.7

30 1 11005.000 1 14.46 4.71 3.78 3.50 3.21 2.97 2.32 2.02 1.68 52.7
30 1 11005.000 1 14.26 4.60 3.69 3.43 3.16 2.93 2.35 2.07 1.62 52.7
30 1 11005.000 1 14.39 4.66 3.75 3.46 3.18 2.93 2.38 2.01 1.67 52.7
30 1 11005.000 1 14.49 4.69 3.78 3.53 3.19 2.94 2.35 2.03 1.70 52.7
Drop Sequence Completed Time: 11:50   Air Temp (F): 55.4
GPS: Quality : DGPS Fix   Latitude = 35 deg7.737742 N   Longitude = 97
deg27.251901   W   PDOP = 1.70
Note:
31 1 11256.000 1 14.63 4.74 3.89 3.66 3.43 3.22 2.69 2.23 1.26 53.1
31 1 11256.000 1 14.41 4.64 3.84 3.64 3.41 3.17 2.66 2.29 1.91 53.1
31 1 11256.000 1 14.36 4.63 3.78 3.58 3.36 3.16 2.66 2.29 1.89 53.1
31 1 11256.000 1 14.34 4.58 3.74 3.56 3.31 3.09 2.61 2.29 1.89 53.1
31 1 11256.000 1 14.41 4.59 3.76 3.59 3.34 3.12 2.64 2.29 1.88 53.1
31 1 11256.000 1 14.51 4.64 3.79 3.60 3.38 3.16 2.60 2.28 1.90 53.1
Drop Sequence Completed Time: 11:50   Air Temp (F): 53.0
GPS: Quality : DGPS Fix   Latitude = 35 deg7.770472 N   Longitude = 97
deg27.282247   W   PDOP = 2.00
Note:
32 1 11505.000 1 14.63 5.39 4.64 4.33 3.95 3.64 2.93 2.47 1.97 52.7
32 1 11505.000 1 14.56 5.34 4.61 4.29 3.92 3.57 2.90 2.44 1.98 52.7
32 1 11505.000 1 14.68 5.39 4.62 4.30 3.95 3.63 2.94 2.44 1.98 52.7
32 1 11505.000 1 14.39 5.26 4.54 4.25 3.85 3.55 2.86 2.38 1.94 52.7
32 1 11505.000 1 14.49 5.32 4.57 4.27 3.88 3.58 2.87 2.41 1.97 52.7
32 1 11505.000 1 14.34 5.28 4.56 4.23 3.87 3.54 2.88 2.43 1.94 52.7
Drop Sequence Completed Time: 11:51   Air Temp (F): 54.4
GPS: Quality : DGPS Fix   Latitude = 35 deg7.802850 N   Longitude = 97
deg27.312307   W   PDOP = 2.00
Note:
33 1 12000.000 1 14.76 5.19 4.25 3.99 3.59 3.29 2.59 2.14 1.75 52.4
33 1 12000.000 1 14.53 5.11 4.24 3.91 3.55 3.24 2.56 2.11 1.71 52.4
33 1 12000.000 1 14.58 5.10 4.21 3.91 3.53 3.22 2.57 2.11 1.70 52.4
33 1 12000.000 1 14.61 5.11 4.21 3.89 3.55 3.24 2.58 2.11 1.68 52.4
33 1 12000.000 1 14.51 5.08 4.16 3.89 3.56 3.25 2.58 2.11 1.65 52.4
33 1 12000.000 1 14.44 5.04 4.15 3.89 3.52 3.20 2.53 2.07 1.67 52.4
Drop Sequence Completed Time: 11:52   Air Temp (F): 54.6
GPS: Quality : DGPS Fix   Latitude = 35 deg7.867203 N   Longitude = 97
deg27.371976   W   PDOP = 2.00
Note:
34 1 12250.000 1 14.58 4.25 3.47 3.25 3.04 2.87 2.44 2.10 1.80 52.7
34 1 12250.000 1 14.58 4.24 3.46 3.21 3.03 2.85 2.41 2.17 1.77 52.7
34 1 12250.000 1 14.53 4.28 3.53 3.30 3.08 2.91 2.47 2.17 1.75 52.7
34 1 12250.000 1 14.41 4.16 3.43 3.22 2.99 2.83 2.48 2.18 1.75 52.7
34 1 12250.000 1 14.56 4.24 3.47 3.21 3.04 2.86 2.41 2.12 1.82 52.7
34 1 12250.000 1 14.58 4.22 3.47 3.25 3.04 2.83 2.49 2.17 1.75 52.7
Drop Sequence Completed Time: 11:53   Air Temp (F): 55.1
GPS: Quality : DGPS Fix   Latitude = 35 deg7.899936 N   Longitude = 97
deg27.402426   W   PDOP = 2.00
Note:
35 1 12502.000 1 14.73 4.49 3.86 3.64 3.29 3.06 2.46 2.09 1.74 52.1
35 1 12502.000 1 14.63 4.44 3.82 3.57 3.25 3.00 2.46 2.08 1.71 52.1

35 1 12502.000 1 14.53 4.41 3.83 3.53 3.21 2.94 2.40 2.13 1.69 52.1
35 1 12502.000 1 14.71 4.50 3.86 3.60 3.27 3.03 2.36 2.11 1.73 52.1
35 1 12502.000 1 14.46 4.40 3.78 3.54 3.24 2.97 2.42 2.04 1.69 52.1
35 1 12502.000 1 14.39 4.45 3.83 3.51 3.19 2.96 2.42 2.06 1.69 52.1
Drop Sequence Completed Time: 11:54   Air Temp (F): 54.9
GPS: Quality : DGPS Fix   Latitude = 35 deg7.932663 N   Longitude = 97
deg27.432692   W   PDOP = 2.00
Note:
36 1 13000.000 1 14.76 5.74 5.03 4.73 4.42 4.08 3.32 2.82 2.25 52.1
36 1 13000.000 1 14.63 5.69 4.93 4.67 4.36 4.06 3.31 2.76 2.20 52.1
36 1 13000.000 1 14.56 5.68 4.88 4.65 4.35 4.04 3.29 2.76 2.20 52.1
36 1 13000.000 1 14.49 5.66 4.88 4.61 4.34 4.02 3.28 2.74 2.16 52.1
36 1 13000.000 1 14.44 5.61 4.84 4.62 4.29 3.99 3.25 2.72 2.17 52.1
36 1 13000.000 1 14.41 5.65 4.86 4.62 4.30 4.01 3.32 2.75 2.20 52.1
Drop Sequence Completed Time: 11:55   Air Temp (F): 55.1
GPS: Quality : DGPS Fix   Latitude = 35 deg7.997329 N   Longitude = 97
deg27.492795   W   PDOP = 2.00
Note:
37 1 13251.000 1 14.71 5.01 4.02 3.77 3.46 3.16 2.57 2.19 1.82 52.4
37 1 13251.000 1 14.49 4.92 4.00 3.67 3.36 3.12 2.53 2.15 1.75 52.4
37 1 13251.000 1 14.49 4.88 3.92 3.62 3.35 3.09 2.53 2.14 1.76 52.4
37 1 13251.000 1 14.26 4.82 3.92 3.64 3.33 3.08 2.48 2.12 1.75 52.4
37 1 13251.000 1 14.31 4.86 3.94 3.65 3.31 3.09 2.50 2.13 1.51 52.4
37 1 13251.000 1 14.34 4.75 3.81 3.57 3.25 3.02 2.42 2.05 1.68 52.4
Drop Sequence Completed Time: 11:56   Air Temp (F): 55.1
GPS: Quality : DGPS Fix   Latitude = 35 deg8.029924 N   Longitude = 97
deg27.522907   W   PDOP = 2.00
Note:
38 1 13500.000 1 14.63 5.30 4.29 4.03 3.66 3.38 2.76 2.33 1.95 52.7
38 1 13500.000 1 14.29 5.16 4.16 3.91 3.60 3.27 2.68 2.25 1.89 52.7
38 1 13500.000 1 14.21 5.09 4.13 3.88 3.58 3.28 2.66 2.22 1.85 52.7
38 1 13500.000 1 14.31 5.09 4.13 3.88 3.57 3.25 2.65 2.25 1.79 52.7
38 1 13500.000 1 14.14 5.08 4.14 3.87 3.54 3.27 2.67 2.25 1.81 52.7
38 1 13500.000 1 14.26 5.08 4.14 3.89 3.50 3.24 2.63 2.23 1.85 52.7
Drop Sequence Completed Time: 11:57   Air Temp (F): 55.2
GPS: Quality : DGPS Fix   Latitude = 35 deg8.062418 N   Longitude = 97
deg27.552803   W   PDOP = 2.20
Note:
39 1 13997.000 1 14.51 10.29 7.41 6.57 5.70 5.09 3.86 3.06 2.37 52.1
39 1 13997.000 1 14.34 10.03 7.36 6.47 5.63 5.02 3.84 3.07 2.35 52.1
39 1 13997.000 1 14.39 9.90 7.35 6.45 5.60 4.97 3.77 3.02 2.33 52.1
39 1 13997.000 1 14.21 9.84 7.33 6.42 5.60 4.96 3.81 3.02 2.33 52.1
39 1 13997.000 1 14.11 9.75 7.25 6.41 5.57 4.91 3.81 3.07 2.37 52.1
39 1 13997.000 1 14.39 9.83 7.30 6.46 5.61 4.97 3.81 3.02 2.35 52.1
Drop Sequence Completed Time: 11:58   Air Temp (F): 55.8
GPS: Quality : DGPS Fix   Latitude = 35 deg8.127060 N   Longitude = 97
deg27.612759   W   PDOP = 2.00
Note:
40 1 14250.000 1 14.44 6.06 5.18 4.93 4.58 4.26 3.44 2.68 2.09 52.7
40 1 14250.000 1 14.31 5.90 4.99 4.77 4.45 4.07 3.26 2.52 1.95 52.7

40 1 14250.000 1 14.29 6.00 5.14 4.88 4.54 4.20 3.39 2.67 2.08 52.7
40 1 14250.000 1 14.39 6.01 5.17 4.89 4.57 4.23 3.39 2.66 2.07 52.7
40 1 14250.000 1 14.29 6.05 5.21 4.94 4.66 4.30 3.46 2.73 2.17 52.7
40 1 14250.000 1 14.29 6.02 5.20 4.92 4.60 4.24 3.41 2.66 2.09 52.7
Drop Sequence Completed Time: 11:59   Air Temp (F): 55.4
GPS: Quality : DGPS Fix   Latitude = 35 deg8.159858 N   Longitude = 97
deg27.642958   W   PDOP = 1.80
Note:
41 1 14502.000 1 14.21 9.31 8.05 7.55 6.76 5.85 4.29 3.40 2.60 52.7
41 1 14502.000 1 13.64 8.97 7.80 7.33 6.54 5.70 4.21 3.38 2.60 52.7
41 1 14502.000 1 13.74 9.02 7.88 7.37 6.60 5.73 4.23 3.37 2.64 52.7
41 1 14502.000 1 14.44 9.45 8.29 7.74 6.93 6.01 4.43 3.55 2.75 52.7
41 1 14502.000 1 13.94 9.12 8.02 7.49 6.71 5.84 4.27 3.41 2.69 52.7
41 1 14502.000 1 14.68 9.53 8.37 7.81 6.99 6.10 4.48 3.62 2.77 52.7
Drop Sequence Completed Time: 12:00   Air Temp (F): 55.8
GPS: Quality : DGPS Fix   Latitude = 35 deg8.192908 N   Longitude = 97
deg27.673448   W   PDOP = 2.10
Note:
42 1 15005.000 1 16.69 10.28 7.59 6.87 6.10 5.43 4.12 3.31 2.56 52.7
42 1 15005.000 1 15.08 9.19 6.80 6.16 5.46 4.88 3.72 3.00 2.32 52.7
42 1 15005.000 1 14.76 8.99 6.71 6.11 5.39 4.81 3.69 2.95 2.28 52.7
42 1 15005.000 1 14.88 8.99 6.76 6.13 5.46 4.83 3.70 2.94 2.29 52.7
42 1 15005.000 1 14.86 8.93 6.74 6.10 5.43 4.83 3.75 2.96 2.31 52.7
42 1 15005.000 1 14.83 8.90 6.75 6.11 5.42 4.84 3.69 2.93 2.31 52.7
Drop Sequence Completed Time: 12:01   Air Temp (F): 55.8
GPS: Quality : DGPS Fix   Latitude = 35 deg8.258495 N   Longitude = 97
deg27.734208   W   PDOP = 2.10
Note:
43 1 15255.000 1 15.18 9.25 7.29 6.58 5.77 5.11 3.84 3.07 2.42 52.7
43 1 15255.000 1 15.03 9.05 7.21 6.51 5.72 5.05 3.81 3.05 2.38 52.7
43 1 15255.000 1 14.98 8.97 7.20 6.49 5.69 5.03 3.84 3.08 2.43 52.7
43 1 15255.000 1 14.93 8.92 7.13 6.46 5.67 5.00 3.83 3.04 2.38 52.7
43 1 15255.000 1 14.91 8.86 7.08 6.44 5.67 5.00 3.78 3.03 2.38 52.7
43 1 15255.000 1 14.88 8.81 7.08 6.41 5.62 4.96 3.78 3.02 2.37 52.7
Drop Sequence Completed Time: 12:02   Air Temp (F): 55.2
GPS: Quality : DGPS Fix   Latitude = 35 deg8.291059 N   Longitude = 97
deg27.764288   W   PDOP = 2.10
Note:
44 1 15502.000 1 15.48 6.99 6.07 5.75 5.29 4.88 3.92 3.27 2.64 53.7
44 1 15502.000 1 14.86 6.72 5.80 5.53 5.10 4.71 3.81 3.14 2.52 53.7
44 1 15502.000 1 14.93 6.72 5.86 5.55 5.12 4.72 3.78 3.18 2.58 53.7
44 1 15502.000 1 15.01 6.73 5.87 5.58 5.16 4.71 3.80 3.15 2.53 53.7
44 1 15502.000 1 14.83 6.71 5.86 5.52 5.09 4.70 3.79 3.16 2.55 53.7
44 1 15502.000 1 14.83 6.60 5.79 5.46 5.06 4.65 3.72 3.09 2.52 53.7
Drop Sequence Completed Time: 12:03   Air Temp (F): 55.6
GPS: Quality : DGPS Fix   Latitude = 35 deg8.322920 N   Longitude = 97
deg27.793978   W   PDOP = 2.10
Note:
45 1 16004.000 1 15.43 7.18 6.11 5.71 5.21 4.69 3.65 2.88 2.28 52.4
45 1 16004.000 1 14.96 6.95 5.91 5.53 5.03 4.58 3.54 2.82 2.16 52.4

45 1 16004.000 1 14.96 6.91 5.93 5.52 4.98 4.51 3.51 2.79 2.19 52.4
45 1 16004.000 1 14.91 6.88 5.89 5.50 4.98 4.50 3.50 2.76 2.19 52.4
45 1 16004.000 1 14.83 6.84 5.90 5.49 4.98 4.51 3.52 2.76 2.20 52.4
45 1 16004.000 1 14.81 6.85 5.92 5.50 5.00 4.52 3.48 2.77 2.19 52.4
Drop Sequence Completed Time: 12:04   Air Temp (F): 55.2
GPS: Quality : DGPS Fix   Latitude = 35 deg8.388370 N   Longitude = 97
deg27.854613   W   PDOP = 2.10
Note:
46 1 16255.000 1 15.55 7.86 6.67 6.23 5.58 4.99 3.81 3.10 2.41 53.4
46 1 16255.000 1 15.05 7.64 6.49 6.04 5.43 4.91 3.79 3.03 2.38 53.4
46 1 16255.000 1 15.03 7.55 6.39 5.99 5.35 4.82 3.68 2.94 2.31 53.4
46 1 16255.000 1 14.98 7.53 6.44 5.99 5.37 4.78 3.69 2.96 2.33 53.4
46 1 16255.000 1 14.86 7.50 6.41 5.97 5.34 4.81 3.69 2.98 2.35 53.4
46 1 16255.000 1 15.15 7.59 6.49 6.05 5.43 4.88 3.77 3.02 2.36 53.4
Drop Sequence Completed Time: 12:05   Air Temp (F): 55.8
GPS: Quality : DGPS Fix   Latitude = 35 deg8.420910 N   Longitude = 97
deg27.884820   W   PDOP = 2.40
Note:
47 1 16514.000 1 15.38 9.43 8.03 7.46 6.66 5.96 4.59 3.65 2.79 52.4
47 1 16514.000 1 15.15 9.26 7.87 7.34 6.57 5.88 4.50 3.58 2.75 52.4
47 1 16514.000 1 14.91 9.06 7.75 7.22 6.45 5.79 4.45 3.52 2.70 52.4
47 1 16514.000 1 14.93 9.03 7.78 7.28 6.47 5.80 4.47 3.56 2.75 52.4
47 1 16514.000 1 15.08 8.97 7.72 7.19 6.41 5.72 4.40 3.46 2.68 52.4
47 1 16514.000 1 14.91 9.04 7.78 7.23 6.47 5.80 4.44 3.56 2.75 52.4
Drop Sequence Completed Time: 12:06   Air Temp (F): 55.9
GPS: Quality : DGPS Fix   Latitude = 35 deg8.454599 N   Longitude = 97
deg27.915888   W   PDOP = 2.10
Note:
48 1 17008.000 1 15.60 9.37 7.18 6.51 5.64 4.87 3.46 2.60 1.98 52.7
48 1 17008.000 1 15.18 9.00 6.94 6.27 5.45 4.68 3.35 2.48 1.92 52.7
48 1 17008.000 1 15.10 8.88 6.91 6.26 5.42 4.66 3.32 2.52 1.92 52.7
48 1 17008.000 1 15.25 8.91 6.97 6.29 5.47 4.71 3.36 2.55 1.93 52.7
48 1 17008.000 1 15.10 8.85 6.92 6.27 5.48 4.71 3.36 2.51 1.94 52.7
48 1 17008.000 1 15.05 8.73 6.85 6.18 5.40 4.62 3.30 2.50 1.90 52.7
Drop Sequence Completed Time: 12:07   Air Temp (F): 56.6
GPS: Quality : DGPS Fix   Latitude = 35 deg8.518159 N   Longitude = 97
deg27.974944   W   PDOP = 2.10
Note:
49 1 17250.000 1 15.45 12.99 10.28 8.93 7.56 6.39 4.38 3.32 2.49 52.7
49 1 17250.000 1 14.91 12.41 9.93 8.71 7.41 6.26 4.24 3.21 2.47 52.7
49 1 17250.000 1 14.88 12.31 9.88 8.67 7.33 6.21 4.22 3.22 2.44 52.7
49 1 17250.000 1 14.96 12.25 9.91 8.67 7.36 6.24 4.24 3.22 2.44 52.7
49 1 17250.000 1 14.91 12.20 9.85 8.66 7.35 6.24 4.23 3.17 2.41 52.7
49 1 17250.000 1 14.81 12.14 9.82 8.60 7.31 6.17 4.22 3.20 2.43 52.7
Drop Sequence Completed Time: 12:08   Air Temp (F): 55.8
GPS: Quality : DGPS Fix   Latitude = 35 deg8.550194 N   Longitude = 97
deg28.004615   W   PDOP = 2.10
Note:
50 1 17501.000 1 15.18 7.84 6.11 5.60 5.11 4.59 3.60 2.90 2.28 50.4
50 1 17501.000 1 15.13 7.62 5.97 5.51 5.01 4.52 3.52 2.81 2.19 50.4

50 1 17501.000 1 15.18 7.62 6.01 5.52 5.03 4.56 3.51 2.83 2.21 50.4
50 1 17501.000 1 14.93 7.52 5.94 5.45 4.97 4.51 3.52 2.85 2.20 50.4
50 1 17501.000 1 15.05 7.56 6.01 5.49 5.03 4.57 3.57 2.87 2.25 50.4
50 1 17501.000 1 15.15 7.61 6.03 5.55 5.06 4.58 3.54 2.86 2.23 50.4
Drop Sequence Completed Time: 12:08   Air Temp (F): 55.9
GPS: Quality : DGPS Fix   Latitude = 35 deg8.583093 N   Longitude = 97
deg28.035089   W   PDOP = 2.10
Note:
51 1 18003.000 1 15.55 6.54 5.56 5.25 4.83 4.45 3.59 2.99 2.40 53.1
51 1 18003.000 1 15.15 6.48 5.41 5.16 4.72 4.37 3.55 2.99 2.37 53.1
51 1 18003.000 1 15.08 6.32 5.39 5.04 4.65 4.27 3.45 2.88 2.30 53.1
51 1 18003.000 1 15.43 6.51 5.56 5.21 4.77 4.43 3.59 3.03 2.44 53.1
51 1 18003.000 1 15.15 6.35 5.43 5.10 4.65 4.32 3.50 2.93 2.39 53.1
51 1 18003.000 1 15.08 6.38 5.47 5.10 4.68 4.31 3.48 2.95 2.41 53.1
Drop Sequence Completed Time: 12:09   Air Temp (F): 55.1
GPS: Quality : DGPS Fix   Latitude = 35 deg8.648218 N   Longitude = 97
deg28.095827   W   PDOP = 2.50
Note:
52 1 18504.000 1 15.55 7.13 6.15 5.78 5.25 4.75 3.77 3.08 2.46 53.7
52 1 18504.000 1 15.20 6.96 6.04 5.66 5.12 4.65 3.66 3.03 2.46 53.7
52 1 18504.000 1 15.23 6.96 6.05 5.68 5.17 4.66 3.69 3.04 2.43 53.7
52 1 18504.000 1 14.88 6.81 5.87 5.54 5.01 4.55 3.60 2.93 2.38 53.7
52 1 18504.000 1 14.98 6.92 5.99 5.58 5.08 4.64 3.72 3.04 2.44 53.7
52 1 18504.000 1 15.10 6.94 6.01 5.65 5.14 4.67 3.70 3.04 2.43 53.7
Drop Sequence Completed Time: 12:10   Air Temp (F): 54.9
GPS: Quality : DGPS Fix   Latitude = 35 deg8.713203 N   Longitude = 97
deg28.156507   W   PDOP = 2.10
Note:
53 1 18751.000 1 15.30 7.86 6.59 6.16 5.58 5.05 4.01 3.26 2.56 53.1
53 1 18751.000 1 15.25 7.74 6.53 6.06 5.51 5.02 3.96 3.23 2.58 53.1
53 1 18751.000 1 14.86 7.65 6.42 5.97 5.40 4.93 3.90 3.16 2.53 53.1
53 1 18751.000 1 15.05 7.67 6.48 6.09 5.52 4.99 3.94 3.22 2.54 53.1
53 1 18751.000 1 14.88 7.54 6.35 5.91 5.35 4.87 3.83 3.11 2.46 53.1
53 1 18751.000 1 14.96 7.58 6.39 5.99 5.42 4.93 3.87 3.17 2.51 53.1
Drop Sequence Completed Time: 12:11   Air Temp (F): 55.8
GPS: Quality : DGPS Fix   Latitude = 35 deg8.745263 N   Longitude = 97
deg28.186537   W   PDOP = 1.80
Note:
54 1 19008.000 1 15.38 8.84 7.84 7.38 6.57 5.72 4.14 3.16 2.41 54.7
54 1 19008.000 1 15.03 8.66 7.66 7.19 6.44 5.63 4.08 3.10 2.34 54.7
54 1 19008.000 1 15.08 8.64 7.65 7.22 6.42 5.64 4.08 3.12 2.37 54.7
54 1 19008.000 1 14.81 8.51 7.53 7.10 6.32 5.51 3.98 3.05 2.32 54.7
54 1 19008.000 1 14.93 8.50 7.54 7.12 6.34 5.53 4.02 3.05 2.34 54.7
54 1 19008.000 1 14.96 8.54 7.60 7.09 6.34 5.57 4.03 3.10 2.33 54.7
Drop Sequence Completed Time: 12:12   Air Temp (F): 55.8
GPS: Quality : DGPS Fix   Latitude = 35 deg8.778665 N   Longitude = 97
deg28.217624   W   PDOP = 2.10
Note:
55 1 19498.000 1 15.57 9.84 8.66 8.09 7.23 6.39 4.69 3.59 2.69 52.4
55 1 19498.000 1 15.01 9.51 8.42 7.84 6.99 6.18 4.58 3.49 2.62 52.4

55 1 19498.000 1 15.13 9.44 8.35 7.81 6.95 6.16 4.54 3.45 2.62 52.4
55 1 19498.000 1 15.18 9.50 8.41 7.88 7.01 6.19 4.57 3.49 2.63 52.4
55 1 19498.000 1 15.01 9.40 8.36 7.81 6.96 6.15 4.53 3.45 2.60 52.4
55 1 19498.000 1 14.96 9.29 8.24 7.68 6.88 6.09 4.49 3.39 2.53 52.4
Drop Sequence Completed Time: 12:13   Air Temp (F): 54.9
GPS: Quality : DGPS Fix   Latitude = 35 deg8.842514 N   Longitude = 97
deg28.276916   W   PDOP = 2.50
Note:
56 1 19999.000 1 15.38 10.93 9.58 8.89 7.78 6.67 4.68 3.47 2.60 52.4
56 1 19999.000 1 15.01 10.53 9.24 8.55 7.49 6.47 4.54 3.37 2.50 52.4
56 1 19999.000 1 14.91 10.53 9.26 8.58 7.49 6.47 4.58 3.41 2.55 52.4
56 1 19999.000 1 14.86 10.43 9.16 8.46 7.39 6.38 4.49 3.33 2.47 52.4
56 1 19999.000 1 14.78 10.40 9.13 8.48 7.41 6.39 4.50 3.36 2.50 52.4
56 1 19999.000 1 14.71 10.38 9.11 8.41 7.38 6.40 4.50 3.33 2.47 52.4
Drop Sequence Completed Time: 12:14   Air Temp (F): 54.6
GPS: Quality : DGPS Fix   Latitude = 35 deg8.907609 N   Longitude = 97
deg28.337174   W   PDOP = 2.10
Note:
57 1 20499.000 1 15.38 12.04 9.81 8.80 7.50 6.31 4.30 3.11 2.35 52.4
57 1 20499.000 1 14.91 11.65 9.53 8.58 7.27 6.13 4.16 3.05 2.33 52.4
57 1 20499.000 1 14.88 11.54 9.40 8.44 7.19 6.07 4.11 2.98 2.25 52.4
57 1 20499.000 1 14.78 11.38 9.33 8.39 7.16 6.05 4.10 3.00 2.25 52.4
57 1 20499.000 1 14.63 11.35 9.35 8.40 7.14 6.02 4.13 3.01 2.27 52.4
57 1 20499.000 1 14.68 11.32 9.30 8.37 7.11 6.01 4.13 2.98 2.28 52.4
Drop Sequence Completed Time: 12:15   Air Temp (F): 54.7
GPS: Quality : DGPS Fix   Latitude = 35 deg8.972686 N   Longitude = 97
deg28.397452   W   PDOP = 2.50
Note:
58 1 21003.000 1 15.13 10.60 9.15 8.14 6.87 5.87 4.12 3.11 2.38 52.4
58 1 21003.000 1 14.96 10.32 8.87 7.90 6.73 5.72 4.01 2.97 2.25 52.4
58 1 21003.000 1 14.81 10.24 8.80 7.85 6.64 5.65 3.94 2.95 2.23 52.4
58 1 21003.000 1 14.91 10.13 8.75 7.80 6.59 5.63 3.96 2.97 2.28 52.4
58 1 21003.000 1 14.68 10.04 8.70 7.75 6.55 5.58 3.91 2.94 2.26 52.4
58 1 21003.000 1 14.73 10.09 8.70 7.78 6.59 5.65 3.94 2.96 2.26 52.4
Drop Sequence Completed Time: 12:16   Air Temp (F): 55.4
GPS: Quality : DGPS Fix   Latitude = 35 deg9.038211 N   Longitude = 97
deg28.458301   W   PDOP = 2.20
Note:
59 1 21505.000 1 15.28 9.87 8.65 7.90 6.86 5.90 4.18 3.12 2.36 52.1
59 1 21505.000 1 14.81 9.51 8.34 7.69 6.67 5.73 4.06 3.03 2.30 52.1
59 1 21505.000 1 14.71 9.46 8.30 7.62 6.64 5.70 4.01 2.99 2.28 52.1
59 1 21505.000 1 14.68 9.40 8.23 7.58 6.57 5.68 4.02 2.98 2.29 52.1
59 1 21505.000 1 14.68 9.37 8.21 7.55 6.54 5.61 3.97 2.97 2.25 52.1
59 1 21505.000 1 14.63 9.34 8.21 7.55 6.56 5.63 3.97 2.98 2.22 52.1
Drop Sequence Completed Time: 12:17   Air Temp (F): 55.2
GPS: Quality : DGPS Fix   Latitude = 35 deg9.103477 N   Longitude = 97
deg28.518876   W   PDOP = 2.20
Note:
60 1 22002.000 1 15.20 8.68 7.54 6.96 6.15 5.40 3.96 3.07 2.35 50.4
60 1 22002.000 1 14.96 8.49 7.38 6.83 6.04 5.30 3.88 3.04 2.32 50.4

60 1 22002.000 1 14.86 8.41 7.33 6.76 6.00 5.27 3.85 3.00 2.30 50.4
60 1 22002.000 1 14.68 8.39 7.28 6.77 6.01 5.27 3.88 3.02 2.36 50.4
60 1 22002.000 1 14.78 8.34 7.26 6.72 5.95 5.21 3.84 2.98 2.30 50.4
60 1 22002.000 1 14.76 8.32 7.21 6.70 5.93 5.18 3.81 2.93 2.26 50.4
Drop Sequence Completed Time: 12:18   Air Temp (F): 53.9
GPS: Quality : DGPS Fix   Latitude = 35 deg9.168359 N   Longitude = 97
deg28.578950   W   PDOP = 2.20
Note:
61 1 22492.000 1 15.05 11.15 9.76 8.91 7.60 6.40 4.31 3.07 2.33 51.7
61 1 22492.000 1 14.76 10.89 9.56 8.71 7.44 6.28 4.25 3.06 2.32 51.7
61 1 22492.000 1 14.83 10.84 9.49 8.64 7.38 6.23 4.24 3.03 2.31 51.7
61 1 22492.000 1 14.76 10.81 9.51 8.66 7.41 6.25 4.21 3.06 2.32 51.7
61 1 22492.000 1 14.83 10.74 9.40 8.56 7.34 6.18 4.21 3.04 2.27 51.7
61 1 22492.000 1 14.68 10.73 9.37 8.56 7.31 6.17 4.21 3.04 2.28 51.7
Drop Sequence Completed Time: 12:20   Air Temp (F): 55.4
GPS: Quality : DGPS Fix   Latitude = 35 deg9.232115 N   Longitude = 97
deg28.638254   W   PDOP = 2.60
Note:
62 1 23008.000 1 15.28 14.22 11.41 10.15 8.63 7.25 5.04 3.80 2.92 51.7
62 1 23008.000 1 15.01 13.81 11.18 9.93 8.43 7.10 4.94 3.73 2.86 51.7
62 1 23008.000 1 14.91 13.64 11.08 9.88 8.39 7.09 4.97 3.73 2.83 51.7
62 1 23008.000 1 14.81 13.57 11.05 9.85 8.37 7.10 4.96 3.76 2.84 51.7
62 1 23008.000 1 14.83 13.41 10.93 9.73 8.29 6.99 4.86 3.70 2.81 51.7
62 1 23008.000 1 14.73 13.32 10.90 9.72 8.28 6.96 4.84 3.63 2.80 51.7
Drop Sequence Completed Time: 12:21   Air Temp (F): 55.2
GPS: Quality : DGPS Fix   Latitude = 35 deg9.299042 N   Longitude = 97
deg28.700537   W   PDOP = 2.60
Note:
63 1 23251.000 1 15.30 13.86 10.15 8.72 7.46 6.29 4.30 3.17 2.45 50.1
63 1 23251.000 1 15.10 13.38 9.91 8.53 7.29 6.14 4.19 3.10 2.39 50.1
63 1 23251.000 1 14.93 13.21 9.81 8.45 7.22 6.08 4.18 3.07 2.38 50.1
63 1 23251.000 1 14.91 13.12 9.76 8.44 7.22 6.09 4.19 3.10 2.39 50.1
63 1 23251.000 1 14.76 12.94 9.55 8.37 7.14 6.00 4.14 3.09 2.38 50.1
63 1 23251.000 1 14.91 12.95 9.69 8.42 7.20 6.07 4.15 3.09 2.36 50.1
Drop Sequence Completed Time: 12:22   Air Temp (F): 54.4
GPS: Quality : DGPS Fix   Latitude = 35 deg9.330709 N   Longitude = 97
deg28.729828   W   PDOP = 2.20
Note:
64 1 24005.000 1 15.43 11.84 9.70 8.73 7.55 6.49 4.71 3.67 2.85 51.4
64 1 24005.000 1 15.15 11.49 9.49 8.53 7.36 6.34 4.57 3.54 2.77 51.4
64 1 24005.000 1 15.15 11.38 9.39 8.47 7.31 6.32 4.59 3.60 2.85 51.4
64 1 24005.000 1 14.96 11.15 9.25 8.40 7.28 6.23 4.50 3.50 2.75 51.4
64 1 24005.000 1 15.03 11.24 9.29 8.37 7.24 6.26 4.52 3.54 2.75 51.4
64 1 24005.000 1 14.96 11.17 9.24 8.34 7.22 6.24 4.54 3.55 2.78 51.4
Drop Sequence Completed Time: 12:27   Air Temp (F): 55.4
GPS: Quality : GPS Fi   Latitude = 35 deg9.428994 N   Longitude = 97 deg28.821065
 W   PDOP = 2.10
Note:
1 1 24502.000 1 15.52 11.53 10.01 8.94 8.07 6.98 5.02 3.83 2.92 52.1
1 1 24502.000 1 15.33 11.35 9.86 8.99 7.91 6.88 4.97 3.82 2.90 52.1

1 1 24502.000 1 15.33 11.36 9.85 8.99 7.95 6.91 4.98 3.83 2.93 52.1
1 1 24502.000 1 15.25 11.26 9.77 8.99 7.89 6.87 4.95 3.75 2.88 52.1
1 1 24502.000 1 15.01 11.01 9.55 8.82 7.70 6.68 4.77 3.69 2.86 52.1
1 1 24502.000 1 15.23 11.19 9.69 8.92 7.83 6.80 4.88 3.72 2.82 52.1
Drop Sequence Completed Time: 12:31   Air Temp (F): 54.4
GPS: Quality : DGPS Fix   Latitude = 35 deg9.494173 N   Longitude = 97
deg28.881085   W   PDOP = 2.10
Note:
2 1 24752.000 1 15.38 12.86 11.00 10.11 8.82 7.62 5.48 4.19 3.22 52.1
2 1 24752.000 1 14.98 12.45 10.72 9.85 8.56 7.43 5.33 4.09 3.10 52.1
2 1 24752.000 1 15.03 12.49 10.71 9.81 8.54 7.44 5.42 4.15 3.17 52.1
2 1 24752.000 1 14.78 12.23 10.53 9.65 8.40 7.29 5.27 4.05 3.08 52.1
2 1 24752.000 1 14.81 12.21 10.53 9.66 8.45 7.33 5.29 4.08 3.08 52.1
2 1 24752.000 1 14.76 12.14 10.46 9.61 8.39 7.27 5.28 4.05 3.09 52.1
Drop Sequence Completed Time: 12:32   Air Temp (F): 55.8
GPS: Quality : DGPS Fix   Latitude = 35 deg9.526453 N   Longitude = 97
deg28.911228   W   PDOP = 2.10
Note:
3 1 25005.000 1 15.38 11.19 9.70 8.97 7.94 6.96 5.16 3.99 3.08 52.1
3 1 25005.000 1 15.25 10.99 9.55 8.84 7.81 6.87 5.08 3.96 3.01 52.1
3 1 25005.000 1 14.86 10.75 9.35 8.67 7.68 6.74 5.00 3.87 2.95 52.1
3 1 25005.000 1 14.81 10.62 9.22 8.56 7.56 6.67 4.94 3.82 2.91 52.1
3 1 25005.000 1 15.01 10.69 9.30 8.63 7.64 6.71 4.97 3.84 2.91 52.1
3 1 25005.000 1 14.86 10.62 9.27 8.58 7.60 6.68 4.97 3.85 2.93 52.1
Drop Sequence Completed Time: 12:33   Air Temp (F): 55.2
GPS: Quality : DGPS Fix   Latitude = 35 deg9.558571 N   Longitude = 97
deg28.941084   W   PDOP = 2.50
Note:

SOUTHBOUND (SB) DATA

M5
Date-Time: 12/ 6/2022 8:37: 6
Sensors: chop chop chop chop chop chop chop chop
Weight/spring: 3
Location: remote
Temp: 54.38
Operator: Ryan
Comments:
25 1 0.000 1 15.13 8.45 7.38 6.57 6.08 5.39 4.05 3.24 2.54 46.1
25 1 0.000 1 15.01 8.34 7.32 6.58 6.01 5.33 3.98 3.16 2.45 46.1
25 1 0.000 1 15.01 8.31 7.27 6.71 6.01 5.30 4.02 3.20 2.49 46.1
25 1 0.000 1 14.96 8.29 7.24 6.70 5.99 5.29 4.02 3.19 2.48 46.1
25 1 0.000 1 14.88 8.27 7.23 6.69 5.99 5.31 3.97 3.18 2.50 46.1
25 1 0.000 1 14.98 8.28 7.22 6.71 5.96 5.29 3.98 3.18 2.47 46.1
Drop Sequence Completed Time: 08:30   Air Temp (F): 53.3
GPS: Quality : DGPS Fix   Latitude = 35 deg9.590275 N   Longitude = 97
deg28.989477   W   PDOP = 1.60
Note:
26 1 50.000 1 15.13 9.98 8.71 8.06 7.12 6.17 4.50 3.36 2.57 50.1
26 1 50.000 1 14.91 9.84 8.59 7.95 7.00 6.11 4.44 3.32 2.55 50.1
26 1 50.000 1 14.96 9.83 8.60 7.96 7.02 6.11 4.42 3.34 2.58 50.1
26 1 50.000 1 14.91 9.81 8.57 7.97 7.00 6.10 4.39 3.30 2.54 50.1
26 1 50.000 1 14.96 9.81 8.59 7.98 7.05 6.12 4.46 3.35 2.58 50.1
26 1 50.000 1 15.01 9.84 8.65 8.03 7.09 6.18 4.50 3.40 2.63 50.1
Drop Sequence Completed Time: 08:31   Air Temp (F): 53.7
GPS: Quality : DGPS Fix   Latitude = 35 deg9.525330 N   Longitude = 97
deg28.929397   W   PDOP = 2.00
Note:
27 1 100.000 1 15.23 10.63 9.24 8.46 7.38 6.35 4.56 3.38 2.58 44.8
27 1 100.000 1 14.91 10.39 9.04 8.29 7.19 6.19 4.44 3.29 2.50 44.8
27 1 100.000 1 14.91 10.40 9.07 8.32 7.20 6.23 4.48 3.37 2.57 44.8
27 1 100.000 1 14.83 10.27 8.97 8.24 7.15 6.16 4.40 3.26 2.49 44.8
27 1 100.000 1 14.83 10.30 8.97 8.24 7.18 6.20 4.44 3.31 2.50 44.8
27 1 100.000 1 14.86 10.22 8.90 8.19 7.11 6.13 4.39 3.29 2.48 44.8
Drop Sequence Completed Time: 08:33   Air Temp (F): 53.7
GPS: Quality : DGPS Fix   Latitude = 35 deg9.460030 N   Longitude = 97
deg28.868747   W   PDOP = 1.60
Note:
1 1 250.000 1 15.55 10.71 9.39 8.64 7.50 6.50 4.66 3.48 2.64 48.8
1 1 250.000 1 15.25 10.59 9.28 8.55 7.44 6.41 4.60 3.43 2.65 48.8
1 1 250.000 1 15.05 10.39 9.09 8.37 7.28 6.28 4.49 3.38 2.58 48.8
1 1 250.000 1 15.10 10.37 9.09 8.40 7.31 6.31 4.53 3.39 2.57 48.8
1 1 250.000 1 15.03 10.28 9.05 8.34 7.28 6.30 4.51 3.38 2.59 48.8
1 1 250.000 1 15.05 10.39 9.09 8.38 7.32 6.29 4.52 3.36 2.56 48.8
Drop Sequence Completed Time: 08:37   Air Temp (F): 54.2
GPS: Quality : DGPS Fix   Latitude = 35 deg9.460183 N   Longitude = 97
deg28.868742   W   PDOP = 2.10
Note:
2 1 503.000 1 15.38 10.36 8.44 7.65 6.70 5.80 4.14 3.10 2.42 49.4
2 1 503.000 1 15.18 10.14 8.35 7.58 6.63 5.72 4.11 3.09 2.43 49.4

2 1 503.000 1 15.05 10.00 8.27 7.52 6.56 5.68 4.10 3.06 2.39 49.4
2 1 503.000 1 15.35 10.15 8.41 7.64 6.69 5.79 4.16 3.12 2.42 49.4
2 1 503.000 1 15.23 10.03 8.30 7.56 6.59 5.70 4.11 3.09 2.41 49.4
2 1 503.000 1 15.10 9.93 8.26 7.52 6.56 5.69 4.06 3.06 2.38 49.4
Drop Sequence Completed Time: 08:39   Air Temp (F): 52.0
GPS: Quality : DGPS Fix   Latitude = 35 deg9.394937 N   Longitude = 97
deg28.807926   W   PDOP = 2.10
Note:
3 1 1503.000 1 15.55 8.72 7.70 6.82 6.38 5.64 4.19 3.27 2.52 50.8
3 1 1503.000 1 15.10 8.51 7.51 6.82 6.26 5.52 4.09 3.20 2.50 50.8
3 1 1503.000 1 15.20 8.50 7.54 6.88 6.25 5.56 4.13 3.24 2.53 50.8
3 1 1503.000 1 15.08 8.45 7.45 6.73 6.18 5.46 4.07 3.17 2.45 50.8
3 1 1503.000 1 14.93 8.39 7.42 6.82 6.17 5.46 4.06 3.21 2.47 50.8
3 1 1503.000 1 15.23 8.49 7.49 6.86 6.21 5.51 4.08 3.19 2.48 50.8
Drop Sequence Completed Time: 08:41   Air Temp (F): 54.4
GPS: Quality : DGPS Fix   Latitude = 35 deg9.264794 N   Longitude = 97
deg28.687089   W   PDOP = 2.10
Note:
4 1 2001.000 1 15.33 17.06 14.06 12.13 9.87 7.94 5.07 3.44 2.65 54.1
4 1 2001.000 1 15.01 16.39 13.62 11.78 9.59 7.73 4.91 3.39 2.56 54.1
4 1 2001.000 1 14.83 16.17 13.54 11.70 9.54 7.70 4.91 3.38 2.66 54.1
4 1 2001.000 1 14.88 16.11 13.49 11.73 9.51 7.67 4.89 3.37 2.53 54.1
4 1 2001.000 1 14.73 16.00 13.39 11.65 9.47 7.65 4.87 3.36 2.58 54.1
4 1 2001.000 1 14.96 16.17 13.58 11.80 9.63 7.75 4.95 3.41 2.61 54.1
Drop Sequence Completed Time: 08:43   Air Temp (F): 54.0
GPS: Quality : DGPS Fix   Latitude = 35 deg9.199906 N   Longitude = 97
deg28.627088   W   PDOP = 2.20
Note:
5 1 3007.000 1 15.33 11.10 8.89 7.67 6.87 5.93 4.18 3.16 2.42 55.4
5 1 3007.000 1 15.01 10.73 8.65 7.67 6.73 5.77 4.08 3.09 2.35 55.4
5 1 3007.000 1 15.05 10.71 8.66 7.60 6.71 5.77 4.12 3.09 2.35 55.4
5 1 3007.000 1 15.10 10.65 8.63 7.75 6.74 5.77 4.11 3.11 2.36 55.4
5 1 3007.000 1 15.01 10.56 8.54 7.70 6.65 5.71 4.04 3.08 2.36 55.4
5 1 3007.000 1 14.91 10.45 8.49 7.64 6.61 5.67 4.06 3.03 2.34 55.4
Drop Sequence Completed Time: 08:45   Air Temp (F): 54.9
GPS: Quality : DGPS Fix   Latitude = 35 deg9.068795 N   Longitude = 97
deg28.505911   W   PDOP = 2.70
Note:
6 1 3505.000 1 15.28 7.42 6.41 5.87 5.26 4.72 3.61 2.85 2.22 56.0
6 1 3505.000 1 15.03 7.27 6.32 5.82 5.18 4.61 3.53 2.82 2.23 56.0
6 1 3505.000 1 15.05 7.25 6.27 5.79 5.18 4.60 3.49 2.81 2.20 56.0
6 1 3505.000 1 14.91 7.20 6.23 5.76 5.14 4.58 3.49 2.80 2.20 56.0
6 1 3505.000 1 14.93 7.22 6.26 5.76 5.14 4.58 3.51 2.80 2.23 56.0
6 1 3505.000 1 14.86 7.18 6.23 5.74 5.14 4.59 3.50 2.80 2.21 56.0
Drop Sequence Completed Time: 08:46   Air Temp (F): 53.2
GPS: Quality : DGPS Fix   Latitude = 35 deg9.004444 N   Longitude = 97
deg28.445549   W   PDOP = 2.20
Note:
7 1 4000.000 1 15.15 13.24 10.64 8.63 7.53 6.24 4.19 3.14 2.41 54.4
7 1 4000.000 1 15.23 13.10 10.60 7.96 7.52 6.22 4.21 3.15 2.39 54.4

7 1 4000.000 1 15.01 12.81 10.40 8.76 7.42 6.13 4.13 3.10 2.39 54.4
7 1 4000.000 1 14.88 12.69 10.31 8.78 7.36 6.08 4.11 3.05 2.34 54.4
7 1 4000.000 1 14.83 12.62 10.26 8.72 7.34 6.05 4.11 3.07 2.38 54.4
7 1 4000.000 1 14.86 12.61 10.28 8.83 7.33 6.08 4.12 3.07 2.36 54.4
Drop Sequence Completed Time: 08:47   Air Temp (F): 54.4
GPS: Quality : DGPS Fix   Latitude = 35 deg8.939827 N   Longitude = 97
deg28.385953   W   PDOP = 2.30
Note:
8 1 4503.000 1 15.40 11.92 9.83 8.92 7.71 6.64 4.72 3.54 2.67 54.7
8 1 4503.000 1 14.93 11.53 9.56 8.70 7.50 6.46 4.60 3.47 2.60 54.7
8 1 4503.000 1 14.91 11.47 9.52 8.64 7.47 6.40 4.57 3.42 2.57 54.7
8 1 4503.000 1 15.01 11.43 9.48 8.65 7.51 6.46 4.57 3.46 2.58 54.7
8 1 4503.000 1 14.81 11.31 9.44 8.58 7.42 6.42 4.58 3.44 2.60 54.7
8 1 4503.000 1 15.01 11.41 9.52 8.62 7.47 6.46 4.60 3.45 2.62 54.7
Drop Sequence Completed Time: 08:48   Air Temp (F): 54.6
GPS: Quality : DGPS Fix   Latitude = 35 deg8.874495 N   Longitude = 97
deg28.325394   W   PDOP = 2.30
Note:
9 1 5001.000 1 15.23 12.17 9.60 8.60 7.41 6.27 4.38 3.27 2.48 53.1
9 1 5001.000 1 15.05 11.84 9.41 8.42 7.26 6.14 4.30 3.17 2.38 53.1
9 1 5001.000 1 14.93 11.72 9.32 8.39 7.21 6.11 4.28 3.19 2.39 53.1
9 1 5001.000 1 14.96 11.69 9.36 8.42 7.24 6.14 4.29 3.23 2.42 53.1
9 1 5001.000 1 14.98 11.67 9.37 8.42 7.25 6.13 4.29 3.22 2.42 53.1
9 1 5001.000 1 15.18 11.63 9.31 8.38 7.21 6.12 4.28 3.20 2.42 53.1
Drop Sequence Completed Time: 08:49   Air Temp (F): 54.6
GPS: Quality : DGPS Fix   Latitude = 35 deg8.809461 N   Longitude = 97
deg28.265272   W   PDOP = 2.30
Note:
10 1 5501.000 1 15.33 7.16 6.21 5.83 5.29 4.79 3.81 3.16 2.55 52.4
10 1 5501.000 1 15.05 6.99 6.12 5.72 5.19 4.74 3.74 3.11 2.52 52.4
10 1 5501.000 1 15.08 6.93 6.09 5.68 5.17 4.69 3.74 3.12 2.51 52.4
10 1 5501.000 1 15.01 6.89 6.07 5.71 5.16 4.70 3.73 3.12 2.51 52.4
10 1 5501.000 1 15.03 6.86 6.03 5.65 5.14 4.67 3.71 3.07 2.47 52.4
10 1 5501.000 1 14.88 6.81 6.02 5.63 5.13 4.66 3.71 3.10 2.50 52.4
Drop Sequence Completed Time: 08:50   Air Temp (F): 54.6
GPS: Quality : DGPS Fix   Latitude = 35 deg8.744281 N   Longitude = 97
deg28.205130   W   PDOP = 2.90
Note:
11 1 6004.000 1 15.20 9.11 8.02 7.40 6.48 5.31 3.78 3.06 2.43 52.4
11 1 6004.000 1 15.05 8.94 7.85 7.27 6.33 5.18 3.70 3.01 2.40 52.4
11 1 6004.000 1 15.03 8.90 7.81 7.24 6.30 5.16 3.72 2.99 2.38 52.4
11 1 6004.000 1 14.98 8.87 7.81 7.23 6.30 5.18 3.70 2.98 2.40 52.4
11 1 6004.000 1 14.98 8.84 7.79 7.22 6.29 5.16 3.70 3.00 2.39 52.4
11 1 6004.000 1 14.93 8.84 7.82 7.23 6.29 5.17 3.69 2.99 2.37 52.4
Drop Sequence Completed Time: 08:51   Air Temp (F): 54.7
GPS: Quality : DGPS Fix   Latitude = 35 deg8.678521 N   Longitude = 97
deg28.144785   W   PDOP = 2.40
Note:
12 1 6501.000 1 15.25 7.54 6.67 6.34 5.90 5.48 4.44 3.61 2.93 52.4
12 1 6501.000 1 15.08 7.50 6.63 6.27 5.85 5.43 4.41 3.58 2.89 52.4

12 1 6501.000 1 15.10 7.45 6.60 6.26 5.82 5.42 4.39 3.56 2.90 52.4
12 1 6501.000 1 14.93 7.38 6.58 6.24 5.79 5.37 4.38 3.56 2.87 52.4
12 1 6501.000 1 15.01 7.39 6.53 6.21 5.78 5.36 4.39 3.56 2.87 52.4
12 1 6501.000 1 15.03 7.38 6.55 6.24 5.77 5.38 4.36 3.53 2.87 52.4
Drop Sequence Completed Time: 08:52   Air Temp (F): 55.2
GPS: Quality : DGPS Fix   Latitude = 35 deg8.613449 N   Longitude = 97
deg28.084926   W   PDOP = 2.40
Note:
13 1 7017.000 1 15.03 18.84 14.86 10.53 9.43 7.50 4.94 3.68 2.84 52.1
13 1 7017.000 1 14.88 18.16 14.48 11.25 9.20 7.30 4.80 3.59 2.76 52.1
13 1 7017.000 1 14.88 18.12 14.51 11.73 9.23 7.34 4.82 3.59 2.77 52.1
13 1 7017.000 1 14.76 17.96 14.37 11.62 9.17 7.25 4.78 3.60 2.72 52.1
13 1 7017.000 1 14.96 17.90 14.36 11.59 9.17 7.27 4.76 3.57 2.70 52.1
13 1 7017.000 1 14.73 17.85 14.30 11.60 9.13 7.26 4.77 3.59 2.73 52.1
Drop Sequence Completed Time: 08:53   Air Temp (F): 55.1
GPS: Quality : DGPS Fix   Latitude = 35 deg8.546229 N   Longitude = 97
deg28.022700   W   PDOP = 2.40
Note:
14 1 7497.000 1 15.20 8.24 7.28 6.83 6.22 5.61 4.36 3.44 2.60 52.7
14 1 7497.000 1 15.15 8.18 7.25 6.79 6.16 5.57 4.31 3.46 2.60 52.7
14 1 7497.000 1 14.96 8.05 7.10 6.66 6.07 5.47 4.21 3.36 2.52 52.7
14 1 7497.000 1 15.10 8.14 7.18 6.75 6.13 5.51 4.28 3.39 2.55 52.7
14 1 7497.000 1 14.88 8.06 7.18 6.72 6.13 5.54 4.26 3.42 2.59 52.7
14 1 7497.000 1 14.91 8.03 7.14 6.66 6.09 5.48 4.23 3.33 2.53 52.7
Drop Sequence Completed Time: 08:55   Air Temp (F): 54.9
GPS: Quality : DGPS Fix   Latitude = 35 deg8.483675 N   Longitude = 97
deg27.964822   W   PDOP = 3.00
Note:
15 1 7999.000 1 15.43 7.69 6.72 5.89 5.61 5.00 3.90 3.15 2.53 52.1
15 1 7999.000 1 15.08 7.39 6.45 5.88 5.39 4.82 3.69 2.97 2.40 52.1
15 1 7999.000 1 15.03 7.48 6.55 5.98 5.45 4.90 3.82 3.12 2.48 52.1
15 1 7999.000 1 14.86 7.43 6.50 5.97 5.45 4.86 3.78 3.09 2.47 52.1
15 1 7999.000 1 15.15 7.52 6.56 6.03 5.49 4.93 3.82 3.14 2.53 52.1
15 1 7999.000 1 14.93 7.44 6.53 5.93 5.46 4.90 3.76 3.12 2.51 52.1
Drop Sequence Completed Time: 08:56   Air Temp (F): 55.6
GPS: Quality : DGPS Fix   Latitude = 35 deg8.418443 N   Longitude = 97
deg27.904309   W   PDOP = 2.40
Note:
16 1 8501.000 1 15.33 9.44 7.63 6.97 6.25 5.34 3.69 2.98 2.39 53.1
16 1 8501.000 1 15.08 9.24 7.52 6.86 6.14 5.25 3.61 2.95 2.37 53.1
16 1 8501.000 1 14.98 9.14 7.44 6.83 6.11 5.21 3.60 2.97 2.37 53.1
16 1 8501.000 1 15.08 9.14 7.48 6.86 6.13 5.26 3.61 2.97 2.39 53.1
16 1 8501.000 1 14.98 9.06 7.44 6.81 6.08 5.22 3.58 2.92 2.34 53.1
16 1 8501.000 1 15.08 9.10 7.45 6.83 6.11 5.23 3.58 2.94 2.37 53.1
Drop Sequence Completed Time: 08:57   Air Temp (F): 54.7
GPS: Quality : DGPS Fix   Latitude = 35 deg8.353066 N   Longitude = 97
deg27.843680   W   PDOP = 3.10
Note:
17 1 9000.000 1 15.25 11.35 9.17 8.29 7.23 6.23 4.36 3.12 2.34 53.4
17 1 9000.000 1 15.10 11.08 9.01 8.16 7.15 6.18 4.28 3.09 2.31 53.4

17 1 9000.000 1 14.86 10.90 8.91 8.06 7.03 6.09 4.20 3.05 2.30 53.4
17 1 9000.000 1 14.93 10.89 8.89 8.05 7.01 6.10 4.25 3.05 2.29 53.4
17 1 9000.000 1 14.86 10.78 8.82 7.97 6.99 6.04 4.21 3.02 2.30 53.4
17 1 9000.000 1 14.86 10.83 8.87 8.03 7.04 6.07 4.22 3.05 2.27 53.4
Drop Sequence Completed Time: 08:58   Air Temp (F): 55.2
GPS: Quality : DGPS Fix   Latitude = 35 deg8.288092 N   Longitude = 97
deg27.783532   W   PDOP = 2.50
Note:
18 1 9501.000 1 15.25 12.52 11.18 9.75 8.25 6.59 4.45 3.27 2.45 53.1
18 1 9501.000 1 15.01 12.16 10.83 9.80 8.04 6.43 4.38 3.19 2.39 53.1
18 1 9501.000 1 14.96 12.07 10.79 9.80 8.01 6.43 4.37 3.19 2.41 53.1
18 1 9501.000 1 14.91 12.02 10.76 9.75 7.97 6.40 4.37 3.19 2.40 53.1
18 1 9501.000 1 14.91 11.93 10.72 9.73 7.96 6.37 4.34 3.20 2.40 53.1
18 1 9501.000 1 14.88 11.94 10.69 9.72 7.95 6.39 4.34 3.20 2.37 53.1
Drop Sequence Completed Time: 08:59   Air Temp (F): 54.7
GPS: Quality : DGPS Fix   Latitude = 35 deg8.222790 N   Longitude = 97
deg27.723277   W   PDOP = 3.20
Note:
19 1 10002.000 1 15.25 8.00 6.76 6.18 5.49 4.85 3.67 2.88 2.21 51.7
19 1 10002.000 1 15.01 7.87 6.64 6.07 5.42 4.78 3.60 2.85 2.20 51.7
19 1 10002.000 1 15.03 7.76 6.58 6.04 5.36 4.72 3.59 2.83 2.19 51.7
19 1 10002.000 1 14.96 7.78 6.57 6.05 5.34 4.73 3.57 2.84 2.18 51.7
19 1 10002.000 1 14.93 7.76 6.58 6.07 5.38 4.73 3.57 2.83 2.18 51.7
19 1 10002.000 1 14.98 7.74 6.55 6.03 5.36 4.73 3.58 2.85 2.18 51.7
Drop Sequence Completed Time: 09:00   Air Temp (F): 54.7
GPS: Quality : DGPS Fix   Latitude = 35 deg8.157616 N   Longitude = 97
deg27.662789   W   PDOP = 2.50
Note:
20 1 10502.000 1 15.33 7.55 6.16 5.68 5.10 4.57 3.58 2.92 2.32 50.4
20 1 10502.000 1 15.10 7.43 6.07 5.61 5.02 4.54 3.49 2.87 2.28 50.4
20 1 10502.000 1 15.01 7.37 5.98 5.56 4.97 4.48 3.47 2.86 2.30 50.4
20 1 10502.000 1 15.05 7.34 6.02 5.55 4.99 4.47 3.47 2.86 2.23 50.4
20 1 10502.000 1 15.03 7.33 6.04 5.54 4.97 4.48 3.47 2.85 2.28 50.4
20 1 10502.000 1 15.01 7.34 6.02 5.54 5.07 4.47 3.48 2.85 2.26 50.4
Drop Sequence Completed Time: 09:01   Air Temp (F): 55.1
GPS: Quality : DGPS Fix   Latitude = 35 deg8.092568 N   Longitude = 97
deg27.602372   W   PDOP = 2.50
Note:
21 1 11000.000 1 15.48 5.88 5.15 4.56 3.77 3.30 2.59 2.17 1.84 53.7
21 1 11000.000 1 15.03 5.71 5.02 4.44 3.69 3.18 2.52 2.14 1.82 53.7
21 1 11000.000 1 15.05 5.70 4.99 4.42 3.68 3.18 2.51 2.16 1.84 53.7
21 1 11000.000 1 15.05 5.65 4.95 4.36 3.65 3.18 2.49 2.11 1.80 53.7
21 1 11000.000 1 15.08 5.64 4.96 4.39 3.65 3.14 2.49 2.14 1.83 53.7
21 1 11000.000 1 15.05 5.65 4.98 4.41 3.69 3.21 2.53 2.17 1.89 53.7
Drop Sequence Completed Time: 09:02   Air Temp (F): 55.6
GPS: Quality : DGPS Fix   Latitude = 35 deg8.027824 N   Longitude = 97
deg27.542280   W   PDOP = 2.50
Note:
22 1 11501.000 1 15.52 5.42 4.60 4.25 3.88 3.54 2.89 2.44 1.99 54.1
22 1 11501.000 1 15.08 5.25 4.46 4.11 3.75 3.44 2.79 2.35 1.92 54.1

22 1 11501.000 1 15.10 5.26 4.45 4.14 3.75 3.44 2.81 2.36 1.93 54.1
22 1 11501.000 1 14.93 5.19 4.40 4.07 3.69 3.39 2.79 2.32 1.89 54.1
22 1 11501.000 1 15.08 5.22 4.43 4.10 3.77 3.44 2.80 2.38 1.94 54.1
22 1 11501.000 1 14.98 5.17 4.37 4.05 3.71 3.40 2.74 2.29 1.89 54.1
Drop Sequence Completed Time: 09:03   Air Temp (F): 55.9
GPS: Quality : DGPS Fix   Latitude = 35 deg7.962627 N   Longitude = 97
deg27.481622   W   PDOP = 3.30
Note:
23 1 12001.000 1 15.43 4.34 3.85 3.63 3.42 3.23 2.76 2.45 2.06 52.1
23 1 12001.000 1 15.18 4.30 3.80 3.56 3.39 3.19 2.73 2.42 2.01 52.1
23 1 12001.000 1 15.08 4.30 3.80 3.56 3.37 3.17 2.73 2.42 2.01 52.1
23 1 12001.000 1 15.01 4.30 3.79 3.57 3.36 3.16 2.69 2.40 2.04 52.1
23 1 12001.000 1 15.01 4.26 3.78 3.54 3.34 3.17 2.72 2.35 2.04 52.1
23 1 12001.000 1 15.01 4.25 3.78 3.57 3.34 3.14 2.71 2.39 2.05 52.1
Drop Sequence Completed Time: 09:05   Air Temp (F): 54.9
GPS: Quality : DGPS Fix   Latitude = 35 deg7.897484 N   Longitude = 97
deg27.421273   W   PDOP = 2.50
Note:
24 1 12499.000 1 15.13 9.00 7.04 6.06 5.20 4.56 3.55 2.97 2.38 50.8
24 1 12499.000 1 15.20 8.93 7.02 6.08 5.22 4.59 3.57 2.98 2.39 50.8
24 1 12499.000 1 15.13 8.80 6.95 6.00 5.16 4.53 3.52 2.90 2.37 50.8
24 1 12499.000 1 15.10 8.72 6.91 6.00 5.14 4.53 3.52 2.92 2.35 50.8
24 1 12499.000 1 15.05 8.73 6.89 6.01 5.16 4.55 3.53 2.92 2.35 50.8
24 1 12499.000 1 15.08 8.70 6.87 6.00 5.14 4.53 3.53 2.91 2.36 50.8
Drop Sequence Completed Time: 09:06   Air Temp (F): 54.0
GPS: Quality : DGPS Fix   Latitude = 35 deg7.832770 N   Longitude = 97
deg27.361356   W   PDOP = 2.50
Note:
25 1 13002.000 1 15.55 5.88 5.06 4.77 4.33 4.00 3.31 2.77 2.28 51.4
25 1 13002.000 1 15.18 5.75 4.96 4.63 4.26 3.94 3.23 2.73 2.25 51.4
25 1 13002.000 1 15.18 5.73 4.91 4.63 4.21 3.93 3.22 2.73 2.23 51.4
25 1 13002.000 1 15.05 5.69 4.93 4.59 4.20 3.93 3.19 2.71 2.21 51.4
25 1 13002.000 1 15.10 5.69 4.89 4.59 4.20 3.88 3.19 2.69 2.25 51.4
25 1 13002.000 1 15.08 5.64 4.84 4.53 4.16 3.84 3.14 2.64 2.17 51.4
Drop Sequence Completed Time: 09:07   Air Temp (F): 55.2
GPS: Quality : DGPS Fix   Latitude = 35 deg7.767322 N   Longitude = 97
deg27.300622   W   PDOP = 2.50
Note:
26 1 13499.000 1 15.40 7.22 6.52 5.95 5.20 4.18 3.34 2.60 2.15 52.1
26 1 13499.000 1 15.05 7.02 6.30 5.81 5.07 4.10 3.26 2.52 2.10 52.1
26 1 13499.000 1 14.98 6.96 6.26 5.77 5.01 4.05 3.27 2.53 2.06 52.1
26 1 13499.000 1 15.10 6.95 6.26 5.78 5.08 4.08 3.35 2.54 2.06 52.1
26 1 13499.000 1 14.83 6.89 6.18 5.72 5.00 4.02 3.31 2.51 2.03 52.1
26 1 13499.000 1 14.91 6.86 6.22 5.72 5.01 4.04 3.28 2.51 2.07 52.1
Drop Sequence Completed Time: 09:08   Air Temp (F): 55.8
GPS: Quality : DGPS Fix   Latitude = 35 deg7.702340 N   Longitude = 97
deg27.240703   W   PDOP = 3.40
Note:
27 1 14000.000 1 15.52 5.25 4.35 3.94 3.54 3.22 2.99 2.27 1.98 55.0
27 1 14000.000 1 15.38 5.13 4.25 3.88 3.47 3.16 2.92 2.28 1.93 55.0

27 1 14000.000 1 15.15 5.11 4.23 3.88 3.47 3.15 2.94 2.28 1.91 55.0
27 1 14000.000 1 15.01 5.04 4.22 3.84 3.45 3.14 2.97 2.25 1.92 55.0
27 1 14000.000 1 15.05 5.07 4.19 3.83 3.44 3.09 2.99 2.23 1.91 55.0
27 1 14000.000 1 15.05 5.08 4.22 3.89 3.44 3.15 2.94 2.27 1.95 55.0
Drop Sequence Completed Time: 09:09   Air Temp (F): 55.4
GPS: Quality : DGPS Fix   Latitude = 35 deg7.637246 N   Longitude = 97
deg27.180339   W   PDOP = 2.50
Note:
28 1 14501.000 1 15.43 6.28 5.20 4.82 4.43 4.10 3.45 2.96 2.46 52.4
28 1 14501.000 1 15.01 6.08 5.09 4.65 4.27 3.99 3.35 2.88 2.40 52.4
28 1 14501.000 1 15.08 6.07 5.05 4.64 4.27 4.00 3.35 2.87 2.36 52.4
28 1 14501.000 1 15.01 6.05 5.00 4.62 4.25 3.96 3.31 2.85 2.35 52.4
28 1 14501.000 1 15.03 6.06 5.04 4.64 4.26 3.98 3.31 2.85 2.37 52.4
28 1 14501.000 1 14.98 6.04 5.04 4.64 4.25 3.98 3.34 2.84 2.38 52.4
Drop Sequence Completed Time: 09:10   Air Temp (F): 54.7
GPS: Quality : DGPS Fix   Latitude = 35 deg7.572204 N   Longitude = 97
deg27.119987   W   PDOP = 2.50
Note:
29 1 15000.000 1 15.25 4.51 3.42 3.07 2.83 2.69 2.31 1.64 1.46 53.1
29 1 15000.000 1 15.30 4.51 3.48 3.10 2.84 2.69 2.32 1.64 1.47 53.1
29 1 15000.000 1 15.13 4.46 3.44 3.09 2.82 2.69 2.29 1.65 1.40 53.1
29 1 15000.000 1 15.03 4.38 3.36 3.05 2.78 2.65 2.28 1.65 1.45 53.1
29 1 15000.000 1 15.08 4.38 3.37 3.03 2.82 2.67 2.26 1.62 1.48 53.1
29 1 15000.000 1 15.15 4.39 3.40 3.08 2.81 2.64 2.29 1.62 1.46 53.1
Drop Sequence Completed Time: 09:11   Air Temp (F): 54.7
GPS: Quality : DGPS Fix   Latitude = 35 deg7.507095 N   Longitude = 97
deg27.059862   W   PDOP = 2.50
Note:
30 1 15501.000 1 15.28 4.86 3.65 3.32 3.00 2.75 2.22 1.90 1.56 51.7
30 1 15501.000 1 15.10 4.73 3.59 3.25 2.94 2.71 2.25 1.90 1.55 51.7
30 1 15501.000 1 15.23 4.74 3.58 3.26 2.94 2.71 2.24 1.92 1.54 51.7
30 1 15501.000 1 15.18 4.72 3.59 3.26 2.95 2.72 2.22 1.87 1.53 51.7
30 1 15501.000 1 15.15 4.72 3.60 3.30 2.93 2.71 2.23 1.88 1.55 51.7
30 1 15501.000 1 14.98 4.67 3.54 3.22 2.91 2.71 2.20 1.87 1.50 51.7
Drop Sequence Completed Time: 09:13   Air Temp (F): 53.7
GPS: Quality : DGPS Fix   Latitude = 35 deg7.441917 N   Longitude = 97
deg26.999568   W   PDOP = 2.50
Note:
31 1 16000.000 1 15.13 7.23 5.10 4.37 3.66 3.19 2.34 1.76 1.27 52.7
31 1 16000.000 1 15.03 7.08 5.03 4.30 3.63 3.15 2.32 1.76 1.26 52.7
31 1 16000.000 1 14.93 6.95 4.97 4.25 3.59 3.12 2.28 1.72 1.25 52.7
31 1 16000.000 1 14.98 6.89 4.94 4.27 3.61 3.12 2.31 1.77 1.27 52.7
31 1 16000.000 1 15.01 6.90 4.94 4.23 3.58 3.10 2.30 1.75 1.24 52.7
31 1 16000.000 1 14.96 6.89 4.97 4.28 3.58 3.13 2.30 1.74 1.25 52.7
Drop Sequence Completed Time: 09:14   Air Temp (F): 54.6
GPS: Quality : DGPS Fix   Latitude = 35 deg7.376993 N   Longitude = 97
deg26.939615   W   PDOP = 2.50
Note:
32 1 16500.000 1 15.35 6.20 5.10 4.69 4.27 3.91 3.11 2.61 2.09 53.1
32 1 16500.000 1 14.96 6.05 4.99 4.58 4.16 3.81 3.11 2.54 2.06 53.1

32 1 16500.000 1 14.86 6.01 4.96 4.58 4.16 3.79 3.05 2.55 2.01 53.1
32 1 16500.000 1 14.88 5.98 4.97 4.57 4.13 3.81 3.05 2.53 2.03 53.1
32 1 16500.000 1 14.93 6.02 4.98 4.59 4.18 3.82 3.07 2.55 2.06 53.1
32 1 16500.000 1 14.83 5.97 4.96 4.59 4.14 3.78 3.02 2.54 2.05 53.1
Drop Sequence Completed Time: 09:15   Air Temp (F): 54.7
GPS: Quality : DGPS Fix   Latitude = 35 deg7.311912 N   Longitude = 97
deg26.879378   W   PDOP = 3.50
Note:
33 1 16853.000 1 15.30 5.38 4.52 4.12 3.75 3.44 2.79 2.36 1.94 53.1
33 1 16853.000 1 14.93 5.25 4.42 4.03 3.65 3.37 2.73 2.31 1.89 53.1
33 1 16853.000 1 15.01 5.20 4.35 4.00 3.66 3.34 2.66 2.24 1.89 53.1
33 1 16853.000 1 14.83 5.14 4.30 3.92 3.58 3.29 2.67 2.23 1.81 53.1
33 1 16853.000 1 14.91 5.18 4.31 3.93 3.59 3.26 2.62 2.18 1.83 53.1
33 1 16853.000 1 14.96 5.15 4.35 3.97 3.61 3.32 2.67 2.27 1.82 53.1
Drop Sequence Completed Time: 09:16   Air Temp (F): 53.5
GPS: Quality : DGPS Fix   Latitude = 35 deg7.265977 N   Longitude = 97
deg26.836842   W   PDOP = 3.40
Note:
34 1 17906.000 1 15.48 6.29 4.86 4.32 3.99 3.74 3.13 2.67 2.23 54.1
34 1 17906.000 1 15.10 6.14 4.77 4.23 3.95 3.69 3.07 2.61 2.19 54.1
34 1 17906.000 1 14.93 6.01 4.70 4.22 3.88 3.67 3.05 2.60 2.15 54.1
34 1 17906.000 1 15.01 6.06 4.76 4.24 3.92 3.70 3.05 2.60 2.17 54.1
34 1 17906.000 1 15.01 6.04 4.71 4.23 3.90 3.68 3.03 2.61 2.18 54.1
34 1 17906.000 1 14.98 5.97 4.69 4.21 3.91 3.66 3.05 2.60 2.14 54.1
Drop Sequence Completed Time: 09:18   Air Temp (F): 55.4
GPS: Quality : DGPS Fix   Latitude = 35 deg7.128915 N   Longitude = 97
deg26.709851   W   PDOP = 2.40
Note:
35 1 18006.000 1 15.25 6.24 5.09 4.63 4.21 3.91 3.24 2.76 2.29 53.1
35 1 18006.000 1 14.93 6.07 4.99 4.55 4.13 3.86 3.29 2.71 2.28 53.1
35 1 18006.000 1 14.93 6.06 4.99 4.52 4.13 3.81 3.16 2.71 2.26 53.1
35 1 18006.000 1 14.91 5.99 4.90 4.47 4.08 3.74 3.29 2.66 2.21 53.1
35 1 18006.000 1 14.86 6.01 4.98 4.48 4.11 3.80 3.12 2.69 2.24 53.1
35 1 18006.000 1 14.78 6.02 4.93 4.45 4.10 3.80 3.24 2.65 2.21 53.1
Drop Sequence Completed Time: 09:19   Air Temp (F): 55.2
GPS: Quality : DGPS Fix   Latitude = 35 deg7.115865 N   Longitude = 97
deg26.697852   W   PDOP = 2.40
Note:
36 1 18505.000 1 15.30 5.92 5.25 4.88 4.47 4.07 3.19 2.65 2.18 54.4
36 1 18505.000 1 15.01 5.83 5.17 4.78 4.38 4.00 3.11 2.60 2.15 54.4
36 1 18505.000 1 14.96 5.74 5.08 4.73 4.33 3.97 3.09 2.58 2.13 54.4
36 1 18505.000 1 14.78 5.72 5.08 4.72 4.34 3.96 3.09 2.59 2.12 54.4
36 1 18505.000 1 14.93 5.71 5.08 4.71 4.34 3.96 3.08 2.56 2.11 54.4
36 1 18505.000 1 14.78 5.70 5.07 4.72 4.30 3.95 3.07 2.56 2.11 54.4
Drop Sequence Completed Time: 09:20   Air Temp (F): 55.9
GPS: Quality : DGPS Fix   Latitude = 35 deg7.051036 N   Longitude = 97
deg26.637687   W   PDOP = 1.90
Note:
37 1 19000.000 1 15.30 5.66 4.42 3.97 3.53 3.17 2.46 1.94 1.47 55.4
37 1 19000.000 1 14.93 5.50 4.32 3.86 3.44 3.11 2.40 1.91 1.45 55.4

37 1 19000.000 1 14.81 5.45 4.27 3.83 3.40 3.08 2.37 1.88 1.45 55.4
37 1 19000.000 1 14.81 5.44 4.27 3.83 3.41 3.07 2.39 1.89 1.44 55.4
37 1 19000.000 1 14.73 5.37 4.22 3.80 3.40 3.04 2.35 1.87 1.45 55.4
37 1 19000.000 1 14.76 5.41 4.26 3.80 3.40 3.05 2.38 1.89 1.45 55.4
Drop Sequence Completed Time: 09:21   Air Temp (F): 55.8
GPS: Quality : DGPS Fix   Latitude = 35 deg6.986402 N   Longitude = 97
deg26.577083   W   PDOP = 3.40
Note:
38 1 19507.000 1 15.38 5.55 4.37 3.95 3.52 3.16 2.37 1.81 1.36 55.4
38 1 19507.000 1 14.98 5.35 4.26 3.82 3.40 3.04 2.29 1.76 1.28 55.4
38 1 19507.000 1 15.01 5.33 4.22 3.80 3.39 3.01 2.27 1.75 1.30 55.4
38 1 19507.000 1 14.93 5.30 4.23 3.79 3.39 3.03 2.29 1.75 1.29 55.4
38 1 19507.000 1 14.98 5.34 4.21 3.81 3.38 3.02 2.29 1.77 1.27 55.4
38 1 19507.000 1 14.98 5.32 4.22 3.81 3.39 3.04 2.29 1.79 1.29 55.4
Drop Sequence Completed Time: 09:22   Air Temp (F): 54.2
GPS: Quality : DGPS Fix   Latitude = 35 deg6.920487 N   Longitude = 97
deg26.516872   W   PDOP = 1.90
Note:
39 1 20008.000 1 15.28 6.80 5.56 4.91 4.26 3.87 3.04 2.44 1.87 50.1
39 1 20008.000 1 15.08 6.65 5.42 4.84 4.17 3.75 2.98 2.39 1.82 50.1
39 1 20008.000 1 14.98 6.62 5.38 4.79 4.16 3.75 2.97 2.39 1.82 50.1
39 1 20008.000 1 14.98 6.60 5.39 4.81 4.16 3.74 2.98 2.38 1.80 50.1
39 1 20008.000 1 14.93 6.59 5.37 4.81 4.16 3.73 2.98 2.39 1.80 50.1
39 1 20008.000 1 15.08 6.53 5.36 4.79 4.11 3.71 2.96 2.36 1.81 50.1
Drop Sequence Completed Time: 09:23   Air Temp (F): 55.9
GPS: Quality : DGPS Fix   Latitude = 35 deg6.855201 N   Longitude = 97
deg26.456701   W   PDOP = 1.80
Note:
40 1 20500.000 1 15.25 4.86 3.98 3.72 3.41 3.18 2.68 2.27 1.89 56.4
40 1 20500.000 1 14.96 4.77 3.95 3.62 3.37 3.17 2.63 2.27 1.83 56.4
40 1 20500.000 1 15.13 4.77 3.96 3.64 3.35 3.16 2.60 2.23 1.85 56.4
40 1 20500.000 1 15.13 4.73 3.92 3.63 3.36 3.16 2.63 2.23 1.84 56.4
40 1 20500.000 1 15.05 4.71 3.91 3.61 3.33 3.12 2.60 2.21 1.82 56.4
40 1 20500.000 1 15.08 4.74 3.90 3.63 3.34 3.16 2.59 2.23 1.83 56.4
Drop Sequence Completed Time: 09:24   Air Temp (F): 56.1
GPS: Quality : DGPS Fix   Latitude = 35 deg6.791231 N   Longitude = 97
deg26.397289   W   PDOP = 1.90
Note:
41 1 21001.000 1 15.40 3.94 3.23 2.97 2.74 2.59 2.12 1.97 1.31 54.7
41 1 21001.000 1 15.43 3.95 3.27 3.00 2.78 2.64 2.16 1.94 1.35 54.7
41 1 21001.000 1 15.20 3.88 3.19 2.96 2.75 2.55 2.11 1.94 1.26 54.7
41 1 21001.000 1 15.03 3.85 3.20 2.93 2.72 2.56 2.19 1.90 1.30 54.7
41 1 21001.000 1 15.03 3.87 3.20 2.93 2.72 2.58 2.15 1.91 1.20 54.7
41 1 21001.000 1 15.08 3.89 3.19 2.93 2.74 2.59 2.19 1.97 1.27 54.7
Drop Sequence Completed Time: 09:25   Air Temp (F): 55.8
GPS: Quality : DGPS Fix   Latitude = 35 deg6.726007 N   Longitude = 97
deg26.337015   W   PDOP = 2.30
Note:
42 1 21499.000 1 15.25 7.93 6.20 5.45 4.76 4.30 3.48 2.96 2.45 53.1
42 1 21499.000 1 15.28 7.80 6.09 5.39 4.74 4.26 3.46 2.95 2.43 53.1

42 1 21499.000 1 15.20 7.77 6.11 5.39 4.73 4.30 3.47 2.94 2.42 53.1
42 1 21499.000 1 15.23 7.79 6.11 5.43 4.76 4.28 3.49 2.96 2.41 53.1
42 1 21499.000 1 15.13 7.71 6.06 5.37 4.70 4.25 3.45 2.96 2.42 53.1
42 1 21499.000 1 15.23 7.74 6.09 5.38 4.73 4.30 3.48 2.92 2.43 53.1
Drop Sequence Completed Time: 09:26   Air Temp (F): 55.6
GPS: Quality : DGPS Fix   Latitude = 35 deg6.661171 N   Longitude = 97
deg26.276937   W   PDOP = 1.80
Note:
43 1 22003.000 1 15.40 5.85 5.01 4.66 4.34 4.01 3.22 2.85 2.33 56.0
43 1 22003.000 1 15.18 5.71 4.90 4.62 4.25 3.94 3.23 2.80 2.28 56.0
43 1 22003.000 1 15.25 5.69 4.88 4.58 4.22 3.94 3.27 2.80 2.29 56.0
43 1 22003.000 1 15.13 5.69 4.86 4.59 4.22 3.92 3.23 2.80 2.30 56.0
43 1 22003.000 1 15.20 5.69 4.87 4.57 4.22 3.92 3.25 2.76 2.27 56.0
43 1 22003.000 1 15.05 5.68 4.86 4.58 4.23 3.91 3.55 2.80 2.30 56.0
Drop Sequence Completed Time: 09:28   Air Temp (F): 55.8
GPS: Quality : DGPS Fix   Latitude = 35 deg6.595575 N   Longitude = 97
deg26.216169   W   PDOP = 1.90
Note:
44 1 22499.000 1 15.23 5.41 4.18 3.69 3.46 3.20 2.64 2.28 1.85 54.1
44 1 22499.000 1 15.13 5.31 4.13 3.68 3.40 3.17 2.63 2.21 1.87 54.1
44 1 22499.000 1 14.96 5.17 4.04 3.62 3.36 3.10 2.59 2.18 1.83 54.1
44 1 22499.000 1 15.01 5.22 4.08 3.64 3.37 3.12 2.61 2.18 1.84 54.1
44 1 22499.000 1 15.01 5.15 4.04 3.61 3.34 3.11 2.56 2.16 1.81 54.1
44 1 22499.000 1 14.88 5.16 4.05 3.62 3.34 3.10 2.59 2.14 1.84 54.1
Drop Sequence Completed Time: 09:29   Air Temp (F): 55.6
GPS: Quality : DGPS Fix   Latitude = 35 deg6.531091 N   Longitude = 97
deg26.156422   W   PDOP = 3.10
Note:
45 1 23001.000 1 15.23 6.01 5.03 4.56 4.19 3.88 3.19 2.44 2.21 54.4
45 1 23001.000 1 14.96 5.90 4.96 4.45 4.14 3.82 3.16 2.44 2.19 54.4
45 1 23001.000 1 14.98 5.89 4.94 4.45 4.13 3.84 3.16 2.49 2.19 54.4
45 1 23001.000 1 14.98 6.00 5.03 4.55 4.25 3.92 3.15 2.42 2.32 54.4
45 1 23001.000 1 15.03 5.88 4.92 4.49 4.13 3.83 3.17 2.40 2.20 54.4
45 1 23001.000 1 14.83 5.71 4.77 4.33 3.96 3.68 3.00 2.44 2.70 54.4
Drop Sequence Completed Time: 09:30   Air Temp (F): 56.3
GPS: Quality : DGPS Fix   Latitude = 35 deg6.465650 N   Longitude = 97
deg26.095894   W   PDOP = 1.80
Note:
46 1 23499.000 1 15.52 4.72 4.17 3.94 3.70 3.53 2.97 2.56 2.16 50.1
46 1 23499.000 1 15.08 4.57 4.04 3.84 3.60 3.41 2.87 2.47 2.08 50.1
46 1 23499.000 1 15.10 4.61 4.09 3.87 3.64 3.44 2.88 2.53 2.09 50.1
46 1 23499.000 1 15.05 4.60 4.05 3.84 3.61 3.41 2.90 2.50 2.09 50.1
46 1 23499.000 1 15.10 4.62 4.07 3.87 3.63 3.45 2.88 2.52 2.09 50.1
46 1 23499.000 1 15.05 4.59 4.03 3.82 3.58 3.41 2.88 2.50 2.07 50.1
Drop Sequence Completed Time: 09:39   Air Temp (F): 55.2
GPS: Quality : DGPS Fix   Latitude = 35 deg6.400696 N   Longitude = 97
deg26.035781   W   PDOP = 1.70
Note:
47 1 24000.000 1 15.45 4.92 4.36 4.12 3.83 3.54 2.95 2.48 2.05 47.1
47 1 24000.000 1 15.05 4.79 4.29 4.04 3.73 3.46 2.85 2.44 1.98 47.1

47 1 24000.000 1 15.03 4.76 4.23 3.99 3.70 3.42 2.83 2.41 2.00 47.1
47 1 24000.000 1 14.98 4.75 4.25 4.02 3.72 3.44 2.84 2.41 1.99 47.1
47 1 24000.000 1 15.01 4.76 4.26 4.02 3.72 3.45 2.84 2.42 2.00 47.1
47 1 24000.000 1 15.03 4.75 4.26 4.02 3.71 3.46 2.85 2.43 2.01 47.1
Drop Sequence Completed Time: 09:42   Air Temp (F): 55.8
GPS: Quality : DGPS Fix   Latitude = 35 deg6.335522 N   Longitude = 97
deg25.975515   W   PDOP = 2.10
Note:

APPENDIX E

RED ROCK CONSULTING
PO Box 30591
Edmond, OK 73003
405-562-3328

SUMMARY OF LABORATORY RESULTS

CLIENT Olsson Associates **PROJECT NAME** I-35 Pavement & Subgrade Survey 35589(04)

PROJECT NUMBER 22118 **PROJECT LOCATION** McClain County, Oklahoma

Borehole	Depth (in)	% Moist.	Liquid Limit	Plastic Limit	Plasticity Index	-3" Sieve	- 3/4" Sieve	-1/2" Sieve	-4 Sieve	-10 Sieve	-40 Sieve	-200 Sieve
C-01	22-46	18.5	22	17	5	100	100	100	99	98	89	53.9
C-01	46-58	15.5										
C-02	24-42	13.0										
C-02	42-60	10.8	21	14	7	100	100	100	99	99	88	60.2
C-03	23-41	14.2										
C-03	41-59	11.9	20	13	7	100	100	100	98	97	89	58.8
C-04	21-51	11.7	19	14	5	100	100	100	100	99	91	47.1
C-05	22-40	14.1	20	16	4	100	100	100	99	97	83	44.2
C-05	40-52	15.8										
C-06	22-40	13.6										
C-06	40-58	18.4	29	14	15	100	100	100	99	99	96	77.4
C-07	19-55	13.0	21	11	10	100	100	100	97	95	81	45.9
C-08	24-48	14.2	NV	NP	NP	100	100	100	96	92	81	39.0
C-08	48-60	14.7										
C-09	23-53	11.7										
C-09	53-59	12.0	21	11	10	100	100	100	98	97	88	56.8
C-10	23-41	11.0	16	13	3	100	100	100	100	99	85	34.7
C-10	41-59	12.4										
C-11	24-48	14.2										
C-11	48-60	17.3	32	12	20	100	100	100	100	100	94	74.9
C-12	26-50	13.2										
C-12	50-62	15.6	24	14	10	100	100	100	98	97	92	69.8
C-13	25-49	11.5	19	14	5	100	100	100	100	99	84	36.3
C-13	49-61	12.6										
C-14	19-52	11.0	NV	NP	NP	100	100	100	98	96	82	31.9
C-14	52-55	15.6										
C-15	21-45	11.8										
C-15	45-57	16.2	27	15	12	100	100	100	100	100	96	79.4
C-16	17-35	15.3	19	16	3	100	100	100	99	95	82	39.7
C-16	35-53	14.6										
C-17	21-39	12.7										
C-17	39-57	18.3	26	16	10	100	100	100	100	99	97	81.8
C-18	22-46	13.9	19	16	3	100	100	100	100	99	88	52.6
C-18	46-58	14.2										
C-19	22-46	12.4										
C-19	46-58	12.1	23	15	8	100	100	100	97	95	91	76.5
C-20	16-40	8.4	NV	NP	NP	100	100	100	97	93	81	32.7
C-20	40-52	14.2										
C-21	17-41	10.3										
C-21	41-47	10.8	21	13	8	100	100	100	94	91	80	48.1
C-22	19-31	17.4	19	13	6	100	100	100	93	83	62	30.2
C-23	20-32	15.0	17	13	4	100	100	100	78	69	50	21.3
C-24	19-43	4.9										

RED ROCK CONSULTING
PO Box 30591
Edmond, OK 73003
405-562-3328

SUMMARY OF LABORATORY RESULTS

CLIENT Olsson Associates **PROJECT NAME** I-35 Pavement & Subgrade Survey 35589(04)

PROJECT NUMBER 22118 **PROJECT LOCATION** McClain County, Oklahoma

Borehole	Depth (in)	% Moist.	Liquid Limit	Plastic Limit	Plasticity Index	-3" Sieve	- 3/4" Sieve	-1/2" Sieve	-4 Sieve	-10 Sieve	-40 Sieve	-200 Sieve
C-24	43-55	9.5	23	17	6	100	100	100	98	96	93	79.6
C-25	19-43	5.1										
C-25	43-55	11.1	22	15	7	100	100	100	100	99	95	78.6
C-26	17-29	7.6	NV	NP	NP	100	100	100	83	74	57	28.7
C-26	29-53	10.7										
C-27	20-32	6.2										
C-27	32-56	10.2	NV	NP	NP	100	100	100	100	99	92	51.3
C-28	17-41	5.8	NV	NP	NP	100	100	100	94	90	75	30.4
C-28	41-53	12.4										
C-29	19-43	12.8										
C-29	43-55	14.1	24	15	9	100	100	100	100	100	96	78.1
C-30	19-31	11.8										
C-30	31-43	8.9	19	15	4	100	100	100	99	99	90	46.3
C-30	43-55	14.8										
C-31	19-43	11.7										
C-31	43-55	12.9	21	16	5	100	100	100	100	99	93	67.6
C-32	18-30	16.0										
C-32	30-54	14.9	25	14	11	100	100	100	100	99	95	74.7
C-33	18-42	12.9										
C-33	42-54	14.4	20	14	6	100	100	100	100	99	92	63.5
C-34	20-44	9.4										
C-34	44-56	12.7	20	14	6	100	100	100	99	98	86	47.6
C-35	21-39	14.4	NV	NP	NP	100	100	100	98	96	81	31.4
C-35	39-50	17.2										
C-36	23-47	11.9										
C-36	47-59	14.4	24	14	10	100	100	100	100	99	93	68.3
C-37	22-46	10.6	NV	NP	NP	100	100	100	100	98	85	38.2
C-37	46-52	11.4										
C-38	22-52	12.6										
C-38	52-58	13.2	23	14	9	100	100	100	100	99	90	57.3
C-39	22-40	12.7	NV	NP	NP	100	100	100	100	99	86	35.8
C-39	40-58	14.9										
C-41	18-42	14.7	24	15	9	100	100	100	97	96	89	61.1
C-42	22-46	12.7	20	16	4	100	100	100	99	97	85	46.2
C-42	46-58	14.6										
C-43	24-48	16.0										
C-43	48-60	13.7	24	15	9	100	100	100	100	100	94	64.7
C-44	24-42	16.1	21	16	5	100	100	100	100	99	89	55.9
C-44	42-60	16.3										
C-45	23-53	12.8	19	14	5	100	100	100	99	98	82	42.8
C-45	53-59	10.4										
C-46	24-54	14.3										
C-46	54-60	15.9	25	15	10	100	100	100	100	99	95	76.1

APPENDIX F

RED ROCK CONSULTING

GENERAL NOTES

SOIL PROPERTY ABBREVIATIONS

N	Uncorrected SPT Penetration, blows per foot
N_{60}	Corrected SPT Penetration, blows per foot
Q_u	Unconfined Compressive Strength, psf
Mc	Moisture Content, %
LL	Liquid Limit, %
PL	Plastic Limit, %
PI	Plasticity Index, %

DRILLING & SAMPLING ABBREVIATIONS

BS	Bag Sample
SPT	Split Spoon Sample
ST	Shelby Tube Sample
AU	Auger Sample
TC	Texas Cone Penetrometer
DCP	Dynamic Cone Penetrometer

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487)
-- used to classify all soils unless otherwise noted --

Major Divisions			Group Symbol	Typical Names
Course-Grained Soils >50% retained on #200 sieve	**Gravels** 50% + of course fraction retained on #4 sieve	Clean Gravels	GW	Well-graded gravels and gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
		Gravels with Fines	GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	Sands 50% + of course fraction passes #4 sieve	Clean Sands	SW	Well-graded sands and gravelly sands, little or no fines
			SP	Poorly graded sands and gravelly sands, little or no fines
		Sands with Fines	SM	Silty sands, sand-silt mixtures
			SC	Clayey sands, sand-clay mixtures
Fine-Grained Soils <50% passes #200 sieve	**Silts and Clays** Liquid Limit ≤ 50%		ML	Inorganic silts, very fine sands, rock four, silty or clayey fine sands
			CL	Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays
			OL	Organic silts and organic silty clays of low plasticity
	Silts and Clays Liquid Limit > 50%		MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts
			CH	Inorganic clays or high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
Highly Organic Soils			PT	Peat, muck, and other highly organic soils

Prefix: G = Gravel, S = Sand, M = Silt, C = Clay, O = Organic **Suffix:** W = Well Graded, P = Poorly Graded, M = Silty, L = Clay, LL < 50%, H = Clay, LL > 50%

PLASTICITY OF COHESIVE SOIL

Degree of Plasticity	Plasticity Index	Swell Potential
None	0 to 4	Very Low
Slight	5 to 9	Low
Medium	10 to 19	Low to Medium
High	20 to 39	Medium to High
Very High	40+	Very High

MOISTURE OF COHESIVE SOIL

Description	Condition	Moisture Content
Dry, Dusty	Dry	0 to 10%
Damp	Moist	10 to 30%
Free Water	Wet	30 to 70%

CONSISTENCY - COHESIVE SOILS

Consistency	SPT
Very Soft	<2
Soft	2 to 4
Medium Stiff	5 to 8
Stiff	9 to 14
Very Stiff	15 to 30
Hard	31+

DENSITY – COHESIONLESS SOILS

Relative Density	SPT
Very Loose	<4
Loose	4 to 10
Medium Dense	11 to 30
Dense	31 to 50
Very Dense	51+

ROCK HARDNESS

SPT (in/50)	TCP (in/100)	Rock Description
6+	6+	Very Soft / Very Poorly Cemented
5 - 6	3 - 6	Soft / Poorly Cemented
4 - 5	2 - 3	Moderately Hard / Cemented
3 - 4	1 - 2	Hard / Well Cemented
<3	<1	Very Hard / Very Well Cemented

ROCK CORE QUALITY

Core Quality	RQD
Excellent Quality	90 – 100%
Good Quality	75 – 90%
Fair Quality	50 – 75%
Poor Quality	25 – 50%
Very Poor Quality	<25%