LTPP Seasonal Monitoring Program

Site Installation Report for GPS Section 204054 (20A) Enterprise, Kansas

---

Report No. FHWA-

February 1996

LTPP Seasonal Monitoring Program

Site Installation Report for GPS Section 204054 (20A) Enterprise, Kansas

---

Report No. FHWA-

Prepared by

Braun Intertec Corporation
6875 Washington Avenue South
P.O. Box 39108
Minneapolis, Minnesota 55439-0108

Prepared for

Federal Highway Administration
LTPP Division, HNR-40
Turner-Fairbanks Highway Research Center
6300 Georgetown Pike
McLean, Virginia 22101-2296

February 1996

Technical Report Documentation Page

1. Report No. FHWA-	2. Government Accession No.	3. Recipient's Catalog No.
4. Title and Subtitle LTPP Seasonal Monitoring Program Site Installation Report for GPS Section 204054 (20A) Enterprise, Kansas		5. Report Date February 1996 6. Performing Organization Code
7. Author(s) Robert J. Van Sambeek and Ronald R. Urbach		8. Performing Organization Report No. DBNX92700-B6-20A
9. Performing Organization Name and Address Braun Intertec Corporation 6875 Washington Avenue South, P.O. Box 39108 Minneapolis, Minnesota 55439-0108		10. Work Unit No. (TRAIS) 11. Contract or Grant No. DTFH61-92-C-00009
12. Sponsoring Agency Name and Address Federal Highway Administration LTPP-Division, HNR-40 Turner-Fairbanks Highway Research Center 6300 Georgetown Pike McLean, Virginia 22101-2296		13. Type of Report and Period Covered Final Report August 1995 - January 1996 14. Sponsoring Agency Code

15. Supplementary Notes
Contracting Officer's Technical Representative - Aramis Lopez, HNR-40

16. Abstract
This report contains instrumentation installation details and data collection summaries for GPS test section 204054, which is a core section in the LTPP Seasonal Monitoring Program. This jointed reinforced concrete (JRC) pavement section on Interstate Highway 70 east of Enterprise, Kansas was instrumented August 24, 1995. Instrumentation included time domain reflectometry (TDR) probes to estimate moisture content in unbound pavement layers, thermistor probes to measure pavement structure thermal gradients and air temperature, electrical resistivity probe to predict frost/thaw conditions, piezometer to measure water table depth below the pavement surface, snap rings to measure joint opening, and tipping-bucket rain gauge to measure precipitation.

Monitoring data was collected the day after instrument installation and roughly on a monthly basis from August 1995 to January 1996, and data collection is expected to continue through July 1996 to complete the current monitoring cycle. In addition to temperature and precipitation data that are collected continuously by a datalogger at the site, monitoring data each month usually includes Falling Weight Deflectometer data, joint faulting data, joint opening data, TDR probe readings, frost/thaw readings, and piezometer readings. On a less regular basis, longitudinal profile data, pavement surface elevation data, and manual distress data are collected as required by FHWA guidelines. A summary of data collected is included in the report.

17. Key Words	18. Distribution Statement		
Long Term Pavement Performance, LTPP, Pavement Instrumentation, Seasonal Monitoring Program, SMP, Time Domain Reflectometry, TDR, Resistance, Frost, Thaw, Temperature, Thermistor, Water Table, Piezometer, Falling Weight Deflectometer, FWD, Joint Faulting, Joint Opening			
19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price

Table of Contents

LTPP Seasonal Monitoring Program
Site Installation Report for GPS Section 204054 (20A)
Enterprise, Kansas

I. Introduction

This report contains information specific to instrument installation and monitoring data collection for the Long Term Pavement Performance (LTPP) General Pavement Study (GPS) section 204054, which is part of the core Seasonal Monitoring Program (SMP) under the Federal Highway Administration (FHWA) LTPP Division. This pavement section was instrumented on August 24, 1995, and will have regular data collection through July 1996. The section will be monitored every other year under the LTPP Study for a ten-year period or until it is removed from the study.

A. Test Site Location

GPS section 204054 is located just east of Enterprise, Kansas on the westbound driving lane of Interstate Highway 70 at milepost 280.9.

B. General Test Section Information

This four-lane divided highway had the original 245-mm thick jointed reinforced concrete (JRC) pavement placed in 1985. The rest of the pavement structure consists of a 90-mm thick econocrete base on a fine-grain subgrade. Additional background information about the section is located in Appendix A-1. This information includes, but is not limited to, the following items:

- SMP location map;
- Detailed section location map;
- SHRP Inventory Data Sheet - traffic, design factors, and layer information;
- SHRP Section Field Verification Form; and
- IMS L05A and L05B tables - layer thickness and material type.

Relevant pre-installation monitoring data for the section located in Appendix A-2 includes the following:

- Pre-installation pavement distress data;
- Pre-installation FWD data (includes tests outside the section limits); and
- FWDCHECK program uniformity analysis results.

C. SMP Test Section Information

The geographic location and existing pavement structure place this section in Cell 27 of the SMP experiment, which is defined by the following parameters:

- JRC pavement;
- Fine-grain subgrade;
- Freezing environment; and
- Dry environment.

This was the twelfth SMP installation in the LTPP North Central Region, and highlights of the installation are summarized in Section IV of this report. Data forms from the LTPP Seasonal Monitoring Program: Instrumentation and Data Collection Guidelines, April 1994, were used for this installation, and the people involved with the installation are listed on "Data Sheet SMP-I01: List of Installed Instrumentation," which is included in Appendix C-1 along with the other SMP installation forms.

II. Instrumentation Installation

A. Pre-Installation Activities

Mr. L.S. Ingram and Mr. William Parcells of the Kansas Department of Transportation (KSDOT or referred to as "the agency" in this report) were initially contacted regarding potential sections identified for the seasonal monitoring pilot activities started in 1991 under the Strategic Highway Research Program (SHRP). General Pavement Study (GPS) sections 201005, 201009, and 201010 were included in the pilot study, and falling weight deflectometer (FWD) data were collected on those sites from the fall of 1991 through the spring of 1992 on roughly a monthly basis as weather permitted. Data analysis results from the SHRP SMP pilot were published in Transportation Research Record Number 940903.

In 1993, Mr. Parcells was contacted to confirm continued agency support for core sections in the SMP study administered by the FHWA LTPP Division. The agency could not guarantee deferred rehabilitation for the three asphalt sections which had been in the SHRP SMP pilot testing, and GPS section 204016 was identified as the first alternative section for agency participation in the SMP. However, this section was scheduled for rehabilitation within two to three years. GPS section 204054 was identified as the second alternative section for agency participation in the SMP, and the agency was willing to support this section and agreed to defer any pavement rehabilitation at least the five years required to get three years of monitoring data that is collected every other year as long as pavement conditions were not a safety concern.

Section 204054 is the control section for the Special Pavement Study (SPS)-4 sections at this location. This section is in Cell 27, but will also provide data for seasonal Cell 25 for dry, no-freeze. This site was not originally selected because of the following concerns that were discussed with the Technical Assistance Contractor for LTPP:

- Concrete pavements with treated bases were not originally considered for the SMP, and GPS section 204054 has an econocrete base under the JRC pavement.

- All of the panels on GPS section 204054 have mid-panel transverse cracks. The road was constructed 12.2-m wide with joints sawn at 9.15-m spacing for the driving lane. However, the shoulders were sawn at 4.57-m spacing, and all mid-panel cracks match these saw cuts. Also, on the SPS-4 sites with dowel retrofit, the longitudinal strands of the steel mesh are broken at the cracks.

On July 21, 1995, a pre-installation meeting was held in Salina, Kansas for agency staff involved with instrumentation installation and monitoring activities for GPS section 204054. A presentation was given on the SMP, arrangements were made for the agency to supply equipment and materials required for the installation, and an installation date was set for agency staff to verify availability of equipment and materials. The agenda, list of participants, and notes from the pre-installation meeting are included in Appendix B-1. For GPS section 204054, the agency was not willing to cut the conduit trench across the concrete shoulder. As an alternative, the agency elected to hire a horizontal boring contractor to install a conduit from the ditch to the instrumentation hole.

After the pre-installation meeting, RCO and agency staff stopped at GPS section 204054 to identify any installation concerns with the site. Field notes from the site visit are included in Appendix B-1. Also, pre-installation monitoring activities for GPS section 204054 included FWD testing and a manual distress survey both completed on April 18, 1995.

At the RCO, pre-installation activities included performing instrumentation checks/calibrations, and incorporating improvements to the installation process based on previous installations done in 1993 and 1994. Recommended improvements to the installation process resulting from instrumentation of GPS section 204054 are listed in Section IV of this report, and results from instrumentation checks/calibration are included in Appendix B-2 using the following forms:

- Data Sheet SMP-C01: TDR Probe Check;
- Data Sheet SMP-C02: Thermistor and Air Temperature Probe Check;
- Data Sheet SMP-C03: Electrical Resistivity Probe Check;
- Data Sheet SMP-C04: Function Generator, Multi-meter, and Switch Box Checks; and
- Data Sheet SMP-C05: Tipping-Bucket Rain Gauge Calibration.

For the air temperature and thermistor probes, checks were done using the datalogger to monitor the 19 temperature readings for the two probes simultaneously for tests run in an environmental chamber for about 12 hours at both 1.7°C and 38.8°C. The probes were left connected to the datalogger for several days after the check to verify their continued operation and consistency among the 19 temperatures recorded. The tipping-bucket rain gauge was also calibrated during this time period with data stored on the datalogger.

For the resistivity probe, loose electrode wraps were tightened by twisting the lead with a needle-nose pliers, and lead wires sticking out of the potting material for the probe were covered with silicon sealant for protection during installation. Excess potting material was scraped off the electrodes for better contact with the soil.

Pre-installation activities also required selection of the instrumentation location. From field observations during the July 21, 1995 site visit and FWDCHECK program analysis for the section, the five panels from Station 4+39 to Station 5+16 were selected for monitoring, and instrumentation would be placed at Station 5+08, based on the following items:

- Crack at Station 5+01 allowed instrumentation to be placed in panel adjacent to the section limits without having to skip a panel;

- FWDCHECK analysis results were more uniform for both Westergaard based Rigid Thickness and Volumetric Modulus of Subgrade Reaction;

- The datalogger was closer to the Weigh-in-Motion cabinet for the agency to connect to a telephone line at a later data; and

- There is less chance of water in the ditch.

B. Installation Activities

The SMP instrumentation installation itinerary for Kansas included travel, installation, and data collection time for one site over a three-day period. On August 23, 1995, RCO staff traveled to Abilene, Kansas and visited GPS section 204054 to verify installation details for the next day.

Instrumentation installation was completed on August 24, 1995, with some final installation activities continued on the following day. The following installation forms are included in Appendix C-1 along with field notes and photographs of the installation:

- Data Sheet SMP-I01: List of Installed Instrumentation;
- Data Sheet SMP-I02: Instrumentation Locations;
- Data Sheet SMP-I03: Log of Piezometer Hole;
- Data Sheet SMP-I04: Log of Instrumentation Hole;
- Data Sheet SMP-I05: Field Gravimetric Moisture Contents;
- Data Sheet SMP-I05(A): Lab Gravimetric Moisture Contents;
- Data Sheet SMP-I05(B): Gravimetric Moisture Comparison;
- Data Sheet SMP-I06: TDR Moisture Content; and
- Data Sheet SMP-I07: Representative Dry Density.

Piezometer installation was done according to protocol. A 0.6-m long access tube was set in concrete just below the existing shoulder material to protect the top of the piezometer and provide easy access for measurements. A 3.0-m long grease sleeve was used on this piezometer to isolate the piezometer from frost heave. The grease sleeve extends about 0.2 m up into the access tube and the space between the two is filled with sand. Additional field notes on piezometer installation are included in Appendix C-1.

The center of the instrumentation hole was marked on the pavement surface at Station 5+08 using the longitudinal joint between the driving lane and shoulder as a transverse reference. FWD testing was done on the five panels for SMP monitoring from Station 4+39 to Station 5+16 including a test over the instrumentation hole.

The agency drill rig was used to cut a 305-mm diameter hole through the concrete pavement after FWD testing over the instrumentation hole was done. Before the core was completed, the drill rig ran short of water, and there was a two-hour delay while additional water was brought to the site. The drill rig was not moved because it would have been difficult to line up on the core again. After the core was through both the JRC pavement and the econocrete base, the core was lifted out using one expansion anchor tapped into the center of the core. The agency had elected to epoxy the core back into the pavement, and the core was washed off and set aside.

The core barrel was replaced with the auger supplied by the RCO to begin removing material from the instrumentation hole. However, it was discovered that the 305-mm dimension on the core barrel was the outside versus inside diameter that had been ordered by the agency, and as a consequence, the auger provided by the RCO was a few millimeters too large in diameter to fit in the hole. RCO staff agreed to have the auger flighting cut off with a torch to fit the hole. After about a one-hour delay, the auger was replaced, and material was put into buckets as it was removed from the hole in 0.15-m lifts.

When the material had been removed to about 0.5 m below the econocrete base, the contractor hired to install a horizontal conduit for instrumentation cables from the ditch to the instrumentation hole used a small hydraulic platform to push a cone-tipped 65-mm diameter pipe through the subgrade soil into the instrumentation hole. The cone entered the hole about 0.3 m below the econocrete base, and only a small amount of soil broke loose from the side of the instrumentation hole. A 50-mm diameter flexible conduit provided by the RCO was attached to a 75-mm diameter expander that was pulled from the instrumentation hole to the shoulder. No additional conduit was required. See photographs in Appendix C-1. The drill rig then finished removing the subgrade soil to the depth required for instrumentation installation.

At 4:30 pm, the instrumentation hole was ready, and RCO staff worked rapidly to install the instrumentation and complete pavement repairs, because traffic control equipment at the site was not approved for night time use. The thermistor probe and resistivity probe were placed in the hole, and a 12-mm diameter hole was drilled in the concrete for the pavement thermistor probe. The angle for the hole was marked on a piece of plywood, which was used as a guide. The hole came out the bottom of the concrete about 10 mm from the core hole as planned. The pavement thermistor probe was inserted into the hole from the bottom side, and plumber's putty was used to temporarily hold the probe in place.

TDR probes 10 through 3 were placed, which brought the material in the instrumentation hole up to the conduit. Before TDR probe 2 was installed, all the sensor cables were pulled through the flexible metal conduit, while leaving enough slack in TDR probes 1 and 2 cables to keep them on the pavement surface. Then TDR probes 2 and 1 were placed. Subgrade soil from the datalogger cabinet hole was used to fill the top 70 mm in the instrumentation hole after all the original material removed from the hole had been used. The subgrade soil was left about 25 mm higher than original in anticipation that a truck would be able to seat the core into the soil.

A wire brush was used to clean the core hole and core, and the pavement thermistor probe height was adjusted to get the tip of the probe 23 mm below the pavement surface. A ring of epoxy was placed around the inside radius of the core hole, and the core was set in the hole. A truck was driven across the core several times until it was level with the adjacent pavement surface.

Duct tape was placed on the pavement adjacent to the cut from the core barrel and hole drilled for the pavement thermistor probe, and W.R. Meadows "REZI-WELD 1000" multi-purpose construction epoxy was poured into the cut and hole until the epoxy was flush with the pavement surface to bond the concrete core and pavement thermistor probe in place. This medium-viscosity epoxy had a 45-minute pot life at room temperature, and it had been stored in a cooler to provide sufficient time to continue adding material as it settled in the cut and hole.

After the duct tape was removed from the pavement surface, the epoxy was covered with toilet paper to prevent tracking from vehicle tires, because it was dark and the agency needed to remove the lane closure. As of January 24, 1996, no problems have been observed with the pavement repair, except that the toilet paper caused the epoxy to turn black. See photograph in Appendix C-1.

Installation of the datalogger cabinet and weather pole were completed after the lane closure was removed, and the datalogger was initiated to collect data to confirm operation the following day. Activities at the site were finished about 8:30 pm.

For installation reports from the LTPP North Central RCO, "Data Sheet SMP-I05(A): Lab Gravimetric Moisture Contents," is used to report agency laboratory moisture results. Also, "Data Sheet SMP-I05(B): Gravimetric Moisture Comparison" was created to summarize moisture data obtained from field moisture tests, laboratory moisture tests, and interpretation of TDR probe data. These forms, along with a plot of the moisture results, are included in Appendix C-1, and the following assumptions and conclusions were made regarding the moisture data:

- LTPP Directive Number: SM-13 "TDR Trace Interpretation Method for Calibration and Function Checks" dated August 17, 1995 was used to interpret the apparent length of each TDR trace obtained during installation for estimating moisture results. This method was specified for "calibration and function checks," but no other method had been distributed by FHWA LTPP staff. The interpreted apparent lengths are reported on "Data Sheet SMP-I06: TDR Moisture Content" in Appendix C-1.

- Equations on pages II-2 and II-5 of the LTPP Seasonal Monitoring Program: Instrumentation Installation and Data Collection Guidelines, April 1994 were used to convert apparent lengths to gravimetric moisture estimates for the base and subgrade materials, and the results are included on "Data Sheet SMP-I05(B): Gravimetric Moisture Comparison," located in Appendix C-1. A plot comparing the TDR probe moisture data to the field and laboratory data is also included in Appendix C-1.

- Moisture data obtained during the installation for TDR probes 1 and 2 are not representative of conditions for the rest of the section because water used to core the pavement seeped into the soil placed around these probes.

- The field moisture results, excluding sample 8, averaged 1.5 percentage points greater than the laboratory moisture results. For sample 8, the laboratory moisture result is suspect based on the moisture plot in Appendix C-1.

- The moisture estimates from TDR probe 2 is questionable because of a flat trace caused by soil characteristics, typically dissolved salts, that electrically short circuit the probe. The second inflection point on this probe trace was placed where the trace went flat, and a moisture was calculated to compare with field and laboratory results. As seen on the plot included in Appendix C-1, this TDR probe data is not consistent with others in the subgrade when compared to the field and laboratory results.

- The moisture estimates from TDR probes 1 and 3 through 10 average 22.5 percent, which is 4.2 percentage points higher than the average from the field moisture tests.

- Answers to the following questions could help explain the differences seen in the moisture data, but they are beyond the scope of this report:

    1. Are the same equations appropriate for all materials on this site?

    2. Do estimates of dry density for the subgrade used to convert from volumetric to gravimetric moisture seem reasonable given the consistently higher moisture values from the TDR probes compared to the field and laboratory results?

3. How much influence does compaction have on the results?

"Data Sheet SMP-I07: Representative Dry Density" was used to record test data obtained during the installation to estimate the dry density of the subgrade, and the form is included in Appendix C-1. The dry density obtained was 1.78 g/cm^3. No field density tests were done in 1989 as part of the original GPS drilling and sampling program because a test pit was not done on this site. Therefore, no SHRP Form S04 data exists to compare dry density data.

Several items were changed regarding installation of the datalogger cabinet and weather pole as follows:

- RCO staff were not able to get the 9.1-m offset from the lane edge specified on page II-23 and Figure II-12 of the LTPP Seasonal Monitoring Program: Instrumentation Installation and Data Collection Guidelines, April 1994 because the TDR cables provided were too short. The cabinet at this site is offset about 7.4 m and the weather pole is offset about 7.9 m. This places the obstructions inside the normal 9.15-m safety zone for highways. However, FHWA LTPP Division staff approved the two obstructions as break-away objects (page II-32 of manual) for placement inside the safety zone.

- The bottom of the front panel on the datalogger cabinet was notched about 0.1 m so the conduit buried about 0.3 m below the shoulder was easier to get into the cabinet, and it also slightly increased the distance the cabinet could be placed from the roadway.

- The conduit for the air temperature probe and tipping-bucket rain gauge signal wires was cut into the back of the cabinet above ground instead of running the conduit underground as shown in the guidelines. If the cables were run underground, the air temperature probe signal cable would have to be extended using special wire and resistors to compensate for increased lead resistance. Also, a union coupler was used on the weather pole about 0.3 m above ground to make pole installation easier.

III. SMP Data Collection

A. Initial SMP Data Collection

On August 25, 1995, final wiring of the datalogger in the cabinet was completed, test locations were marked on the pavement, and the first set of SMP data was collected.

Two cycles of FWD data were collected, as well as manual data including joint faulting data, resistivity probe data, elevation data, and piezometer data. The RCO did not have access to the drill guide for installing snap rings for joint opening measurements until October 18, 1995, when three sets of joint opening data were collected. The October joint opening data and manual data collected August 25, 1995 are included in Appendix D-1 as follows:

- One set of contact resistance data;
- One set of four-point resistivity data;
- Two ground water table measurements;
- Three sets of joint opening measurements;
- Two sets of joint faulting measurements; and
- One set of elevation data.

Data from the piezometer should not be entered into the IMS database because low permeability for the soils on this site will require several days for piezometer readings to stabilize.

Computer data files obtained from automated data collection using the dataloggers included the following:

- Two sets of TDR traces and CRREL voltages; and
- Temperature and precipitation data collected from the datalogger to verify operation overnight.

TDR probe 1 and 2 data should not be entered into the IMS database because this data is not representative of conditions for the rest of the section because water used to core the pavement seeped into the soil placed around these probes.

Temperature data from the thermistor probe should not be entered into the IMS database because of heat given off by epoxy used to repair the pavement and disturbance of material around the probe. In addition, temperature data up to several days after instrument installation will have to be reviewed to determine when the disturbed materials came back to thermal equilibrium. Data affected by the installation will have to be edited from the computer files.

B. Routine SMP Data Collection

Routine data collection done on the site from August 25, 1995 through January 24, 1996, is summarized on LTPP's standard data tracking log included in Appendix D-2. Data collection is expected to continue through July 1996 to complete the current monitoring loop.

Events that influenced the data collection and that will influence data interpretation for the site include the following:

- Water that seeped into the soil during coring of the concrete pavement increased the moisture levels around TDR probes 1 and 2 compared to the rest of the SMP monitoring section.

- Characteristics of the soil around TDR probe 2 produce flat traces. This was observed for data collected in August, September, and October. In November, December, and January the traces are not flat, probably because the soil around the probe was frozen. Screen prints of the TDR data are included in Appendix D-2.

- Intermittent failure of the relay used to power the thermistor probe affected all 18 temperature readings. This data will have to be identified and edited from the datalogger files. Screen prints of temperature data in Appendix D-2 show the influence of the bad relay on the data.

- Toilet paper used to cover the epoxy caused the epoxy to turn black. This dark color on the 12-mm diameter spot above the tip of the pavement thermistor probe in the concrete may slightly increase temperature readings on the first thermistor, which is only 23-mm deep into the concrete.

- On December 11, 1995 a block of ice was removed from the tipping-bucket rain gauge funnel. Precipitation data for this day should be edited.

- Unstable manual resistivity probe readings were noted for data collected January 24, 1996. For these data, the average value observed will be entered into the database.

Instrumentation and equipment problems at the site include the following:

- The relay used to power the thermistor probe had intermittent failures that affected all 18 temperature readings. The relay was replaced January 24, 1996.

- Cold temperatures during data collection with the cable reader caused vertical shifts or spikes in some TDR traces. Screen prints in Appendix D-2 of data from October 10, 1995 have spikes in nine traces, and data from December 11, 1995 have spikes in TDR probes 8, 9, and 10 traces.

Other problems experienced at the site include failures with switch boxes used to collect manual resistance/resistivity data and failures of the CRREL multiplexer for automated resistance data collection. Print screens showing the failure modes for the CRREL multiplexer are included in Appendix D-2.

IV. Summary, Conclusions, and Recommendations

A. Instrumentation Installation Highlights

The following items are identified by the authors as unique or particular items of interest regarding this section in the SMP.

- This was the twelfth SMP installation in the LTPP North Central Region, and GPS section 204054 is the only concrete SMP section in the North Central Region with transverse cracks. The SMP monitoring on this site includes testing on three joints and three mid-panel transverse cracks.

- This was the second installation by the RCO where the pavement was cored and the conduit was installed under the road from the shoulder. These two activities produced minimal disturbance to the pavement structure, which in turn required only minimal pavement repair.

- This site had to be opened to traffic before the epoxy used to repair the pavement had time to set. However, the repair still looked good as of January 24, 1996.

B. Recommendations for Improving Installations

In addition to previous modifications from other installations, the following procedure and equipment changes from protocol were used during this installation or are recommended for future installations:

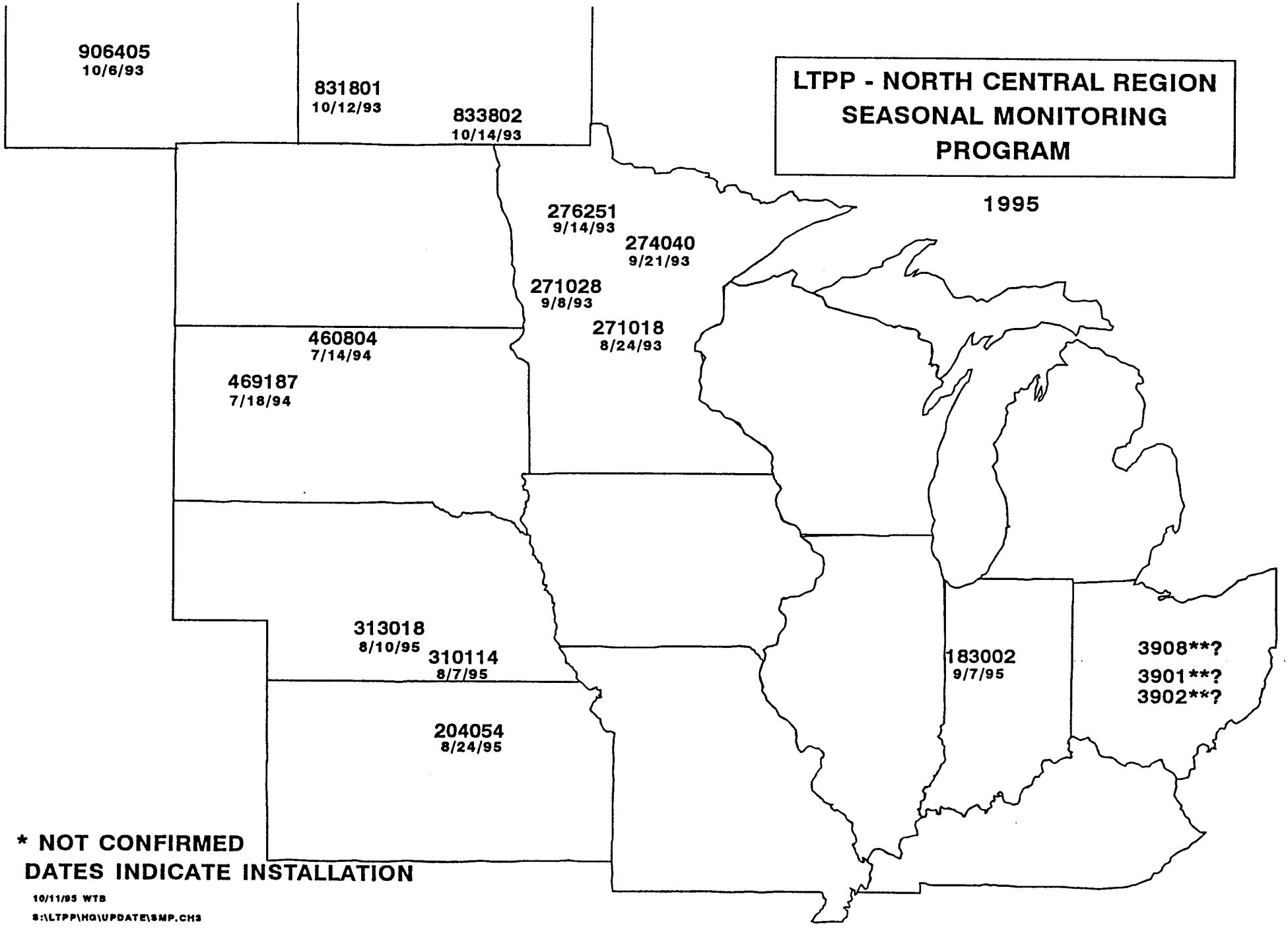
- For this installation, a hydraulic platform was used to push a cone-tipped pipe through the subgrade soil from the shoulder into the instrumentation hole, and the 50-mm diameter flexible conduit used by the RCO was attached to a 75-mm diameter expander that was pulled from the instrumentation hole to the shoulder. No additional conduit was required and no pavement repairs were needed. This procedure should be considered for installations on fine-grain soil to eliminate the trench usually cut across the shoulder to get the sensor cables to the datalogger cabinet.

- For this installation, single ply toilet paper was used to cover the epoxy. However, because the paper turned the epoxy black, this procedure is not recommended for additional installations.

Appendix A-1: Test Section Background Information

Appendix A-1 contains the following test section background information:

- SMP location map;
- Detailed section location map;
- SHRP Inventory Data Sheet - traffic, design factors, and layer information;
- SHRP Section Field Verification Form; and
- IMS L05A and L05B tables - layer thickness and material type.


906405
10/6/93
831801
10/12/93
833802
10/14/93
LTPP - NORTH CENTRAL REGION
SEASONAL MONITORING
PROGRAM
1995
276251
9/14/93
274040
9/21/93
271028
9/8/93
271018
8/24/93
460804
7/14/94
469187
7/18/94
313018
8/10/95
310114
8/7/95
204054
8/24/95
183002
9/7/95
3908**?
3901**?
3902**?
* NOT CONFIRMED
DATES INDICATE INSTALLATION
10/11/95 WTB
S:\LTPP\HQ\UPDATE\SMP.CH3

STATE HIGHWAY

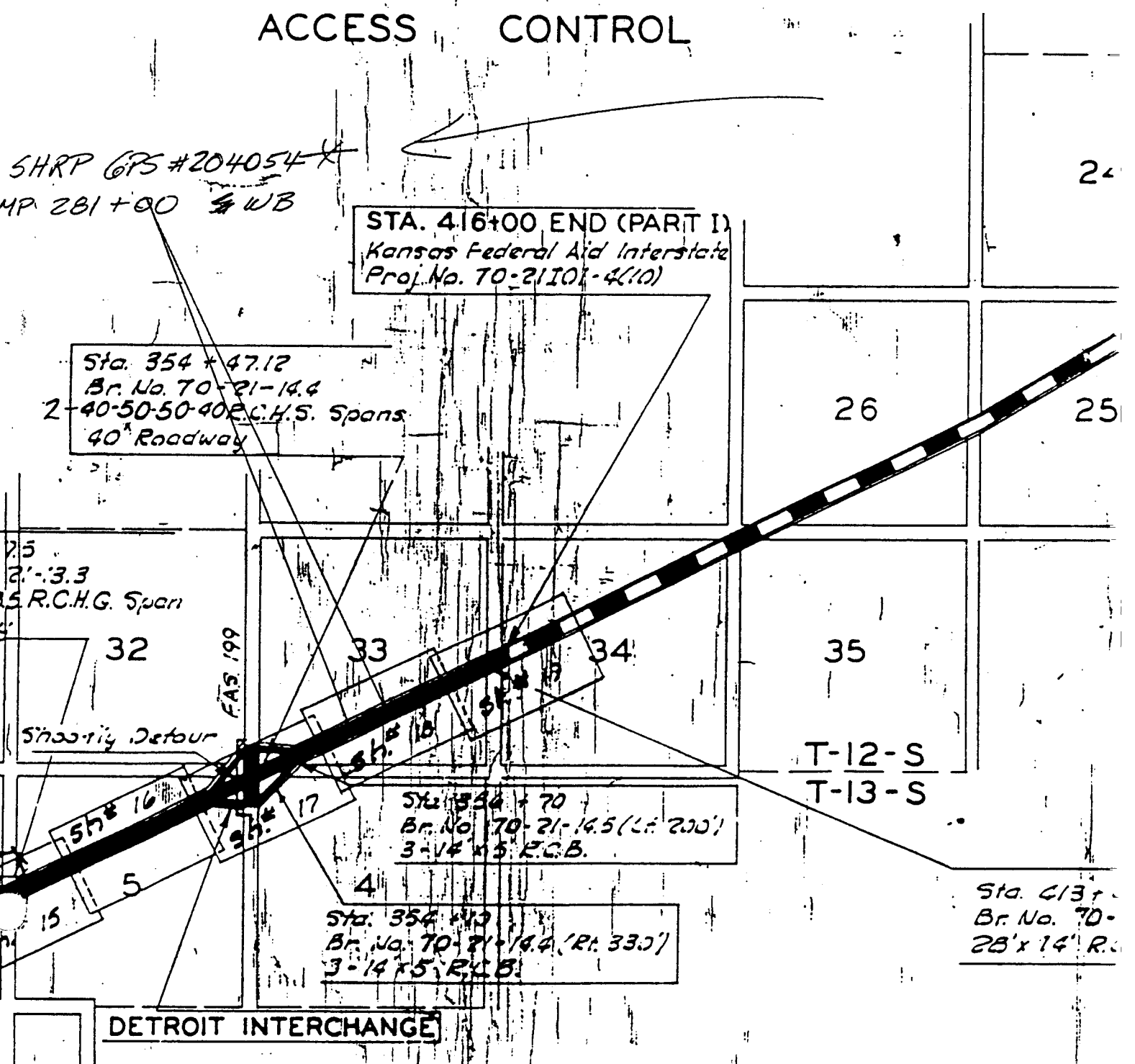
FEDERAL AID PROJECT

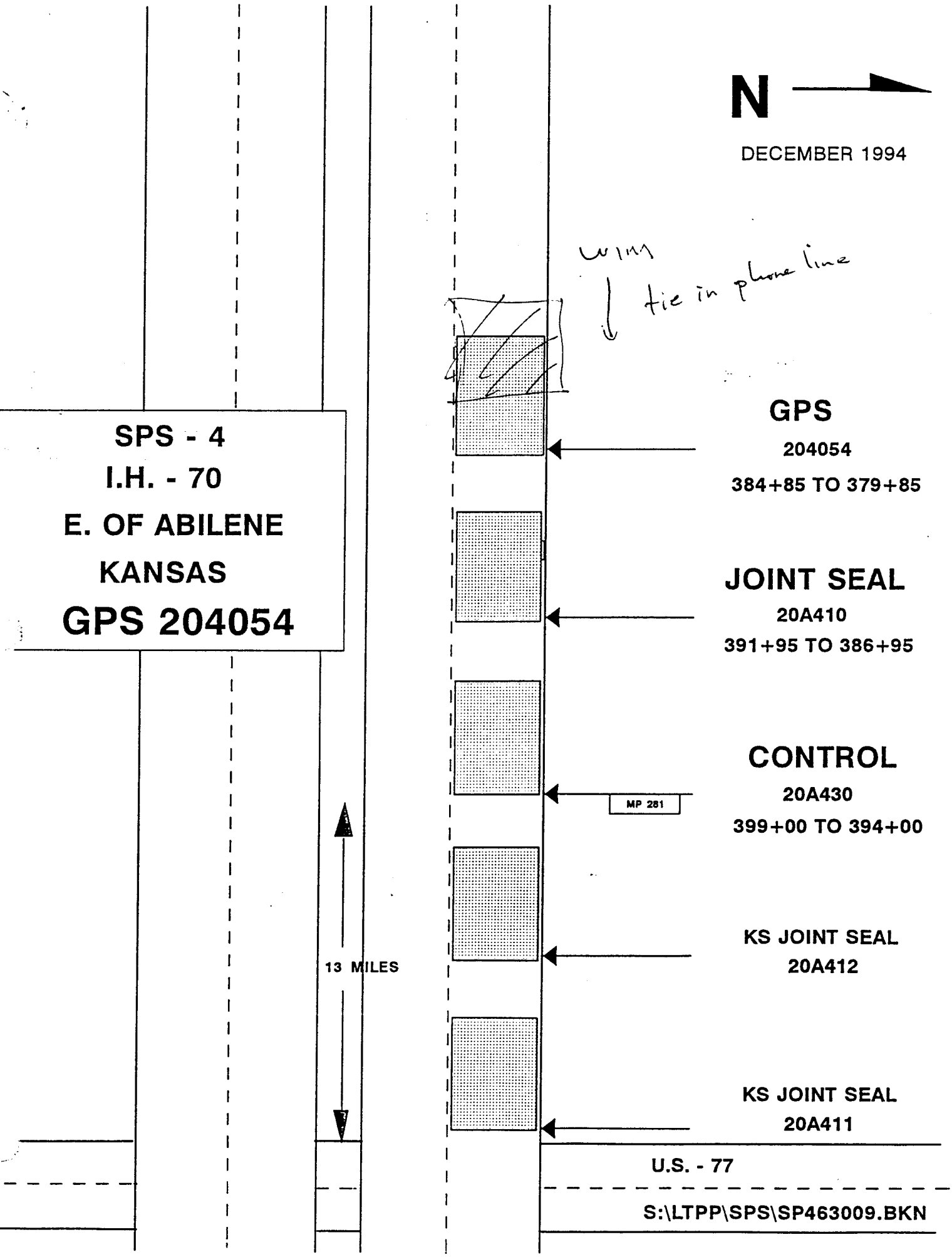
DICKINSON COUNTY

INTERSTATE 70

TRAFFIC CENSUS 7100 VEHICLES PER DAY (1975)

ACCESS CONTROL




N
DECEMBER 1994
w/ my
tie in phone line
SPS - 4
I.H. - 70
E. OF ABILENE
KANSAS
GPS 204054
GPS
204054
384+85 TO 379+85
JOINT SEAL
20A410
391+95 TO 386+95
CONTROL
20A430
399+00 TO 394+00
MP 281
KS JOINT SEAL
20A412
KS JOINT SEAL
20A411
13 MILES
U.S. - 77
S:\LTPP\SPS\SP463009.BKN

STRATEGIC HIGHWAY RESEARCH PROGRAM
GENERAL PAVEMENT STUDIES
Long-Term Pavement Performance Monitoring
Project Information Sheet

REGION: North Central PAVEMENT TYPE: Jointed Reinforced Concrete
STATE: Kansas

SHRP Assigned ID:	204054	District:	2	Year Open:	1985
State Assigned ID:	4207	Highway:	I.H.- 70	Year Traffic:	1985
Design Cell ID:	4- 37	Length:	2.3 miles	AADT:	4060
		Lanes:	2	Trucks:	20.0 %
		Shoulder Surface Type:	Unspecified		
		Project Status:	Approved		

DESIGN FACTORS - Moisture: Dry
Temperature: Freeze
Subgrade: 53 - Silty Clay Fine
Traffic: 329 KESAL/Yr High (200)
PCC Thickness: 9.3 in. Low (9.5)
Joint Spacing: 15.0 ft. Low (40)

LAYER CONFIGURATION

LAYER NO.	LAYER DESCRIPTION	LAYER THICKNESS	LAYER MATERIAL TYPE
3	3 - Orig Surface	9.3	5 - Portland Cement Concrete (JRCP)
2	5 - Base Layer	4.3	37 - Cement-Aggregate Mixture
1	7 - Subgrade		53 - Silty Clay

PAVEMENT LAYER INFORMATION

	PORTLAND CEMENT CONCRETE LAYERS			
LAYER NO.	JOINT SPACING	DOWELS	REINFORCING	CRCP STEEL
3	30.0	Yes	Yes	.00 %

SECTION FIELD VERIFICATION FORM

ate 8/24/88

Rater MARTI

State Project Code 4207
State Code 20
SHRP Section I.D. 4054

Project and Section Identification

State District No. ___ ___
County or Parish DICKINSON 1
Route Signing (Numeric Code)
Interstate ..... 1 State 3
Primary ..... 2 Other 4
Route Number I 70
LTPP Experiment Code JRCP (4)
Number of Through Lanes (One Direction) 2
Direction of Travel 2
Eastbound ..... 1 Northbound 3
Westbound ..... 2 Southbound 4
Available Project Length (Without Discontinuities) 2000'

	Start Point	End Point
Test Section Milepoints	281.00	280.90

Additional Section Location Information*: STATION 384+85 - 379+85
"0" IS 15' WEST OF STATION 385+00
~ 1000' EAST OF INTERCHANGE TO ENTERPRISE (CITY) EXIT #281

* Include distances from two landmarks (refer to specific procedures outlined in the Initial State Visit Guidelines).

Location of monument: 1' NORTH OF NORTH EDGE OF CONCRETE SHOULDER

Geometric Information

Lane Width (Feet) 12.
Lane (By Number) Included in Monitoring Section 1
(Lane 1 is Outside Lane, Lane 2 is Next to Lane 1, etc.)

Shoulder Data:	Outside Shoulder	Inside Shoulder
Total Width (Feet)	10.	06.
Paved Width (Feet)	10.	06.
Surface Type		4

Turf ..... 1 Concrete 4
Granular ..... 2 Surface Treatment 5
Asphalt Concrete ... 3 Other 6

Additional Data for PCC Shoulders:

Average Joint Spacing (Feet)	15.	15.
Skewness of Joints (Feet)	0.8	0.0
Joints Match Pavement Joints? (Yes - 1; No - 2)	1	1

Revised June 8, 1988

DISTRESS SURVEY FORM
PCC Surfaced Pavements
(GPS Experiments 3,4,5,9)

Date 8-24-88

Rater MarTi

State Code 20

SHRP Section ID 40 54

	Severity Level		
	Low	Medium	High
1. "D" Cracking (Linear Feet of joints, cracks, and free edges affected)*			
2. Joint Seal Damage** (Number of joints)	1	1	
3. Longitudinal Cracking (Linear Feet)			
4. Patch or Slab Replacement Deterioration (Number and Sq. Ft.)			
5. Pumping (Check highest severity found)	✓ isolated area. very small at Trans. crks.		
6. Transverse Cracking (Number of Cracks)	12*		

7. Corner Break** (Number) _____

8. Average Faulting**
   - < 0.4" _____
   - 0.4-0.8" _____
   - > 0.8" _____

* Measured as percent surface area for CRCP.
** Not applicable to CRCP.

Comments * Trans. CRKS are a result of Panel JTs @ 30' interval and shoulder JTs @ 15' interval, Some corner spall @ Med. Sev, seal damage

SECTION FIELD VERIFICATION FORM (CONTINUED)

State Code
SHRP Section I.D. 4 0 2 5 0 4

Vertical Alignment (from plans)

Cut, Fill, or At Grade: CUT
Depth of Cut/Fill at Start of Section: 11'
Depth of Cut/Fill at End of Section: 9'

Joint Information for JCP

Average Contraction Joint Spacing (Feet) 15.0
Average Intermediate Sawed Joint Spacing (Feet) (JRCP Only) 0.0
Skewness of Joints (Feet/Lane) 0.0

CORE 1 (Beginning of Project)

Layer No.	Layer Types*	Thickness	Brief Material Description
1	Subgrade (G)		
2			
3			
4			
5			
6			
7			

Notes:

CORE 2 (End of Project)

Layer No.	Layer Types*	Thickness	Brief Material Description
1	Subgrade (G)		
2			
3			
4			
5			
6			
7			

Notes:

*Layer Types: A - HMAC/Surface Treatment, P - PCC Layer, B - Base/Subbase, G - Subgrade

SHRP/LTPP LAYER THICKNESS

L05A - L05B TABLES "L05_A_B"

20-MAR-95

E**L05A DATA** Gps Sps	CN	L#	TYP	THICK	MATL	1	2	3	STA 0 THICK	STA 0 MATL	STA 0 1	STA 0 2	STA 0 3	STA 5 THICK	STA 5 MATL	STA 5 1	STA 5 2	STA 5 3	**L05B** CN	L#	DESC	TYPE	THICK	MATL	1	2	3	COMMENT	NOTE	INV
20 3015	1	1	SS		102	7									102	7			1	1	7	SS		102						1
	1	2	TB	4	319	1	2	4						4.3	319	1	2	4	1	2	5	TB	4.2	319						2
	1	3	PC	9.3	4	1	2	4						9.1	4	1	2	4	1	3	3	PC	9.2	4						3
20 3060	1	1	SS		108	7									102	7			1	1	7	SS		102	F	I				1
	1	2	TS	6	338	4								6	338	4			1	2	6	TS	6	338						2
	1	3	TB	3.5	334	1	2	4						3.2	334	1	2	4	1	3	5	TB	3.4	334						3
	1	4	PC	9.6	4	1	2	4						10	4	1	2	4	1	4	3	PC	9.8	4						4
20 4016	1	1	SS		108	7									114	7			1	1	7	SS		108	F	I				1
	1	2	GB	4	303	4								4	303	4			1	2	5	GB	4	303						2
	1	3	PC	9.3	5	1	2	4						8.9	5	1	2	4	1	3	3	PC	9.1	5						3
20 4052	1	1	SS		216	7									204	7			1	1	7	SS		214	E	H				1
	1	2	TB	3.6	332	1	2	4						4.4	332	1	2	4	1	2	5	TB	4	332						2
	1	3	PC	8.6	5	1	2	4						9.7	5	1	2	4	1	3	3	PC	9.2	5						3
20 4053	1	1	SS		120	7									108	7			1	1	7	SS		114	E	H				1
	1	2	TS	6	338	4								6	338	4			1	2	6	TS	6	338						2
	1	3	TB	3.2	331	1	2	4						3.6	331	1	2	4	1	3	5	TB	3.4	331						3
	1	4	PC	10.4	5	1	2	4						10.5	5	1	2	4	1	4	3	PC	10.4	5						4
20 4054	1	1	SS		102	7									102	7			1	1	7	SS		102	— INORGANIC CLAY					1
	1	2	TB	3.4	332	1	2	4	3.5"					3.5	332	1	2	4	1	2	5	TB	3.4	332	— ECONOCRETE					2
	1	3	PC	9.3	5	1	2	4	9.5"					9.6	5	1	2	4	1	3	3	PC	9.5	5						3
				12.7																										
20 4063	1	1	SS		108	7									135	7			1	1	7	SS		108	F	I				1
	1	2	TS	4.5	338	4								4.8	338	4			1	2	6	TS	4.6	338						2
	1	3	TB	4	334	1	2	4						4	334	1	2	4	1	3	5	TB	4	334						3
	1	4	PC	9	5	1	2	4						9.3	5	1	2	4	1	4	3	PC	9.2	5						4

9.9" in field for the installation?

Appendix A-2: Pre-Installation Monitoring Data and FWDCHECK Results

Appendix A-2 contains the following pre-installation monitoring data and FWDCHECK analysis results:

- Pre-installation pavement distress data;
- Pre-installation FWD data; and
- FWDCHECK program uniformity analysis results.

Revised May 29, 1992

SHEET 4

DISTRESS SURVEY

LTPP PROGRAM

STATE ASSIGNED ID ____

STATE CODE 20

SHRP SECTION ID 4054

DISTRESS SURVEY FOR PAVEMENTS WITH JOINTED PORTLAND CEMENT CONCRETE SURFACES

DATE OF DISTRESS SURVEY (MONTH/DAY/YEAR) 04/18/95

SURVEYORS: RSM, ____, ____
PAVEMENT SURFACE TEMP - BEFORE ____°C; AFTER ____°C
PHOTOS, VIDEO, OR BOTH WITH SURVEY (P, V, B) B

DISTRESS TYPE	SEVERITY LEVEL LOW	MODERATE	HIGH
CRACKING			
1. CORNER BREAKS (Number)	0	0	1
2. DURABILITY "D" CRACKING (Number of Affected Slabs)	0	0	0
AREA AFFECTED (Square Meters)	0	0	0
3. LONGITUDINAL CRACKING (Meters)	0	0	0
Length Sealed (Meters)	—	—	—
4. TRANSVERSE CRACKING (Number of Cracks)	1	14	1
(Meters)	3.6	50.4	3.6
Length Sealed (Meters)	0	0	0
JOINT DEFICIENCIES			
5a. TRANSVERSE JOINT SEAL DAMAGE Sealed? (Y, N)			Y
If "Y" Number of Joints	15	2	0
5b. LONGITUDINAL JOINT SEAL DAMAGE Number of Longitudinal Joints that have been sealed (0, 1, or 2)			2
Length of Damaged Sealant (Meters)			0
6. SPALLING OF LONGITUDINAL JOINTS (Meters)	3.0	0	0
7. SPALLING OF TRANSVERSE JOINTS Number of Affected Joints	4	0	0
Length Spalled (Meters)	2.0	0	0

Revised May 29, 1992

SHEET 5

DISTRESS SURVEY

LTPP PROGRAM

STATE ASSIGNED ID ____

STATE CODE 20

SHRP SECTION ID 4054

DATE OF DISTRESS SURVEY (MONTH/DAY/YEAR) __/__/__

SURVEYORS: RSM, ___

DISTRESS SURVEY FOR PAVEMENTS WITH JOINTED PORTLAND CEMENT CONCRETE SURFACES (CONTINUED)

DISTRESS TYPE	SEVERITY LEVEL LOW	MODERATE	HIGH
SURFACE DEFORMATION			
8a. MAP CRACKING (Number)			0
(Square Meters)			0
8b. SCALING (Number)			0
(Square Meters)			0
9. POLISHED AGGREGATE (Square Meters)			6
10. POPOUTS (Number per Square Meter)			20
MISCELLANEOUS DISTRESSES			
11. BLOWUPS (Number)			0
12. FAULTING OF TRANSVERSE JOINTS AND CRACKS - REFER TO SHEET 6			
13. LANE-TO-SHOULDER DROPOFF - REFER TO SHEET 7			
14. LANE-TO-SHOULDER SEPARATION - REFER TO SHEET 7			
15. PATCH/PATCH DETERIORATION			
Flexible (Number)	0	0	0
(Square Meters)	0	0	0
Rigid (Number)	0	0	0
(Square Meters)	0	0	0
16. WATER BLEEDING AND PUMPING (Number of Occurrences)			0
Length Affected (Meters)			0

17. OTHER (Describe) _____

Revised April 23, 1993

SHEET 6

DISTRESS SURVEY

LTPP PROGRAM

STATE ASSIGNED ID _ _ _ _

STATE CODE 20

SHRP SECTION ID 4054

DATE OF DISTRESS SURVEY (MONTH/DAY/YEAR) 04/18/95

SURVEYORS: _ _ _, _ _ _

DISTRESS SURVEY FOR PAVEMENTS WITH JOINTED PORTLAND CEMENT CONCRETE SURFACES (CONTINUED)

12. FAULTING OF TRANSVERSE JOINTS AND CRACKS

Point[1] Distance (Meters)	Joint or Crack (J/C)	Crack Length (Meters)	Well Sealed (Y/N)	Length of Joint Spalling, m L	M	H	Faulting[2], mm 0.3m	0.75m
1.6	J	.0		.0	.0	.0	0	0
6.2	J	3.6		1.0	.0	.0	0	0
10.8	J	.0		.0	.0	.0	0	0
15.3	J	3.6		.5	.0	.0	0	0
19.9	J	.0		.3	.0	.0	0	0
24.5	J	3.6		.0	.0	1.5	2	2
29.1	J	.0		.0	.0	.0	1	1
33.6	J	3.6		.8	.0	.0	0	0
38.1	J	.0		.3	.0	.0	0	0
42.7	J	3.6		.8	.3	1.0	1	2
47.3	J	.0		.0	.0	.0	0	1
51.9	J	3.6		.0	.1	.0	0	0
56.5	J	.0		.0	.0	.0	2	0
61.0	J	3.6		.3	.5	.0	0	1
65.6	J	.0		.0	.0	.0	1	1
70.2	J	3.6		1.3	.0	.0	0	2
74.8	J	.0		.0	.0	.0	0	0
79.4	J	3.6		.0	1.5	.0	3	2
83.9	J	.0		.0	.0	.0	0	0
88.5	J	3.6		.0	1.3	.0	2	2
93.0	J	.0		.0	.0	.0	1	1
97.6	J	3.6		.0	.0	.0	0	2
102.2	J	.0		.3	.0	.0	4	3
106.8	J	3.6		.8	.0	.0	0	1
111.3	J	.0		.0	.0	.0	2	2
115.3	J	3.6		1.0	.0	.0	0	1
120.5	J	.0		.0	.0	.0	1	1

Note 1. Point Distance is from the start of the test section to the measurement location.

Note 2. If the "approach" slab is higher than the "departure" slab, faulting is recorded as positive (+ or 0); if the "approach" slab is lower, record faulting as negative (-) and the minus sign must be used.

Revised April 23, 1993

SHEET 6

DISTRESS SURVEY

LTPP PROGRAM

STATE ASSIGNED ID ___ ___ ___ ___

STATE CODE 2 0

SHRP SECTION ID 4 0 5 4

DATE OF DISTRESS SURVEY (MONTH/DAY/YEAR) 04/18/95

SURVEYORS: ___ ___ ___, ___ ___ ___

DISTRESS SURVEY FOR PAVEMENTS WITH JOINTED PORTLAND CEMENT CONCRETE SURFACES (CONTINUED)

12. FAULTING OF TRANSVERSE JOINTS AND CRACKS

Page __ of __

Point[1] Distance (Meters)	Joint or Crack (J/C)	Crack Length (Meters)	Well Sealed (Y/N)	Length of Joint Spalling, m: L	M	H	Faulting[2], mm: 0.3m	0.75m
125.1	C	3.6	N	.8	.0	.0	0	0
129.7	J	_._	Y	.5	.0	.0	1	0
134.2	C	3.6	N	.3	.2	.0	0	0
138.8	J	_._	Y	.0	.0	.0	0	0
143.4	C	3.6	N	.0	.8	.3	1	1
148.0	J	_._	Y	.0	.0	.0	0	0

Note 1. Point Distance is from the start of the test section to the measurement location.

Note 2. If the "approach" slab is higher than the "departure" slab, faulting is recorded as positive (+ or 0); if the "approach" slab is lower, record faulting as negative (-) and the minus sign must be used.

Revised May 29, 1992

SHEET 7

DISTRESS SURVEY

LTPP PROGRAM

STATE ASSIGNED ID __ __ __

STATE CODE 20

SHRP SECTION ID 4054

DATE OF DISTRESS SURVEY (MONTH/DAY/YEAR) __ __/__ __/__ __

SURVEYORS: RSM ___ ___ ___

DISTRESS SURVEY FOR PAVEMENTS WITH JOINTED PORTLAND CEMENT CONCRETE SURFACES (CONTINUED)

13. LANE-TO-SHOULDER DROPOFF

14. LANE-TO-SHOULDER SEPARATION

Point No.	Point[1] Distance (meters)	Lane-to-shoulder[2] Dropoff (mm)	Lane-to-shoulder Separation (mm)	Well Sealed (Y/N)
1.	0.	-03.	09.	Y
2.	15.25	-02.	09.	Y
3.	30.5	-03.	09.	Y
4.	45.75	-07.	08.	Y
5.	61.	-04.	09.	Y
6.	76.25	-02.	09.	Y
7.	91.5	-04.	09.	Y
8.	106.75	-02.	08.	Y
9.	122.	-04.	09.	Y
10.	137.25	-03.	09.	Y
11.	152.5	-01.	09.	Y

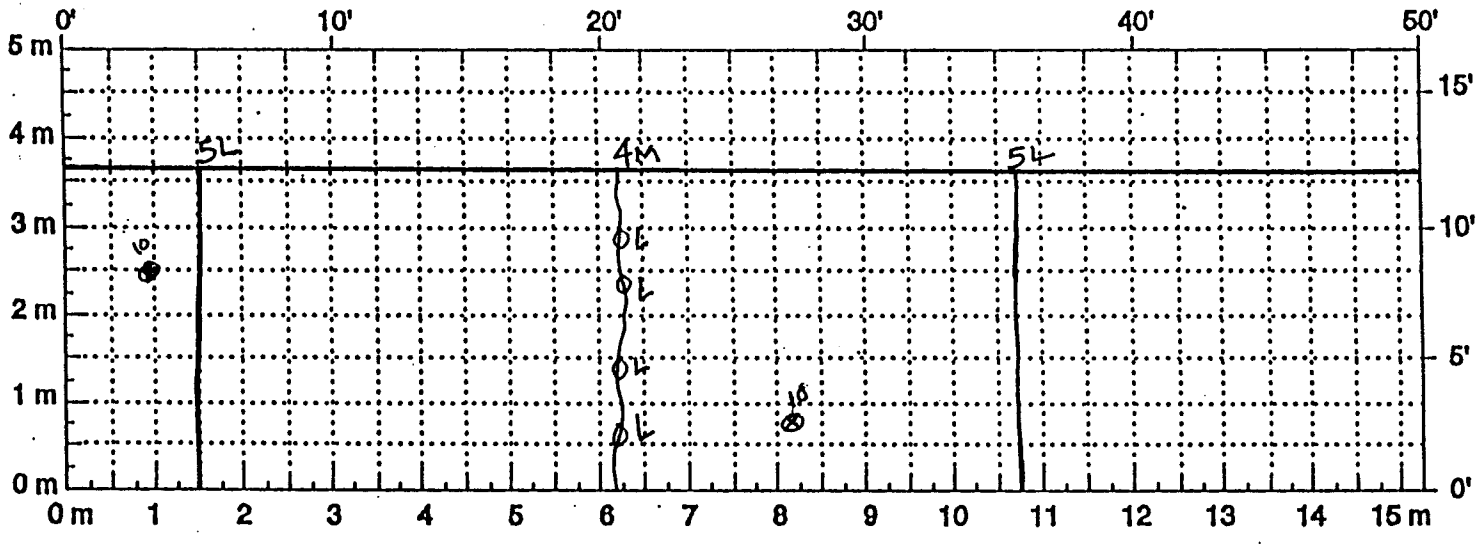
Note 1. Point Distance is from the start of the test section to the measurement location. The values shown are SI equivalents of the 50 ft spacing used in previous surveys.

Note 2. If heave of the shoulder occurs (upward movement), record as a negative (-) value. Do not record (+) signs, positive values are assumed.

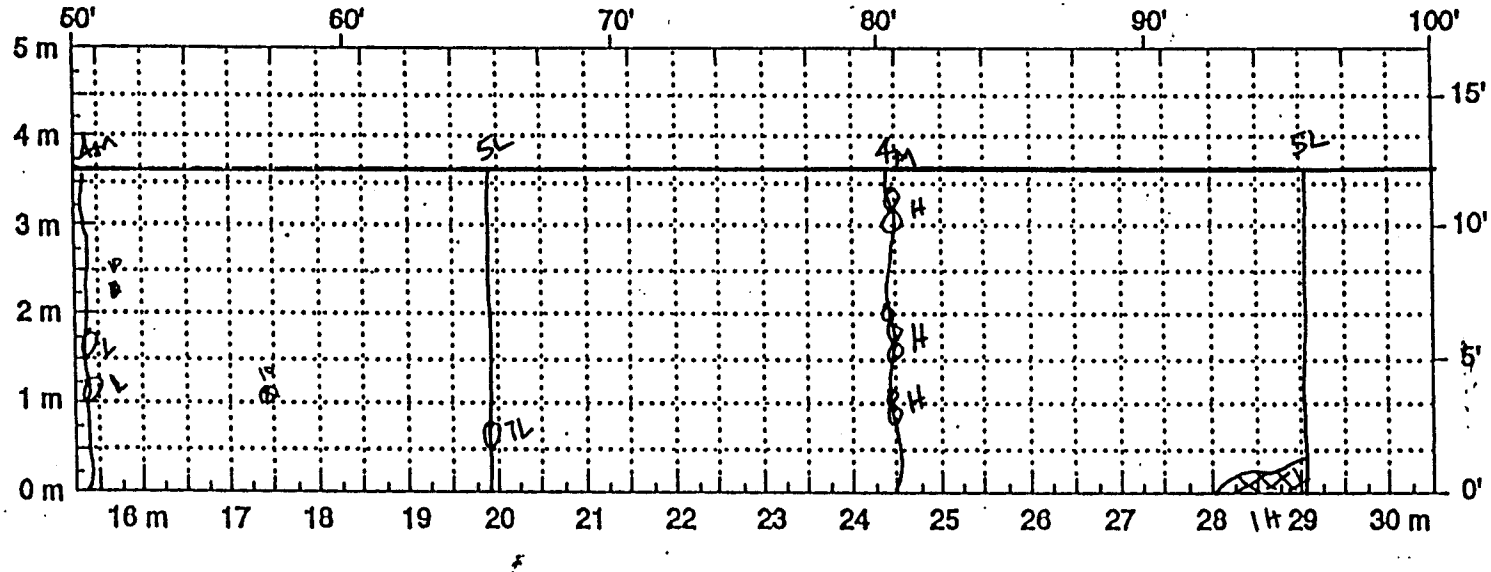
State Assigned ID _____

State Code 20

SHRP Section ID 4054



Comments: _____

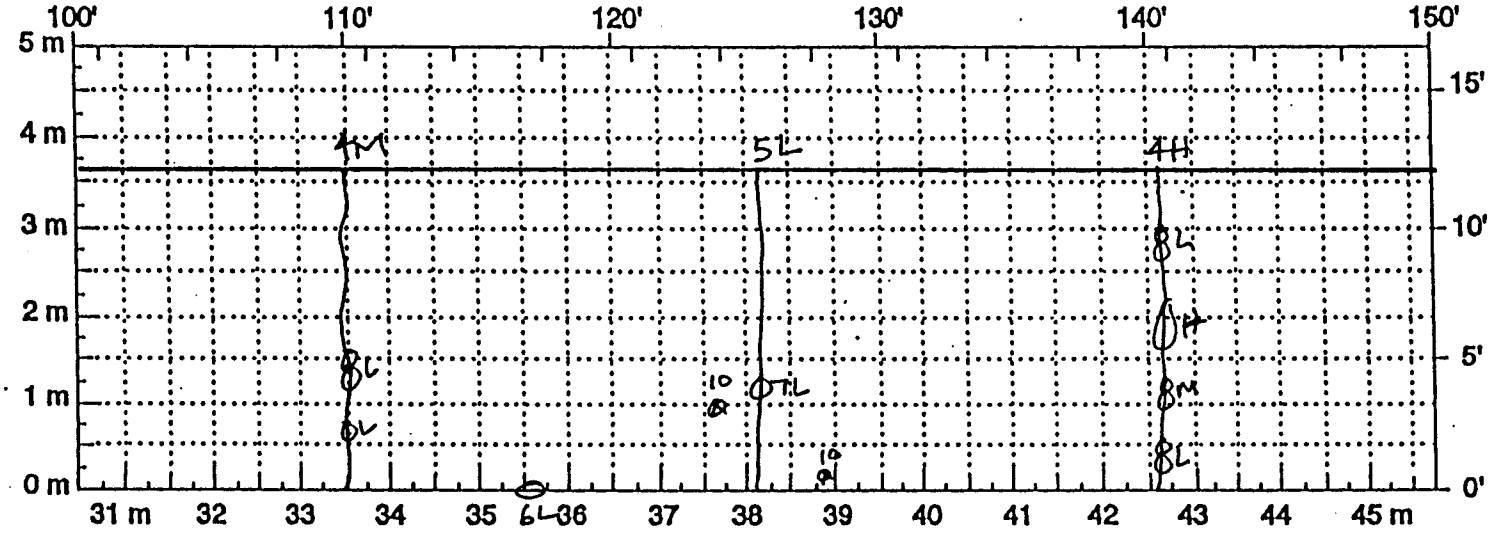


Comments: _____

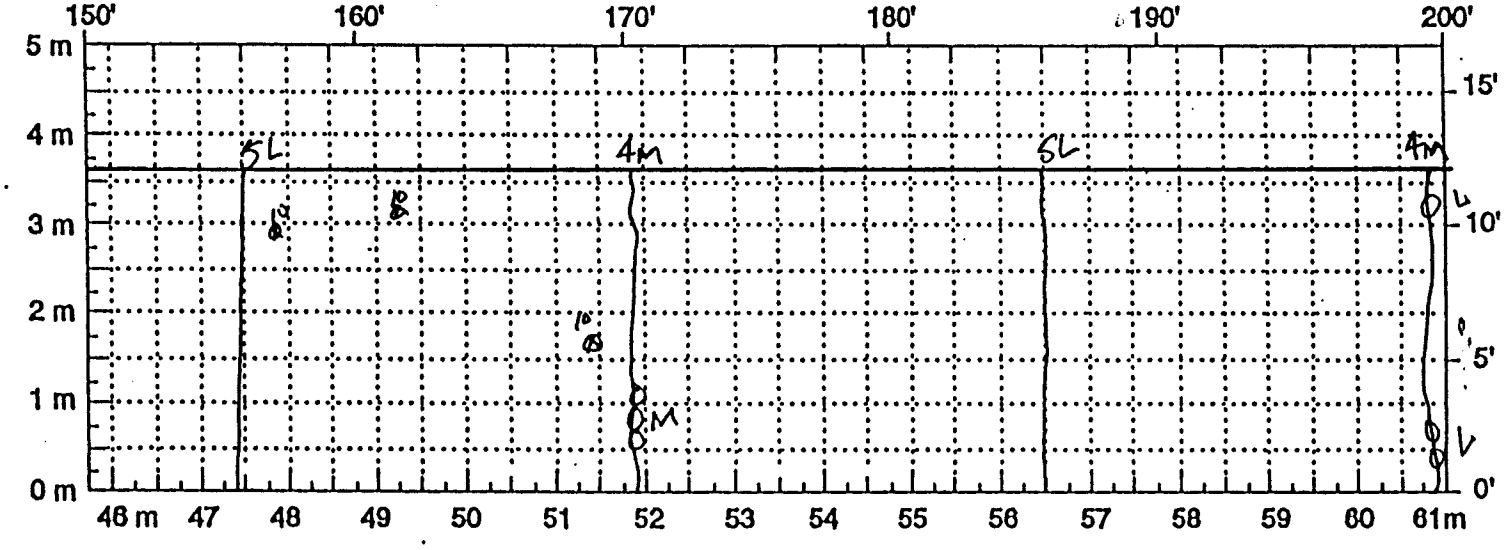
State Assigned ID _____

State Code 20

SHRP Section ID 4054



Comments: _____

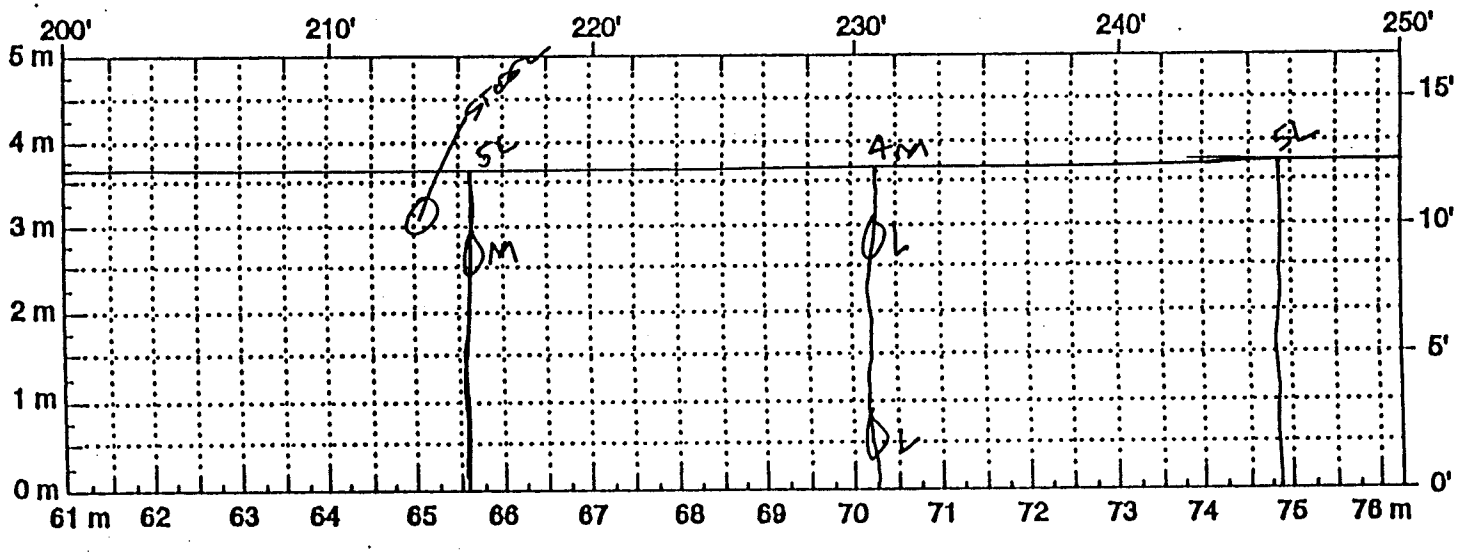


Comments: _____

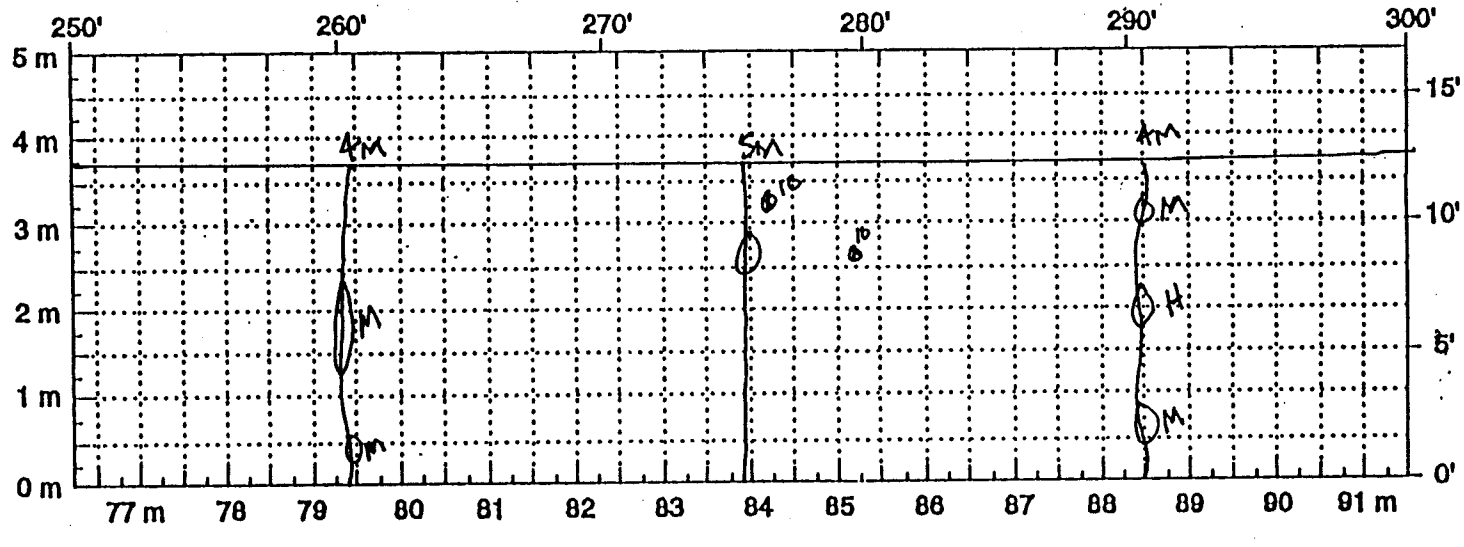
State Assigned ID _____

State Code 20

SHRP Section ID 4054



Comments: _____

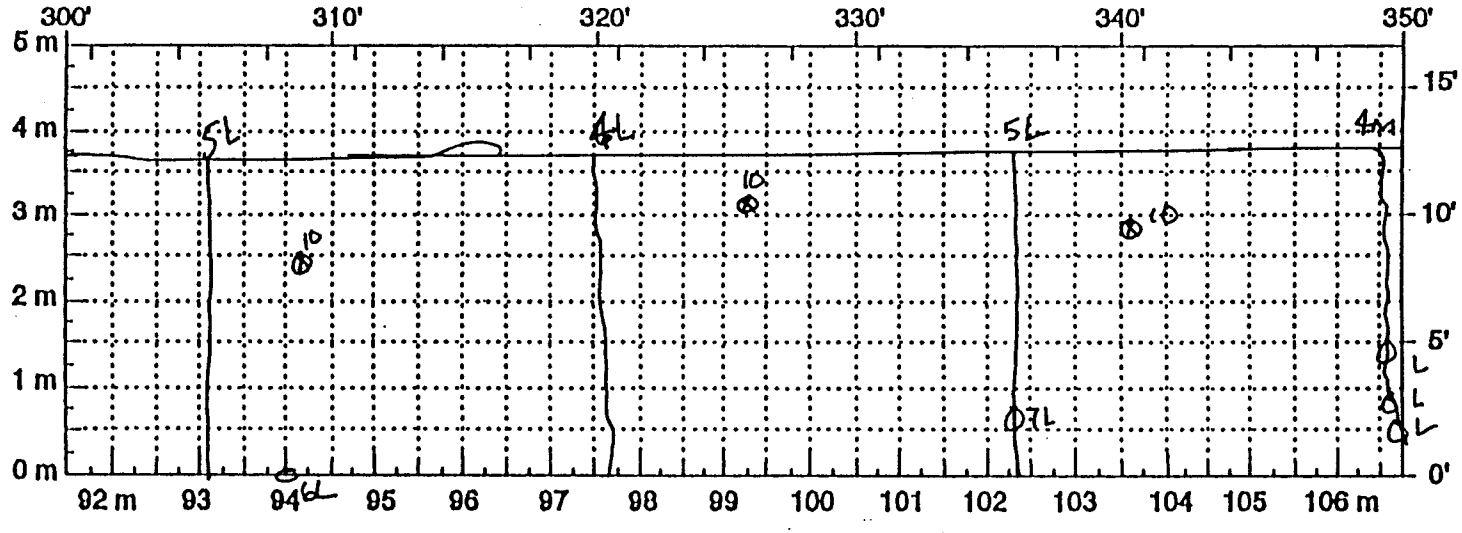


Comments: _____

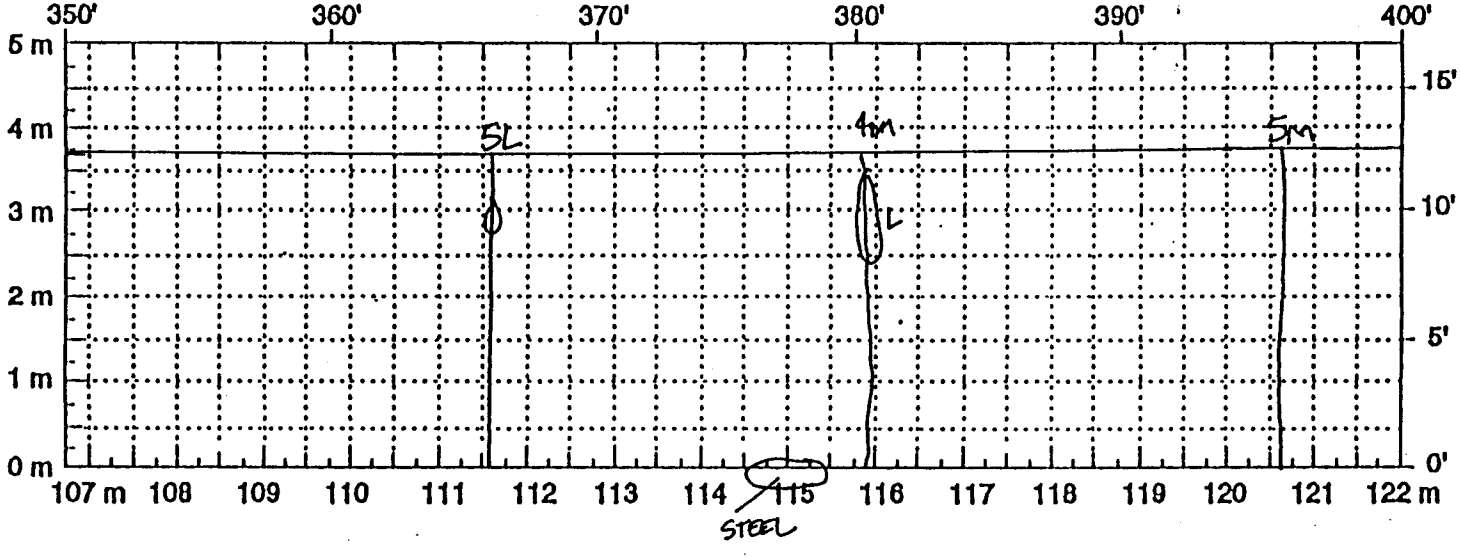
State Assigned ID _____

State Code 20

SHRP Section ID 4054



Comments: _____

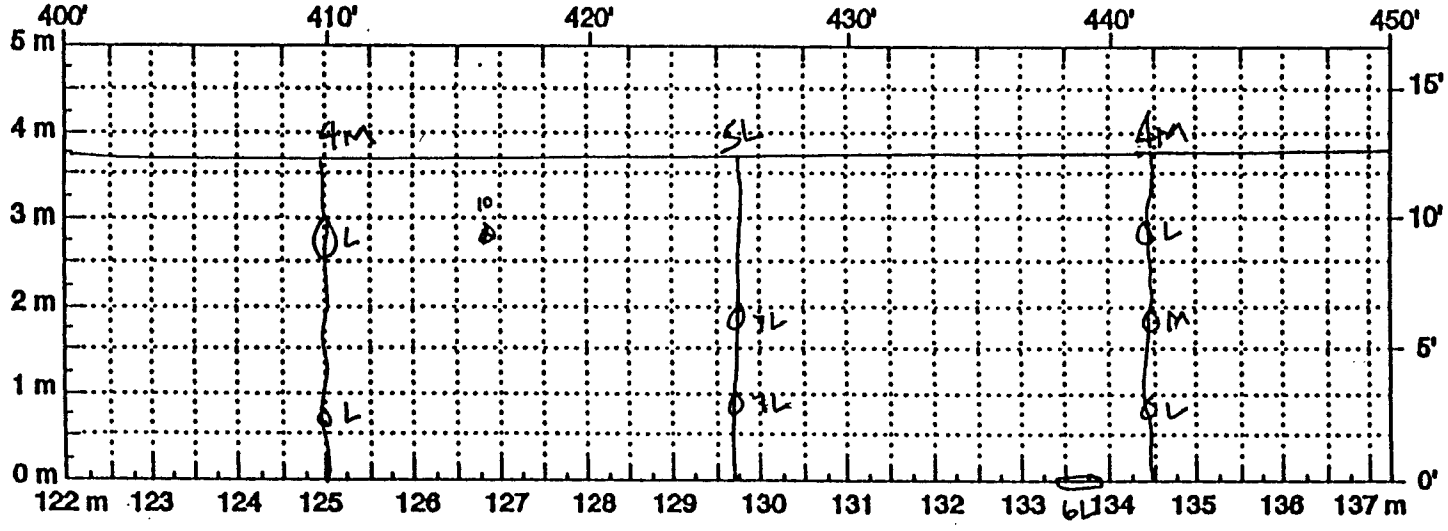


Comments: _____

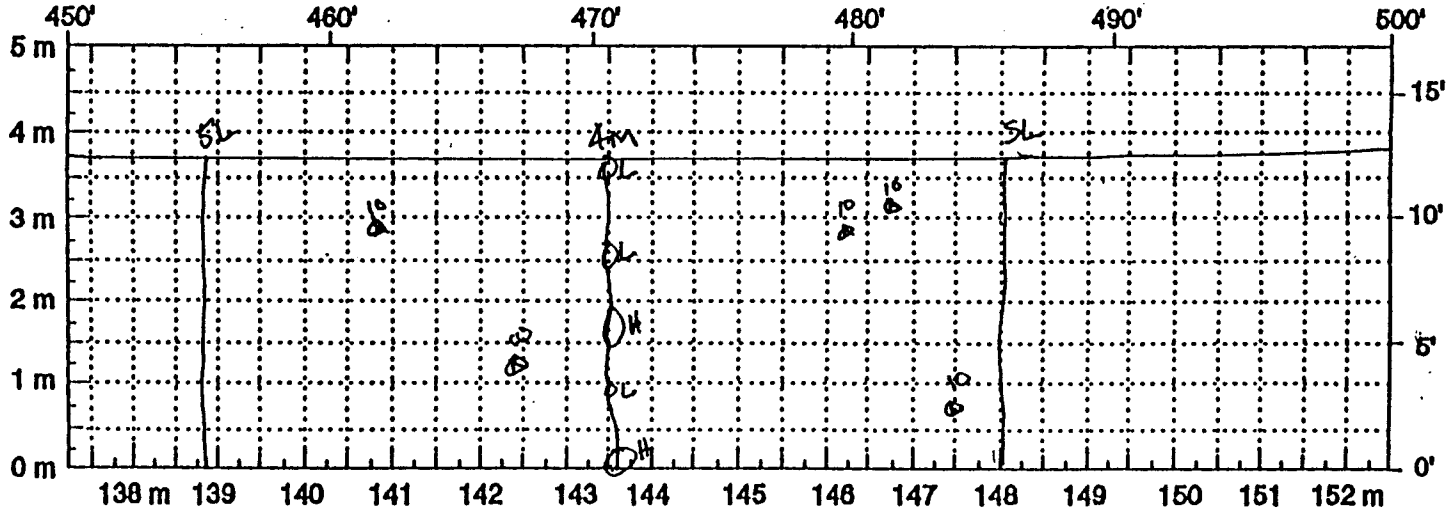
State Assigned ID _____

State Code 20

SHRP Section ID 4054



Comments: _____



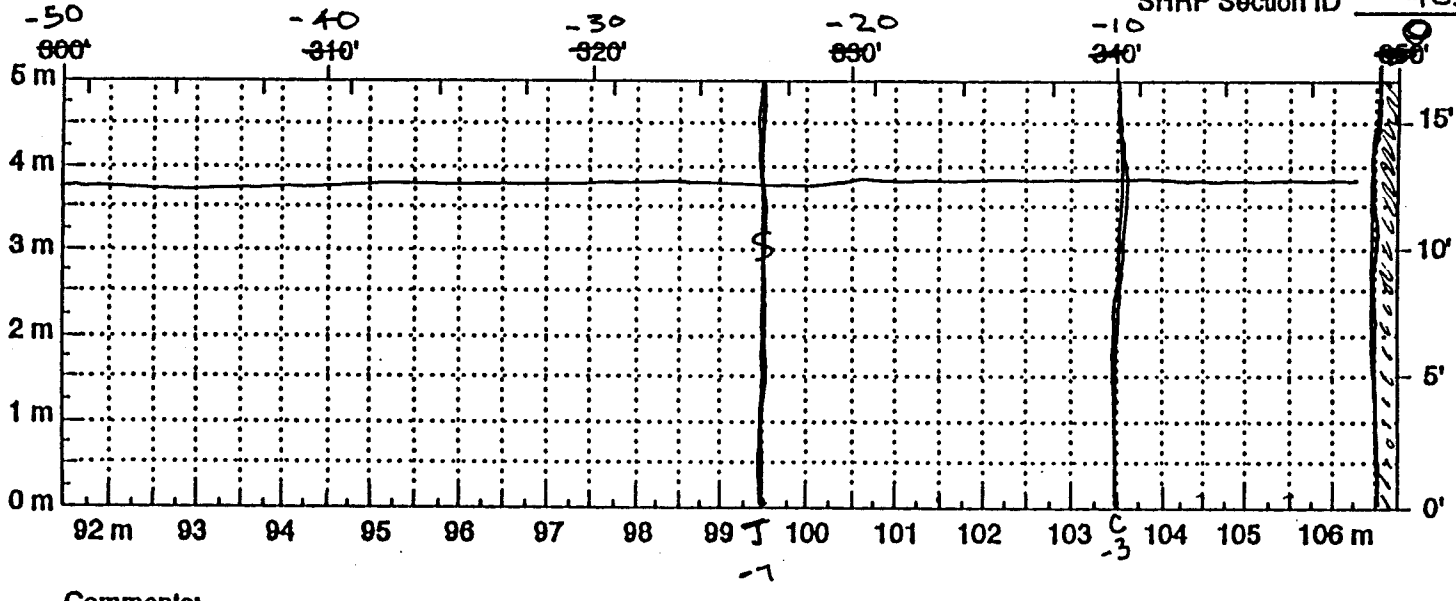
Comments: _____

For SMP

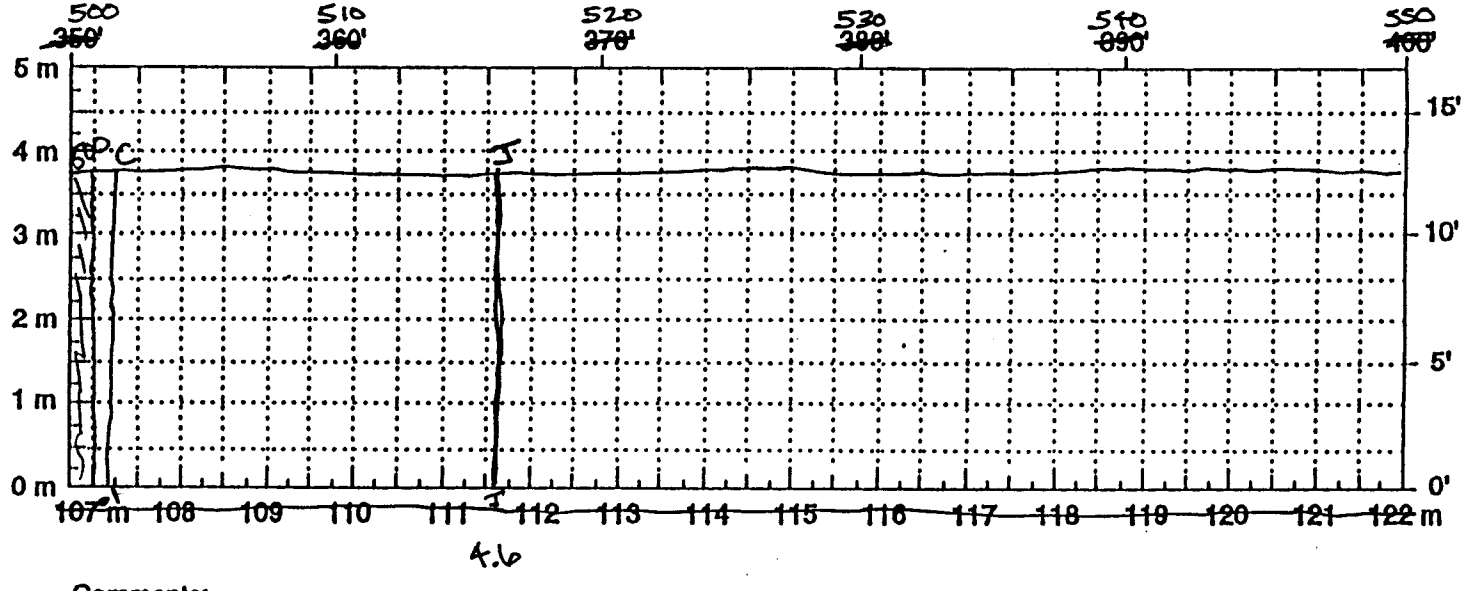
State Assigned ID _____

State Code 20

SHRP Section ID 4054-



Comments: _____



Comments: _____

File: C:\FWD\DATA\204054D1.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

FWD S/N : 8002-060
Operator ID : Mulvaney, Ronald S.

Stationing...: Feet

Diameter of Plate: 11.8
Deflector distances : 8 12 18 24 36 60

SHRP TESTING - RIGID/CRCP - BASIN AND EDGE TEST (J0/C0, J1/C1, J2/C2, J3/C3)
Sequence: CCC222233334444

Stn: - 16 Lane:J1 Temp: J/C: Air: 46 PvT: 47 09:13

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	113.7	12454	4.17	4.00	3.84	3.59	3.35	2.86	1.83
	C	114.6	12557	4.17	4.00	3.84	3.58	3.34	2.85	1.84
	C	114.5	12541	4.11	3.94	3.78	3.53	3.29	2.79	1.78
*	2	88.2	9661	3.14	2.99	2.87	2.70	2.53	2.16	1.37
*	2	88.4	9685	3.15	3.00	2.88	2.70	2.53	2.14	1.37
*	2	88.1	9649	3.12	2.98	2.87	2.69	2.53	2.15	1.37
*	2	88.2	9661	3.12	2.99	2.87	2.70	2.53	2.15	1.37
*	3	113.8	12470	4.13	3.97	3.81	3.55	3.31	2.81	1.81
*	3	113.8	12474	4.14	3.97	3.81	3.56	3.33	2.82	1.81
*	3	114.1	12502	4.13	3.96	3.81	3.56	3.31	2.81	1.82
*	3	113.7	12462	4.14	3.96	3.81	3.56	3.32	2.83	1.82
*	4	153.7	16844	5.60	5.37	5.17	4.83	4.52	3.82	2.48
*	4	153.4	16812	5.61	5.37	5.16	4.83	4.52	3.83	2.47
*	4	153.1	16776	5.60	5.37	5.16	4.83	4.51	3.83	2.46
*	4	153.0	16768	5.59	5.36	5.15	4.83	4.51	3.83	2.45

Stn: -5 Lane:J1 Temp: J/C: Air: 46 PvT: 47 09:16

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	111.7	12243	4.11	3.82	3.68	3.40	3.18	2.65	1.71
	C	111.9	12263	4.11	3.83	3.67	3.40	3.15	2.64	1.69
	C	112.4	12315	4.13	3.83	3.68	3.41	3.17	2.66	1.70
*	2	85.6	9379	3.10	2.86	2.76	2.54	2.37	1.97	1.26
*	2	85.5	9363	3.11	2.88	2.77	2.56	2.37	1.96	1.26
*	2	85.3	9347	3.10	2.87	2.76	2.55	2.37	1.98	1.26
*	2	85.3	9347	3.09	2.86	2.75	2.54	2.37	1.96	1.26
*	3	111.6	12227	4.10	3.80	3.65	3.38	3.15	2.64	1.69
*	3	111.9	12255	4.11	3.82	3.67	3.40	3.16	2.65	1.70
*	3	111.7	12243	4.11	3.82	3.66	3.40	3.15	2.63	1.69
*	3	111.9	12263	4.10	3.80	3.65	3.38	3.13	2.61	1.69
*	4	152.1	16669	5.59	5.21	4.99	4.64	4.31	3.62	2.34
*	4	152.6	16724	5.63	5.23	5.01	4.65	4.34	3.63	2.34
*	4	152.0	16649	5.61	5.21	5.01	4.63	4.35	3.63	2.35
*	4	152.5	16712	5.59	5.20	4.98	4.61	4.30	3.60	2.32

Stn: 13 Lane:J1 Temp: J/C: Air: 46 PvT: 47 09:19

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	111.1	12172	3.57	3.37	3.24	3.05	2.85	2.43	1.59
	C	111.3	12196	3.58	3.37	3.26	3.07	2.89	2.44	1.59
	C	111.3	12196	3.57	3.37	3.26	3.06	2.90	2.44	1.60
*	2	85.1	9324	2.69	2.54	2.46	2.31	2.17	1.84	1.20
*	2	85.0	9312	2.71	2.54	2.46	2.31	2.19	1.84	1.20
*	2	84.8	9292	2.68	2.53	2.46	2.31	2.18	1.83	1.20
*	2	84.9	9300	2.69	2.52	2.45	2.31	2.17	1.82	1.20
*	3	110.8	12136	3.56	3.35	3.24	3.05	2.86	2.43	1.59
*	3	111.3	12196	3.57	3.37	3.26	3.06	2.87	2.44	1.59
*	3	111.3	12192	3.57	3.37	3.25	3.06	2.88	2.44	1.60
*	3	111.0	12160	3.58	3.36	3.25	3.05	2.87	2.43	1.59
*	4	151.1	16550	4.91	4.59	4.43	4.17	3.91	3.33	2.17
*	4	151.1	16558	4.91	4.61	4.44	4.17	3.92	3.34	2.17
*	4	151.3	16573	4.93	4.61	4.45	4.19	3.93	3.34	2.17
*	4	151.0	16542	4.90	4.60	4.44	4.17	3.91	3.33	2.17

Stn: 29 Lane:J1 Temp: J/C: Air: 47 PvT: 48 09:22

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	110.9	12148	3.67	3.43	3.31	3.08	2.95	2.46	1.61
	C	111.3	12192	3.68	3.44	3.32	3.09	2.98	2.47	1.62
	C	110.9	12156	3.67	3.43	3.32	3.08	2.96	2.46	1.61

File: C:\FWD\DATA\204054D1.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	2	83.9	9196	2.73	2.56	2.48	2.30	2.20	1.83	1.20
*	2	84.0	9200	2.73	2.56	2.46	2.28	2.19	1.83	1.19
*	2	84.1	9216	2.74	2.56	2.48	2.30	2.18	1.83	1.19
*	2	84.0	9208	2.72	2.56	2.48	2.29	2.20	1.84	1.20
*	3	109.9	12037	3.63	3.40	3.29	3.06	2.93	2.44	1.60
*	3	110.8	12144	3.67	3.43	3.30	3.08	2.95	2.46	1.61
*	3	110.5	12104	3.65	3.42	3.30	3.07	2.94	2.45	1.61
*	3	110.8	12140	3.66	3.44	3.32	3.09	2.94	2.46	1.61
*	4	150.6	16498	5.01	4.72	4.54	4.25	4.00	3.37	2.21
*	4	150.8	16526	5.01	4.72	4.55	4.24	4.02	3.37	2.22
*	4	150.3	16470	5.02	4.71	4.54	4.23	4.02	3.36	2.21
*	4	150.8	16522	5.03	4.72	4.56	4.24	4.03	3.38	2.24

Stn: 44 Lane:J1 Temp: J/C: Air: 47 PvT: 47 09:25

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	109.3	11973	3.60	3.38	3.24	3.02	2.83	2.38	1.56
	C	109.5	11997	3.62	3.38	3.25	3.02	2.85	2.41	1.57
	C	109.8	12029	3.63	3.39	3.26	3.02	2.87	2.41	1.57
*	2	82.8	9073	2.73	2.54	2.44	2.27	2.13	1.79	1.18
*	2	83.0	9089	2.74	2.53	2.46	2.27	2.15	1.80	1.19
*	2	83.1	9105	2.74	2.54	2.44	2.28	2.13	1.79	1.16
*	2	83.3	9129	2.72	2.55	2.45	2.28	2.14	1.79	1.17
*	3	108.8	11922	3.60	3.37	3.24	3.02	2.85	2.40	1.59
*	3	109.8	12029	3.63	3.39	3.26	3.02	2.86	2.41	1.60
*	3	109.2	11969	3.63	3.38	3.26	3.04	2.85	2.40	1.59
*	3	109.3	11977	3.63	3.38	3.26	3.03	2.85	2.40	1.59
*	4	149.7	16403	4.94	4.60	4.44	4.12	3.92	3.32	2.23
*	4	150.1	16450	4.96	4.63	4.46	4.15	3.93	3.33	2.23
*	4	150.3	16466	4.97	4.63	4.46	4.15	3.93	3.33	2.22
*	4	150.3	16466	4.97	4.63	4.46	4.15	3.92	3.33	2.23

Stn: 58 Lane:J1 Temp: J/C: Air: 48 PvT: 49 09:27

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	109.1	11953	3.27	3.03	2.91	2.72	2.60	2.17	1.39
	C	109.8	12029	3.28	3.04	2.91	2.72	2.63	2.18	1.40
	C	109.6	12013	3.29	3.06	2.93	2.74	2.59	2.17	1.39
*	2	83.4	9137	2.46	2.28	2.17	2.04	1.99	1.64	1.04
*	2	83.1	9101	2.46	2.28	2.18	2.04	2.01	1.65	1.04
*	2	83.1	9105	2.45	2.28	2.18	2.04	1.98	1.63	1.03
*	2	83.4	9137	2.45	2.27	2.17	2.02	2.00	1.63	1.03
*	3	109.2	11965	3.27	3.02	2.90	2.70	2.63	2.17	1.38
*	3	109.5	12001	3.28	3.04	2.91	2.72	2.64	2.18	1.39
*	3	109.7	12021	3.28	3.05	2.92	2.74	2.60	2.17	1.38
*	3	109.6	12005	3.30	3.05	2.92	2.73	2.63	2.18	1.38
*	4	148.9	16319	4.48	4.17	3.98	3.71	3.61	2.98	1.91
*	4	149.4	16371	4.48	4.19	4.00	3.74	3.60	2.98	1.91
*	4	149.6	16391	4.49	4.19	4.02	3.74	3.61	2.98	1.90
*	4	149.0	16327	4.49	4.18	3.99	3.73	3.62	3.00	1.90

Stn: 74 Lane:J1 Temp: J/C: Air: 47 PvT: 49 09:30

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	108.7	11906	3.70	3.47	3.28	3.06	2.87	2.41	1.56
	C	109.0	11937	3.73	3.50	3.31	3.09	2.90	2.44	1.61
	C	108.7	11914	3.74	3.49	3.31	3.09	2.90	2.45	1.62
*	2	82.5	9038	2.81	2.61	2.48	2.31	2.17	1.83	1.22
*	2	82.3	9018	2.79	2.61	2.47	2.30	2.17	1.84	1.23
*	2	82.2	9006	2.80	2.61	2.48	2.31	2.17	1.85	1.23
*	2	82.4	9026	2.80	2.60	2.48	2.31	2.15	1.82	1.20
*	3	108.3	11870	3.72	3.47	3.30	3.07	2.89	2.44	1.61
*	3	108.9	11933	3.74	3.48	3.32	3.09	2.88	2.44	1.57
*	3	108.8	11922	3.73	3.48	3.30	3.09	2.89	2.44	1.60
*	3	109.0	11937	3.75	3.50	3.31	3.09	2.91	2.47	1.63
*	4	148.8	16299	5.14	4.79	4.54	4.24	3.96	3.32	2.16
*	4	148.8	16307	5.15	4.80	4.56	4.25	3.99	3.35	2.20
*	4	149.2	16351	5.16	4.81	4.57	4.26	3.99	3.35	2.19
*	4	149.0	16327	5.15	4.80	4.56	4.25	3.97	3.33	2.17

Stn: 103 Lane:J1 Temp: J/C: Air: 47 PvT: 50 09:32

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	108.6	11902	3.68	3.45	3.34	3.12	2.94	2.50	1.66
	C	108.9	11930	3.69	3.45	3.35	3.12	2.94	2.50	1.66

File: C:\FWD\DATA\204054D1.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

	C	109.0	11937	3.69	3.45	3.35	3.12	2.95	2.50	1.67
*	2	82.7	9057	2.76	2.59	2.50	2.33	2.19	1.85	1.24
*	2	82.6	9053	2.76	2.58	2.51	2.33	2.20	1.86	1.23
*	2	82.8	9073	2.75	2.57	2.51	2.33	2.21	1.88	1.22
*	2	82.6	9049	2.76	2.59	2.50	2.33	2.19	1.86	1.24
*	3	108.7	11906	3.69	3.45	3.34	3.11	2.93	2.48	1.66
*	3	108.8	11926	3.69	3.45	3.34	3.12	2.94	2.50	1.65
*	3	108.9	11930	3.68	3.45	3.35	3.12	2.94	2.50	1.66
*	3	109.0	11937	3.70	3.46	3.35	3.13	2.94	2.50	1.66
*	4	147.4	16144	5.09	4.77	4.59	4.28	4.02	3.42	2.28
*	4	147.8	16192	5.09	4.78	4.60	4.30	4.04	3.43	2.29
*	4	147.5	16156	5.09	4.78	4.60	4.30	4.03	3.42	2.29
*	4	147.1	16117	5.07	4.76	4.59	4.28	4.03	3.42	2.28

Stn: 118 Lane:J1 Temp: J/C: Air: 47 PvT: 49 09:34

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	108.0	11834	3.48	3.27	3.13	2.93	2.72	2.31	1.50
	C	108.2	11854	3.50	3.27	3.15	2.94	2.74	2.33	1.52
	C	108.1	11846	3.50	3.27	3.14	2.94	2.74	2.33	1.51
*	2	81.9	8970	2.63	2.44	2.35	2.20	2.04	1.73	1.13
*	2	81.9	8974	2.64	2.45	2.37	2.21	2.04	1.74	1.14
*	2	82.2	9006	2.64	2.44	2.36	2.20	2.04	1.72	1.13
*	2	81.9	8974	2.62	2.45	2.36	2.20	2.04	1.74	1.13
*	3	107.6	11790	3.48	3.25	3.12	2.92	2.71	2.30	1.50
*	3	108.3	11870	3.50	3.28	3.15	2.94	2.74	2.32	1.51
*	3	108.3	11866	3.50	3.26	3.15	2.94	2.73	2.32	1.51
*	3	108.2	11858	3.50	3.27	3.14	2.94	2.74	2.32	1.51
*	4	147.0	16105	4.81	4.48	4.31	4.03	3.75	3.18	2.06
*	4	147.2	16132	4.82	4.50	4.32	4.04	3.76	3.19	2.07
*	4	147.4	16144	4.82	4.50	4.31	4.06	3.78	3.20	2.07
*	4	146.7	16069	4.81	4.48	4.31	4.04	3.75	3.17	2.06

Stn: 161 Lane:J1 Temp: J/C: Air: 47 PvT: 51 09:37

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	107.6	11790	4.02	3.76	3.63	3.38	3.15	2.65	1.74
	C	107.4	11763	4.00	3.73	3.61	3.36	3.13	2.63	1.75
	C	107.0	11727	4.00	3.73	3.61	3.35	3.13	2.63	1.73
*	2	80.7	8847	3.02	2.80	2.71	2.52	2.35	1.96	1.31
*	2	81.0	8875	3.02	2.81	2.72	2.53	2.35	1.95	1.30
*	2	80.7	8839	3.01	2.80	2.72	2.51	2.35	1.96	1.30
*	2	81.0	8875	3.02	2.80	2.73	2.52	2.36	1.97	1.30
*	3	106.9	11711	4.00	3.74	3.61	3.37	3.13	2.63	1.72
*	3	107.4	11763	4.02	3.73	3.63	3.35	3.15	2.65	1.73
*	3	107.1	11739	4.00	3.72	3.61	3.34	3.13	2.64	1.72
*	3	107.1	11735	4.00	3.72	3.60	3.34	3.12	2.62	1.71
*	4	146.7	16069	5.45	5.09	4.93	4.57	4.28	3.61	2.35
*	4	146.8	16085	5.46	5.11	4.93	4.58	4.28	3.61	2.35
*	4	147.0	16105	5.47	5.13	4.92	4.62	4.28	3.59	2.35
*	4	146.5	16053	5.47	5.10	4.93	4.59	4.28	3.60	2.33

Stn: 177 Lane:J1 Temp: J/C: Air: 47 PvT: 50 09:39

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	106.9	11711	3.68	3.42	3.29	3.08	2.89	2.44	1.58
	C	106.9	11711	3.67	3.42	3.29	3.08	2.91	2.45	1.57
	C	106.7	11691	3.68	3.42	3.30	3.09	2.91	2.45	1.57
*	2	81.0	8875	2.78	2.58	2.48	2.31	2.16	1.82	1.18
*	2	80.9	8867	2.77	2.57	2.47	2.31	2.17	1.83	1.17
*	2	80.9	8867	2.77	2.56	2.48	2.31	2.19	1.83	1.19
*	2	81.1	8891	2.78	2.58	2.49	2.32	2.16	1.83	1.19
*	3	106.8	11703	3.67	3.41	3.29	3.08	2.89	2.44	1.56
*	3	107.3	11751	3.68	3.42	3.30	3.09	2.90	2.44	1.57
*	3	107.1	11731	3.68	3.43	3.31	3.09	2.89	2.44	1.58
*	3	107.0	11719	3.68	3.42	3.30	3.10	2.93	2.46	1.58
*	4	146.5	16049	5.04	4.68	4.51	4.22	3.98	3.36	2.16
*	4	146.6	16065	5.06	4.72	4.54	4.25	3.98	3.37	2.17
*	4	146.4	16041	5.05	4.70	4.52	4.24	3.98	3.38	2.17
*	4	146.7	16077	5.06	4.72	4.54	4.26	3.98	3.36	2.15

Stn: 223 Lane:J1 Temp: J/C: Air: 47 PvT: 51 09:42

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	107.4	11771	3.87	3.65	3.52	3.29	3.07	2.61	1.67

File: C:\FWD\DATA\204054D1.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

	C	107.4	11771	3.86	3.65	3.51	3.28	3.08	2.60	1.67
	C	107.3	11755	3.87	3.65	3.51	3.28	3.07	2.60	1.66
*	2	80.9	8863	2.89	2.72	2.61	2.43	2.29	1.93	1.22
*	2	81.2	8895	2.89	2.72	2.63	2.46	2.31	1.94	1.24
*	2	81.2	8898	2.90	2.73	2.63	2.46	2.29	1.93	1.23
*	2	81.1	8891	2.90	2.73	2.63	2.43	2.30	1.94	1.23
*	3	107.1	11731	3.86	3.63	3.50	3.26	3.07	2.59	1.65
*	3	107.3	11755	3.87	3.65	3.51	3.29	3.07	2.59	1.65
*	3	107.4	11771	3.88	3.65	3.52	3.28	3.07	2.60	1.66
*	3	107.4	11763	3.89	3.66	3.52	3.28	3.08	2.61	1.66
*	4	146.3	16029	5.29	4.99	4.80	4.51	4.20	3.55	2.26
*	4	146.7	16077	5.32	5.02	4.83	4.55	4.23	3.57	2.27
*	4	147.1	16113	5.32	5.02	4.83	4.53	4.22	3.57	2.28
*	4	146.7	16077	5.31	5.01	4.83	4.52	4.23	3.57	2.27

Stn: 240 Lane:J1 Temp: J/C: Air: 47 PvT: 51 09:44

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	107.0	11723	3.39	3.20	3.07	2.85	2.65	2.22	1.40
	C	107.6	11790	3.43	3.21	3.09	2.86	2.67	2.23	1.40
	C	107.2	11747	3.42	3.20	3.08	2.84	2.65	2.22	1.40
*	2	80.6	8831	2.55	2.37	2.30	2.12	1.96	1.65	1.03
*	2	80.8	8855	2.56	2.40	2.31	2.12	1.99	1.66	1.04
*	2	80.7	8847	2.56	2.39	2.30	2.13	1.97	1.65	1.04
*	2	80.8	8855	2.57	2.39	2.31	2.13	1.98	1.66	1.04
*	3	106.7	11695	3.41	3.19	3.06	2.85	2.64	2.21	1.38
*	3	107.3	11755	3.43	3.21	3.09	2.85	2.67	2.24	1.40
*	3	107.0	11727	3.41	3.20	3.07	2.85	2.64	2.22	1.40
*	3	107.3	11755	3.43	3.21	3.09	2.85	2.67	2.23	1.41
*	4	146.6	16065	4.74	4.44	4.26	3.94	3.69	3.09	1.94
*	4	146.4	16041	4.75	4.45	4.26	3.94	3.69	3.09	1.94
*	4	146.4	16045	4.74	4.44	4.26	3.92	3.67	3.07	1.91
*	4	146.6	16061	4.75	4.45	4.27	3.96	3.69	3.09	1.95

Stn: 286 Lane:J1 Temp: J/C: Air: 48 PvT: 52 09:46

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	108.2	11854	4.07	3.89	3.83	3.63	3.39	2.89	1.41
	C	107.4	11771	4.04	3.87	3.78	3.57	3.34	2.82	1.42
	C	107.4	11771	4.04	3.87	3.78	3.59	3.34	2.83	1.43
*	2	80.7	8843	3.01	2.88	2.83	2.67	2.48	2.10	1.06
*	2	80.9	8859	3.02	2.89	2.84	2.68	2.49	2.10	1.06
*	2	81.3	8910	3.04	2.90	2.83	2.68	2.49	2.11	1.07
*	2	80.9	8863	3.03	2.90	2.85	2.69	2.50	2.12	1.06
*	3	107.0	11727	4.03	3.87	3.78	3.57	3.33	2.83	1.43
*	3	107.3	11755	4.03	3.87	3.79	3.58	3.34	2.83	1.42
*	3	107.1	11735	4.04	3.87	3.78	3.57	3.33	2.83	1.41
*	3	107.8	11806	4.06	3.91	3.81	3.60	3.36	2.85	1.44
*	4	146.3	16033	5.54	5.32	5.18	4.90	4.58	3.89	1.93
*	4	146.9	16093	5.59	5.36	5.22	4.94	4.62	3.92	1.94
*	4	147.1	16117	5.58	5.36	5.23	4.94	4.63	3.91	1.94
*	4	146.3	16033	5.57	5.36	5.21	4.93	4.61	3.91	1.94

Stn: 330 Lane:J1 Temp: J/C: Air: 49 PvT: 53 09:49

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	106.6	11679	3.41	3.23	3.12	2.95	2.78	2.42	1.72
	C	106.6	11679	3.41	3.22	3.10	2.93	2.77	2.40	1.70
	C	106.8	11703	3.42	3.23	3.12	2.94	2.78	2.41	1.71
*	2	80.2	8791	2.56	2.40	2.32	2.19	2.06	1.78	1.24
*	2	80.1	8779	2.55	2.40	2.31	2.19	2.06	1.79	1.25
*	2	80.4	8807	2.55	2.40	2.32	2.19	2.06	1.78	1.24
*	2	80.7	8847	2.56	2.41	2.32	2.20	2.06	1.80	1.26
*	3	106.6	11679	3.42	3.22	3.11	2.94	2.77	2.39	1.69
*	3	106.3	11647	3.39	3.22	3.11	2.94	2.77	2.41	1.70
*	3	106.5	11671	3.41	3.21	3.10	2.93	2.77	2.40	1.70
*	3	106.3	11647	3.40	3.21	3.09	2.93	2.76	2.39	1.69
*	4	145.4	15934	4.70	4.43	4.28	4.05	3.83	3.31	2.37
*	4	146.2	16017	4.73	4.46	4.31	4.07	3.85	3.35	2.41
*	4	146.2	16017	4.71	4.46	4.30	4.10	3.84	3.34	2.38
*	4	146.1	16009	4.72	4.46	4.30	4.07	3.85	3.33	2.39

Stn: 373 Lane:J1 Temp: J/C: Air: 48 PvT: 53 09:51

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7

File: C:\FWD\DATA\204054D1.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

	C	106.6	11683	3.33	3.11	3.03	2.80	2.66	2.26	1.48
	C	106.7	11695	3.33	3.11	3.00	2.81	2.65	2.25	1.49
	C	106.8	11703	3.34	3.12	3.02	2.82	2.65	2.28	1.49
*	2	80.4	8807	2.46	2.31	2.25	2.07	1.96	1.67	1.12
*	2	80.8	8855	2.50	2.33	2.26	2.11	1.98	1.70	1.11
*	2	80.6	8831	2.48	2.32	2.26	2.08	1.98	1.69	1.10
*	2	80.8	8851	2.49	2.31	2.26	2.08	1.98	1.69	1.11
*	3	106.3	11651	3.30	3.11	2.99	2.81	2.63	2.26	1.48
*	3	106.7	11691	3.31	3.12	3.02	2.81	2.66	2.26	1.50
*	3	106.7	11695	3.33	3.12	3.03	2.81	2.66	2.26	1.50
*	3	106.6	11683	3.33	3.11	3.02	2.81	2.65	2.27	1.46
*	4	145.8	15978	4.59	4.31	4.17	3.90	3.67	3.14	2.05
*	4	147.0	16101	4.63	4.36	4.19	3.96	3.70	3.19	2.07
*	4	145.6	15950	4.59	4.31	4.18	3.87	3.68	3.12	2.08
*	4	145.3	15922	4.58	4.31	4.17	3.90	3.67	3.15	2.06

Stn: 391 Lane:J1 Temp: J/C: Air: 48 PvT: 52 09:54

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	106.0	11616	3.25	2.97	2.86	2.71	2.58	2.19	1.40
	C	106.0	11612	3.24	2.99	2.88	2.72	2.54	2.15	1.41
	C	106.2	11632	3.25	2.99	2.88	2.72	2.57	2.18	1.41
*	2	79.5	8708	2.41	2.21	2.14	2.02	1.91	1.63	1.04
*	2	79.7	8736	2.42	2.24	2.16	2.03	1.90	1.61	1.03
*	2	79.8	8748	2.42	2.22	2.14	2.03	1.92	1.61	1.04
*	2	79.7	8736	2.42	2.22	2.14	2.02	1.91	1.60	1.03
*	3	105.3	11532	3.22	2.97	2.86	2.70	2.55	2.15	1.40
*	3	105.7	11580	3.24	2.99	2.87	2.72	2.57	2.17	1.41
*	3	105.6	11572	3.23	2.98	2.87	2.70	2.56	2.15	1.40
*	3	105.7	11584	3.24	3.00	2.89	2.72	2.56	2.16	1.41
*	4	144.7	15850	4.47	4.14	3.98	3.77	3.53	2.98	1.94
*	4	144.7	15854	4.48	4.13	3.98	3.74	3.52	2.99	1.95
*	4	145.4	15926	4.48	4.15	3.99	3.78	3.54	3.00	1.94
*	4	145.2	15906	4.49	4.15	4.00	3.76	3.54	3.00	1.97

Stn: 418 Lane:J1 Temp: J/C: Air: 48 PvT: 52 09:56

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	106.7	11687	3.36	3.18	3.08	2.87	2.67	2.25	1.50
	C	106.6	11679	3.35	3.17	3.09	2.87	2.67	2.25	1.49
	C	106.9	11711	3.35	3.19	3.07	2.87	2.68	2.26	1.49
*	2	79.8	8748	2.48	2.36	2.29	2.13	1.98	1.67	1.11
*	2	80.1	8779	2.49	2.35	2.30	2.14	1.99	1.67	1.11
*	2	80.2	8787	2.50	2.37	2.30	2.13	1.98	1.67	1.11
*	2	80.0	8763	2.47	2.34	2.27	2.11	1.96	1.67	1.10
*	3	106.1	11620	3.36	3.17	3.07	2.87	2.66	2.23	1.49
*	3	106.0	11616	3.35	3.18	3.06	2.86	2.66	2.24	1.47
*	3	106.6	11675	3.36	3.19	3.07	2.86	2.67	2.25	1.48
*	3	106.6	11683	3.37	3.19	3.09	2.89	2.68	2.24	1.49
*	4	145.7	15966	4.67	4.39	4.25	3.98	3.69	3.12	2.06
*	4	146.0	15993	4.67	4.41	4.26	3.97	3.70	3.14	2.07
*	4	145.9	15989	4.69	4.41	4.26	3.98	3.70	3.14	2.07
*	4	145.4	15934	4.67	4.39	4.24	3.96	3.69	3.12	2.06

Stn: 432 Lane:J1 Temp: J/C: Air: 49 PvT: 53 09:58

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	106.0	11612	3.54	3.26	3.13	2.91	2.72	2.30	1.51
	C	105.7	11580	3.53	3.25	3.13	2.91	2.73	2.31	1.51
	C	105.8	11592	3.57	3.27	3.14	2.92	2.74	2.33	1.52
*	2	79.7	8732	2.66	2.44	2.35	2.19	2.05	1.72	1.13
*	2	79.5	8716	2.66	2.43	2.34	2.17	2.03	1.71	1.13
*	2	79.5	8712	2.67	2.45	2.35	2.19	2.03	1.72	1.13
*	2	80.5	8815	2.69	2.46	2.36	2.19	2.07	1.74	1.13
*	3	105.7	11584	3.55	3.27	3.14	2.93	2.75	2.32	1.53
*	3	106.0	11616	3.56	3.28	3.15	2.93	2.75	2.33	1.53
*	3	105.8	11592	3.55	3.27	3.14	2.93	2.74	2.33	1.54
*	3	106.0	11616	3.56	3.28	3.15	2.93	2.76	2.34	1.54
*	4	144.4	15819	4.87	4.50	4.32	4.04	3.77	3.20	2.12
*	4	144.5	15835	4.89	4.51	4.33	4.04	3.79	3.22	2.13
*	4	144.7	15850	4.89	4.52	4.33	4.05	3.79	3.22	2.12
*	4	144.8	15866	4.91	4.53	4.35	4.06	3.80	3.23	2.14

File: C:\FWD\DATA\204054D1.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

Stn: 447 Lane:J1 Temp: J/C: Air: 48 PvT: 52 10:00

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	106.2	11632	3.26	3.05	2.94	2.75	2.59	2.18	1.40
	C	106.2	11636	3.29	3.07	2.95	2.74	2.63	2.19	1.44
	C	105.8	11596	3.26	3.06	2.96	2.76	2.62	2.20	1.43
*	2	79.6	8724	2.44	2.28	2.20	2.05	1.96	1.65	1.06
*	2	79.8	8748	2.45	2.29	2.20	2.06	1.94	1.65	1.06
*	2	79.8	8748	2.46	2.29	2.20	2.06	1.94	1.65	1.07
*	2	79.6	8720	2.45	2.29	2.21	2.06	1.92	1.65	1.04
*	3	105.4	11548	3.27	3.06	2.95	2.74	2.63	2.19	1.42
*	3	105.4	11548	3.28	3.07	2.96	2.75	2.62	2.19	1.42
*	3	105.5	11556	3.28	3.07	2.96	2.76	2.61	2.21	1.45
*	3	105.8	11588	3.28	3.07	2.96	2.75	2.64	2.21	1.44
*	4	144.9	15874	4.52	4.23	4.09	3.81	3.62	3.05	1.97
*	4	145.8	15978	4.55	4.26	4.11	3.86	3.65	3.07	1.99
*	4	145.4	15926	4.54	4.26	4.11	3.84	3.66	3.07	2.00
*	4	145.2	15910	4.54	4.26	4.11	3.85	3.64	3.07	1.98

Stn: 461 Lane:J1 Temp: J/C: Air: 48 PvT: 52 10:03

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	106.1	11624	3.57	3.37	3.24	3.03	2.83	2.39	1.56
	C	106.1	11620	3.57	3.37	3.24	3.02	2.81	2.38	1.55
	C	106.4	11659	3.59	3.37	3.24	3.03	2.81	2.39	1.55
*	2	79.3	8692	2.65	2.49	2.40	2.24	2.09	1.76	1.14
*	2	79.6	8720	2.65	2.50	2.40	2.24	2.09	1.76	1.15
*	2	79.7	8736	2.65	2.50	2.41	2.24	2.09	1.77	1.14
*	2	79.7	8732	2.66	2.51	2.41	2.25	2.09	1.77	1.16
*	3	105.8	11588	3.56	3.36	3.22	3.01	2.80	2.37	1.54
*	3	106.2	11640	3.59	3.37	3.24	3.02	2.83	2.38	1.55
*	3	106.2	11640	3.59	3.38	3.25	3.02	2.84	2.39	1.59
*	3	106.1	11620	3.59	3.37	3.24	3.02	2.85	2.39	1.56
*	4	145.4	15926	4.93	4.66	4.48	4.19	3.94	3.32	2.16
*	4	145.5	15946	4.94	4.67	4.48	4.20	3.93	3.33	2.18
*	4	145.5	15946	4.95	4.67	4.49	4.20	3.93	3.33	2.19
*	4	145.2	15910	4.96	4.68	4.49	4.20	3.92	3.33	2.18

Stn: 476 Lane:J1 Temp: J/C: Air: 48 PvT: 53 10:05

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.6	11457	3.52	3.24	3.11	2.91	2.72	2.31	1.52
	C	104.4	11437	3.54	3.25	3.12	2.90	2.72	2.30	1.54
	C	104.2	11417	3.54	3.26	3.14	2.92	2.73	2.31	1.54
*	2	78.7	8624	2.65	2.43	2.34	2.19	2.04	1.73	1.16
*	2	78.7	8624	2.64	2.44	2.34	2.19	2.04	1.72	1.14
*	2	78.6	8616	2.62	2.43	2.34	2.18	2.03	1.70	1.12
*	2	78.8	8636	2.62	2.43	2.34	2.19	2.05	1.72	1.13
*	3	105.1	11512	3.54	3.27	3.15	2.93	2.75	2.32	1.54
*	3	104.8	11485	3.54	3.27	3.15	2.93	2.73	2.31	1.53
*	3	104.8	11485	3.52	3.26	3.15	2.94	2.74	2.31	1.53
*	3	104.8	11481	3.54	3.27	3.13	2.93	2.74	2.31	1.55
*	4	144.9	15878	4.90	4.54	4.37	4.08	3.81	3.22	2.14
*	4	144.2	15803	4.86	4.52	4.35	4.08	3.81	3.22	2.16
*	4	144.2	15803	4.90	4.53	4.36	4.07	3.81	3.22	2.14
*	4	144.1	15791	4.92	4.55	4.37	4.07	3.80	3.20	2.13

Stn: 493 Lane:J1 Temp: J/C: Air: 49 PvT: 53 10:07

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.3	11532	3.37	3.19	3.11	2.90	2.78	2.40	1.66
	C	105.3	11540	3.36	3.18	3.11	2.91	2.81	2.41	1.66
	C	105.4	11552	3.36	3.20	3.11	2.91	2.79	2.40	1.65
*	2	79.0	8652	2.49	2.36	2.31	2.17	2.09	1.80	1.24
*	2	79.2	8680	2.57	2.43	2.37	2.18	2.06	1.78	1.21
*	2	79.4	8696	2.57	2.41	2.33	2.15	2.07	1.80	1.25
*	2	79.8	8740	2.56	2.41	2.33	2.17	2.07	1.79	1.22
*	3	105.0	11500	3.34	3.17	3.09	2.92	2.80	2.41	1.64
*	3	105.3	11536	3.38	3.22	3.15	2.95	2.79	2.39	1.61
*	3	105.4	11548	3.37	3.21	3.16	2.97	2.81	2.40	1.61
*	3	105.6	11568	3.39	3.19	3.10	2.91	2.80	2.42	1.68
*	4	144.9	15874	4.67	4.44	4.34	4.08	3.85	3.31	2.24
*	4	145.5	15942	4.65	4.42	4.30	4.08	3.88	3.34	2.28
*	4	145.2	15910	4.68	4.43	4.29	4.06	3.86	3.35	2.30
*	4	145.4	15930	4.71	4.42	4.30	4.03	3.86	3.33	2.29

File: C:\FWD\DATA\204054D1.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

Stn:		506	Lane:J1	Temp:		J/C:		Air: 49	PvT: 53		10:09
Sta	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7	
	C	105.0	11508	3.45	3.22	3.15	2.93	2.78	2.32	1.51	
	C	105.2	11528	3.46	3.22	3.13	2.93	2.80	2.35	1.54	
	C	105.5	11556	3.54	3.25	3.14	2.91	2.77	2.34	1.54	
*	2	78.9	8640	2.59	2.42	2.35	2.16	2.04	1.72	1.12	
*	2	78.8	8632	2.56	2.40	2.32	2.16	2.05	1.72	1.15	
*	2	79.0	8656	2.58	2.41	2.34	2.15	2.06	1.73	1.13	
*	2	79.0	8652	2.55	2.41	2.35	2.17	2.06	1.73	1.12	
*	3	104.9	11489	3.48	3.24	3.13	2.92	2.76	2.33	1.54	
*	3	105.1	11516	3.46	3.24	3.16	2.94	2.79	2.34	1.52	
*	3	105.1	11520	3.50	3.24	3.13	2.93	2.78	2.35	1.55	
*	3	105.1	11516	3.48	3.23	3.12	2.92	2.78	2.35	1.55	
*	4	144.4	15823	4.80	4.52	4.38	4.09	3.83	3.22	2.09	
*	4	144.8	15862	4.80	4.50	4.37	4.10	3.84	3.25	2.12	
*	4	145.2	15910	4.81	4.51	4.36	4.10	3.85	3.26	2.14	
*	4	144.6	15846	4.82	4.53	4.40	4.10	3.85	3.25	2.11	

Stn:		521	Lane:J1	Temp:		J/C:		Air: 49	PvT: 53		10:11
Sta	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7	
	C	105.7	11576	3.28	3.06	2.96	2.77	2.60	2.20	1.44	
	C	105.8	11596	3.30	3.10	2.97	2.78	2.59	2.20	1.44	
	C	105.6	11568	3.30	3.09	2.97	2.77	2.59	2.20	1.44	
*	2	79.0	8656	2.46	2.30	2.21	2.05	1.91	1.61	1.07	
*	2	79.3	8688	2.44	2.29	2.20	2.05	1.93	1.62	1.08	
*	2	79.3	8684	2.46	2.30	2.21	2.06	1.93	1.62	1.07	
*	2	79.3	8688	2.45	2.29	2.20	2.06	1.93	1.63	1.08	
*	3	105.3	11536	3.28	3.07	2.96	2.77	2.60	2.20	1.44	
*	3	105.6	11568	3.32	3.08	2.96	2.77	2.60	2.21	1.46	
*	3	105.8	11588	3.32	3.11	3.00	2.80	2.63	2.22	1.45	
*	3	105.4	11548	3.30	3.10	2.99	2.78	2.60	2.20	1.45	
*	4	145.6	15950	4.56	4.28	4.12	3.86	3.60	3.06	2.01	
*	4	145.5	15938	4.59	4.29	4.12	3.88	3.61	3.07	2.03	
*	4	145.5	15938	4.58	4.29	4.13	3.87	3.61	3.08	2.03	
*	4	145.4	15930	4.56	4.28	4.12	3.86	3.64	3.08	2.03	

Mileage:-.001 -> .099

File: C:\FWD\DATA\20405402.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

FWD S/N : 8002-060
Operator ID : Mulvaney, Ronald S.

Stationing...: Feet

Diameter of Plate: 11.8
Deflector distances : 8 12 18 24 36 60

SHRP TESTING - RIGID/CRCP - BASIN AND EDGE TEST (J0/C0, J1/C1, J2/C2, J3/C3)
Sequence: CCC222233334444

Stn: -23 Lane:J2 Temp: J/C: Air: 48 PvT: 53 10:20

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.2	11524	5.88	5.34	5.02	4.59	4.17	3.36	2.11
	C	105.7	11576	5.80	5.30	5.00	4.56	4.16	3.36	2.11
	C	105.6	11568	5.80	5.31	5.01	4.59	4.19	3.39	2.11
*	2	79.4	8704	4.39	3.99	3.78	3.45	3.14	2.52	1.60
*	2	79.4	8704	4.40	4.00	3.79	3.46	3.15	2.54	1.58
*	2	79.4	8704	4.43	4.00	3.78	3.46	3.15	2.54	1.59
*	2	79.5	8708	4.42	4.03	3.81	3.46	3.15	2.54	1.60
*	3	105.1	11516	5.83	5.30	4.99	4.56	4.16	3.36	2.11
*	3	105.3	11540	5.84	5.32	5.02	4.59	4.19	3.39	2.13
*	3	105.3	11532	5.87	5.31	5.02	4.60	4.18	3.38	2.13
*	3	105.4	11544	5.88	5.33	5.04	4.61	4.20	3.41	2.14
*	4	143.9	15767	8.00	7.21	6.78	6.20	5.66	4.58	2.90
*	4	144.2	15799	8.04	7.28	6.86	6.28	5.76	4.65	2.94
*	4	144.2	15799	8.06	7.29	6.87	6.28	5.71	4.65	2.95
*	4	143.3	15699	8.04	7.26	6.85	6.28	5.72	4.63	2.94

Stn:- 15 Lane:J3 Temp: J/C: Air: 49 PvT: 53 10:22

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	106.4	11659	5.28	4.98	4.81	4.50	4.17	3.45	2.11
	C	106.3	11643	5.23	4.96	4.79	4.47	4.14	3.43	2.09
	C	106.7	11695	5.27	4.98	4.81	4.50	4.17	3.43	2.09
*	2	80.0	8767	3.96	3.72	3.61	3.37	3.11	2.56	1.57
*	2	80.2	8787	3.98	3.73	3.61	3.37	3.13	2.56	1.57
*	2	80.2	8783	3.95	3.72	3.61	3.36	3.12	2.54	1.56
*	2	80.2	8783	3.94	3.72	3.60	3.36	3.11	2.54	1.55
*	3	106.2	11632	5.25	4.96	4.80	4.48	4.15	3.41	2.09
*	3	106.0	11612	5.25	4.97	4.80	4.48	4.14	3.42	2.10
*	3	106.0	11616	5.25	4.96	4.80	4.49	4.16	3.42	2.09
*	3	106.1	11628	5.26	4.97	4.80	4.49	4.16	3.43	2.10
*	4	145.3	15918	7.19	6.79	6.56	6.13	5.70	4.71	2.90
*	4	145.3	15922	7.20	6.81	6.57	6.15	5.70	4.73	2.91
*	4	144.9	15874	7.21	6.81	6.57	6.14	5.70	4.72	2.91
*	4	145.5	15946	7.22	6.83	6.59	6.19	5.73	4.74	2.92

Stn: -8 Lane:J2 Temp: J/C: Air: 48 PvT: 53 10:25

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.8	11596	6.65	5.78	5.37	4.76	4.22	3.35	2.00
	C	106.3	11651	6.52	5.65	5.26	4.67	4.15	3.28	1.98
	C	106.1	11624	6.50	5.65	5.25	4.66	4.16	3.28	1.97
*	2	79.8	8744	4.95	4.27	3.96	3.52	3.09	2.43	1.45
*	2	79.8	8748	4.94	4.26	3.96	3.51	3.10	2.43	1.44
*	2	79.8	8740	4.94	4.28	3.96	3.52	3.09	2.44	1.46
*	2	80.0	8763	4.94	4.28	3.95	3.54	3.07	2.41	1.46
*	3	105.8	11592	6.52	5.65	5.24	4.67	4.14	3.28	1.97
*	3	106.0	11616	6.55	5.68	5.27	4.69	4.15	3.26	1.97
*	3	105.9	11604	6.56	5.67	5.27	4.67	4.17	3.29	1.98
*	3	105.9	11604	6.57	5.69	5.28	4.69	4.19	3.31	2.00
*	4	144.7	15858	8.98	7.80	7.22	6.47	5.71	4.53	2.77
*	4	144.7	15858	9.03	7.83	7.26	6.47	5.75	4.56	2.78
*	4	144.8	15866	9.12	7.89	7.31	6.52	5.78	4.58	2.82
*	4	145.4	15930	9.10	7.90	7.32	6.52	5.80	4.61	2.82

Stn:- 5 Lane:J3 Temp: J/C: Air: 48 PvT: 52 10:28

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	106.0	11616	5.22	4.94	4.79	4.50	4.19	3.53	2.28

File: C:\FWD\DATA\204054D2.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

	C	106.0	11612	5.18	4.93	4.78	4.50	4.18	3.52	2.28
	C	105.8	11592	5.20	4.94	4.78	4.50	4.18	3.53	2.28
*	2	79.4	8700	3.88	3.72	3.59	3.38	3.12	2.64	1.69
*	2	79.4	8696	3.91	3.71	3.58	3.36	3.11	2.63	1.69
*	2	79.5	8712	3.89	3.71	3.58	3.35	3.10	2.61	1.67
*	2	79.7	8732	3.90	3.72	3.60	3.38	3.13	2.64	1.69
*	3	105.2	11528	5.17	4.93	4.76	4.48	4.15	3.51	2.26
*	3	105.7	11580	5.20	4.96	4.78	4.49	4.16	3.51	2.27
*	3	106.2	11636	5.22	4.99	4.81	4.52	4.19	3.54	2.30
*	3	105.9	11600	5.18	4.96	4.80	4.52	4.20	3.55	2.30
*	4	143.8	15751	7.13	6.78	6.56	6.17	5.73	4.86	3.17
*	4	144.4	15819	7.15	6.83	6.59	6.21	5.77	4.89	3.18
*	4	144.5	15827	7.18	6.84	6.61	6.24	5.80	4.92	3.20
*	4	144.1	15783	7.16	6.83	6.59	6.22	5.78	4.90	3.19

Stn: 5 Lane:J2 Temp: J/C: Air: 48 PvT: 52 10:31

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.1	11520	6.17	5.75	5.46	4.96	4.59	3.76	2.32
	C	105.6	11568	6.19	5.74	5.46	4.98	4.60	3.77	2.34
	C	105.8	11592	6.22	5.75	5.47	4.99	4.60	3.79	2.35
*	2	79.6	8720	4.65	4.30	4.09	3.73	3.43	2.80	1.74
*	2	79.6	8724	4.65	4.30	4.09	3.72	3.43	2.80	1.74
*	2	79.9	8755	4.66	4.31	4.09	3.73	3.44	2.79	1.74
*	2	79.9	8755	4.63	4.31	4.10	3.74	3.44	2.78	1.74
*	3	105.4	11548	6.17	5.72	5.44	4.95	4.58	3.77	2.33
*	3	105.7	11584	6.22	5.76	5.48	4.99	4.61	3.80	2.35
*	3	105.5	11556	6.21	5.76	5.47	4.99	4.60	3.78	2.35
*	3	105.6	11572	6.21	5.75	5.47	4.98	4.60	3.78	2.34
*	4	145.5	15942	8.68	8.03	7.63	7.00	6.41	5.23	3.27
*	4	144.9	15870	8.67	8.01	7.61	6.96	6.40	5.25	3.29
*	4	144.7	15854	8.69	8.02	7.62	6.98	6.41	5.26	3.30
*	4	144.8	15866	8.69	8.03	7.64	6.99	6.43	5.27	3.30

Stn: 14 Lane:J3 Temp: J/C: Air: 48 PvT: 52 10:33

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.1	11512	6.20	5.89	5.71	5.32	4.87	3.98	2.26
	C	104.8	11485	6.20	5.91	5.71	5.32	4.87	3.98	2.23
	C	104.9	11493	6.22	5.93	5.75	5.36	4.89	3.99	2.25
*	2	78.9	8644	4.76	4.51	4.38	4.07	3.72	3.04	1.69
*	2	79.2	8676	4.77	4.54	4.39	4.09	3.74	3.05	1.69
*	2	79.2	8672	4.77	4.54	4.40	4.10	3.74	3.05	1.69
*	2	78.9	8648	4.76	4.52	4.39	4.09	3.72	3.04	1.69
*	3	104.7	11477	6.26	5.93	5.77	5.37	4.90	4.01	2.26
*	3	105.1	11512	6.31	5.99	5.81	5.41	4.95	4.04	2.27
*	3	105.1	11520	6.30	6.00	5.83	5.43	4.96	4.06	2.28
*	3	105.0	11508	6.32	6.01	5.83	5.43	4.96	4.06	2.28
*	4	144.3	15811	8.53	8.14	7.87	7.34	6.74	5.53	3.15
*	4	144.5	15831	8.61	8.21	7.94	7.41	6.80	5.59	3.18
*	4	144.1	15787	8.61	8.22	7.95	7.43	6.80	5.58	3.19
*	4	144.0	15775	8.64	8.24	7.98	7.46	6.82	5.60	3.19

Stn: 20 Lane:J2 Temp: J/C: Air: 48 PvT: 52 10:35

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.7	11469	8.94	7.59	6.94	6.06	5.24	3.83	2.13
	C	104.8	11481	8.92	7.53	6.89	6.02	5.20	3.78	2.12
	C	104.9	11489	9.02	7.62	6.97	6.07	5.24	3.81	2.12
*	2	79.0	8660	6.92	5.82	5.33	4.63	4.00	2.89	1.58
*	2	78.8	8636	6.91	5.79	5.30	4.64	4.01	2.89	1.58
*	2	79.0	8652	6.92	5.83	5.33	4.64	4.00	2.88	1.59
*	2	78.9	8644	6.93	5.83	5.33	4.65	4.00	2.89	1.59
*	3	104.4	11437	9.14	7.71	7.04	6.14	5.30	3.84	2.11
*	3	105.0	11504	9.24	7.80	7.12	6.21	5.36	3.89	2.15
*	3	105.0	11500	9.30	7.84	7.17	6.24	5.39	3.89	2.15
*	3	104.8	11481	9.33	7.85	7.17	6.26	5.40	3.90	2.16
*	4	143.5	15727	12.73	10.76	9.83	8.54	7.36	5.36	2.99
*	4	143.7	15743	12.84	10.86	9.92	8.61	7.41	5.39	2.99
*	4	143.8	15751	12.88	10.89	9.94	8.65	7.46	5.43	3.01
*	4	143.7	15747	12.91	10.92	9.97	8.68	7.48	5.43	3.02

File: C:\FWD\DATA\204054D2.FWD
Road: I-70 WESTBOUND 5 MILES EAST OF ABILENE KS
Subsection: 204054

Stn: 29 Lane:J3 Temp: J/C: Air: 47 PvT: 52 10:38

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.6	11457	7.06	6.77	6.60	6.17	5.82	4.76	2.37
	C	104.8	11481	7.07	6.80	6.61	6.19	5.81	4.75	2.34
	C	105.5	11564	7.19	6.87	6.69	6.25	5.89	4.81	2.39
*	2	78.9	8648	5.47	5.19	5.06	4.72	4.46	3.61	1.75
*	2	79.2	8676	5.45	5.21	5.08	4.73	4.47	3.63	1.77
*	2	79.6	8724	5.48	5.22	5.08	4.74	4.49	3.63	1.76
*	2	79.5	8708	5.45	5.22	5.09	4.75	4.47	3.63	1.75
*	3	105.0	11504	7.18	6.92	6.72	6.29	5.90	4.82	2.39
*	3	105.2	11524	7.22	6.93	6.74	6.30	5.91	4.83	2.37
*	3	104.9	11493	7.18	6.93	6.74	6.30	5.93	4.85	2.38
*	3	104.9	11497	7.19	6.91	6.72	6.28	5.91	4.84	2.40
*	4	144.5	15835	9.79	9.44	9.17	8.60	8.05	6.63	3.29
*	4	146.1	16005	9.94	9.59	9.31	8.76	8.19	6.73	3.36
*	4	145.6	15950	9.98	9.62	9.34	8.76	8.20	6.74	3.38
*	4	144.3	15811	9.93	9.57	9.30	8.72	8.17	6.71	3.33

Stn: 35 Lane:J2 Temp: J/C: Air: 48 PvT: 52 10:41

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.8	11485	9.63	8.56	8.03	7.07	6.29	4.84	2.77
	C	104.8	11485	9.55	8.51	7.98	7.05	6.26	4.85	2.80
	C	105.2	11524	9.61	8.56	8.03	7.11	6.30	4.89	2.83
*	2	79.5	8712	7.28	6.50	6.10	5.39	4.78	3.69	2.12
*	2	79.7	8728	7.30	6.52	6.10	5.42	4.77	3.70	2.13
*	2	79.6	8720	7.31	6.51	6.11	5.41	4.78	3.70	2.12
*	2	79.3	8684	7.30	6.50	6.09	5.37	4.76	3.69	2.12
*	3	104.8	11485	9.59	8.54	8.02	7.09	6.30	4.89	2.84
*	3	105.2	11524	9.64	8.60	8.08	7.13	6.36	4.94	2.85
*	3	105.0	11500	9.65	8.60	8.07	7.13	6.35	4.93	2.87
*	3	104.8	11481	9.65	8.59	8.07	7.12	6.35	4.93	2.87
*	4	144.4	15819	13.02	11.60	10.89	9.67	8.61	6.72	3.94
*	4	143.8	15759	13.01	11.57	10.86	9.65	8.60	6.73	3.97
*	4	143.8	15759	13.01	11.58	10.88	9.66	8.62	6.74	3.99
*	4	143.6	15731	13.03	11.59	10.89	9.65	8.62	6.76	4.00

Stn: 44 Lane:J3 Temp: J/C: Air: 48 PvT: 52 10:44

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.6	11461	7.39	6.95	6.68	6.15	5.61	4.49	2.40
	C	104.8	11485	7.42	6.98	6.71	6.16	5.63	4.50	2.41
	C	104.8	11481	7.47	7.01	6.74	6.20	5.66	4.52	2.40
*	2	78.6	8608	5.70	5.34	5.13	4.72	4.30	3.43	1.80
*	2	78.9	8640	5.71	5.35	5.14	4.74	4.30	3.44	1.82
*	2	78.7	8620	5.69	5.33	5.14	4.72	4.30	3.43	1.81
*	2	78.9	8648	5.72	5.35	5.13	4.72	4.31	3.44	1.82
*	3	104.4	11437	7.48	7.03	6.76	6.22	5.67	4.52	2.39
*	3	104.7	11469	7.54	7.09	6.81	6.28	5.71	4.55	2.41
*	3	104.9	11489	7.58	7.10	6.83	6.28	5.73	4.57	2.43
*	3	104.9	11497	7.56	7.11	6.84	6.29	5.74	4.58	2.43
*	4	143.9	15763	10.27	9.66	9.28	8.56	7.81	6.25	3.35
*	4	143.9	15763	10.34	9.72	9.33	8.63	7.85	6.29	3.37
*	4	143.6	15731	10.37	9.74	9.35	8.63	7.87	6.31	3.37
*	4	143.5	15727	10.38	9.75	9.37	8.64	7.89	6.33	3.37

Stn: 50 Lane:J2 Temp: J/C: Air: 48 PvT: 52 10:46

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.7	11469	7.72	7.14	6.76	6.08	5.57	4.40	2.57
	C	104.9	11497	7.72	7.13	6.75	6.08	5.55	4.39	2.56
	C	104.7	11477	7.75	7.15	6.78	6.11	5.59	4.42	2.59
*	2	78.5	8597	5.81	5.38	5.11	4.58	4.22	3.35	1.96
*	2	78.7	8620	5.84	5.41	5.13	4.63	4.20	3.34	1.98
*	2	78.6	8616	5.85	5.40	5.13	4.61	4.23	3.36	1.97
*	2	78.7	8624	5.83	5.40	5.12	4.63	4.22	3.35	1.96
*	3	104.5	11453	7.75	7.16	6.79	6.13	5.58	4.42	2.60
*	3	104.6	11461	7.79	7.19	6.81	6.14	5.61	4.45	2.62
*	3	104.6	11461	7.79	7.20	6.82	6.16	5.62	4.45	2.62
*	3	104.9	11489	7.81	7.22	6.84	6.17	5.64	4.46	2.63
*	4	143.9	15767	10.67	9.88	9.35	8.47	7.69	6.08	3.60
*	4	144.7	15850	10.76	9.96	9.43	8.53	7.75	6.14	3.62
*	4	144.4	15823	10.78	9.98	9.45	8.53	7.80	6.17	3.65
*	4	144.5	15827	10.82	10.00	9.47	8.56	7.81	6.20	3.67

File: C:\FWD\DATA\20405402.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

Stn:		58	Lane:J3	Temp:		J/C:	Air: 49		PvT: 53		10:48
Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7	
	C	105.0	11500	6.39	6.12	5.88	5.47	5.05	4.13	2.46	
	C	105.1	11512	6.48	6.19	5.95	5.53	5.09	4.17	2.48	
	C	104.8	11481	6.48	6.21	5.96	5.55	5.11	4.18	2.46	
*	2	78.5	8605	5.08	4.86	4.68	4.34	3.98	3.24	1.90	
*	2	78.7	8624	5.09	4.86	4.67	4.34	3.98	3.24	1.87	
*	2	78.8	8628	5.09	4.86	4.67	4.33	3.98	3.24	1.89	
*	2	78.5	8605	5.09	4.87	4.67	4.33	3.98	3.24	1.89	
*	3	104.4	11437	6.48	6.22	5.99	5.57	5.13	4.20	2.49	
*	3	105.0	11508	6.52	6.25	6.02	5.61	5.15	4.22	2.47	
*	3	104.8	11485	6.53	6.26	6.03	5.60	5.16	4.22	2.51	
*	3	104.7	11477	6.52	6.27	6.03	5.62	5.19	4.24	2.51	
*	4	143.8	15755	8.54	8.21	7.92	7.40	6.84	5.65	3.41	
*	4	144.0	15775	8.57	8.25	7.95	7.43	6.88	5.67	3.42	
*	4	144.0	15779	8.57	8.25	7.95	7.43	6.88	5.68	3.43	
*	4	144.2	15799	8.60	8.28	7.98	7.46	6.91	5.70	3.44	

Stn:		65	Lane:J2	Temp:		J/C:	Air: 48		PvT: 53		10:51
Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7	
	C	104.6	11461	8.49	7.63	7.17	6.50	5.89	4.65	2.78	
	C	104.7	11469	8.37	7.54	7.08	6.44	5.84	4.65	2.81	
	C	104.5	11453	8.37	7.54	7.08	6.45	5.84	4.66	2.83	
*	2	78.5	8601	6.29	5.66	5.32	4.85	4.41	3.50	2.12	
*	2	78.4	8585	6.28	5.66	5.33	4.87	4.44	3.51	2.13	
*	2	79.0	8652	6.31	5.69	5.35	4.90	4.48	3.54	2.14	
*	2	78.6	8608	6.30	5.68	5.33	4.87	4.45	3.52	2.13	
*	3	104.1	11405	8.33	7.52	7.06	6.45	5.86	4.65	2.83	
*	3	104.4	11437	8.46	7.63	7.18	6.56	5.96	4.74	2.89	
*	3	104.4	11437	8.41	7.56	7.10	6.47	5.86	4.67	2.84	
*	3	104.4	11437	8.37	7.56	7.09	6.47	5.89	4.67	2.84	
*	4	143.2	15692	11.47	10.31	9.68	8.81	8.00	6.35	3.84	
*	4	144.0	15779	11.55	10.39	9.76	8.89	8.06	6.41	3.90	
*	4	143.9	15763	11.57	10.40	9.76	8.89	8.06	6.42	3.91	
*	4	143.4	15715	11.55	10.39	9.75	8.89	8.07	6.43	3.91	

Stn:		74	Lane:J3	Temp:		J/C:	Air: 49		PvT: 53		10:53
Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7	
	C	103.5	11342	7.93	7.70	7.45	7.06	6.64	5.59	3.78	
	C	104.1	11409	7.99	7.74	7.50	7.08	6.65	5.62	3.76	
	C	104.2	11413	8.03	7.81	7.58	7.16	6.72	5.67	3.80	
*	2	78.1	8553	6.09	5.90	5.74	5.41	5.08	4.29	2.84	
*	2	78.2	8565	6.11	5.92	5.74	5.43	5.09	4.30	2.85	
*	2	78.4	8585	6.12	5.92	5.75	5.41	5.08	4.29	2.85	
*	2	78.0	8545	6.11	5.91	5.74	5.42	5.08	4.28	2.83	
*	3	104.0	11397	8.07	7.80	7.57	7.16	6.70	5.71	3.83	
*	3	104.1	11409	8.14	7.89	7.65	7.23	6.80	5.74	3.85	
*	3	104.2	11413	8.15	7.91	7.67	7.26	6.82	5.77	3.89	
*	3	104.1	11401	8.16	7.91	7.68	7.26	6.83	5.78	3.91	
*	4	142.5	15608	11.10	10.76	10.43	9.86	9.29	7.89	5.42	
*	4	143.0	15664	11.20	10.85	10.52	9.98	9.38	7.98	5.50	
*	4	143.0	15668	11.24	10.89	10.57	10.01	9.42	8.04	5.53	
*	4	143.0	15664	11.28	10.94	10.61	10.04	9.46	8.07	5.57	

Stn:		95	Lane:J2	Temp:		J/C:	Air: 49		PvT: 53		10:55
Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7	
	C	105.0	11504	7.94	7.09	6.66	5.94	5.30	4.03	2.26	
	C	105.0	11500	7.90	7.09	6.66	5.93	5.31	4.02	2.20	
	C	104.6	11465	7.94	7.12	6.70	5.97	5.35	4.04	2.20	
*	2	78.5	8597	6.17	5.56	5.22	4.65	4.10	3.11	1.67	
*	2	78.7	8624	6.22	5.56	5.23	4.66	4.12	3.11	1.68	
*	2	78.8	8632	6.24	5.57	5.24	4.67	4.14	3.12	1.69	
*	2	78.8	8632	6.22	5.57	5.24	4.67	4.15	3.12	1.66	
*	3	104.5	11453	8.00	7.15	6.72	6.01	5.35	4.06	2.23	
*	3	105.0	11500	8.02	7.19	6.76	6.03	5.41	4.08	2.23	
*	3	104.8	11481	8.05	7.20	6.78	6.05	5.41	4.09	2.24	
*	3	104.7	11469	8.06	7.21	6.78	6.05	5.41	4.09	2.24	
*	4	144.1	15783	10.69	9.57	8.99	8.06	7.21	5.50	3.07	
*	4	144.3	15815	10.72	9.61	9.04	8.10	7.25	5.53	3.07	

File: C:\FWD\DATA\20405402.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	4	143.9	15763	10.72	9.60	9.03	8.12	7.26	5.53	3.07
*	4	143.8	15759	10.78	9.64	9.06	8.12	7.26	5.55	3.09

Stn: 103 Lane:J3 Temp: J/C: Air: 48 PvT: 53 11:02

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.4	11548	5.89	5.52	5.26	4.85	4.40	3.52	1.98
	C	105.9	11600	5.90	5.53	5.26	4.85	4.40	3.50	1.94
	C	105.6	11568	5.94	5.57	5.30	4.88	4.43	3.52	1.96
*	2	79.2	8676	4.53	4.22	4.03	3.70	3.33	2.64	1.46
*	2	79.3	8688	4.52	4.22	4.00	3.68	3.33	2.63	1.44
*	2	79.2	8676	4.53	4.22	4.03	3.70	3.33	2.63	1.45
*	2	79.3	8684	4.56	4.24	4.03	3.70	3.36	2.66	1.46
*	3	105.2	11524	5.98	5.59	5.32	4.89	4.43	3.52	1.97
*	3	105.6	11572	6.01	5.62	5.34	4.92	4.47	3.55	1.97
*	3	105.4	11548	6.01	5.63	5.36	4.93	4.47	3.55	1.97
*	3	105.5	11560	6.03	5.65	5.38	4.94	4.48	3.56	1.97
*	4	144.2	15803	8.17	7.67	7.31	6.74	6.11	4.87	2.73
*	4	144.6	15846	8.26	7.74	7.37	6.79	6.17	4.93	2.74
*	4	144.9	15874	8.30	7.79	7.41	6.83	6.20	4.95	2.76
*	4	144.4	15823	8.31	7.80	7.43	6.85	6.23	4.95	2.76

Stn: 110 Lane:J2 Temp: J/C: Air: 48 PvT: 53 11:04

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.5	11564	7.00	6.22	5.85	5.21	4.66	3.61	2.07
	C	105.6	11572	7.08	6.29	5.90	5.25	4.69	3.63	2.07
	C	105.5	11564	7.15	6.35	5.96	5.30	4.73	3.65	2.09
*	2	79.1	8668	5.55	4.92	4.61	4.09	3.64	2.80	1.57
*	2	79.6	8720	5.57	4.94	4.63	4.13	3.64	2.82	1.59
*	2	79.4	8696	5.59	4.96	4.65	4.14	3.65	2.82	1.59
*	2	79.6	8724	5.61	4.97	4.65	4.14	3.67	2.83	1.59
*	3	105.2	11524	7.25	6.44	6.03	5.37	4.78	3.69	2.11
*	3	105.6	11572	7.32	6.49	6.09	5.41	4.81	3.72	2.14
*	3	105.6	11572	7.34	6.53	6.11	5.44	4.83	3.74	2.13
*	3	105.9	11600	7.39	6.56	6.14	5.46	4.85	3.75	2.14
*	4	144.4	15823	9.94	8.85	8.29	7.40	6.60	5.10	2.91
*	4	144.5	15827	10.05	8.93	8.36	7.46	6.65	5.14	2.93
*	4	144.1	15791	10.12	8.99	8.41	7.51	6.69	5.17	2.94
*	4	143.8	15755	10.14	9.01	8.43	7.53	6.69	5.17	2.93

Stn: 119 Lane:J3 Temp: J/C: Air: 49 PvT: 52 11:07

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.8	11596	5.86	5.60	5.38	4.98	4.51	3.60	1.93
	C	105.8	11596	5.88	5.60	5.37	4.96	4.49	3.59	1.91
	C	105.5	11564	5.91	5.61	5.39	4.98	4.52	3.60	1.93
*	2	79.6	8720	4.44	4.23	4.07	3.75	3.40	2.70	1.41
*	2	79.7	8728	4.42	4.22	4.06	3.74	3.39	2.69	1.41
*	2	79.9	8751	4.44	4.25	4.08	3.76	3.41	2.70	1.41
*	2	79.8	8748	4.44	4.23	4.07	3.76	3.39	2.70	1.41
*	3	105.7	11584	5.90	5.63	5.41	5.00	4.53	3.61	1.96
*	3	106.6	11675	5.98	5.69	5.46	5.04	4.58	3.65	1.98
*	3	105.8	11596	5.92	5.67	5.44	5.02	4.56	3.63	1.96
*	3	106.0	11612	5.93	5.67	5.44	5.03	4.56	3.64	1.96
*	4	145.2	15914	8.14	7.78	7.46	6.94	6.31	5.03	2.78
*	4	145.9	15989	8.22	7.85	7.52	6.96	6.35	5.07	2.78
*	4	145.2	15914	8.22	7.85	7.53	6.98	6.35	5.07	2.81
*	4	145.9	15982	8.27	7.89	7.56	7.00	6.38	5.09	2.80

Stn: 154 Lane:J2 Temp: J/C: Air: 48 PvT: 53 11:09

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.3	11425	8.15	7.29	6.83	6.11	5.49	4.21	2.44
	C	104.7	11473	8.02	7.20	6.75	6.08	5.47	4.22	2.48
	C	104.7	11477	8.06	7.24	6.79	6.11	5.50	4.26	2.50
*	2	79.2	8680	6.19	5.59	5.24	4.73	4.26	3.30	1.93
*	2	79.3	8692	6.23	5.59	5.24	4.74	4.25	3.30	1.93
*	2	79.4	8700	6.26	5.60	5.26	4.73	4.25	3.32	1.94
*	2	79.4	8696	6.25	5.60	5.27	4.75	4.28	3.33	1.95
*	3	104.4	11437	8.11	7.27	6.84	6.15	5.55	4.30	2.54
*	3	105.0	11500	8.16	7.35	6.90	6.22	5.61	4.35	2.57
*	3	104.8	11481	8.19	7.35	6.92	6.23	5.63	4.36	2.57
*	3	105.0	11508	8.21	7.37	6.94	6.24	5.64	4.37	2.57
*	4	141.6	15513	11.07	9.87	9.26	8.33	7.51	5.82	3.44

File: C:\FWD\DATA\2040S4D2.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	4	142.4	15600	11.17	10.00	9.37	8.44	7.61	5.94	3.52
*	4	141.9	15545	11.21	10.02	9.40	8.48	7.65	5.94	3.53
*	4	141.8	15533	11.25	10.07	9.45	8.51	7.67	5.99	3.56

Stn: 161 Lane:J3 Temp: J/C: Air: 48 PvT: 53 11:11

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.4	11437	6.35	6.06	5.87	5.45	5.10	4.22	2.60
	C	104.8	11485	6.36	6.11	5.91	5.48	5.14	4.24	2.59
	C	104.8	11485	6.42	6.15	5.95	5.52	5.19	4.28	2.62
*	2	78.6	8608	4.90	4.71	4.56	4.22	3.94	3.25	1.97
*	2	78.8	8628	4.94	4.72	4.57	4.24	3.96	3.27	2.00
*	2	78.6	8616	4.93	4.72	4.57	4.25	3.95	3.26	2.00
*	2	78.8	8636	4.94	4.73	4.57	4.24	3.95	3.26	2.00
*	3	104.3	11429	6.44	6.17	5.97	5.52	5.20	4.30	2.64
*	3	104.7	11473	6.47	6.20	6.00	5.57	5.22	4.32	2.65
*	3	104.9	11493	6.51	6.23	6.02	5.59	5.25	4.35	2.67
*	3	104.8	11485	6.50	6.24	6.03	5.61	5.24	4.35	2.67
*	4	143.1	15680	8.56	8.19	7.91	7.39	6.93	5.77	3.58
*	4	143.8	15759	8.60	8.24	7.96	7.44	6.98	5.81	3.61
*	4	143.7	15747	8.61	8.24	7.97	7.44	6.99	5.83	3.63
*	4	143.2	15692	8.59	8.22	7.95	7.42	6.97	5.81	3.61

Stn: 168 Lane:J2 Temp: J/C: Air: 49 PvT: 53 11:13

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	103.9	11381	8.28	7.55	7.12	6.52	5.94	4.78	2.86
	C	104.1	11401	8.18	7.47	7.05	6.46	5.88	4.70	2.83
	C	104.2	11417	8.20	7.48	7.06	6.47	5.90	4.71	2.85
*	2	78.1	8561	6.51	5.96	5.59	5.10	4.69	3.75	2.23
*	2	78.4	8589	6.50	5.95	5.59	5.11	4.69	3.74	2.23
*	2	78.2	8569	6.51	5.95	5.60	5.12	4.68	3.72	2.23
*	2	78.2	8565	6.50	5.96	5.60	5.12	4.69	3.73	2.23
*	3	104.0	11393	8.20	7.48	7.03	6.44	5.92	4.77	2.87
*	3	104.5	11445	8.24	7.53	7.05	6.47	5.95	4.77	2.89
*	3	104.2	11417	8.22	7.52	7.06	6.48	5.94	4.74	2.87
*	3	104.4	11433	8.21	7.50	7.06	6.46	5.93	4.73	2.86
*	4	142.1	15572	10.58	9.69	9.12	8.36	7.66	6.21	3.78
*	4	142.5	15608	10.63	9.74	9.17	8.39	7.72	6.30	3.81
*	4	142.3	15596	10.67	9.76	9.20	8.43	7.71	6.24	3.81
*	4	142.2	15584	10.67	9.76	9.20	8.43	7.71	6.23	3.81

Stn: 177 Lane:J3 Temp: J/C: Air: 49 PvT: 53 11:16

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.1	11409	7.26	6.81	6.61	6.11	5.63	4.57	2.65
	C	104.2	11417	7.32	6.86	6.65	6.15	5.67	4.59	2.64
	C	104.2	11417	7.37	6.93	6.71	6.21	5.72	4.63	2.66
*	2	78.1	8557	5.54	5.28	5.12	4.73	4.36	3.53	2.00
*	2	78.4	8585	5.56	5.29	5.14	4.74	4.37	3.53	2.02
*	2	78.2	8573	5.55	5.29	5.14	4.75	4.37	3.54	2.01
*	2	78.2	8565	5.56	5.30	5.14	4.75	4.37	3.54	2.01
*	3	103.7	11361	7.40	6.97	6.73	6.25	5.74	4.68	2.67
*	3	104.1	11405	7.42	6.98	6.77	6.26	5.78	4.67	2.69
*	3	104.1	11401	7.45	7.02	6.80	6.30	5.80	4.70	2.70
*	3	104.2	11421	7.50	7.06	6.83	6.33	5.83	4.74	2.70
*	4	142.2	15584	10.07	9.50	9.20	8.54	7.87	6.39	3.69
*	4	142.7	15640	10.15	9.59	9.28	8.59	7.93	6.45	3.73
*	4	142.0	15560	10.16	9.59	9.29	8.62	7.95	6.45	3.74
*	4	142.6	15620	10.22	9.66	9.35	8.69	8.00	6.50	3.77

Stn: 214 Lane:J2 Temp: J/C: Air: 48 PvT: 54 11:18

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.4	11437	6.86	6.12	5.75	5.19	4.72	3.71	2.31
	C	104.7	11469	6.76	6.03	5.67	5.13	4.72	3.69	2.33
	C	104.4	11437	6.77	6.02	5.67	5.12	4.70	3.68	2.32
*	2	78.0	8545	5.16	4.59	4.31	3.89	3.48	2.79	1.75
*	2	78.4	8593	5.17	4.58	4.31	3.88	3.53	2.79	1.74
*	2	78.8	8632	5.17	4.59	4.31	3.91	3.59	2.80	1.76
*	2	78.4	8585	5.15	4.57	4.30	3.89	3.52	2.79	1.74
*	3	104.0	11397	6.76	6.03	5.68	5.13	4.67	3.69	2.32
*	3	104.4	11437	6.79	6.06	5.70	5.16	4.73	3.70	2.33
*	3	104.4	11441	6.81	6.06	5.70	5.15	4.72	3.71	2.33
*	3	104.2	11413	6.81	6.07	5.71	5.16	4.69	3.71	2.34

File: C:\FWD\DATA\204054D2.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	4	142.8	15648	9.11	8.16	7.68	6.94	6.36	5.03	3.17
*	4	143.6	15735	9.16	8.21	7.73	7.00	6.43	5.07	3.20
*	4	143.8	15751	9.19	8.23	7.74	7.01	6.41	5.07	3.21
*	4	143.0	15668	9.18	8.22	7.74	7.01	6.41	5.08	3.20

Stn: 222 Lane:J3 Temp: J/C: Air: 49 PvT: 54 11:22

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.2	11528	5.36	5.04	4.85	4.50	4.14	3.40	1.97
	C	105.4	11544	5.34	5.02	4.83	4.48	4.14	3.39	1.96
	C	105.0	11504	5.35	5.03	4.84	4.49	4.14	3.39	1.98
*	2	79.0	8656	4.02	3.79	3.64	3.37	3.10	2.52	1.44
*	2	78.8	8632	4.00	3.79	3.65	3.37	3.09	2.50	1.43
*	2	79.2	8676	4.00	3.78	3.64	3.37	3.09	2.51	1.43
*	2	79.1	8668	4.01	3.79	3.65	3.37	3.09	2.51	1.43
*	3	105.3	11540	5.36	5.04	4.84	4.49	4.14	3.39	1.94
*	3	105.1	11520	5.38	5.05	4.86	4.50	4.15	3.39	1.96
*	3	105.3	11536	5.39	5.06	4.87	4.51	4.16	3.39	1.96
*	3	105.3	11532	5.38	5.06	4.87	4.52	4.17	3.43	1.97
*	4	143.7	15739	7.31	6.88	6.61	6.15	5.67	4.66	2.74
*	4	144.3	15807	7.37	6.94	6.68	6.21	5.74	4.71	2.76
*	4	144.5	15835	7.37	6.95	6.68	6.22	5.76	4.72	2.77
*	4	144.5	15827	7.37	6.96	6.69	6.25	5.75	4.71	2.76

Stn: 228 Lane:J2 Temp: J/C: Air: 49 PvT: 53 11:24

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.5	11453	7.33	6.28	5.86	5.19	4.57	3.51	2.08
	C	104.7	11477	7.28	6.25	5.81	5.14	4.54	3.49	2.06
	C	104.5	11453	7.32	6.30	5.85	5.18	4.56	3.51	2.07
*	2	78.4	8589	5.45	4.67	4.36	3.85	3.39	2.59	1.53
*	2	78.5	8601	5.51	4.71	4.38	3.87	3.39	2.61	1.53
*	2	78.6	8608	5.52	4.70	4.38	3.87	3.41	2.61	1.53
*	2	78.5	8605	5.51	4.72	4.39	3.88	3.42	2.62	1.53
*	3	104.4	11433	7.37	6.33	5.89	5.21	4.59	3.52	2.07
*	3	104.8	11481	7.46	6.40	5.94	5.25	4.63	3.55	2.10
*	3	104.5	11445	7.45	6.40	5.95	5.27	4.63	3.56	2.09
*	3	104.6	11465	7.50	6.43	5.98	5.30	4.66	3.57	2.11
*	4	142.6	15620	10.42	8.94	8.29	7.34	6.45	4.97	2.91
*	4	143.1	15676	10.54	9.04	8.39	7.42	6.53	5.02	2.93
*	4	143.4	15715	10.60	9.11	8.46	7.49	6.61	5.06	2.94
*	4	143.5	15719	10.69	9.17	8.51	7.54	6.63	5.09	2.97

Stn: 240 Lane:J3 Temp: J/C: Air: 49 PvT: 53 11:27

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.9	11493	4.28	4.06	3.94	3.69	3.41	2.87	1.74
	C	105.5	11560	4.30	4.06	3.91	3.67	3.41	2.84	1.73
	C	105.3	11536	4.28	4.05	3.92	3.68	3.40	2.85	1.72
*	2	79.4	8704	3.20	3.02	2.93	2.75	2.54	2.14	1.29
*	2	79.5	8708	3.19	3.02	2.93	2.75	2.54	2.15	1.28
*	2	79.4	8700	3.19	3.01	2.92	2.74	2.52	2.15	1.29
*	2	79.4	8700	3.19	3.00	2.93	2.74	2.52	2.13	1.28
*	3	105.2	11524	4.26	4.04	3.91	3.67	3.39	2.87	1.74
*	3	105.4	11552	4.28	4.06	3.92	3.69	3.40	2.85	1.73
*	3	105.1	11516	4.26	4.05	3.92	3.68	3.40	2.87	1.73
*	3	105.1	11516	4.26	4.04	3.91	3.67	3.39	2.85	1.73
*	4	144.0	15779	5.96	5.63	5.44	5.10	4.73	3.98	2.42
*	4	144.3	15811	5.98	5.65	5.47	5.13	4.75	4.01	2.44
*	4	144.3	15807	5.98	5.66	5.48	5.16	4.78	4.06	2.46
*	4	144.0	15779	5.97	5.65	5.46	5.13	4.76	3.99	2.43

Stn: 275 Lane:J2 Temp: J/C: Air: 49 PvT: 55 11:29

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	103.8	11373	6.74	6.04	5.73	5.15	4.74	3.79	2.39
	C	104.1	11401	6.61	5.91	5.63	5.06	4.70	3.77	2.41
	C	104.1	11401	6.61	5.92	5.63	5.06	4.71	3.78	2.41
*	2	77.8	8521	4.94	4.43	4.24	3.78	3.54	2.85	1.80
*	2	78.0	8545	4.96	4.45	4.25	3.81	3.54	2.84	1.77
*	2	77.9	8537	4.96	4.46	4.27	3.82	3.57	2.87	1.80
*	2	77.9	8537	4.96	4.46	4.26	3.81	3.55	2.86	1.83
*	3	103.4	11334	6.59	5.91	5.63	5.06	4.69	3.78	2.41
*	3	103.9	11381	6.64	5.96	5.67	5.10	4.71	3.80	2.41

File: C:\FWD\DATA\204054D2.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	3	104.2	11417	6.65	5.96	5.68	5.11	4.74	3.81	2.42
*	3	103.9	11381	6.63	5.96	5.68	5.10	4.72	3.80	2.42
*	4	141.9	15552	9.13	8.17	7.76	6.96	6.45	5.18	3.29
*	4	142.8	15644	9.15	8.20	7.80	7.03	6.52	5.25	3.35
*	4	143.1	15676	9.16	8.22	7.81	7.04	6.52	5.25	3.37
*	4	142.3	15596	9.19	8.25	7.84	7.06	6.54	5.26	3.37

Stn: 286 Lane:J3 Temp: J/C: Air: 51 PvT: 54 11:32

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	103.2	11306	6.00	5.74	5.57	5.26	4.92	4.10	2.54
	C	103.5	11338	6.04	5.73	5.56	5.25	4.89	4.07	2.52
	C	103.7	11357	6.07	5.80	5.61	5.31	4.94	4.10	2.53
*	2	77.7	8509	4.59	4.39	4.25	4.00	3.72	3.08	1.87
*	2	77.8	8529	4.57	4.38	4.26	4.01	3.72	3.09	1.88
*	2	77.7	8513	4.59	4.38	4.26	4.01	3.72	3.08	1.88
*	2	77.8	8521	4.60	4.39	4.27	4.02	3.72	3.09	1.87
*	3	103.2	11310	6.05	5.77	5.60	5.28	4.91	4.08	2.52
*	3	104.3	11429	6.17	5.85	5.68	5.36	4.98	4.13	2.57
*	3	103.8	11373	6.13	5.85	5.67	5.35	4.98	4.14	2.56
*	3	103.6	11350	6.11	5.85	5.68	5.35	4.97	4.13	2.55
*	4	141.9	15552	8.28	7.93	7.69	7.26	6.77	5.65	3.53
*	4	142.5	15612	8.37	8.01	7.76	7.32	6.83	5.70	3.56
*	4	141.8	15537	8.37	8.02	7.77	7.33	6.83	5.71	3.56
*	4	141.6	15509	8.37	8.02	7.78	7.34	6.85	5.70	3.57

Stn: 320 Lane:J2 Temp: J/C: Air: 52 PvT: 56 11:34

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.7	11477	4.87	4.54	4.38	4.10	3.80	3.07	1.95
	C	104.8	11481	4.81	4.50	4.33	4.04	3.72	3.03	1.93
	C	104.6	11457	4.82	4.52	4.34	4.05	3.71	3.03	1.92
*	2	78.8	8628	3.62	3.38	3.26	3.05	2.81	2.27	1.43
*	2	78.7	8624	3.61	3.38	3.27	3.06	2.82	2.29	1.43
*	2	79.1	8668	3.65	3.42	3.29	3.07	2.80	2.29	1.45
*	2	78.9	8648	3.62	3.39	3.28	3.07	2.83	2.29	1.44
*	3	105.0	11508	4.86	4.56	4.38	4.09	3.76	3.06	1.93
*	3	104.8	11485	4.85	4.53	4.37	4.09	3.76	3.06	1.92
*	3	104.7	11469	4.85	4.55	4.38	4.08	3.75	3.06	1.92
*	3	104.7	11477	4.88	4.56	4.39	4.09	3.77	3.07	1.92
*	4	143.9	15771	6.72	6.30	6.05	5.65	5.20	4.23	2.69
*	4	143.7	15739	6.75	6.33	6.08	5.67	5.22	4.25	2.70
*	4	144.3	15811	6.77	6.35	6.10	5.70	5.25	4.27	2.70
*	4	144.0	15779	6.79	6.37	6.12	5.71	5.24	4.27	2.72

Stn: 330 Lane:J3 Temp: J/C: Air: 51 PvT: 57 11:36

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.0	11393	5.20	4.99	4.90	4.61	4.36	3.64	1.07
	C	104.5	11449	5.20	4.94	4.82	4.52	4.24	3.55	1.08
	C	104.0	11397	5.17	4.92	4.80	4.52	4.24	3.54	1.08
*	2	78.5	8597	3.83	3.66	3.57	3.35	3.15	2.61	0.80
*	2	78.5	8601	3.87	3.66	3.57	3.35	3.13	2.60	0.81
*	2	78.7	8624	3.85	3.66	3.58	3.35	3.15	2.60	0.80
*	2	78.6	8616	3.85	3.66	3.58	3.35	3.13	2.61	0.81
*	3	103.9	11381	5.15	4.89	4.80	4.50	4.24	3.52	1.07
*	3	104.4	11437	5.19	4.94	4.81	4.52	4.23	3.54	1.08
*	3	104.4	11437	5.20	4.94	4.83	4.54	4.26	3.56	1.09
*	3	104.2	11413	5.21	4.95	4.83	4.54	4.27	3.56	1.09
*	4	142.9	15656	7.21	6.87	6.70	6.30	5.91	4.97	1.49
*	4	143.5	15723	7.28	6.93	6.78	6.37	6.00	5.03	1.50
*	4	143.7	15743	7.31	6.96	6.80	6.40	6.04	5.05	1.52
*	4	143.8	15751	7.31	6.95	6.79	6.39	6.02	5.04	1.52

Stn: 365 Lane:J2 Temp: J/C: Air: 51 PvT: 56 11:39

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	103.6	11346	7.32	6.50	5.97	5.30	4.63	3.46	2.01
	C	103.6	11346	7.10	6.32	5.80	5.17	4.52	3.39	1.99
	C	103.7	11365	7.11	6.31	5.83	5.15	4.51	3.38	1.99
*	2	77.8	8529	5.31	4.73	4.37	3.86	3.38	2.53	1.48
*	2	78.1	8553	5.33	4.73	4.37	3.87	3.39	2.54	1.48
*	2	78.2	8573	5.33	4.74	4.35	3.87	3.39	2.56	1.49
*	2	78.1	8561	5.37	4.74	4.37	3.88	3.39	2.56	1.50
*	3	103.5	11342	7.07	6.30	5.80	5.15	4.50	3.38	1.98

File: C:\FWD\DATA\204054D2.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	3	103.9	11381	7.11	6.33	5.82	5.18	4.53	3.39	1.99
*	3	104.1	11401	7.14	6.34	5.85	5.18	4.54	3.40	1.98
*	3	103.6	11354	7.11	6.33	5.83	5.17	4.53	3.40	2.00
*	4	142.2	15584	9.88	8.76	8.06	7.16	6.25	4.69	2.73
*	4	143.3	15703	9.92	8.80	8.09	7.20	6.29	4.73	2.76
*	4	143.0	15664	9.94	8.82	8.10	7.22	6.30	4.74	2.77
*	4	142.8	15648	9.93	8.83	8.09	7.23	6.31	4.72	2.76

Stn: 373 Lane:J3 Temp: J/C: Air: 52 PvT: 57 11:41

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.5	11449	5.00	4.80	4.65	4.37	4.06	3.39	2.11
	C	104.5	11453	4.97	4.74	4.60	4.32	4.04	3.37	2.08
	C	104.8	11481	4.99	4.75	4.61	4.33	4.04	3.37	2.07
*	2	79.0	8652	3.75	3.56	3.45	3.24	3.01	2.50	1.52
*	2	78.9	8640	3.72	3.54	3.44	3.24	3.02	2.52	1.54
*	2	78.7	8624	3.72	3.54	3.43	3.23	3.02	2.50	1.53
*	2	78.6	8612	3.72	3.55	3.44	3.23	3.02	2.51	1.52
*	3	104.5	11453	4.97	4.75	4.61	4.33	4.04	3.38	2.09
*	3	104.6	11461	4.98	4.76	4.61	4.34	4.03	3.38	2.08
*	3	105.0	11504	5.00	4.78	4.64	4.36	4.06	3.40	2.10
*	3	104.7	11469	5.01	4.77	4.62	4.35	4.06	3.40	2.10
*	4	143.3	15695	6.91	6.64	6.43	6.06	5.62	4.72	2.96
*	4	143.0	15668	6.93	6.65	6.44	6.06	5.64	4.74	2.96
*	4	143.9	15771	6.94	6.69	6.47	6.09	5.70	4.77	2.99
*	4	143.1	15684	6.94	6.66	6.45	6.06	5.63	4.73	2.98

Stn: 384 Lane:J2 Temp: J/C: Air: 51 PvT: 54 11:43

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.5	11445	8.11	7.13	6.56	5.80	5.09	3.85	2.28
	C	104.5	11453	7.95	6.99	6.43	5.69	4.98	3.78	2.25
	C	104.5	11445	8.02	7.06	6.49	5.74	5.02	3.81	2.26
*	2	78.7	8620	6.05	5.33	4.90	4.33	3.79	2.85	1.69
*	2	79.0	8660	6.11	5.38	4.95	4.37	3.82	2.88	1.69
*	2	78.6	8612	6.08	5.35	4.92	4.35	3.80	2.86	1.67
*	2	78.6	8608	6.09	5.37	4.94	4.37	3.81	2.87	1.67
*	3	104.5	11453	8.16	7.17	6.60	5.83	5.10	3.85	2.27
*	3	104.5	11453	8.21	7.21	6.65	5.87	5.14	3.88	2.29
*	3	104.7	11473	8.26	7.26	6.67	5.90	5.15	3.89	2.28
*	3	104.4	11441	8.25	7.26	6.68	5.90	5.15	3.89	2.28
*	4	142.7	15632	11.45	10.07	9.28	8.19	7.18	5.44	3.23
*	4	143.6	15731	11.57	10.17	9.36	8.27	7.23	5.48	3.23
*	4	143.2	15692	11.63	10.22	9.41	8.31	7.30	5.50	3.25
*	4	143.5	15719	11.71	10.28	9.46	8.38	7.32	5.53	3.25

Stn: 391 Lane:J3 Temp: J/C: Air: 51 PvT: 54 11:45

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.5	11453	6.29	5.98	5.78	5.31	4.91	3.96	2.41
	C	104.5	11445	6.27	5.97	5.76	5.30	4.89	3.94	2.39
	C	104.5	11445	6.29	5.99	5.78	5.32	4.91	3.96	2.39
*	2	78.8	8636	4.72	4.52	4.35	4.01	3.70	2.98	1.78
*	2	79.0	8652	4.72	4.50	4.37	4.00	3.71	3.00	1.79
*	2	78.8	8632	4.74	4.52	4.38	4.01	3.72	3.00	1.79
*	2	78.7	8624	4.74	4.53	4.38	4.02	3.72	3.00	1.79
*	3	104.2	11413	6.28	5.98	5.78	5.31	4.91	3.97	2.39
*	3	104.5	11453	6.31	6.02	5.80	5.35	4.94	4.00	2.41
*	3	104.3	11429	6.31	6.01	5.80	5.34	4.93	4.00	2.40
*	3	104.5	11453	6.32	6.03	5.82	5.36	4.96	4.01	2.41
*	4	143.8	15759	8.70	8.31	8.00	7.38	6.83	5.53	3.37
*	4	144.0	15775	8.74	8.36	8.05	7.43	6.88	5.57	3.39
*	4	143.5	15727	8.73	8.34	8.04	7.43	6.86	5.57	3.39
*	4	143.8	15751	8.76	8.37	8.06	7.44	6.88	5.59	3.40

Stn: 414 Lane:J2 Temp: J/C: Air: 53 PvT: 56 11:48

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	103.4	11334	7.44	6.70	6.39	5.69	5.13	3.97	2.41
	C	103.8	11369	7.36	6.63	6.34	5.64	5.09	3.93	2.37
	C	103.8	11369	7.38	6.66	6.35	5.67	5.09	3.93	2.38
*	2	78.0	8541	5.51	4.98	4.78	4.25	3.83	2.97	1.79
*	2	77.7	8517	5.50	4.98	4.76	4.24	3.81	2.95	1.78
*	2	78.2	8569	5.50	5.00	4.77	4.26	3.83	2.96	1.78
*	2	77.9	8533	5.49	4.98	4.76	4.24	3.81	2.96	1.78

File: C:\FWD\DATA\204054D2.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	3	103.4	11326	7.38	6.67	6.35	5.67	5.09	3.94	2.38
*	3	103.6	11354	7.43	6.72	6.39	5.71	5.13	3.97	2.40
*	3	103.8	11377	7.45	6.74	6.41	5.73	5.15	3.99	2.41
*	3	103.6	11346	7.44	6.74	6.40	5.72	5.13	3.97	2.39
*	4	142.1	15572	10.30	9.33	8.84	7.90	7.06	5.47	3.31
*	4	142.8	15644	10.39	9.42	8.93	7.99	7.17	5.54	3.34
*	4	142.4	15600	10.37	9.41	8.92	7.98	7.15	5.54	3.35
*	4	143.1	15684	10.44	9.44	8.98	8.02	7.21	5.58	3.35

Stn: 418 Lane:J3 Temp: J/C: Air: 52 PvT: 57 11:50

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.4	11441	5.50	5.15	4.98	4.58	4.23	3.57	2.31
	C	104.4	11441	5.48	5.11	4.94	4.55	4.20	3.53	2.28
	C	104.5	11449	5.49	5.13	4.96	4.56	4.21	3.54	2.28
*	2	78.6	8612	4.13	3.85	3.74	3.42	3.15	2.64	1.70
*	2	79.0	8652	4.13	3.87	3.74	3.43	3.17	2.64	1.69
*	2	78.6	8608	4.13	3.85	3.74	3.41	3.15	2.64	1.69
*	2	79.0	8652	4.13	3.85	3.74	3.41	3.15	2.64	1.69
*	3	103.8	11373	5.49	5.11	4.96	4.54	4.20	3.54	2.28
*	3	104.4	11437	5.53	5.15	4.99	4.58	4.22	3.55	2.29
*	3	104.3	11425	5.53	5.16	4.99	4.59	4.23	3.54	2.29
*	3	104.7	11473	5.55	5.19	5.00	4.61	4.24	3.56	2.29
*	4	143.0	15668	7.60	7.12	6.87	6.35	5.88	4.92	3.18
*	4	144.0	15779	7.66	7.18	6.92	6.42	5.90	4.96	3.20
*	4	143.8	15759	7.68	7.19	6.93	6.41	5.93	4.96	3.20
*	4	143.9	15771	7.70	7.23	6.95	6.44	5.93	4.97	3.20

Stn: 426 Lane:J2 Temp: J/C: Air: 53 PvT: 58 11:52

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.4	11437	7.22	6.41	6.02	5.38	4.90	3.86	2.37
	C	104.6	11461	7.02	6.27	5.89	5.29	4.82	3.83	2.35
	C	104.7	11473	7.03	6.29	5.90	5.30	4.84	3.84	2.37
*	2	78.6	8608	5.11	4.60	4.31	3.87	3.62	2.81	1.76
*	2	78.9	8644	5.14	4.63	4.33	3.90	3.62	2.83	1.76
*	2	78.9	8644	5.15	4.64	4.36	3.92	3.59	2.84	1.74
*	2	78.9	8640	5.15	4.63	4.33	3.90	3.63	2.82	1.75
*	3	104.6	11465	7.02	6.26	5.87	5.28	4.86	3.83	2.36
*	3	104.7	11473	7.05	6.29	5.89	5.31	4.87	3.85	2.38
*	3	104.6	11461	7.06	6.29	5.90	5.31	4.88	3.85	2.39
*	3	104.6	11461	7.07	6.30	5.91	5.32	4.88	3.86	2.39
*	4	142.4	15600	9.91	8.84	8.29	7.46	6.81	5.37	3.31
*	4	143.3	15695	9.91	8.89	8.33	7.52	6.87	5.45	3.38
*	4	143.0	15668	9.94	8.91	8.36	7.54	6.87	5.47	3.38
*	4	142.6	15620	9.91	8.90	8.34	7.55	6.89	5.46	3.38

Stn: 432 Lane:J3 Temp: J/C: Air: 52 PvT: 58 11:56

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.8	11481	6.91	6.64	6.40	6.07	5.70	4.75	3.04
	C	105.6	11568	6.93	6.70	6.45	6.10	5.78	4.76	3.07
	C	105.1	11516	6.98	6.75	6.50	6.15	5.81	4.81	3.10
*	2	78.5	8601	5.38	5.17	4.96	4.72	4.49	3.65	2.34
*	2	78.3	8581	5.35	5.14	4.95	4.69	4.46	3.64	2.33
*	2	78.4	8593	5.38	5.16	4.98	4.70	4.42	3.65	2.35
*	2	78.5	8597	5.37	5.16	4.97	4.72	4.47	3.65	2.34
*	3	104.2	11417	7.03	6.77	6.52	6.19	5.83	4.83	3.12
*	3	104.6	11461	7.09	6.82	6.58	6.23	5.89	4.87	3.15
*	3	104.6	11457	7.11	6.84	6.60	6.25	5.89	4.89	3.16
*	3	104.7	11473	7.16	6.87	6.63	6.27	5.88	4.92	3.17
*	4	144.7	15850	9.65	9.31	8.99	8.52	7.99	6.71	4.39
*	4	144.8	15862	9.76	9.41	9.09	8.60	8.09	6.79	4.45
*	4	144.7	15854	9.83	9.50	9.16	8.67	8.20	6.84	4.48
*	4	144.4	15823	9.85	9.52	9.19	8.70	8.19	6.87	4.49

Stn: 440 Lane:J2 Temp: J/C: Air: 53 PvT: 58 11:58

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	103.7	11361	10.45	9.28	8.74	7.85	6.98	5.32	2.95
	C	103.8	11369	10.53	9.38	8.81	7.91	7.02	5.37	2.98
	C	104.0	11393	10.69	9.51	8.94	8.02	7.12	5.44	3.02
*	2	78.1	8557	8.27	7.33	6.89	6.19	5.46	4.17	2.27
*	2	78.2	8573	8.31	7.35	6.91	6.20	5.49	4.19	2.30

File: C:\FWD\DATA\204054D2.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	2	78.4	8589	8.34	7.38	6.94	6.22	5.51	4.20	2.30
*	2	78.5	8597	8.35	7.39	6.94	6.22	5.51	4.21	2.31
*	3	103.7	11357	10.81	9.61	9.02	8.10	7.18	5.48	3.05
*	3	104.1	11405	10.96	9.73	9.14	8.20	7.28	5.57	3.09
*	3	103.8	11369	11.00	9.78	9.18	8.24	7.31	5.59	3.09
*	3	103.8	11369	11.06	9.81	9.21	8.28	7.33	5.61	3.13
*	4	141.8	15533	14.83	13.21	12.39	11.15	9.88	7.57	4.25
*	4	142.4	15600	15.07	13.42	12.57	11.31	10.04	7.70	4.31
*	4	142.1	15568	15.17	13.49	12.65	11.38	10.09	7.74	4.34
*	4	141.9	15545	15.24	13.56	12.70	11.43	10.13	7.76	4.37

Stn: 447 Lane:J3 Temp: J/C: Air: 53 PvT: 58 12:00

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.1	11512	6.11	5.73	5.48	5.08	4.65	3.80	2.30
	C	104.8	11481	6.09	5.72	5.45	5.07	4.64	3.77	2.26
	C	104.7	11469	6.15	5.77	5.51	5.12	4.67	3.80	2.27
*	2	78.2	8565	4.64	4.37	4.16	3.87	3.54	2.84	1.68
*	2	78.3	8581	4.66	4.39	4.18	3.89	3.55	2.85	1.68
*	2	78.8	8632	4.67	4.41	4.21	3.91	3.55	2.87	1.69
*	2	78.3	8581	4.67	4.41	4.19	3.91	3.56	2.86	1.69
*	3	104.1	11401	6.20	5.82	5.56	5.18	4.73	3.81	2.27
*	3	104.5	11453	6.28	5.89	5.61	5.23	4.77	3.86	2.30
*	3	104.2	11417	6.29	5.91	5.63	5.26	4.80	3.87	2.30
*	3	104.4	11437	6.29	5.93	5.65	5.27	4.81	3.88	2.30
*	4	143.5	15723	8.57	8.09	7.72	7.20	6.59	5.35	3.22
*	4	144.5	15831	8.68	8.20	7.81	7.30	6.68	5.43	3.26
*	4	143.6	15735	8.70	8.22	7.83	7.31	6.69	5.44	3.26
*	4	143.9	15763	8.75	8.28	7.89	7.35	6.73	5.46	3.28

Stn: 456 Lane:J2 Temp: J/C: Air: 52 PvT: 58 12:02

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	103.2	11310	7.37	6.61	6.23	5.65	5.04	3.97	2.32
	C	103.2	11310	7.17	6.45	6.10	5.55	4.95	3.92	2.29
	C	103.2	11310	7.23	6.49	6.14	5.59	4.99	3.95	2.32
*	2	77.6	8505	5.48	4.89	4.63	4.20	3.75	2.96	1.72
*	2	77.7	8517	5.48	4.90	4.63	4.21	3.75	2.96	1.68
*	2	78.0	8549	5.47	4.91	4.65	4.22	3.76	2.97	1.72
*	2	77.6	8497	5.47	4.90	4.64	4.22	3.76	2.97	1.71
*	3	103.3	11322	7.31	6.55	6.19	5.63	5.02	3.97	2.31
*	3	103.6	11350	7.33	6.58	6.22	5.66	5.05	4.00	2.33
*	3	103.6	11346	7.31	6.59	6.24	5.67	5.06	4.01	2.32
*	3	103.8	11373	7.36	6.61	6.25	5.69	5.07	4.01	2.35
*	4	142.8	15644	10.19	9.11	8.61	7.83	6.99	5.53	3.24
*	4	143.1	15680	10.24	9.21	8.70	7.91	7.07	5.61	3.30
*	4	142.7	15640	10.26	9.22	8.71	7.93	7.09	5.62	3.30
*	4	142.2	15580	10.28	9.21	8.71	7.92	7.08	5.61	3.30

Stn: 461 Lane:J3 Temp: J/C: Air: 53 PvT: 57 12:05

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	103.8	11377	6.31	5.93	5.70	5.32	4.89	4.02	2.54
	C	104.1	11409	6.31	5.94	5.69	5.30	4.87	3.97	2.52
	C	104.6	11457	6.34	5.97	5.73	5.33	4.89	3.99	2.53
*	2	78.1	8553	4.71	4.44	4.25	3.93	3.60	2.91	1.85
*	2	78.3	8581	4.73	4.44	4.26	3.95	3.62	2.94	1.86
*	2	78.1	8553	4.72	4.43	4.25	3.94	3.60	2.94	1.85
*	2	78.1	8557	4.71	4.43	4.25	3.95	3.61	2.95	1.86
*	3	104.2	11413	6.34	5.96	5.72	5.33	4.89	4.00	2.52
*	3	103.9	11381	6.34	5.97	5.73	5.34	4.90	4.00	2.53
*	3	104.4	11441	6.37	6.00	5.76	5.37	4.93	4.03	2.54
*	3	104.4	11437	6.36	6.00	5.76	5.36	4.91	4.02	2.54
*	4	144.2	15799	8.82	8.34	8.01	7.48	6.88	5.63	3.60
*	4	144.2	15795	8.86	8.39	8.06	7.52	6.91	5.66	3.62
*	4	143.8	15751	8.86	8.39	8.06	7.52	6.91	5.67	3.62
*	4	144.3	15811	8.88	8.39	8.07	7.55	6.94	5.70	3.62

Stn: 471 Lane:J2 Temp: J/C: Air: 53 PvT: 58 12:07

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.1	11405	7.84	6.93	6.53	5.76	5.26	4.08	2.34
	C	104.4	11437	7.58	6.74	6.33	5.61	5.08	3.92	2.28
	C	104.7	11473	7.65	6.79	6.38	5.65	5.12	3.95	2.28
*	2	77.7	8513	5.76	5.12	4.81	4.24	3.83	2.94	1.69

File: C:\FWD\DATA\204054D2.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	2	78.1	8561	5.78	5.15	4.83	4.27	3.86	2.95	1.69
*	2	77.7	8517	5.78	5.11	4.81	4.24	3.84	2.93	1.68
*	2	77.7	8509	5.78	5.14	4.82	4.26	3.85	2.93	1.68
*	3	103.6	11354	7.63	6.77	6.37	5.63	5.10	3.94	2.26
*	3	104.0	11389	7.68	6.82	6.41	5.68	5.14	3.96	2.28
*	3	103.8	11369	7.69	6.82	6.42	5.68	5.16	3.98	2.29
*	3	104.3	11425	7.70	6.85	6.44	5.70	5.17	3.98	2.30
*	4	143.2	15692	10.60	9.41	8.85	7.86	7.12	5.47	3.78
*	4	143.7	15739	10.68	9.50	8.92	7.93	7.17	5.54	3.21
*	4	143.3	15703	10.70	9.51	8.94	7.94	7.19	5.54	3.22
*	4	143.5	15723	10.73	9.55	8.97	7.97	7.21	5.55	3.23

Stn: 476 Lane:J3 Temp: J/C: Air: 54 PvT: 58 12:09

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.2	11524	5.51	5.28	5.14	4.74	4.43	3.66	2.39
	C	105.0	11500	5.51	5.27	5.10	4.73	4.38	3.65	2.38
	C	105.0	11500	5.57	5.31	5.16	4.76	4.43	3.67	2.37
*	2	78.7	8620	4.17	4.01	3.89	3.59	3.31	2.74	1.81
*	2	79.2	8672	4.20	4.04	3.91	3.61	3.33	2.75	1.83
*	2	79.1	8668	4.22	4.03	3.91	3.61	3.33	2.74	1.76
*	2	79.5	8716	4.26	4.07	3.94	3.65	3.35	2.78	1.80
*	3	105.0	11508	5.62	5.39	5.20	4.82	4.44	3.69	2.37
*	3	104.9	11489	5.65	5.39	5.22	4.83	4.46	3.69	2.40
*	3	105.0	11508	5.66	5.41	5.22	4.85	4.46	3.71	2.41
*	3	104.8	11481	5.68	5.42	5.23	4.85	4.48	3.72	2.40
*	4	143.4	15715	7.78	7.43	7.19	6.67	6.17	5.15	3.33
*	4	144.4	15819	7.85	7.50	7.25	6.73	6.22	5.19	3.39
*	4	144.2	15799	7.89	7.51	7.28	6.74	6.27	5.19	3.35
*	4	143.6	15731	7.90	7.53	7.29	6.74	6.25	5.19	3.38

Stn: 484 Lane:J2 Temp: J/C: Air: 54 PvT: 58 12:12

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.0	11389	5.45	4.91	4.63	4.24	3.88	3.19	2.12
	C	104.1	11401	5.26	4.74	4.46	4.11	3.78	3.11	2.07
	C	103.7	11365	5.24	4.73	4.45	4.09	3.77	3.10	2.07
*	2	77.8	8525	3.87	3.50	3.29	3.03	2.79	2.28	1.52
*	2	77.8	8529	3.89	3.51	3.30	3.03	2.78	2.30	1.54
*	2	77.6	8497	3.88	3.50	3.30	3.03	2.78	2.30	1.52
*	2	77.7	8509	3.88	3.50	3.30	3.04	2.79	2.30	1.54
*	3	103.5	11342	5.26	4.72	4.44	4.08	3.75	3.09	2.06
*	3	103.8	11369	5.29	4.75	4.47	4.10	3.77	3.12	2.07
*	3	103.9	11385	5.31	4.76	4.48	4.11	3.77	3.11	2.07
*	3	104.1	11405	5.32	4.78	4.50	4.13	3.78	3.13	2.08
*	4	143.3	15703	7.46	6.67	6.28	5.76	5.29	4.37	2.91
*	4	143.6	15735	7.48	6.69	6.30	5.77	5.29	4.38	2.93
*	4	144.4	15819	7.52	6.72	6.34	5.80	5.30	4.40	2.93
*	4	144.3	15815	7.56	6.76	6.38	5.83	5.31	4.43	2.96

Stn: 494 Lane:J3 Temp: J/C: Air: 54 PvT: 60 12:14

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	103.4	11326	4.97	4.61	4.49	4.19	3.96	3.33	2.11
	C	104.4	11437	4.94	4.60	4.45	4.17	3.91	3.30	2.11
	C	103.6	11346	4.90	4.57	4.42	4.13	3.86	3.26	2.06
*	2	77.6	8501	3.66	3.39	3.29	3.06	2.87	2.41	1.52
*	2	78.0	8541	3.67	3.42	3.30	3.07	2.87	2.42	1.52
*	2	77.8	8529	3.68	3.43	3.31	3.09	2.87	2.42	1.53
*	2	78.3	8577	3.70	3.45	3.33	3.11	2.91	2.44	1.53
*	3	103.7	11365	4.91	4.59	4.44	4.15	3.87	3.26	2.07
*	3	104.0	11389	4.94	4.60	4.44	4.15	3.87	3.26	2.07
*	3	104.0	11389	4.96	4.64	4.47	4.18	3.89	3.29	2.08
*	3	103.6	11350	4.95	4.61	4.46	4.17	3.89	3.29	2.10
*	4	143.2	15692	6.80	6.38	6.17	5.77	5.41	4.57	2.93
*	4	142.3	15588	6.79	6.37	6.16	5.77	5.39	4.55	2.92
*	4	143.2	15688	6.81	6.41	6.19	5.80	5.41	4.57	2.93
*	4	143.3	15703	6.80	6.39	6.17	5.77	5.37	4.53	2.88

Stn: 501 Lane:J2 Temp: J/C: Air: 54 PvT: 60 12:16

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.1	11405	5.66	5.08	4.82	4.35	3.94	3.22	1.98
	C	104.1	11405	5.42	4.90	4.65	4.20	3.81	3.10	1.93
	C	104.3	11425	5.45	4.91	4.66	4.21	3.81	3.13	1.93

File: C:\FWD\DATA\204054D2.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	2	78.1	8557	4.08	3.65	3.46	3.13	2.82	2.30	1.44
*	2	78.5	8601	4.08	3.66	3.48	3.14	2.83	2.31	1.43
*	2	78.5	8601	4.12	3.68	3.51	3.17	2.87	2.35	1.44
*	2	78.3	8581	4.07	3.64	3.47	3.13	2.83	2.31	1.42
*	3	103.7	11357	5.46	4.91	4.67	4.22	3.81	3.13	1.93
*	3	104.5	11449	5.52	4.97	4.72	4.27	3.86	3.13	1.94
*	3	104.2	11413	5.52	4.96	4.72	4.27	3.85	3.16	1.93
*	3	104.0	11393	5.54	4.99	4.72	4.27	3.86	3.13	1.94
*	4	144.0	15779	7.74	6.95	6.58	5.98	5.40	4.40	2.72
*	4	143.7	15747	7.78	6.96	6.61	5.98	5.41	4.41	2.72
*	4	144.1	15787	7.82	7.02	6.65	6.03	5.45	4.43	2.74
*	4	142.7	15636	7.78	6.99	6.61	6.02	5.42	4.42	2.70

Stn: 506 Lane:J3 Temp: J/C: Air: 53 PvT: 58 12:18

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.0	11393	5.03	4.83	4.72	4.38	4.13	3.44	2.24
	C	104.8	11481	5.11	4.91	4.78	4.44	4.15	3.46	2.25
	C	104.4	11437	5.18	4.95	4.82	4.48	4.19	3.48	2.27
*	2	78.4	8585	3.86	3.74	3.64	3.39	3.14	2.60	1.65
*	2	78.1	8553	3.86	3.74	3.65	3.39	3.15	2.60	1.66
*	2	77.6	8497	3.85	3.72	3.60	3.37	3.10	2.58	1.64
*	2	78.2	8569	3.87	3.75	3.66	3.39	3.17	2.61	1.66
*	3	104.0	11393	5.21	5.00	4.85	4.52	4.21	3.50	2.26
*	3	104.1	11401	5.24	5.03	4.89	4.56	4.24	3.52	2.26
*	3	103.7	11357	5.24	5.03	4.89	4.57	4.24	3.53	2.27
*	3	103.6	11346	5.26	5.04	4.91	4.57	4.26	3.54	2.28
*	4	142.8	15648	7.14	6.87	6.68	6.25	5.84	4.87	3.18
*	4	143.1	15684	7.22	6.94	6.76	6.31	5.90	4.91	3.18
*	4	143.8	15759	7.26	6.99	6.79	6.36	5.91	4.94	3.19
*	4	143.4	15707	7.29	7.00	6.82	6.37	5.95	4.96	3.21

Stn: 515 Lane:J2 Temp: J/C: Air: 53 PvT: 60 12:21

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	103.3	11322	5.96	5.35	5.06	4.53	4.15	3.38	2.15
	C	103.2	11310	5.86	5.25	4.97	4.46	4.09	3.35	2.16
	C	103.2	11306	5.86	5.27	4.98	4.48	4.08	3.33	2.15
*	2	77.7	8509	4.42	3.95	3.74	3.36	3.06	2.48	1.59
*	2	77.6	8501	4.42	3.96	3.75	3.37	3.07	2.48	1.59
*	2	77.8	8521	4.43	3.98	3.75	3.37	3.06	2.48	1.58
*	2	77.8	8525	4.43	3.97	3.76	3.38	3.07	2.48	1.57
*	3	103.4	11334	5.92	5.31	5.02	4.51	4.12	3.35	2.15
*	3	103.6	11354	5.94	5.33	5.04	4.53	4.14	3.37	2.15
*	3	103.5	11338	5.95	5.35	5.06	4.55	4.14	3.37	2.16
*	3	103.3	11318	5.95	5.35	5.06	4.54	4.15	3.36	2.15
*	4	142.1	15564	8.19	7.35	6.94	6.25	5.70	4.65	3.00
*	4	142.6	15624	8.22	7.39	6.98	6.30	5.74	4.69	3.03
*	4	143.1	15676	8.28	7.44	7.04	6.36	5.79	4.72	3.06
*	4	142.5	15616	8.27	7.42	7.02	6.31	5.77	4.72	3.05

Stn: 521 Lane:J3 Temp: J/C: Air: 54 PvT: 60 12:23

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	103.6	11346	5.24	5.02	4.85	4.58	4.26	3.64	2.36
	C	103.6	11354	5.25	5.01	4.85	4.56	4.24	3.61	2.33
	C	103.8	11377	5.30	5.06	4.89	4.61	4.28	3.65	2.35
*	2	78.1	8561	3.98	3.83	3.70	3.48	3.23	2.74	1.74
*	2	78.0	8545	3.99	3.83	3.71	3.48	3.23	2.74	1.74
*	2	78.2	8565	4.00	3.84	3.71	3.49	3.24	2.74	1.75
*	2	77.7	8517	4.00	3.83	3.70	3.48	3.23	2.74	1.74
*	3	103.8	11377	5.33	5.09	4.93	4.63	4.31	3.67	2.37
*	3	103.4	11334	5.34	5.09	4.93	4.64	4.31	3.67	2.36
*	3	103.4	11334	5.34	5.11	4.94	4.65	4.32	3.68	2.36
*	3	103.6	11354	5.35	5.11	4.95	4.66	4.33	3.69	2.37
*	4	143.2	15688	7.28	6.98	6.75	6.36	5.93	5.07	3.30
*	4	144.0	15779	7.35	7.04	6.81	6.42	5.98	5.11	3.33
*	4	144.3	15811	7.37	7.07	6.83	6.44	6.00	5.14	3.33
*	4	143.8	15755	7.37	7.07	6.84	6.44	6.03	5.13	3.33

Mileage:-.004 -> .099

File: C:\FWD\DATA\204054D3.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

FWD S/N : 8002-060
Operator ID : Mulvaney, Ronald S.

Stationing...: Feet

Diameter of Plate: 11.8
Deflector distances : 12 12 18 24 36 60

SHRP TESTING - RIGID/CRCP - JOINT AND CRACK TEST (J4/C4, J5/C5)
Sequence: CCC222233334444

Stn: -25 Lane:J4 Temp: J/C: 28 Air: 55 PvT: 63 12:29

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.9	11600	4.80	4.04	4.26	3.83	3.43	2.76	1.74
	C	105.8	11592	4.61	3.89	4.09	3.67	3.27	2.63	1.67
	C	105.6	11572	4.63	3.91	4.09	3.68	3.30	2.66	1.69
*	2	80.0	8767	3.45	2.91	3.05	2.73	2.43	1.97	1.25
*	2	79.6	8720	3.45	2.89	3.02	2.71	2.41	1.95	1.26
*	2	79.7	8736	3.44	2.91	3.04	2.74	2.46	1.98	1.25
*	2	79.9	8751	3.45	2.90	3.04	2.73	2.45	1.98	1.25
*	3	105.8	11596	4.61	3.89	4.07	3.66	3.26	2.64	1.69
*	3	106.6	11675	4.63	3.93	4.13	3.71	3.30	2.68	1.72
*	3	106.2	11632	4.66	3.92	4.11	3.69	3.29	2.66	1.70
*	3	105.9	11600	4.65	3.93	4.10	3.69	3.29	2.65	1.69
*	4	144.7	15854	6.46	5.44	5.70	5.13	4.57	3.70	2.36
*	4	144.6	15842	6.48	5.45	5.69	5.12	4.57	3.69	2.36
*	4	145.0	15886	6.49	5.46	5.71	5.15	4.58	3.70	2.37
*	4	144.2	15795	6.49	5.47	5.70	5.12	4.58	3.69	2.37

Stn: -23 Lane:J5 Temp: J/C: 28 Air: 55 PvT: 63 12:31

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.5	11445	4.48	4.02	3.87	3.55	3.25	2.69	1.80
	C	105.5	11560	4.48	4.05	3.88	3.55	3.26	2.68	1.80
	C	105.4	11544	4.50	4.05	3.88	3.54	3.25	2.67	1.80
*	2	79.0	8652	3.33	2.98	2.87	2.63	2.41	1.99	1.32
*	2	79.2	8672	3.34	3.00	2.88	2.65	2.42	2.00	1.33
*	2	79.1	8668	3.33	2.99	2.88	2.63	2.41	1.98	1.33
*	2	79.2	8672	3.33	2.98	2.88	2.62	2.39	1.96	1.33
*	3	104.2	11421	4.48	4.02	3.85	3.52	3.22	2.67	1.78
*	3	105.1	11520	4.48	4.04	3.87	3.54	3.25	2.69	1.79
*	3	104.9	11497	4.49	4.04	3.86	3.55	3.25	2.69	1.79
*	3	105.2	11524	4.50	4.05	3.87	3.56	3.25	2.70	1.80
*	4	142.7	15632	6.22	5.59	5.34	4.90	4.47	3.70	2.47
*	4	143.7	15747	6.26	5.63	5.37	4.93	4.51	3.74	2.51
*	4	143.7	15743	6.27	5.63	5.37	4.94	4.52	3.74	2.51
*	4	143.0	15668	6.24	5.61	5.35	4.92	4.52	3.72	2.49

Stn: -9 Lane:J4 Temp: J/C: 30 Air: 55 PvT: 62 12:34

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.5	11445	7.10	5.60	3.35	3.07	2.81	2.22	1.41
	C	104.8	11485	7.01	5.52	3.34	3.07	2.80	2.22	1.43
	C	105.1	11512	7.03	5.54	3.37	3.08	2.80	2.23	1.43
*	2	78.5	8605	5.17	4.05	2.52	2.29	2.08	1.66	1.04
*	2	78.9	8640	5.18	4.07	2.52	2.29	2.07	1.66	1.04
*	2	78.9	8644	5.19	4.06	2.52	2.28	2.07	1.66	1.04
*	2	78.7	8620	5.18	4.05	2.52	2.27	2.06	1.64	1.03
*	3	104.7	11469	7.01	5.52	3.35	3.04	2.77	2.21	1.41
*	3	105.1	11516	7.05	5.54	3.39	3.07	2.80	2.23	1.43
*	3	105.0	11504	7.06	5.54	3.39	3.07	2.80	2.24	1.43
*	3	105.1	11512	7.07	5.55	3.40	3.07	2.79	2.22	1.42
*	4	144.4	15819	9.97	7.80	4.68	4.24	3.86	3.10	2.00
*	4	144.2	15803	9.98	7.81	4.71	4.26	3.86	3.09	2.00
*	4	144.3	15811	10.00	7.83	4.72	4.30	3.89	3.11	2.01
*	4	144.2	15799	10.01	7.83	4.72	4.28	3.89	3.13	2.03

Stn: -7 Lane:J5 Temp: J/C: 30 Air: 56 PvT: 61 12:36

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7

File: C:\FWD\DATA\20405403.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

	C	105.7	11584	5.56	3.94	4.46	3.96	3.52	2.80	1.73
	C	105.4	11548	5.46	3.97	4.41	3.93	3.52	2.78	1.72
	C	105.5	11560	5.47	3.97	4.42	3.93	3.55	2.79	1.72
*	2	79.2	8672	4.07	2.92	3.30	2.92	2.66	2.05	1.26
*	2	79.1	8664	4.09	2.92	3.29	2.93	2.66	2.06	1.28
*	2	79.1	8664	4.06	2.89	3.28	2.91	2.63	2.05	1.26
*	2	78.9	8648	4.07	2.89	3.28	2.91	2.61	2.04	1.26
*	3	105.2	11528	5.48	3.95	4.41	3.93	3.51	2.78	1.71
*	3	105.8	11596	5.50	3.94	4.43	3.94	3.50	2.80	1.72
*	3	105.4	11548	5.53	3.95	4.44	3.94	3.55	2.78	1.74
*	3	105.7	11584	5.50	3.96	4.44	3.95	3.54	2.79	1.72
*	4	145.4	15930	7.66	5.47	6.15	5.48	4.91	3.87	2.40
*	4	145.6	15950	7.70	5.52	6.18	5.52	4.94	3.90	2.42
*	4	145.0	15882	7.70	5.52	6.18	5.50	4.94	3.90	2.43
*	4	145.0	15890	7.70	5.48	6.18	5.50	4.93	3.90	2.43

Stn: 5 Lane:J4 Temp: J/C: 26 Air: 54 PvT: 62 12:39

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.9	11497	4.58	3.78	3.98	3.57	3.21	2.57	1.61
	C	106.0	11616	4.58	3.80	3.98	3.58	3.22	2.60	1.64
	C	105.7	11576	4.58	3.79	3.98	3.59	3.22	2.59	1.63
*	2	79.1	8664	3.37	2.77	2.96	2.63	2.37	1.90	1.20
*	2	78.9	8648	3.36	2.80	2.93	2.65	2.37	1.91	1.19
*	2	78.9	8644	3.35	2.78	2.95	2.63	2.37	1.90	1.19
*	2	78.9	8648	3.35	2.78	2.95	2.62	2.36	1.89	1.19
*	3	105.2	11524	4.57	3.77	3.97	3.57	3.21	2.59	1.63
*	3	105.4	11548	4.59	3.79	3.98	3.57	3.21	2.59	1.63
*	3	104.9	11489	4.57	3.78	3.97	3.57	3.21	2.58	1.63
*	3	105.0	11508	4.57	3.79	3.98	3.57	3.21	2.59	1.63
*	4	144.6	15846	6.37	5.27	5.56	5.00	4.49	3.62	2.28
*	4	145.0	15890	6.37	5.28	5.57	5.01	4.51	3.63	2.30
*	4	145.0	15886	6.40	5.31	5.59	5.04	4.53	3.65	2.31
*	4	145.1	15898	6.40	5.31	5.61	5.04	4.52	3.65	2.31

Stn: 5 Lane:J5 Temp: J/C: 26 Air: 55 PvT: 62 12:41

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.9	11608	4.78	4.10	4.13	3.75	3.47	2.84	1.83
	C	106.2	11636	4.75	4.13	4.12	3.75	3.46	2.82	1.78
	C	105.9	11600	4.74	4.10	4.11	3.75	3.42	2.80	1.82
*	2	78.9	8648	3.50	3.03	3.03	2.76	2.53	2.07	1.31
*	2	79.1	8668	3.51	3.02	3.03	2.75	2.55	2.07	1.35
*	2	79.3	8692	3.51	3.00	3.03	2.77	2.50	2.02	1.27
*	2	79.0	8660	3.50	3.01	3.03	2.76	2.53	2.09	1.31
*	3	105.9	11604	4.74	4.09	4.10	3.73	3.46	2.82	1.82
*	3	106.0	11616	4.75	4.11	4.11	3.75	3.47	2.85	1.83
*	3	106.0	11616	4.75	4.12	4.12	3.76	3.43	2.80	1.82
*	3	105.9	11604	4.75	4.10	4.11	3.74	3.48	2.84	1.85
*	4	145.6	15954	6.66	5.73	5.74	5.24	4.80	3.92	2.54
*	4	145.1	15902	6.63	5.72	5.72	5.25	4.81	3.90	2.49
*	4	145.8	15978	6.66	5.70	5.74	5.25	4.81	3.95	2.54
*	4	145.5	15938	6.67	5.74	5.76	5.26	4.80	3.91	2.49

Stn: 21 Lane:J4 Temp: J/C: 66 Air: 56 PvT: 63 12:44

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.3	11540	6.37	4.99	3.36	3.01	2.66	2.06	1.26
	C	106.1	11620	6.32	4.96	3.29	2.96	2.59	2.02	1.25
	C	105.4	11552	6.31	4.94	3.24	2.90	2.58	2.01	1.26
*	2	79.3	8692	4.70	3.69	2.44	2.17	1.94	1.49	0.94
*	2	79.1	8664	4.69	3.67	2.43	2.17	1.93	1.49	0.93
*	2	80.2	8787	4.74	3.70	2.44	2.19	1.92	1.50	0.90
*	2	79.4	8696	4.72	3.68	2.41	2.14	1.91	1.48	0.91
*	3	106.1	11628	6.39	4.99	3.20	2.88	2.54	1.99	1.23
*	3	106.0	11616	6.40	5.02	3.19	2.86	2.54	1.99	1.30
*	3	105.6	11572	6.41	5.02	3.18	2.86	2.53	1.98	1.28
*	3	106.1	11628	6.43	5.03	3.19	2.88	2.54	1.99	1.29
*	4	145.6	15950	9.07	7.08	4.37	3.93	3.50	2.76	1.77
*	4	144.5	15835	9.05	7.07	4.32	3.88	3.49	2.72	1.75
*	4	144.6	15842	9.09	7.10	4.33	3.88	3.48	2.73	1.76
*	4	144.7	15850	9.12	7.14	4.32	3.88	3.49	2.73	1.75

File: C:\FWD\DATA\20405403.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

Stn: 22 Lane:J5 Temp: J/C: 6 Air: 56 PvT: 63 12:46

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.7	11477	5.37	3.88	4.21	3.65	3.21	2.48	1.54
	C	105.0	11504	5.31	3.94	4.17	3.63	3.19	2.46	1.55
	C	105.1	11516	5.30	3.94	4.16	3.62	3.19	2.46	1.51
*	2	78.6	8612	4.04	2.83	3.15	2.72	2.38	1.82	1.12
*	2	78.7	8624	4.04	2.84	3.13	2.73	2.39	1.81	1.12
*	2	78.8	8628	4.04	2.83	3.15	2.72	2.38	1.81	1.13
*	2	78.6	8612	4.03	2.83	3.14	2.71	2.37	1.81	1.14
*	3	104.6	11461	5.26	3.94	4.14	3.61	3.17	2.44	1.53
*	3	104.5	11453	5.26	3.94	4.13	3.60	3.17	2.44	1.51
*	3	104.6	11461	5.27	3.95	4.14	3.61	3.17	2.45	1.51
*	3	104.5	11453	5.26	3.95	4.13	3.59	3.16	2.44	1.51
*	4	144.5	15835	7.11	5.68	5.63	4.94	4.35	3.40	2.11
*	4	144.3	15815	7.11	5.70	5.63	4.93	4.35	3.39	2.11
*	4	144.4	15823	7.12	5.72	5.65	4.94	4.36	3.41	2.13
*	4	143.7	15747	7.09	5.70	5.63	4.93	4.35	3.39	2.12

Stn: 35 Lane:J4 Temp: J/C: 25 Air: 55 PvT: 63 12:49

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.3	11425	6.20	4.95	5.01	4.39	3.81	2.84	1.63
	C	104.7	11469	6.03	4.85	4.84	4.24	3.73	2.79	1.65
	C	104.9	11489	6.05	4.85	4.87	4.27	3.70	2.79	1.64
*	2	78.1	8561	4.49	3.59	3.59	3.13	2.76	2.05	1.19
*	2	78.3	8581	4.50	3.58	3.59	3.13	2.75	2.05	1.22
*	2	78.2	8573	4.46	3.58	3.58	3.13	2.75	2.05	1.21
*	2	78.2	8569	4.46	3.57	3.57	3.12	2.74	2.05	1.21
*	3	104.8	11485	6.03	4.84	4.85	4.25	3.67	2.78	1.63
*	3	104.5	11445	6.06	4.85	4.85	4.24	3.70	2.78	1.63
*	3	105.0	11504	6.11	4.90	4.91	4.30	3.76	2.83	1.69
*	3	105.0	11500	6.08	4.86	4.89	4.28	3.71	2.80	1.65
*	4	144.7	15850	8.56	6.83	6.85	6.00	5.26	3.94	2.35
*	4	144.2	15795	8.55	6.83	6.83	5.98	5.22	3.94	2.35
*	4	143.6	15731	8.56	6.83	6.83	5.98	5.26	3.96	2.36
*	4	144.8	15866	8.58	6.86	6.86	6.01	5.25	3.96	2.36

Stn: 37 Lane:J5 Temp: J/C: 25 Air: 54 PvT: 63 12:51

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.1	11401	5.32	4.83	4.42	3.96	3.57	2.84	1.76
	C	104.4	11437	5.30	4.85	4.41	3.93	3.63	2.92	1.76
	C	104.4	11433	5.30	4.85	4.41	3.94	3.60	2.88	1.78
*	2	78.2	8565	3.91	3.57	3.27	2.92	2.65	2.09	1.30
*	2	78.3	8577	3.92	3.59	3.28	2.90	2.70	2.15	1.31
*	2	78.1	8553	3.91	3.57	3.27	2.92	2.65	2.13	1.30
*	2	78.3	8577	3.89	3.62	3.26	2.89	2.71	2.19	1.30
*	3	103.9	11381	5.30	4.82	4.39	3.91	3.61	2.88	1.76
*	3	104.2	11421	5.31	4.83	4.41	3.93	3.59	2.88	1.76
*	3	104.4	11437	5.32	4.84	4.40	3.96	3.56	2.85	1.76
*	3	104.3	11429	5.33	4.83	4.41	3.93	3.61	2.89	1.76
*	4	143.4	15715	7.38	6.76	6.09	5.45	4.97	3.97	2.44
*	4	143.6	15731	7.35	6.71	6.09	5.47	4.96	3.99	2.48
*	4	143.5	15723	7.39	6.72	6.11	5.48	5.01	4.01	2.48
*	4	143.1	15684	7.36	6.72	6.10	5.52	4.96	3.97	2.48

Stn: 50 Lane:J4 Temp: J/C: 6 Air: 56 PvT: 63 12:55

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.4	11441	4.81	4.03	4.25	3.83	3.40	2.70	1.65
	C	104.4	11437	4.83	4.06	4.27	3.85	3.43	2.73	1.68
	C	104.4	11441	4.81	4.06	4.26	3.85	3.41	2.71	1.66
*	2	78.4	8585	3.57	3.02	3.17	2.85	2.54	2.03	1.25
*	2	78.7	8620	3.57	2.99	3.15	2.85	2.50	2.00	1.23
*	2	78.8	8628	3.56	3.00	3.15	2.83	2.54	2.01	1.22
*	2	78.5	8601	3.56	3.01	3.16	2.84	2.54	2.03	1.25
*	3	103.8	11377	4.79	4.03	4.24	3.82	3.42	2.72	1.65
*	3	105.4	11552	4.85	4.08	4.30	3.87	3.45	2.75	1.69
*	3	104.8	11481	4.84	4.08	4.29	3.86	3.45	2.75	1.69
*	3	104.8	11481	4.83	4.07	4.28	3.85	3.44	2.73	1.68
*	4	144.1	15783	6.75	5.66	5.96	5.35	4.78	3.79	2.31

File: C:\FWD\DATA\20405403.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	4	145.5	15946	6.77	5.70	6.00	5.39	4.82	3.83	2.33
*	4	144.9	15874	6.79	5.71	6.00	5.41	4.81	3.81	2.32
*	4	145.0	15890	6.79	5.70	6.00	5.41	4.80	3.81	2.32

Stn: 51 Lane:J5 Temp: J/C: 6 Air: 55 PvT: 63 12:58

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.7	11477	4.60	4.24	3.98	3.63	3.30	2.68	1.70
	C	104.5	11453	4.60	4.25	3.98	3.61	3.31	2.68	1.67
	C	104.0	11393	4.59	4.24	3.97	3.61	3.29	2.67	1.67
*	2	78.1	8557	3.40	3.15	2.96	2.68	2.46	1.99	1.25
*	2	78.4	8585	3.42	3.15	2.97	2.70	2.46	2.00	1.26
*	2	78.9	8640	3.43	3.18	3.00	2.70	2.49	2.02	1.26
*	2	78.0	8549	3.40	3.13	2.95	2.68	2.44	1.98	1.24
*	3	105.1	11520	4.64	4.28	4.00	3.63	3.32	2.69	1.69
*	3	103.7	11361	4.59	4.24	3.97	3.61	3.30	2.67	1.67
*	3	104.9	11497	4.64	4.28	4.01	3.65	3.32	2.69	1.67
*	3	105.4	11544	4.64	4.29	4.02	3.66	3.33	2.70	1.69
*	4	143.7	15743	6.41	5.91	5.49	5.06	4.53	3.69	2.33
*	4	145.2	15906	6.46	5.97	5.55	5.09	4.59	3.72	2.33
*	4	145.1	15898	6.46	5.98	5.56	5.08	4.61	3.74	2.35
*	4	144.9	15870	6.49	5.99	5.58	5.10	4.61	3.74	2.34

Stn: 65 Lane:J4 Temp: J/C: 22 Air: 55 PvT: 63 13:00

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.9	11493	5.35	4.31	4.49	3.96	3.50	2.68	1.62
	C	104.9	11497	5.15	4.19	4.31	3.81	3.38	2.63	1.64
	C	105.1	11512	5.17	4.20	4.32	3.83	3.38	2.64	1.65
*	2	78.9	8648	3.83	3.13	3.19	2.81	2.51	1.91	1.23
*	2	79.1	8668	3.84	3.13	3.20	2.83	2.51	1.94	1.22
*	2	78.5	8605	3.82	3.10	3.19	2.82	2.50	1.92	1.23
*	2	78.6	8616	3.85	3.12	3.21	2.84	2.51	1.93	1.22
*	3	104.9	11497	5.17	4.16	4.31	3.81	3.37	2.63	1.63
*	3	105.0	11504	5.20	4.22	4.33	3.83	3.39	2.64	1.64
*	3	105.4	11548	5.20	4.22	4.34	3.84	3.39	2.65	1.63
*	3	105.1	11512	5.19	4.22	4.34	3.83	3.39	2.64	1.65
*	4	144.4	15819	7.30	5.88	6.08	5.37	4.76	3.68	2.29
*	4	144.9	15874	7.31	5.91	6.09	5.39	4.76	3.71	2.31
*	4	144.9	15874	7.32	5.92	6.10	5.41	4.78	3.72	2.32
*	4	144.9	15874	7.34	5.93	6.12	5.42	4.79	3.74	2.33

Stn: 68 Lane:J5 Temp: J/C: 22 Air: 54 PvT: 63 13:03

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.4	11548	5.07	4.40	4.25	3.83	3.50	2.83	1.82
	C	105.6	11568	5.07	4.41	4.27	3.88	3.50	2.85	1.84
	C	105.3	11540	5.04	4.41	4.26	3.85	3.50	2.85	1.83
*	2	78.5	8605	3.76	3.26	3.15	2.85	2.60	2.12	1.35
*	2	78.9	8644	3.77	3.26	3.17	2.85	2.60	2.11	1.35
*	2	78.6	8608	3.75	3.24	3.15	2.85	2.61	2.12	1.36
*	2	78.7	8624	3.75	3.26	3.16	2.86	2.60	2.13	1.37
*	3	105.3	11536	5.05	4.41	4.26	3.86	3.48	2.86	1.82
*	3	105.0	11508	5.04	4.40	4.24	3.84	3.50	2.85	1.83
*	3	105.0	11500	5.04	4.40	4.24	3.83	3.51	2.84	1.83
*	3	105.3	11540	5.07	4.40	4.27	3.86	3.50	2.85	1.83
*	4	144.0	15779	7.04	6.15	5.89	5.33	4.85	3.93	2.51
*	4	145.1	15898	7.07	6.16	5.93	5.37	4.91	3.97	2.55
*	4	144.8	15866	7.08	6.16	5.94	5.41	4.91	3.98	2.56
*	4	144.7	15854	7.09	6.14	5.93	5.38	4.91	3.98	2.56

Stn: 94 Lane:J4 Temp: J/C: 24 Air: 54 PvT: 66 13:05

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.1	11516	5.91	4.67	4.74	4.14	3.60	2.71	1.53
	C	106.1	11624	5.87	4.63	4.70	4.09	3.56	2.69	1.55
	C	105.7	11576	5.89	4.63	4.70	4.09	3.57	2.70	1.54
*	2	79.3	8692	4.31	3.42	3.48	3.02	2.63	2.01	1.13
*	2	79.0	8652	4.35	3.42	3.47	3.02	2.63	1.99	1.12
*	2	79.5	8712	4.44	3.43	3.50	3.04	2.65	2.00	1.13
*	2	79.0	8656	4.34	3.42	3.47	3.02	2.63	1.98	1.12
*	3	105.5	11560	5.85	4.63	4.67	4.08	3.55	2.67	1.53
*	3	105.9	11600	5.92	4.65	4.70	4.10	3.57	2.69	1.54
*	3	105.7	11580	5.93	4.66	4.72	4.11	3.57	2.70	1.56
*	3	105.9	11608	6.01	4.65	4.72	4.12	3.59	2.71	1.54

File: C:\FWD\DATA\20405403.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	4	144.2	15795	8.32	6.54	6.57	5.76	5.00	3.76	2.15
*	4	144.4	15819	8.36	6.57	6.61	5.77	5.03	3.80	2.16
*	4	143.8	15755	8.31	6.55	6.59	5.77	5.02	3.78	2.17
*	4	144.5	15827	8.38	6.58	6.62	5.78	5.03	3.79	2.17

Stn: 96 Lane:J5 Temp: J/C: 24 Air: 54 PvT: 64 13:08

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.6	11465	5.51	4.73	4.56	4.09	3.67	2.87	1.69
	C	104.7	11469	5.49	4.73	4.54	4.07	3.67	2.87	1.70
	C	105.3	11532	5.54	4.72	4.56	4.09	3.65	2.86	1.68
*	2	78.3	8581	4.07	3.54	3.40	3.04	2.77	2.13	1.24
*	2	78.5	8597	4.07	3.52	3.41	3.04	2.77	2.13	1.26
*	2	78.5	8601	4.09	3.54	3.41	3.04	2.77	2.13	1.25
*	2	78.7	8624	4.07	3.52	3.41	3.04	2.76	2.13	1.24
*	3	104.6	11457	5.49	4.73	4.54	4.07	3.69	2.87	1.69
*	3	104.8	11481	5.52	4.77	4.57	4.09	3.69	2.89	1.69
*	3	104.9	11489	5.52	4.75	4.57	4.09	3.69	2.89	1.69
*	3	104.5	11445	5.51	4.73	4.57	4.09	3.68	2.88	1.69
*	4	143.6	15731	7.56	6.53	6.26	5.63	5.03	3.96	2.32
*	4	144.8	15862	7.66	6.62	6.33	5.69	5.12	4.01	2.36
*	4	144.6	15846	7.67	6.62	6.35	5.72	5.08	4.01	2.38
*	4	144.7	15854	7.68	6.61	6.35	5.72	5.11	4.02	2.36

Stn: 109 Lane:J4 Temp: J/C: 6 Air: 54 PvT: 63 13:10

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.8	11596	5.11	4.22	3.94	3.50	3.09	2.43	1.45
	C	106.3	11651	5.10	4.18	3.89	3.49	3.15	2.41	1.43
	C	106.0	11616	5.12	4.18	3.91	3.48	3.11	2.43	1.44
*	2	79.6	8724	3.77	3.09	2.88	2.58	2.31	1.79	1.07
*	2	79.8	8740	3.79	3.10	2.87	2.59	2.32	1.79	1.07
*	2	80.0	8763	3.83	3.11	2.89	2.59	2.31	1.78	1.07
*	2	79.7	8732	3.79	3.10	2.90	2.58	2.28	1.78	1.07
*	3	105.8	11596	5.10	4.18	3.89	3.46	3.08	2.41	1.43
*	3	106.1	11620	5.13	4.21	3.91	3.48	3.10	2.42	1.44
*	3	106.0	11612	5.15	4.20	3.90	3.48	3.09	2.42	1.44
*	3	106.0	11616	5.16	4.22	3.91	3.49	3.10	2.43	1.45
*	4	143.4	15715	7.24	5.89	5.45	4.85	4.30	3.37	2.00
*	4	144.6	15842	7.31	5.93	5.50	4.88	4.31	3.39	2.02
*	4	144.9	15870	7.34	5.95	5.50	4.89	4.33	3.41	2.02
*	4	144.0	15779	7.33	5.95	5.48	4.88	4.31	3.39	2.02

Stn: 110 Lane:J5 Temp: J/C: 6 Air: 54 PvT: 63 13:12

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.0	11504	5.13	4.01	4.24	3.81	3.42	2.70	1.60
	C	105.4	11548	5.11	4.10	4.23	3.80	3.43	2.74	1.62
	C	105.2	11528	5.12	4.07	4.22	3.81	3.43	2.74	1.61
*	2	79.0	8652	3.86	3.03	3.20	2.88	2.59	2.05	1.21
*	2	78.9	8640	3.84	3.01	3.21	2.89	2.58	2.06	1.22
*	2	79.2	8680	3.90	3.06	3.21	2.88	2.60	2.06	1.20
*	2	78.9	8640	3.91	3.03	3.21	2.87	2.59	2.08	1.21
*	3	105.3	11532	5.15	4.07	4.27	3.84	3.45	2.75	1.62
*	3	105.0	11504	5.13	4.07	4.27	3.83	3.45	2.77	1.62
*	3	105.2	11528	5.23	4.08	4.29	3.87	3.46	2.74	1.63
*	3	105.5	11556	5.21	4.09	4.30	3.87	3.48	2.77	1.63
*	4	144.6	15842	7.24	5.65	5.94	5.34	4.78	3.76	2.24
*	4	144.7	15850	7.29	5.66	5.96	5.35	4.80	3.80	2.24
*	4	144.5	15831	7.29	5.66	5.97	5.38	4.81	3.81	2.25
*	4	144.9	15878	7.31	5.65	5.98	5.38	4.82	3.80	2.24

Stn: 153 Lane:J4 Temp: J/C: 33 Air: 55 PvT: 65 13:15

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.7	11580	5.80	4.72	5.08	4.43	3.90	2.99	1.70
	C	106.3	11643	5.51	4.53	4.79	4.19	3.71	2.88	1.70
	C	106.1	11628	5.49	4.51	4.77	4.18	3.69	2.84	1.69
*	2	79.7	8736	4.11	3.37	3.57	3.12	2.74	2.09	1.24
*	2	79.7	8736	4.05	3.37	3.56	3.11	2.74	2.11	1.26
*	2	79.8	8748	4.09	3.37	3.57	3.12	2.75	2.12	1.24
*	2	80.1	8779	4.08	3.38	3.57	3.12	2.75	2.12	1.27
*	3	105.6	11572	5.44	4.50	4.75	4.16	3.67	2.82	1.68
*	3	106.0	11616	5.50	4.51	4.76	4.17	3.69	2.83	1.69
*	3	105.7	11584	5.50	4.52	4.77	4.18	3.69	2.82	1.68

File: C:\FWD\DATA\204054D3.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	3	106.3	11643	5.49	4.53	4.78	4.19	3.70	2.84	1.69
*	4	143.2	15688	7.72	6.28	6.69	5.85	5.17	3.96	2.32
*	4	143.6	15731	7.67	6.27	6.61	5.79	5.13	3.96	2.34
*	4	144.2	15795	7.69	6.30	6.63	5.82	5.15	4.00	2.35
*	4	144.1	15791	7.68	6.30	6.63	5.82	5.14	3.96	2.35

Stn: 154 Lane:J5 Temp: J/C: 33 Air: 54 PvT: 64 13:17

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.4	11544	5.50	4.81	4.50	3.98	3.52	2.74	1.70
	C	105.7	11580	5.44	4.84	4.46	3.95	3.54	2.78	1.70
	C	105.6	11572	5.44	4.83	4.46	3.96	3.54	2.80	1.69
*	2	79.3	8688	4.06	3.60	3.35	2.96	2.63	2.06	1.26
*	2	79.4	8704	4.07	3.62	3.35	2.96	2.65	2.10	1.27
*	2	79.4	8704	4.06	3.61	3.34	2.95	2.63	2.08	1.27
*	2	79.7	8728	4.05	3.60	3.33	2.96	2.63	2.04	1.24
*	3	105.8	11596	5.45	4.83	4.47	3.96	3.54	2.79	1.69
*	3	106.1	11620	5.48	4.89	4.54	4.03	3.59	2.84	1.77
*	3	105.5	11564	5.44	4.83	4.46	3.95	3.54	2.81	1.70
*	3	105.6	11572	5.44	4.83	4.48	3.96	3.54	2.78	1.70
*	4	142.7	15640	7.52	6.67	6.14	5.43	4.86	3.79	2.28
*	4	142.9	15656	7.50	6.64	6.14	5.45	4.87	3.81	2.33
*	4	142.9	15660	7.50	6.64	6.14	5.48	4.87	3.82	2.33
*	4	143.4	15711	7.53	6.67	6.18	5.47	4.90	3.87	2.35

Stn: 168 Lane:J4 Temp: J/C: 6 Air: 55 PvT: 63 13:20

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.6	11465	5.43	4.41	4.60	4.06	3.59	2.79	1.69
	C	104.8	11485	5.35	4.38	4.55	4.01	3.56	2.78	1.68
	C	105.1	11516	5.36	4.41	4.56	4.03	3.57	2.78	1.70
*	2	78.7	8620	3.99	3.26	3.41	3.00	2.66	2.04	1.23
*	2	78.7	8620	4.02	3.27	3.40	2.99	2.65	2.05	1.25
*	2	78.8	8632	4.00	3.27	3.39	2.99	2.66	2.07	1.26
*	2	78.5	8601	4.00	3.26	3.39	2.99	2.66	2.06	1.26
*	3	104.9	11493	5.35	4.37	4.55	4.03	3.56	2.73	1.68
*	3	105.2	11524	5.37	4.39	4.57	4.03	3.57	2.76	1.69
*	3	105.1	11520	5.34	4.37	4.54	4.00	3.55	2.74	1.68
*	3	105.2	11524	5.39	4.39	4.57	4.03	3.57	2.78	1.69
*	4	143.7	15743	7.48	6.06	6.29	5.55	4.93	3.81	2.33
*	4	143.2	15688	7.47	6.02	6.27	5.54	4.91	3.75	2.32
*	4	143.7	15747	7.48	6.04	6.28	5.54	4.91	3.82	2.33
*	4	143.9	15771	7.53	6.07	6.32	5.59	4.94	3.81	2.37

Stn: 169 Lane:J5 Temp: J/C: 6 Air: 56 PvT: 63 13:22

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.4	11548	4.70	4.60	4.06	3.69	3.35	2.74	1.75
	C	105.6	11568	4.71	4.61	4.06	3.69	3.35	2.74	1.76
	C	105.4	11552	4.73	4.61	4.06	3.70	3.34	2.74	1.76
*	2	79.2	8680	3.49	3.42	3.02	2.74	2.50	2.05	1.31
*	2	79.0	8656	3.50	3.43	3.02	2.72	2.51	2.05	1.30
*	2	79.0	8660	3.49	3.44	3.03	2.76	2.50	2.04	1.31
*	2	79.3	8684	3.48	3.43	3.01	2.72	2.50	2.05	1.31
*	3	105.3	11540	4.72	4.60	4.04	3.67	3.35	2.73	1.75
*	3	105.4	11552	4.72	4.61	4.05	3.68	3.35	2.74	1.75
*	3	105.4	11548	4.72	4.60	4.05	3.69	3.34	2.73	1.75
*	3	105.4	11548	4.74	4.63	4.04	3.67	3.35	2.74	1.75
*	4	144.4	15823	6.51	6.33	5.56	5.06	4.59	3.74	2.41
*	4	144.2	15803	6.52	6.35	5.57	5.07	4.59	3.76	2.40
*	4	144.2	15795	6.52	6.36	5.59	5.10	4.59	3.75	2.41
*	4	144.2	15799	6.51	6.36	5.59	5.10	4.61	3.76	2.42

Stn: 213 Lane:J4 Temp: J/C: 30 Air: 56 PvT: 68 13:25

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.6	11461	5.58	4.43	4.24	3.74	3.37	2.65	1.67
	C	105.8	11596	5.50	4.37	4.10	3.64	3.30	2.62	1.67
	C	105.7	11584	5.57	4.37	4.09	3.64	3.29	2.61	1.67
*	2	79.6	8720	4.23	3.23	3.03	2.68	2.43	1.94	1.22
*	2	79.3	8692	4.12	3.23	3.02	2.67	2.44	1.93	1.20
*	2	79.6	8724	4.17	3.25	3.03	2.69	2.44	1.93	1.21
*	2	79.5	8716	4.13	3.23	3.02	2.67	2.43	1.93	1.23
*	3	105.2	11524	5.45	4.35	4.03	3.57	3.23	2.56	1.65
*	3	105.4	11544	5.47	4.35	4.02	3.56	3.22	2.56	1.64

File: C:\FWD\DATA\204054D3.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	3	105.2	11524	5.50	4.36	4.02	3.56	3.22	2.56	1.64
*	3	104.8	11485	5.50	4.36	4.02	3.57	3.22	2.57	1.64
*	4	141.3	15481	7.65	6.07	5.52	4.91	4.46	3.55	2.27
*	4	143.0	15672	7.72	6.19	5.57	4.95	4.51	3.60	2.31
*	4	142.9	15656	7.74	6.18	5.54	4.93	4.47	3.53	2.29
*	4	142.7	15640	7.76	6.17	5.53	4.93	4.46	3.54	2.28

Stn: 215 Lane:J5 Temp: J/C: 30 Air: 54 PvT: 66 13:29

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.8	11596	5.40	4.13	4.35	3.91	3.50	2.81	1.85
	C	106.4	11655	5.41	4.17	4.37	3.92	3.51	2.83	1.86
	C	106.1	11628	5.41	4.15	4.38	3.89	3.49	2.77	1.79
*	2	80.0	8763	4.07	3.08	3.28	2.93	2.61	2.09	1.37
*	2	80.3	8795	4.07	3.06	3.28	2.94	2.63	2.12	1.38
*	2	80.3	8795	4.07	3.06	3.28	2.94	2.64	2.12	1.37
*	2	80.2	8791	4.07	3.08	3.28	2.93	2.62	2.12	1.37
*	3	106.3	11643	5.43	4.16	4.37	3.92	3.52	2.85	1.85
*	3	105.7	11584	5.41	4.15	4.38	3.91	3.51	2.81	1.82
*	3	106.3	11647	5.44	4.16	4.40	3.93	3.52	2.80	1.84
*	3	105.8	11592	5.44	4.17	4.40	3.93	3.52	2.82	1.85
*	4	143.4	15711	7.40	5.74	5.99	5.37	4.83	3.87	2.54
*	4	144.3	15807	7.44	5.81	6.04	5.44	4.87	3.91	2.53
*	4	143.5	15719	7.41	5.78	6.04	5.38	4.83	3.89	2.53
*	4	143.5	15723	7.45	5.79	6.07	5.41	4.86	3.90	2.52

Stn: 228 Lane:J4 Temp: J/C: 20 Air: 55 PvT: 64 13:31

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.3	11532	5.69	4.58	4.02	3.62	3.20	2.53	1.56
	C	105.4	11548	5.69	4.57	4.03	3.61	3.18	2.53	1.56
	C	105.3	11540	5.73	4.57	4.00	3.59	3.17	2.52	1.56
*	2	79.2	8672	4.20	3.39	2.99	2.68	2.36	1.85	1.14
*	2	78.9	8644	4.20	3.35	2.96	2.65	2.35	1.82	1.15
*	2	79.0	8652	4.20	3.38	2.98	2.66	2.34	1.85	1.13
*	2	78.8	8636	4.19	3.37	2.96	2.65	2.33	1.84	1.13
*	3	104.2	11421	5.73	4.57	3.94	3.54	3.14	2.48	1.54
*	3	104.9	11493	5.76	4.60	3.96	3.56	3.15	2.49	1.55
*	3	104.9	11493	5.76	4.60	3.96	3.55	3.14	2.50	1.54
*	3	105.5	11560	5.78	4.62	3.95	3.55	3.14	2.48	1.52
*	4	143.7	15739	8.13	6.50	5.41	4.88	4.33	3.44	2.16
*	4	143.8	15759	8.17	6.55	5.43	4.89	4.34	3.45	2.16
*	4	143.8	15759	8.24	6.57	5.41	4.89	4.35	3.44	2.17
*	4	144.1	15787	8.23	6.57	5.40	4.88	4.35	3.43	2.17

Stn: 230 Lane:J5 Temp: J/C: 20 Air: 56 PvT: 63 13:33

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.4	11437	5.04	4.17	4.13	3.71	3.35	2.65	1.67
	C	104.4	11433	4.96	4.17	4.10	3.69	3.33	2.64	1.66
	C	104.6	11461	4.95	4.17	4.10	3.69	3.32	2.64	1.67
*	2	78.5	8597	3.70	3.05	3.06	2.74	2.48	1.95	1.24
*	2	78.4	8585	3.73	3.06	3.06	2.73	2.47	1.96	1.25
*	2	78.8	8628	3.70	3.05	3.06	2.75	2.48	1.97	1.25
*	2	78.7	8620	3.71	3.06	3.06	2.74	2.48	1.97	1.24
*	3	103.9	11381	4.93	4.12	4.07	3.67	3.29	2.63	1.66
*	3	105.0	11504	4.94	4.14	4.09	3.69	3.33	2.64	1.65
*	3	104.7	11477	4.93	4.13	4.09	3.67	3.30	2.62	1.64
*	3	105.2	11524	4.97	4.16	4.10	3.68	3.27	2.63	1.64
*	4	143.6	15735	6.76	5.73	5.63	5.07	4.56	3.67	2.31
*	4	144.2	15795	6.77	5.74	5.65	5.09	4.56	3.69	2.36
*	4	143.8	15751	6.75	5.74	5.64	5.09	4.57	3.70	2.34
*	4	143.6	15731	6.76	5.74	5.61	5.07	4.57	3.67	2.32

Stn: 271 Lane:J4 Temp: J/C: 28 Air: 56 PvT: 68 13:36

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	103.0	11282	5.73	4.47	4.56	4.00	3.57	2.85	1.78
	C	103.4	11330	5.53	4.34	4.35	3.85	3.44	2.78	1.77
	C	103.6	11350	5.51	4.32	4.35	3.85	3.43	2.77	1.79
*	2	78.1	8561	4.15	3.22	3.23	2.85	2.55	2.08	1.28
*	2	78.5	8605	4.19	3.22	3.25	2.88	2.55	2.09	1.32
*	2	77.9	8537	4.15	3.21	3.22	2.84	2.53	2.07	1.32
*	2	77.8	8529	4.09	3.20	3.22	2.83	2.53	2.06	1.31
*	3	102.9	11274	5.49	4.30	4.31	3.81	3.39	2.74	1.74

File: C:\FWD\DATA\204054D3.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	3	103.2	11302	5.49	4.31	4.33	3.83	3.41	2.76	1.76
*	3	103.6	11346	5.52	4.34	4.35	3.84	3.43	2.77	1.81
*	3	103.9	11381	5.54	4.36	4.37	3.86	3.44	2.78	1.80
*	4	140.3	15374	7.72	6.05	6.04	5.37	4.76	3.81	2.48
*	4	141.0	15453	7.69	6.03	6.02	5.33	4.78	3.85	2.48
*	4	140.8	15429	7.73	6.08	6.07	5.37	4.81	3.88	2.50
*	4	140.6	15402	7.74	6.09	6.07	5.38	4.80	3.88	2.50

Stn: 273 Lane:J5 Temp: J/C: 28 Air: 55 PvT: 67 13:38

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.2	11413	5.30	4.40	4.33	3.91	3.56	2.87	1.89
	C	104.7	11469	5.31	4.44	4.34	3.93	3.57	2.93	1.90
	C	104.4	11433	5.28	4.42	4.32	3.91	3.56	2.91	1.90
*	2	78.4	8593	3.94	3.26	3.22	2.90	2.64	2.15	1.42
*	2	79.0	8660	3.94	3.28	3.24	2.91	2.65	2.16	1.40
*	2	78.5	8605	3.92	3.26	3.20	2.88	2.62	2.13	1.39
*	2	78.4	8593	3.95	3.30	3.23	2.91	2.65	2.17	1.41
*	3	104.2	11417	5.27	4.37	4.33	3.91	3.56	2.89	1.90
*	3	104.2	11421	5.30	4.43	4.38	3.95	3.60	2.93	1.93
*	3	104.5	11453	5.30	4.41	4.35	3.93	3.57	2.91	1.90
*	3	104.4	11437	5.28	4.41	4.35	3.93	3.57	2.90	1.91
*	4	142.9	15652	7.40	6.17	6.06	5.47	4.97	4.03	2.64
*	4	143.1	15676	7.41	6.14	6.06	5.47	4.98	4.04	2.65
*	4	142.8	15644	7.40	6.14	6.06	5.48	4.98	4.04	2.66
*	4	143.5	15723	7.44	6.16	6.08	5.50	5.00	4.07	2.67

Stn: 318 Lane:J4 Temp: J/C: 21 Air: 56 PvT: 68 13:41

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.9	11600	4.12	3.52	3.62	3.31	3.02	2.52	1.67
	C	105.7	11580	4.05	3.46	3.57	3.27	2.99	2.46	1.63
	C	105.5	11560	4.07	3.46	3.56	3.26	2.98	2.48	1.64
*	2	79.2	8680	2.98	2.54	2.62	2.39	2.19	1.83	1.21
*	2	79.2	8676	2.98	2.55	2.65	2.42	2.20	1.81	1.22
*	2	79.3	8692	2.97	2.54	2.65	2.41	2.20	1.83	1.22
*	2	79.4	8700	2.98	2.55	2.63	2.41	2.20	1.83	1.22
*	3	104.5	11449	4.04	3.43	3.55	3.25	2.97	2.45	1.63
*	3	105.4	11544	4.05	3.45	3.56	3.27	2.98	2.47	1.67
*	3	105.5	11560	4.04	3.45	3.56	3.25	2.97	2.46	1.63
*	3	105.4	11548	4.04	3.44	3.56	3.25	2.97	2.46	1.64
*	4	143.3	15695	5.63	4.82	4.97	4.56	4.16	3.46	2.30
*	4	144.0	15779	5.67	4.83	5.00	4.59	4.19	3.46	2.30
*	4	143.5	15723	5.67	4.82	5.01	4.59	4.20	3.44	2.30
*	4	144.0	15779	5.67	4.83	5.02	4.60	4.19	3.45	2.30

Stn: 319 Lane:J5 Temp: J/C: 21 Air: 56 PvT: 67 13:43

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.6	11457	4.00	3.54	3.57	3.31	3.06	2.58	1.71
	C	104.9	11489	4.01	3.55	3.59	3.33	3.08	2.58	1.72
	C	104.4	11441	4.00	3.54	3.59	3.32	3.07	2.59	1.71
*	2	78.2	8565	2.94	2.60	2.64	2.43	2.26	1.89	1.25
*	2	78.3	8581	2.93	2.61	2.64	2.45	2.26	1.89	1.24
*	2	78.5	8605	2.96	2.62	2.65	2.46	2.28	1.93	1.26
*	2	78.2	8565	2.96	2.61	2.64	2.46	2.26	1.90	1.25
*	3	103.7	11365	3.98	3.51	3.56	3.29	3.04	2.55	1.70
*	3	104.6	11457	3.99	3.54	3.57	3.31	3.06	2.59	1.71
*	3	104.4	11433	3.98	3.55	3.57	3.31	3.06	2.57	1.69
*	3	104.2	11413	4.00	3.55	3.57	3.31	3.06	2.57	1.71
*	4	142.5	15608	5.53	4.91	4.93	4.58	4.23	3.55	2.36
*	4	143.6	15731	5.59	4.96	4.98	4.62	4.26	3.57	2.39
*	4	143.9	15771	5.59	4.97	4.98	4.62	4.26	3.57	2.39
*	4	143.3	15703	5.58	4.95	4.97	4.62	4.26	3.57	2.39

Stn: 364 Lane:J4 Temp: J/C: 27 Air: 57 PvT: 68 13:47

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	106.0	11616	4.65	3.79	3.98	3.50	3.10	2.38	1.46
	C	106.2	11636	4.45	3.67	3.79	3.32	2.96	2.30	1.42
	C	106.6	11679	4.48	3.70	3.80	3.35	2.96	2.29	1.42
*	2	80.1	8775	3.28	2.68	2.80	2.46	2.17	1.67	1.04
*	2	79.7	8736	3.28	2.69	2.79	2.45	2.18	1.69	1.03
*	2	79.7	8732	3.26	2.71	2.78	2.45	2.17	1.67	1.04
*	2	80.1	8775	3.28	2.72	2.78	2.44	2.18	1.68	1.03

File: C:\FWD\DATA\204054D3.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	3	106.0	11616	4.46	3.69	3.78	3.33	2.94	2.28	1.41
*	3	106.2	11636	4.46	3.67	3.77	3.33	2.94	2.28	1.41
*	3	106.3	11643	4.47	3.69	3.78	3.33	2.94	2.29	1.41
*	3	106.4	11659	4.47	3.69	3.78	3.34	2.94	2.28	1.41
*	4	143.9	15767	6.24	5.16	5.30	4.69	4.12	3.19	1.97
*	4	144.2	15799	6.25	5.17	5.31	4.69	4.13	3.21	1.98
*	4	143.9	15763	6.27	5.18	5.32	4.71	4.12	3.20	1.99
*	4	143.7	15743	6.26	5.17	5.31	4.68	4.12	3.20	1.98

Stn: 367 Lane:J5 Temp: J/C: 27 Air: 56 PvT: 67 13:49

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.5	11453	4.41	3.78	3.60	3.23	2.93	2.33	1.50
	C	104.5	11453	4.41	3.80	3.59	3.22	2.91	2.31	1.48
	C	104.6	11457	4.39	3.82	3.58	3.21	2.90	2.32	1.47
*	2	78.0	8541	3.24	2.80	2.67	2.39	2.22	1.73	1.14
*	2	78.4	8585	3.21	2.80	2.66	2.38	2.17	1.71	1.11
*	2	78.2	8565	3.22	2.78	2.65	2.37	2.14	1.70	1.09
*	2	78.2	8565	3.23	2.78	2.65	2.37	2.14	1.71	1.11
*	3	103.6	11346	4.39	3.77	3.57	3.19	2.90	2.31	1.47
*	3	104.4	11433	4.45	3.81	3.59	3.21	2.88	2.30	1.46
*	3	104.4	11433	4.42	3.79	3.59	3.21	2.86	2.31	1.47
*	3	104.2	11413	4.42	3.80	3.59	3.21	2.89	2.30	1.48
*	4	143.1	15680	6.18	5.31	5.01	4.47	4.04	3.22	2.04
*	4	144.1	15787	6.24	5.34	5.04	4.50	4.07	3.24	2.07
*	4	143.9	15763	6.23	5.32	5.03	4.50	4.06	3.23	2.06
*	4	143.7	15739	6.26	5.34	5.05	4.51	4.09	3.24	2.08

Stn: 378 Lane:J4 Temp: J/C: 22 Air: 56 PvT: 65 13:52

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.8	11485	5.35	4.14	3.77	3.32	2.97	2.30	1.38
	C	105.2	11528	5.28	4.09	3.72	3.29	2.92	2.27	1.38
	C	104.7	11477	5.29	4.08	3.72	3.28	2.92	2.27	1.37
*	2	78.7	8620	3.85	3.00	2.76	2.43	2.17	1.67	1.01
*	2	78.6	8612	3.87	3.00	2.76	2.43	2.17	1.68	1.00
*	2	78.8	8628	3.87	2.98	2.76	2.43	2.16	1.67	1.00
*	2	78.6	8616	3.86	2.98	2.76	2.45	2.15	1.69	1.01
*	3	104.1	11409	5.25	4.07	3.67	3.24	2.89	2.24	1.36
*	3	104.5	11445	5.27	4.09	3.69	3.25	2.90	2.25	1.37
*	3	104.7	11473	5.28	4.10	3.69	3.26	2.91	2.27	1.37
*	3	104.8	11481	5.30	4.09	3.69	3.25	2.89	2.26	1.37
*	4	143.1	15680	7.46	5.75	5.04	4.49	3.97	3.12	1.90
*	4	144.2	15803	7.56	5.84	5.09	4.53	4.02	3.15	1.91
*	4	143.7	15747	7.57	5.84	5.08	4.53	4.00	3.17	1.93
*	4	143.8	15755	7.56	5.85	5.08	4.52	4.02	3.17	1.93

Stn: 378 Lane:J5 Temp: J/C: 22 Air: 56 PvT: 64 13:55

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.6	11461	5.02	3.72	3.94	3.49	3.05	2.37	1.43
	C	104.4	11437	4.98	3.77	3.89	3.44	3.01	2.34	1.41
	C	105.0	11504	5.06	3.78	3.91	3.46	3.02	2.36	1.43
*	2	78.2	8569	3.65	2.79	2.88	2.55	2.22	1.72	1.04
*	2	78.7	8620	3.64	2.78	2.88	2.54	2.22	1.73	1.04
*	2	78.3	8581	3.66	2.79	2.87	2.56	2.20	1.73	1.03
*	2	78.8	8636	3.69	2.79	2.89	2.56	2.22	1.73	1.03
*	3	104.2	11413	4.98	3.75	3.88	3.44	3.01	2.33	1.41
*	3	105.1	11512	5.04	3.78	3.93	3.46	3.05	2.37	1.43
*	3	105.1	11512	5.06	3.77	3.91	3.48	3.03	2.35	1.43
*	3	105.3	11536	5.03	3.78	3.93	3.48	3.04	2.37	1.43
*	4	143.4	15715	7.06	5.17	5.48	4.87	4.24	3.30	2.00
*	4	143.9	15763	7.11	5.19	5.51	4.86	4.26	3.31	2.01
*	4	143.8	15759	7.11	5.21	5.50	4.87	4.27	3.33	2.01
*	4	144.2	15799	7.15	5.21	5.52	4.88	4.30	3.34	2.01

Stn: 408 Lane:J4 Temp: J/C: 06 Air: 56 PvT: 72 13:57

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.5	11449	4.48	3.88	3.99	3.60	3.24	2.59	1.67
	C	105.0	11504	4.44	3.83	3.95	3.57	3.20	2.60	1.65
	C	104.7	11473	4.43	3.82	3.95	3.56	3.19	2.59	1.66
*	2	78.7	8624	3.31	2.86	2.93	2.63	2.37	1.91	1.22
*	2	78.4	8585	3.29	2.82	2.91	2.62	2.36	1.88	1.21

File: C:\FWD\DATA\204054D3.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	2	78.6	8616	3.27	2.83	2.91	2.63	2.35	1.87	1.20
*	2	78.4	8585	3.26	2.81	2.90	2.61	2.33	1.90	1.20
*	3	103.8	11373	4.41	3.80	3.91	3.52	3.17	2.52	1.61
*	3	104.8	11485	4.44	3.82	3.97	3.56	3.22	2.55	1.65
*	3	105.0	11504	4.41	3.81	3.95	3.55	3.20	2.54	1.66
*	3	105.2	11528	4.46	3.82	3.96	3.56	3.20	2.57	1.65
*	4	144.2	15803	6.24	5.35	5.54	4.99	4.48	3.58	2.30
*	4	144.5	15827	6.27	5.39	5.57	5.01	4.51	3.63	2.34
*	4	144.5	15827	6.30	5.37	5.60	5.03	4.53	3.64	2.36
*	4	144.2	15803	6.29	5.38	5.57	5.02	4.52	3.64	2.34

Stn: 409 Lane:J5 Temp: J/C: 06 Air: 57 PvT: 69 13:59

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	103.9	11381	4.23	3.92	3.68	3.38	3.09	2.56	1.71
	C	104.6	11461	4.27	3.94	3.69	3.40	3.11	2.60	1.72
	C	104.5	11445	4.28	3.95	3.69	3.38	3.07	2.56	1.71
*	2	78.2	8569	3.07	2.91	2.74	2.52	2.30	1.93	1.28
*	2	78.0	8541	3.10	2.88	2.72	2.51	2.29	1.92	1.26
*	2	78.3	8577	3.13	2.90	2.73	2.49	2.26	1.89	1.26
*	2	78.4	8585	3.12	2.89	2.72	2.49	2.28	1.89	1.25
*	3	104.1	11405	4.26	3.92	3.67	3.37	3.08	2.56	1.71
*	3	104.6	11457	4.28	3.94	3.69	3.39	3.09	2.57	1.72
*	3	104.9	11493	4.29	3.95	3.70	3.40	3.10	2.57	1.72
*	3	104.5	11445	4.28	3.93	3.68	3.38	3.09	2.57	1.71
*	4	143.5	15723	5.90	5.46	5.09	4.68	4.28	3.54	2.35
*	4	144.7	15858	5.94	5.52	5.14	4.71	4.32	3.56	2.39
*	4	144.3	15811	5.96	5.51	5.14	4.70	4.27	3.54	2.37
*	4	144.8	15865	5.95	5.52	5.15	4.71	4.30	3.55	2.36

Stn: 423 Lane:J4 Temp: J/C: 25 Air: 58 PvT: 69 14:02

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.9	11493	4.52	3.66	3.85	3.38	3.03	2.35	1.41
	C	105.7	11576	4.33	3.59	3.68	3.25	2.93	2.30	1.43
	C	105.4	11548	4.35	3.57	3.69	3.25	2.93	2.30	1.43
*	2	79.0	8660	3.21	2.64	2.72	2.39	2.15	1.69	1.05
*	2	78.8	8628	3.18	2.61	2.71	2.37	2.14	1.67	1.04
*	2	79.2	8672	3.18	2.62	2.70	2.38	2.14	1.67	1.03
*	2	79.3	8692	3.20	2.61	2.70	2.37	2.13	1.67	1.02
*	3	104.4	11441	4.33	3.52	3.67	3.24	2.90	2.28	1.41
*	3	105.7	11576	4.37	3.60	3.70	3.26	2.93	2.31	1.44
*	3	105.5	11564	4.35	3.60	3.69	3.26	2.93	2.31	1.43
*	3	105.4	11552	4.36	3.56	3.71	3.27	2.93	2.30	1.43
*	4	144.5	15827	6.25	5.09	5.31	4.69	4.18	3.28	2.02
*	4	145.4	15934	6.23	5.13	5.27	4.67	4.17	3.30	2.05
*	4	145.3	15922	6.23	5.12	5.28	4.69	4.16	3.28	2.05
*	4	145.4	15934	6.24	5.11	5.28	4.69	4.16	3.29	2.04

Stn: 427 Lane:J5 Temp: J/C: 25 Air: 57 PvT: 67 14:05

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.3	11536	4.09	3.67	3.47	3.11	2.89	2.40	1.56
	C	105.0	11508	4.09	3.70	3.45	3.11	2.86	2.35	1.52
	C	105.5	11560	4.10	3.72	3.47	3.13	2.87	2.35	1.52
*	2	79.3	8688	3.02	2.74	2.54	2.32	2.10	1.72	1.12
*	2	78.7	8624	3.00	2.70	2.54	2.29	2.10	1.71	1.11
*	2	79.2	8672	3.01	2.70	2.52	2.30	2.08	1.70	1.11
*	2	78.4	8593	2.99	2.69	2.52	2.29	2.07	1.69	1.11
*	3	104.5	11453	4.07	3.69	3.44	3.11	2.84	2.33	1.50
*	3	105.2	11528	4.09	3.72	3.46	3.13	2.87	2.35	1.51
*	3	105.2	11528	4.09	3.72	3.47	3.13	2.87	2.36	1.52
*	3	105.0	11508	4.09	3.71	3.46	3.13	2.87	2.36	1.52
*	4	144.2	15795	5.74	5.22	4.84	4.44	4.00	3.25	2.11
*	4	144.7	15850	5.80	5.26	4.89	4.43	4.07	3.34	2.17
*	4	144.9	15878	5.81	5.28	4.90	4.44	4.06	3.32	2.15
*	4	145.1	15894	5.81	5.28	4.90	4.46	4.06	3.31	2.16

Stn: 439 Lane:J4 Temp: J/C: 06 Air: 55 PvT: 67 14:08

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.6	11461	6.25	5.03	4.67	4.19	3.78	2.96	1.83
	C	104.9	11497	6.22	4.99	4.68	4.19	3.76	2.96	1.85
	C	105.0	11508	6.24	5.03	4.67	4.20	3.78	3.00	1.85
*	2	78.8	8632	4.65	3.73	3.49	3.13	2.80	2.21	1.36

File: C:\FWD\DATA\20405403.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	2	78.9	8640	4.63	3.70	3.47	3.10	2.78	2.18	1.34
*	2	78.7	8620	4.66	3.73	3.49	3.12	2.80	2.20	1.35
*	2	78.6	8608	4.66	3.73	3.49	3.11	2.78	2.18	1.35
*	3	104.8	11481	6.30	5.05	4.69	4.18	3.74	2.97	1.83
*	3	105.4	11548	6.36	5.14	4.69	4.21	3.80	3.01	1.86
*	3	104.9	11489	6.42	5.17	4.70	4.22	3.80	3.02	1.86
*	3	105.0	11500	6.43	5.16	4.69	4.21	3.79	3.01	1.85
*	4	144.5	15835	9.06	7.25	6.46	5.81	5.24	4.16	2.61
*	4	144.0	15779	9.13	7.29	6.44	5.79	5.24	4.16	2.61
*	4	143.6	15731	9.20	7.35	6.42	5.77	5.21	4.15	2.60
*	4	143.8	15759	9.28	7.40	6.44	5.78	5.21	4.17	2.61

Stn: 440 Lane:J5 Temp: J/C: 06 Air: 57 PvT: 67 14:10

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.4	11441	5.83	4.87	4.87	4.41	4.00	3.21	1.99
	C	104.6	11457	5.79	4.94	4.86	4.40	4.00	3.21	1.98
	C	104.6	11457	5.80	4.91	4.85	4.40	3.99	3.22	1.98
*	2	78.5	8605	4.27	3.60	3.60	3.25	2.95	2.38	1.46
*	2	78.6	8608	4.27	3.60	3.59	3.25	2.94	2.37	1.45
*	2	78.5	8605	4.29	3.62	3.60	3.26	2.96	2.38	1.46
*	2	78.6	8612	4.28	3.62	3.61	3.25	2.96	2.38	1.46
*	3	104.5	11445	5.81	4.91	4.86	4.41	4.03	3.22	1.99
*	3	104.1	11409	5.81	4.87	4.88	4.41	3.97	3.22	1.99
*	3	104.1	11409	5.82	4.90	4.89	4.42	4.00	3.22	1.98
*	3	104.2	11417	5.84	4.91	4.90	4.43	4.00	3.23	1.99
*	4	143.4	15715	8.13	6.80	6.81	6.17	5.63	4.52	2.80
*	4	142.9	15660	8.17	6.80	6.85	6.20	5.63	4.54	2.81
*	4	143.8	15755	8.23	6.84	6.89	6.24	5.68	4.57	2.83
*	4	143.7	15743	8.27	6.84	6.93	6.28	5.69	4.59	2.84

Stn: 451 Lane:J4 Temp: J/C: 27 Air: 57 PvT: 68 14:13

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.5	11453	4.43	3.63	3.87	3.43	3.07	2.39	1.46
	C	104.4	11437	4.36	3.57	3.80	3.39	3.01	2.36	1.42
	C	104.4	11441	4.38	3.57	3.80	3.39	3.01	2.36	1.42
*	2	78.2	8565	3.20	2.62	2.80	2.48	2.22	1.73	1.07
*	2	77.7	8517	3.20	2.62	2.79	2.48	2.21	1.71	1.06
*	2	77.7	8513	3.20	2.62	2.78	2.48	2.20	1.73	1.05
*	2	77.8	8525	3.20	2.63	2.79	2.47	2.22	1.72	1.06
*	3	104.6	11461	4.37	3.60	3.80	3.39	3.01	2.36	1.44
*	3	103.8	11373	4.39	3.58	3.81	3.40	3.01	2.37	1.43
*	3	103.8	11377	4.41	3.60	3.82	3.41	3.02	2.38	1.44
*	3	103.8	11369	4.39	3.60	3.83	3.41	3.05	2.36	1.44
*	4	143.3	15699	6.24	5.11	5.48	4.87	4.35	3.39	2.05
*	4	143.4	15711	6.21	5.11	5.43	4.85	4.33	3.39	2.09
*	4	143.3	15703	6.22	5.10	5.42	4.86	4.30	3.40	2.07
*	4	143.3	15695	6.23	5.11	5.43	4.87	4.30	3.40	2.06

Stn: 454 Lane:J5 Temp: J/C: 27 Air: 56 PvT: 67 14:15

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	105.8	11588	4.74	3.94	3.91	3.52	3.19	2.57	1.57
	C	105.8	11596	4.69	3.94	3.90	3.52	3.17	2.54	1.57
	C	105.8	11596	4.72	3.91	3.90	3.54	3.16	2.50	1.56
*	2	80.1	8775	3.48	2.89	2.87	2.56	2.35	1.90	1.16
*	2	80.0	8763	3.48	2.84	2.87	2.58	2.33	1.89	1.15
*	2	80.2	8783	3.48	2.91	2.88	2.59	2.33	1.88	1.18
*	2	79.9	8755	3.50	2.88	2.88	2.61	2.33	1.88	1.15
*	3	105.8	11592	4.69	3.90	3.90	3.54	3.17	2.52	1.57
*	3	106.0	11612	4.72	3.92	3.89	3.52	3.16	2.52	1.57
*	3	106.0	11616	4.73	3.94	3.91	3.55	3.18	2.51	1.58
*	3	106.0	11616	4.72	3.92	3.90	3.53	3.17	2.54	1.57
*	4	142.8	15648	6.63	5.52	5.46	4.93	4.43	3.54	2.21
*	4	143.3	15703	6.61	5.49	5.46	4.95	4.46	3.56	2.23
*	4	142.9	15652	6.62	5.51	5.48	4.95	4.45	3.58	2.24
*	4	143.0	15672	6.64	5.52	5.49	4.96	4.46	3.59	2.24

Stn: 466 Lane:J4 Temp: J/C: 21 Air: 57 PvT: 68 14:18

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.0	11393	5.81	4.57	4.19	3.70	3.26	2.47	1.47
	C	104.3	11429	5.11	4.24	4.30	3.80	3.36	2.57	1.55
	C	104.0	11397	5.04	4.20	4.32	3.80	3.38	2.58	1.54

File: C:\FWD\DATA\20405403.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

*	2	78.2	8565	3.68	3.07	3.20	2.84	2.50	1.90	1.13
*	2	78.3	8581	3.70	3.11	3.23	2.88	2.51	1.90	1.16
*	2	78.1	8557	3.67	3.09	3.23	2.85	2.51	1.92	1.14
*	2	78.7	8624	3.70	3.11	3.23	2.90	2.50	1.89	1.13
*	3	103.9	11385	5.09	4.19	4.33	3.83	3.38	2.57	1.52
*	3	104.0	11393	5.07	4.21	4.35	3.81	3.41	2.61	1.56
*	3	103.9	11381	5.06	4.20	4.35	3.84	3.40	2.59	1.55
*	3	103.8	11377	5.07	4.20	4.35	3.86	3.40	2.59	1.55
*	4	142.7	15640	7.66V	6.16	5.92	5.24	4.61	3.51	2.10
*	4	143.3	15699	7.39	6.04	6.05	5.37	4.73	3.61	2.17
*	4	143.3	15699	7.35	6.04	6.09	5.40	4.76	3.64	2.19
*	4	143.5	15727	7.32	6.04	6.10	5.44	4.77	3.62	2.18

Stn: 468 Lane:J5 Temp: J/C: 21 Air: 57 PvT: 67 14:20

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.2	11413	4.87	4.38	4.12	3.70	3.33	2.67	1.66
	C	105.0	11500	4.89	4.40	4.15	3.74	3.36	2.71	1.69
	C	104.6	11465	4.87	4.39	4.13	3.72	3.37	2.69	1.68
*	2	78.0	8541	3.65	3.24	3.07	2.76	2.50	2.00	1.25
*	2	78.4	8585	3.62	3.22	3.06	2.76	2.48	1.98	1.20
*	2	78.2	8565	3.63	3.26	3.08	2.77	2.48	2.00	1.23
*	2	78.4	8589	3.64	3.27	3.09	2.78	2.50	2.00	1.24
*	3	104.5	11453	4.86	4.38	4.12	3.72	3.37	2.68	1.67
*	3	105.1	11512	4.91	4.41	4.16	3.74	3.42	2.72	1.71
*	3	104.2	11421	4.91	4.39	4.15	3.74	3.37	2.71	1.68
*	3	104.4	11437	4.89	4.38	4.15	3.73	3.38	2.72	1.68
*	4	142.7	15640	6.72	6.07	5.69	5.14	4.65	3.76	2.32
*	4	143.1	15680	6.78	6.10	5.72	5.16	4.68	3.78	2.34
*	4	143.6	15731	6.78	6.11	5.72	5.17	4.68	3.76	2.35
*	4	144.1	15787	6.82	6.15	5.74	5.19	4.69	3.76	2.35

Stn: 481 Lane:J4 Temp: J/C: 31 Air: 58 PvT: 68 14:22

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.8	11485	4.22	3.61	3.76	3.40	3.09	2.54	1.67
	C	105.4	11548	4.21	3.60	3.75	3.39	3.09	2.54	1.67
	C	105.2	11524	4.21	3.59	3.74	3.39	3.09	2.53	1.67
*	2	79.0	8660	3.11	2.65	2.76	2.49	2.27	1.86	1.22
*	2	79.1	8668	3.11	2.65	2.76	2.49	2.26	1.85	1.22
*	2	79.2	8672	3.11	2.64	2.74	2.48	2.25	1.85	1.21
*	2	79.2	8680	3.11	2.65	2.75	2.48	2.26	1.85	1.22
*	3	104.4	11441	4.19	3.57	3.73	3.37	3.07	2.51	1.66
*	3	105.2	11524	4.23	3.60	3.73	3.38	3.07	2.52	1.66
*	3	104.9	11493	4.20	3.60	3.73	3.37	3.07	2.52	1.67
*	3	105.1	11512	4.22	3.60	3.74	3.38	3.08	2.52	1.67
*	4	142.7	15636	5.88	5.01	5.17	4.67	4.26	3.49	2.32
*	4	143.6	15735	5.90	5.04	5.17	4.69	4.26	3.50	2.32
*	4	143.8	15751	5.93	5.05	5.20	4.71	4.30	3.52	2.33
*	4	143.6	15735	5.93	5.06	5.20	4.72	4.30	3.53	2.33

Stn: 485 Lane:J5 Temp: J/C: 31 Air: 58 PvT: 67 14:25

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.4	11441	3.99	3.69	3.44	3.16	2.93	2.47	1.69
	C	104.7	11477	3.98	3.70	3.46	3.16	2.93	2.43	1.67
	C	105.0	11504	3.99	3.72	3.48	3.14	2.97	2.49	1.69
*	2	78.3	8577	2.96	2.71	2.53	2.35	2.14	1.80	1.22
*	2	78.6	8608	2.94	2.73	2.56	2.34	2.16	1.79	1.22
*	2	78.4	8585	2.94	2.74	2.56	2.33	2.16	1.80	1.23
*	2	78.3	8577	2.92	2.69	2.56	2.33	2.17	1.81	1.24
*	3	104.2	11421	3.98	3.64	3.45	3.13	2.93	2.46	1.67
*	3	104.2	11417	3.98	3.85V	3.45	3.16	2.93	2.46	1.67
*	3	104.4	11433	3.98	3.74	3.45	3.15	2.94	2.48	1.70
*	3	105.1	11512	4.06	3.61	3.47	3.18	2.93	2.45	1.67
*	4	143.2	15692	5.58	5.13	4.78	4.36	4.06	3.43	2.35
*	4	143.8	15759	5.68	5.22	4.82	4.40	4.11	3.46	2.37
*	4	144.1	15787	5.65	5.11	4.82	4.37	4.13	3.46	2.37
*	4	143.9	15771	5.69	5.19	4.83	4.39	4.11	3.43	2.36

Stn: 501 Lane:J4 Temp: J/C: 20 Air: 58 PvT: 69 14:27

Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
	C	104.4	11437	5.54	4.49	3.95	3.53	3.15	2.49	1.54
	C	104.4	11441	5.44	4.39	3.97	3.52	3.15	2.49	1.54

File: C:\FWD\DATA\204054D3.FWD
Road: I-70 WESTBOUND 6 MILES EAST OF ABILENE KS
Subsection: 204054

	Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
		C	104.7	11469	5.47	4.44	3.99	3.55	3.16	2.50	1.55
*		2	78.3	8581	4.02	3.23	2.98	2.63	2.34	1.83	1.13
*		2	78.5	8605	4.04	3.31	2.98	2.65	2.35	1.83	1.13
*		2	78.5	8601	4.06	3.23	2.99	2.64	2.35	1.83	1.14
*		2	78.7	8620	4.03	3.23	2.98	2.63	2.35	1.87	1.14
*		3	104.5	11453	5.47	4.41	3.95	3.52	3.12	2.46	1.54
*		3	104.6	11461	5.50	4.46	3.97	3.53	3.15	2.49	1.54
*		3	104.4	11433	5.53	4.45	3.97	3.52	3.13	2.48	1.54
*		3	104.5	11445	5.50	4.45	3.96	3.52	3.14	2.47	1.54
*		4	142.9	15656	7.95	6.26	5.35	4.78	4.26	3.39	2.14
*		4	143.5	15719	8.09	6.34	5.39	4.80	4.31	3.42	2.15
*		4	143.3	15703	8.12	6.37	5.35	4.78	4.28	3.40	2.15
*		4	142.9	15656	8.15	6.37	5.34	4.76	4.28	3.41	2.15

Stn: 501 Lane:J5 Temp: J/C: 20 Air: 57 PvT: 69 14:30

	Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
		C	103.8	11369	4.64	3.91	3.85	3.48	3.13	2.54	1.63
		C	104.4	11437	4.56	3.96	3.81	3.46	3.11	2.52	1.62
		C	104.0	11389	4.53	3.98	3.79	3.44	3.10	2.52	1.62
*		2	78.0	8549	3.41	2.95	2.83	2.56	2.30	1.87	1.19
*		2	78.1	8553	3.37	2.94	2.81	2.54	2.29	1.85	1.19
*		2	77.9	8533	3.35	2.92	2.81	2.56	2.29	1.86	1.20
*		2	78.0	8541	3.38	2.96	2.82	2.55	2.30	1.87	1.19
*		3	104.0	11393	4.54	3.99	3.78	3.43	3.09	2.51	1.62
*		3	103.8	11377	4.54	3.98	3.78	3.43	3.09	2.52	1.61
*		3	104.1	11401	4.56	3.99	3.79	3.43	3.09	2.51	1.62
*		3	104.3	11429	4.56	3.99	3.79	3.43	3.10	2.52	1.63
*		4	142.5	15616	6.23	5.45	5.18	4.71	4.26	3.49	2.26
*		4	143.4	15711	6.26	5.51	5.19	4.72	4.28	3.48	2.27
*		4	143.8	15755	6.26	5.52	5.19	4.72	4.28	3.49	2.28
*		4	143.8	15751	6.27	5.50	5.20	4.76	4.29	3.50	2.28

Stn: 513 Lane:J4 Temp: J/C: 27 Air: 58 PvT: 70 14:33

	Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
		C	104.7	11469	4.52	3.77	3.93	3.47	3.10	2.47	1.56
		C	104.8	11481	4.49	3.76	3.90	3.44	3.07	2.44	1.54
		C	104.8	11485	4.50	3.74	3.89	3.44	3.07	2.46	1.57
*		2	78.7	8624	3.32	2.78	2.88	2.54	2.28	1.81	1.16
*		2	78.6	8616	3.29	2.75	2.85	2.50	2.23	1.79	1.14
*		2	79.0	8660	3.30	2.75	2.85	2.52	2.25	1.80	1.15
*		2	78.5	8601	3.31	2.77	2.87	2.53	2.26	1.80	1.13
*		3	104.6	11465	4.48	3.75	3.88	3.43	3.08	2.46	1.57
*		3	104.9	11489	4.49	3.73	3.86	3.42	3.05	2.44	1.56
*		3	104.9	11489	4.50	3.75	3.85	3.43	3.05	2.44	1.54
*		3	105.1	11512	4.51	3.76	3.86	3.43	3.05	2.45	1.54
*		4	143.9	15771	6.30	5.21	5.40	4.79	4.30	3.43	2.20
*		4	144.2	15795	6.31	5.24	5.41	4.80	4.29	3.44	2.25
*		4	144.4	15819	6.34	5.26	5.42	4.81	4.30	3.45	2.23
*		4	144.7	15858	6.37	5.28	5.45	4.87	4.33	3.47	2.24

Stn: 516 Lane:J5 Temp: J/C: 27 Air: 58 PvT: 69 14:36

	Sto	Hgt	psi	lbf	Df1	Df2	Df3	Df4	Df5	Df6	Df7
		C	104.8	11481	4.41	3.88	3.63	3.28	2.99	2.45	1.61
		C	104.7	11469	4.37	3.89	3.61	3.27	2.96	2.42	1.57
		C	104.4	11437	4.36	3.88	3.61	3.26	2.98	2.43	1.59
*		2	78.9	8644	3.19	2.85	2.67	2.41	2.19	1.77	1.17
*		2	78.9	8640	3.26	2.88	2.69	2.43	2.20	1.80	1.16
*		2	78.6	8612	3.22	2.86	2.68	2.41	2.22	1.80	1.17
*		2	78.9	8640	3.21	2.85	2.67	2.41	2.19	1.77	1.17
*		3	104.4	11441	4.36	3.87	3.61	3.26	2.97	2.43	1.58
*		3	104.4	11441	4.38	3.90	3.62	3.28	2.98	2.44	1.58
*		3	104.3	11429	4.38	3.88	3.61	3.26	2.99	2.43	1.59
*		3	104.5	11453	4.37	3.88	3.61	3.26	2.97	2.40	1.59
*		4	143.1	15676	6.09	5.41	5.02	4.53	4.13	3.37	2.22
*		4	144.0	15775	6.11	5.43	5.03	4.55	4.15	3.37	2.22
*		4	144.1	15783	6.11	5.42	5.02	4.54	4.13	3.37	2.22
*		4	143.9	15771	6.13	5.43	5.03	4.55	4.13	3.37	2.22

Mileage:-.005 -> .098

Summary of Data for section 204054D
Analyzed by: Bob Van Sambeek on 07-19-1995

UNCORRECTED Overall Deflection Statistics

Mean Values (mils/kip)

Test Loc.	Drop Ht	Sensor 1	Sensor 2	Sensor 3	Sensor 4	Sensor 5	Sensor 6	Sensor 7
1	2	0.3011	0.2815	0.2718	0.2534	0.2382	0.2010	0.1301
	3	0.3042	0.2850	0.2748	0.2567	0.2414	0.2039	0.1322
	4	0.3063	0.2873	0.2767	0.2589	0.2431	0.2058	0.1334

Standard Deviations

Test Loc.	Drop Ht	Sensor 1	Sensor 2	Sensor 3	Sensor 4	Sensor 5	Sensor 6	Sensor 7
1	2	0.0195	0.0191	0.0190	0.0179	0.0157	0.0133	0.0084
	3	0.0195	0.0194	0.0191	0.0179	0.0158	0.0137	0.0084
	4	0.0191	0.0191	0.0187	0.0177	0.0157	0.0134	0.0086

Coefficient of Variation

Test Loc.	Drop Ht	Sensor 1	Sensor 2	Sensor 3	Sensor 4	Sensor 5	Sensor 6	Sensor 7
1	2	6.48%	6.80%	6.99%	7.06%	6.58%	6.64%	6.48%
	3	6.42%	6.80%	6.95%	6.95%	6.53%	6.72%	6.38%
	4	6.24%	6.67%	6.76%	6.82%	6.45%	6.54%	6.46%

Rigid Pavement Deflection Statistics - 204054D

Mean Values (mils/kip)

Test Loc.	Drop Ht	Sensor 1	Sensor 2	Sensor 3	Sensor 4	Sensor 5	Sensor 6	Sensor 7
1	2	0.3011	0.2815	0.2718	0.2534	0.2382	0.2010	0.1301
	3	0.3042	0.2850	0.2748	0.2567	0.2414	0.2039	0.1322
	4	0.3063	0.2873	0.2767	0.2589	0.2431	0.2058	0.1334

Standard Deviations

Test Loc.	Drop Ht	Sensor 1	Sensor 2	Sensor 3	Sensor 4	Sensor 5	Sensor 6	Sensor 7
1	2	0.0195	0.0191	0.0190	0.0179	0.0157	0.0133	0.0084
	3	0.0195	0.0194	0.0191	0.0179	0.0158	0.0137	0.0084
	4	0.0191	0.0191	0.0187	0.0177	0.0157	0.0134	0.0086

Coefficient of Variation

Test Loc.	Drop Ht	Sensor 1	Sensor 2	Sensor 3	Sensor 4	Sensor 5	Sensor 6	Sensor 7
1	2	6.48%	6.80%	6.99%	7.06%	6.58%	6.64%	6.48%
	3	6.42%	6.80%	6.95%	6.95%	6.53%	6.72%	6.38%
	4	6.24%	6.67%	6.76%	6.82%	6.45%	6.54%	6.46%

Outlier Statistics - 204054D

Station	Height	Sensor	Number of Std. Dev.
58	3	7	-2.01
161	2	1	2.02
161	2	7	2.00
286	2	1	2.05
286	2	2	2.33
286	2	3	2.53
286	2	4	2.73
286	2	5	2.72
286	2	6	2.74
286	3	1	2.02
286	3	2	2.32
286	3	3	2.49
286	3	4	2.68
286	3	5	2.71
286	3	6	2.72
286	4	1	2.11
286	4	2	2.39
286	4	3	2.54
286	4	4	2.70
286	4	5	2.79
286	4	6	2.78

Pavement Construction Information - 204054D

Material Code	Material Name	Layer Thickness
730	Portland Cement Concrete	9.5
332	Econocrete	3.5

RIGID Pavement Thickness Data - 204054D
(comparison of each calculation to the expected value)

Minimum expected thickness: 6.17
Maximum expected thickness: 10.92

Height	Station	Effective Thickness

No predicted thickness values fall outside the expected range...

RIGID Pavement Thickness Statistics - 204054D

Drop height 2

Subsection	Station	Volumetric k	Effective Thickness
No test pit data found, therefore no results exist...			
1	16	347	9.88
	-5	363	9.50
	13	387	10.25
	29	383	10.25
	44	386	10.25
	58	429	10.25
	74	373	9.88
	103	370	10.25
	118	395	10.25
	161	341	9.50
	177	371	9.88
	223	354	9.88
	240	412	10.25
	286	352	9.50
	330	369	10.25
	373	400	10.25
	391	416	10.25
	418	398	10.25
	432	386	9.88
	447	408	10.25
	461	377	10.25
	476	380	9.88
	493	366	10.25
	506	382	10.25
	521	406	10.25
Subsection 1 Overall Mean:		382	10.07
Standard Deviation:		22	0.27
Coeff Of Variation:		5.89%	2.66%

RIGID Pavement Thickness Statistics - 204054D

Drop height 3

Subsection	Station	Volumetric k	Effective Thickness
No test pit data found, therefore no results exist...			
1	16	340	9.88
	-5	355	9.50
	13	382	10.25
	29	376	10.25
	44	378	10.25
	58	424	10.25
	74	371	9.88
	103	363	10.25
	118	391	10.25
	161	339	9.50
	177	368	9.88
	223	348	9.88
	240	407	10.25
	286	348	9.50
	330	363	10.25
	373	394	10.25
	391	410	10.25
	418	394	10.25
	432	379	9.88
	447	401	10.25
	461	371	9.88
	476	376	9.88
	493	363	10.25
	506	374	10.25
	521	399	10.25
Subsection 1 Overall Mean:		377	10.06
Standard Deviation:		22	0.27
Coeff Of Variation:		5.88%	2.66%

RIGID Pavement Thickness Statistics - 204054D

Drop height 4

Subsection	Station	Volumetric k	Effective Thickness
No test pit data found, therefore no results exist...			
1	16	337	9.88
	-5	352	9.50
	13	380	10.25
	29	372	10.25
	44	374	10.25
	58	421	10.25
	74	372	9.88
	103	358	9.88
	118	387	10.25
	161	340	9.50
	177	366	9.88
	223	347	9.88
	240	401	10.25
	286	346	9.50
	330	356	10.25
	373	388	10.25
	391	406	10.25
	418	388	10.25
	432	374	9.88
	447	398	10.25
	461	365	10.25
	476	372	9.88
	493	361	10.25
	506	373	10.25
	521	395	10.25
Subsection 1 Overall Mean:		373	10.06
Standard Deviation:		21	0.27
Coeff Of Variation:		5.73%	2.66%

ll panels have mid panel cracks that match the joints on the shoulder.

Summary of Results

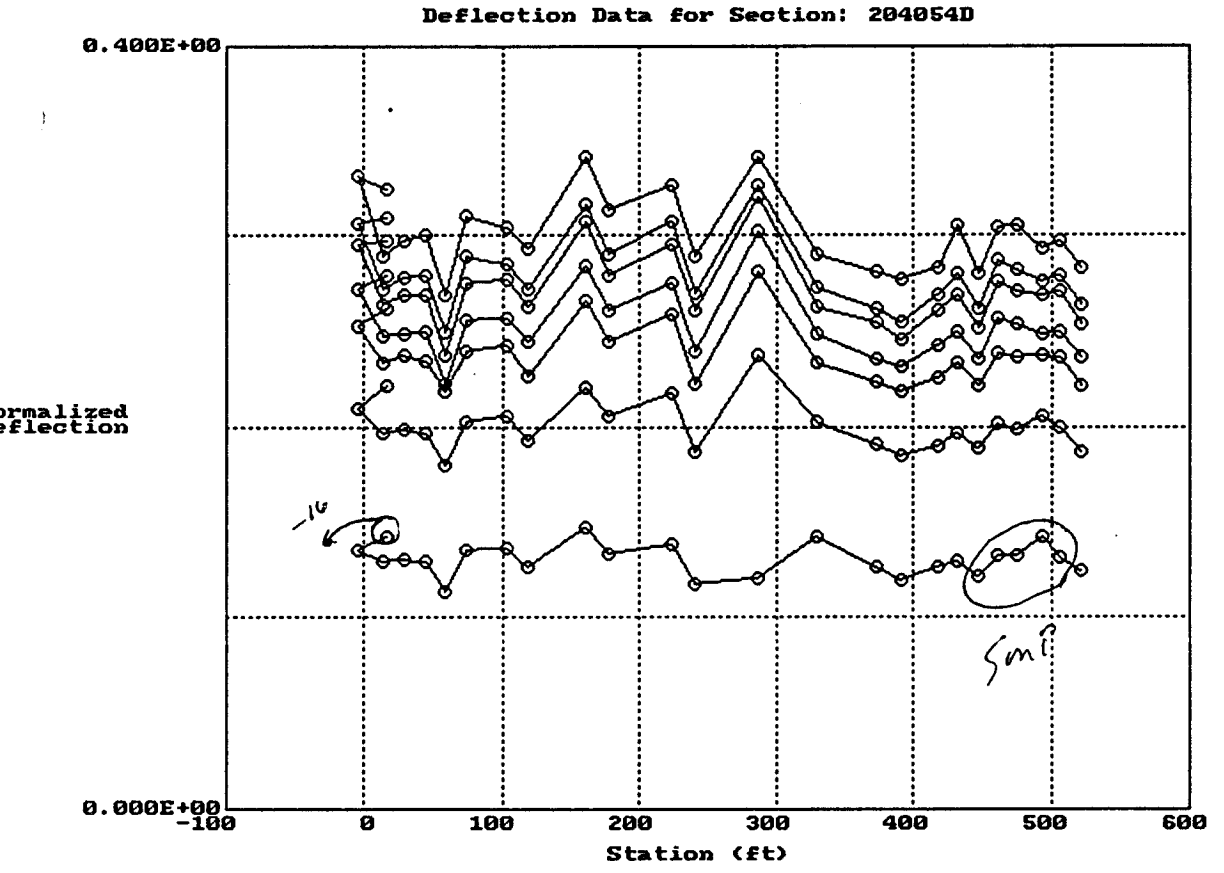
Section uniformity:
NO Subsections were identified within the section.

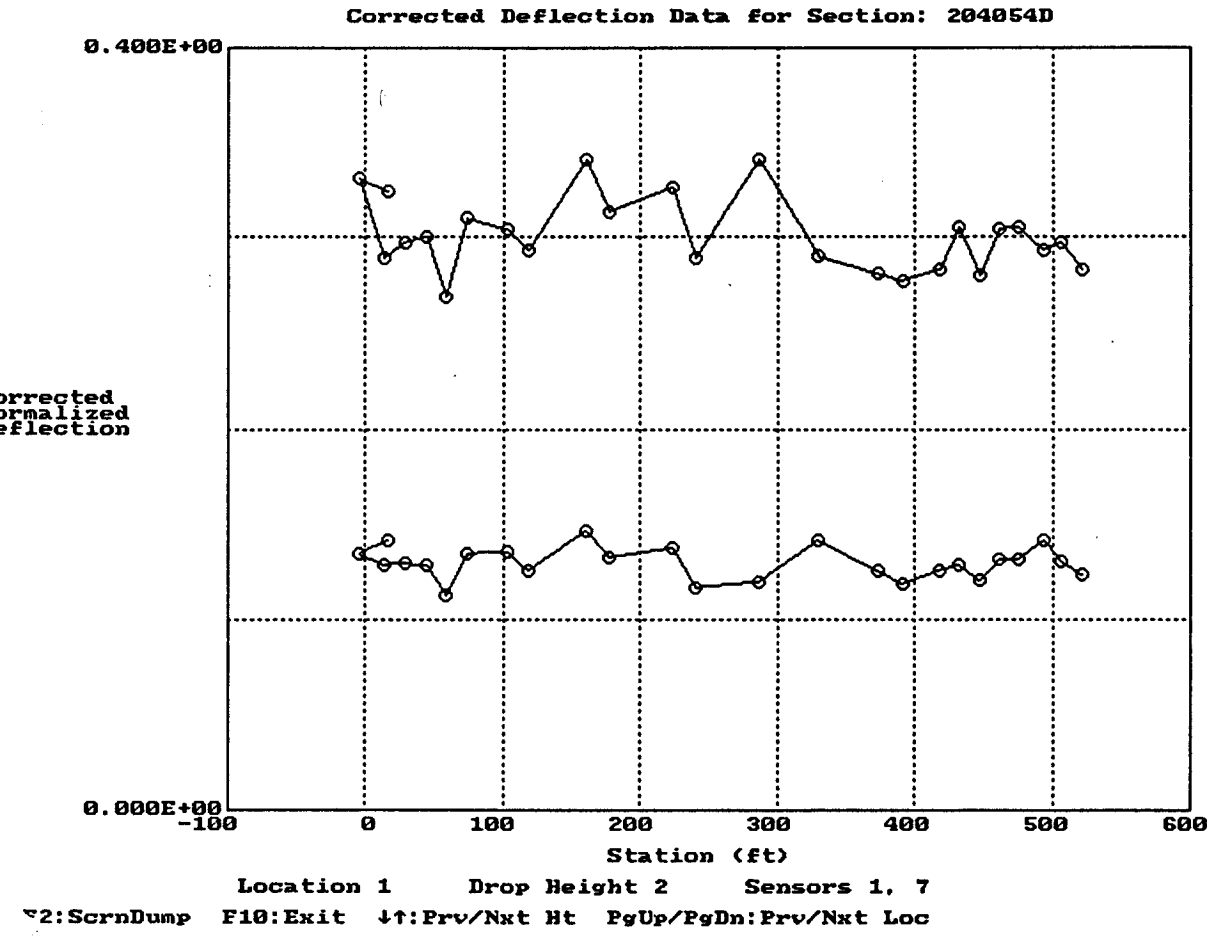
Outliers - Test pits: 21 combinations at each test pit
NO Test pit data was present.

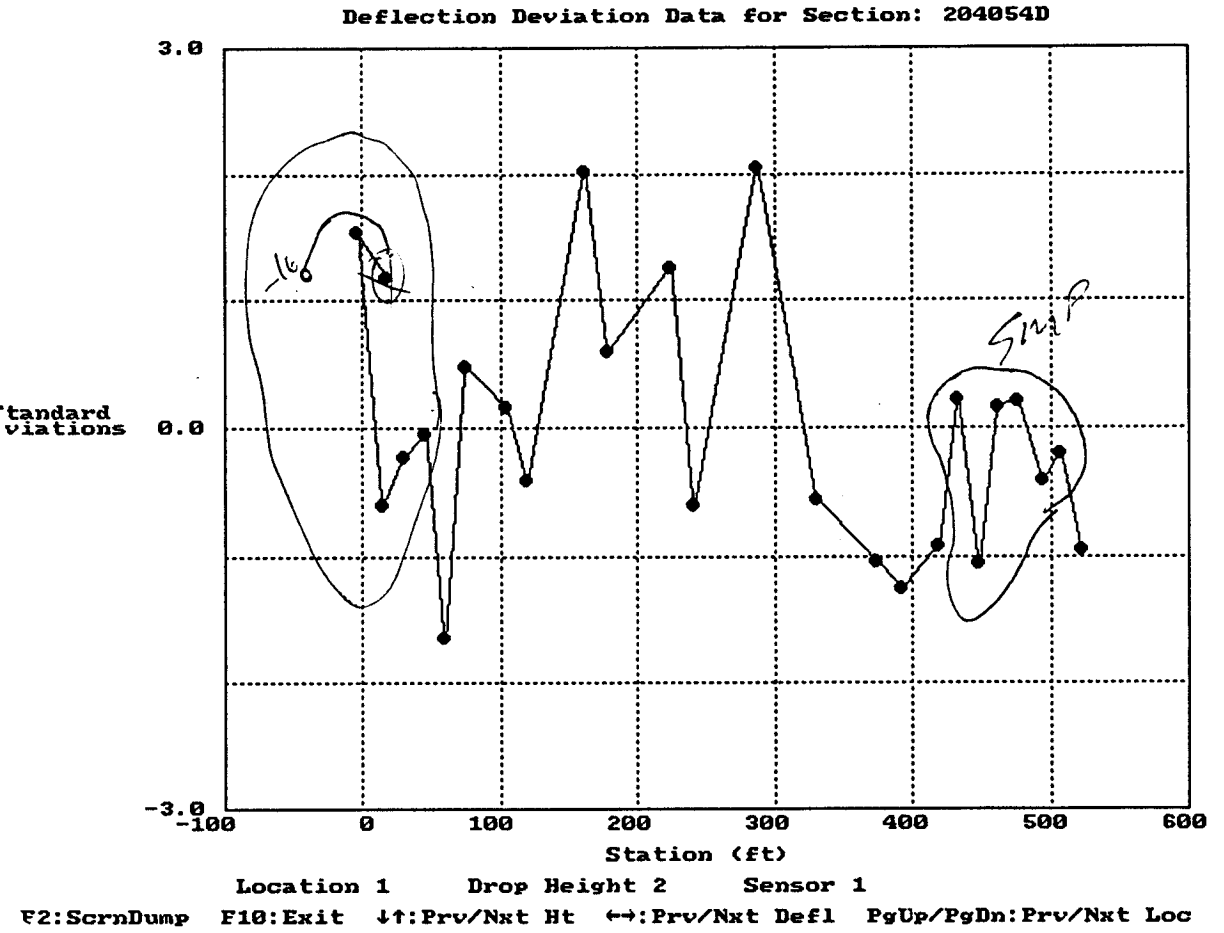
Outliers - Section data: 525 total combinations within the section
21 height/sensor/station combinations are data outliers in subsection 1.

Structural capacity - Test pits: 3 combinations at each test pit
All results for TP 1 are within the range of expected values.
All results for TP 2 are within the range of expected values.

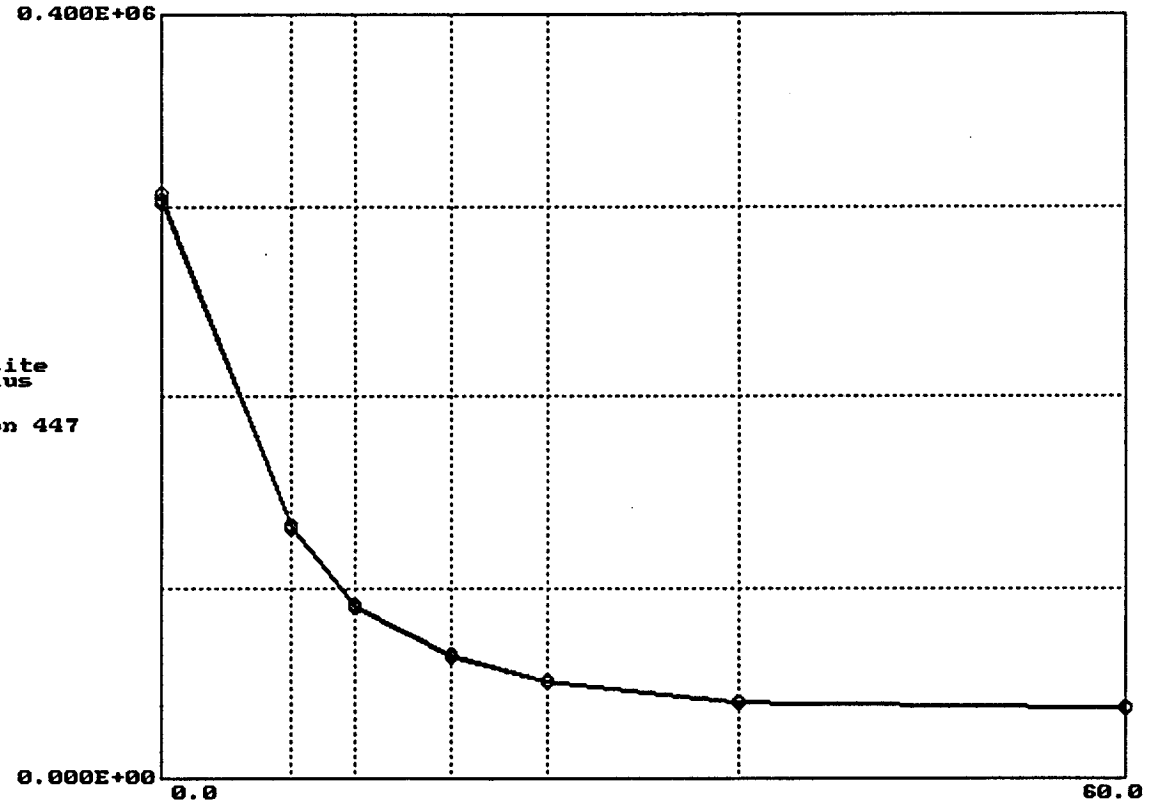
Structural capacity - Section data: 75 total combinations within the section
All results are within the range of expected values.


Deflection Data for Section: 204054D
0.400E+00
ormalized
eflection
0.000E+00
-100
0
100
200
300
400
500
600
Station (ft)
Location 1
Drop Height 2
Sensors 1, 2, 3, 4, 5, 6, 7
F2:ScrnDump
F10:Exit
↓↑:Prv/Nxt Ht
PgUp/PgDn:Prv/Nxt Loc


Corrected Deflection Data for Section: 204054D
0.400E+00
orrected
ormalized
eflection
0.000E+00
-100
0
100
200
300
400
500
600
Station (ft)
Location 1
Drop Height 2
Sensors 1, 7
F2:ScrnDump
F10:Exit
↓↑:Prv/Nxt Ht
PgUp/PgDn:Prv/Nxt Loc

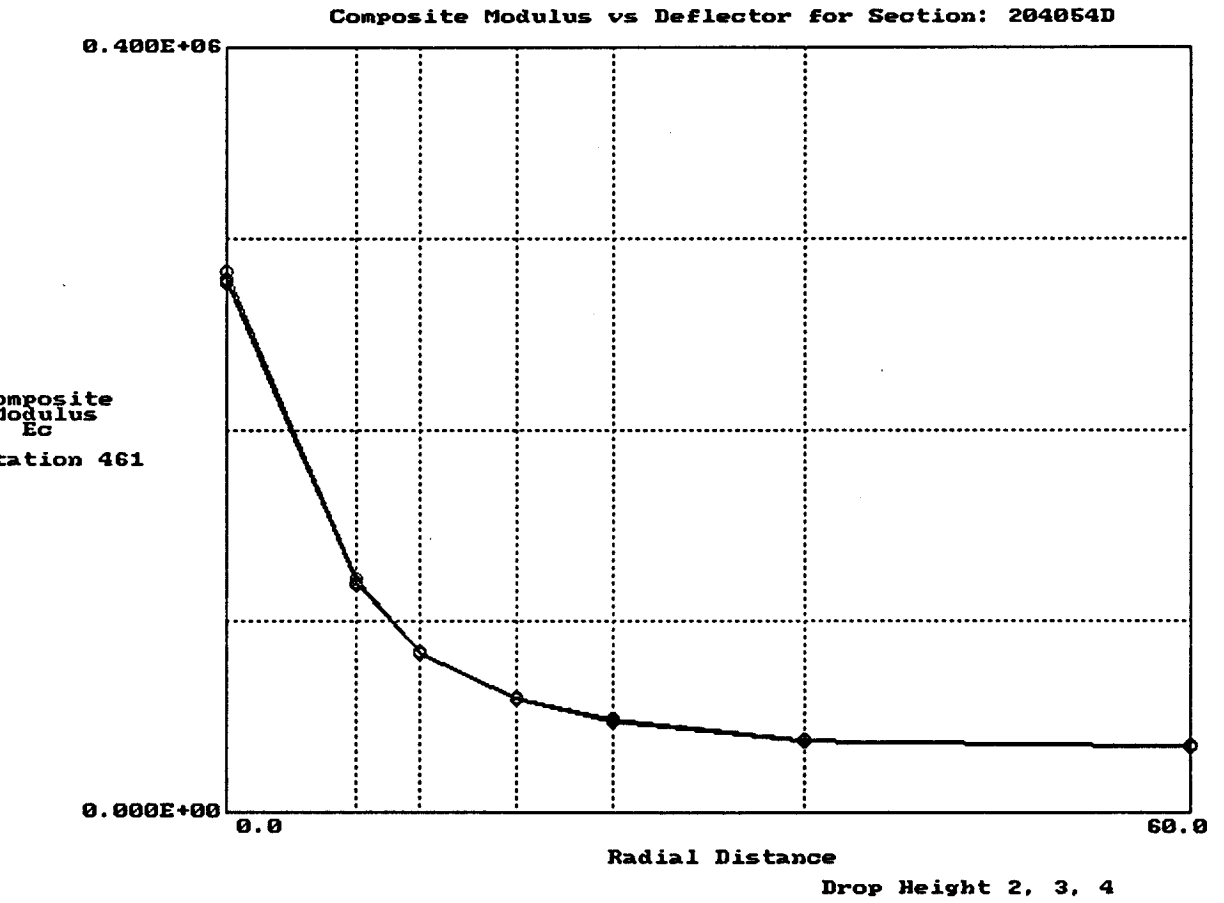

Deflection Deviation Data for Section: 204054D
3.0
0.0
-3.0
tandard
viations
-100
0
100
200
300
400
500
600
Station (ft)
Location 1
Drop Height 2
Sensor 1
F2:ScrnDump
F10:Exit
↓↑:Prv/Nxt Ht
↔:Prv/Nxt Defl
PgUp/PgDn:Prv/Nxt Loc

Composite Modulus vs Deflector for Section: 204054D



omposite
odulus
Ec
cation 447

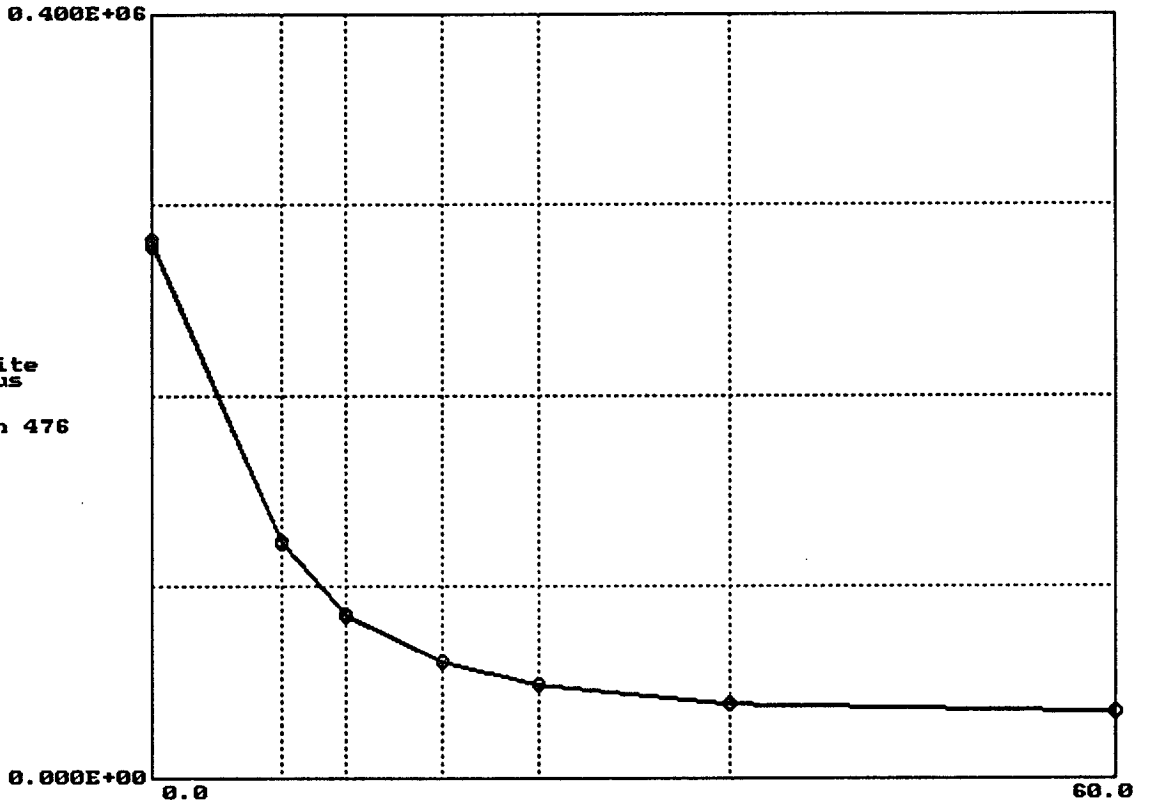
F10:ExitPlots Home End PgUp PgDn



omposite
Modulus
Ec
tation 461

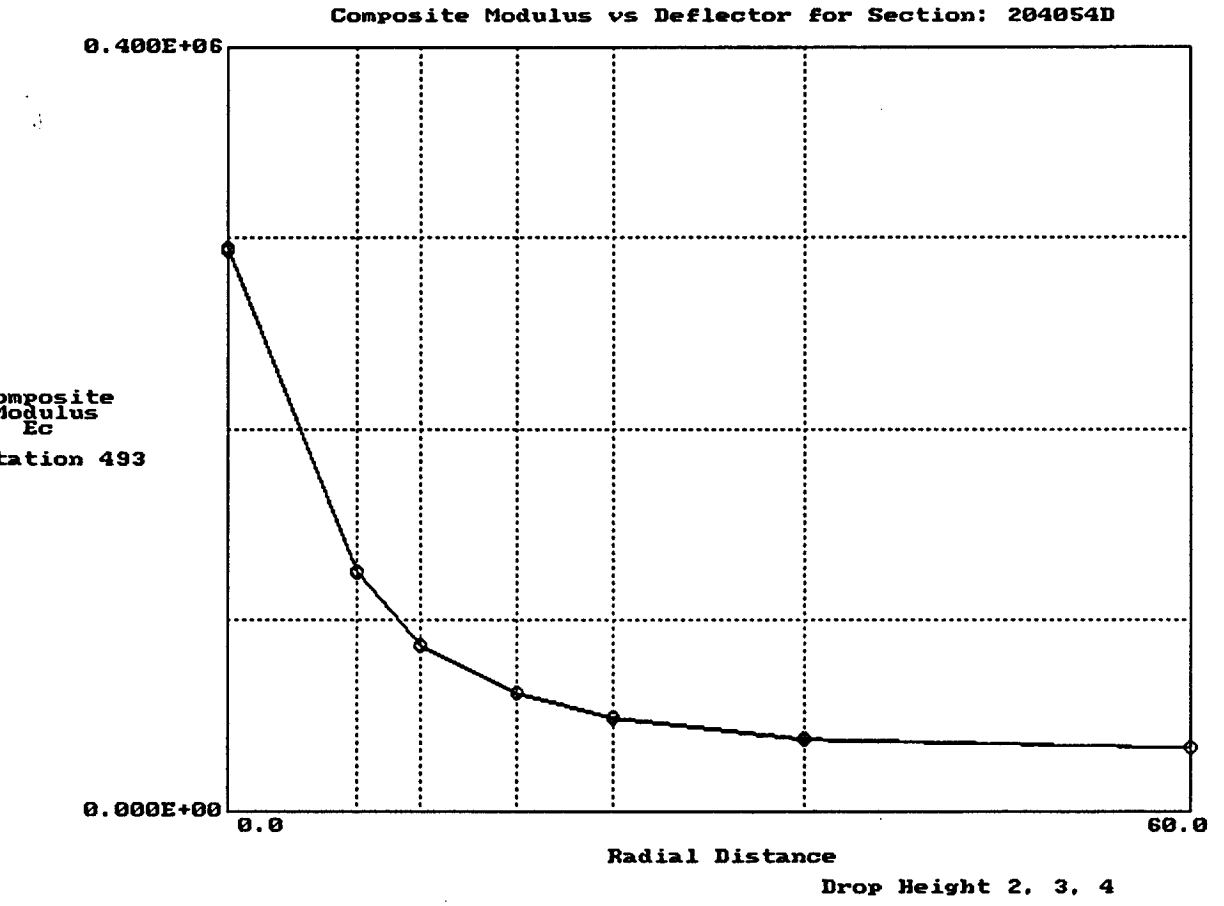
F10:ExitPlots Home End PgUp PgDn

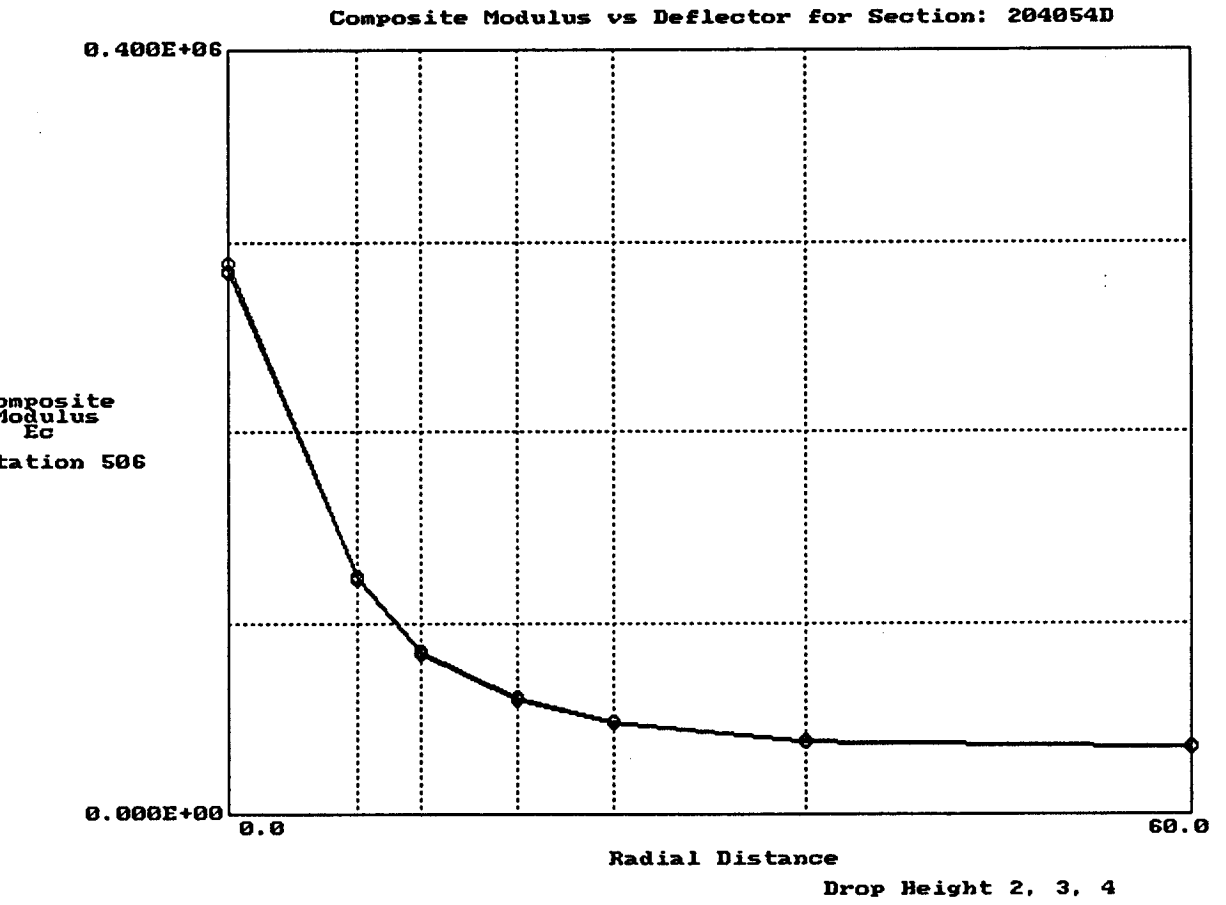
Composite Modulus vs Deflector for Section: 204054D



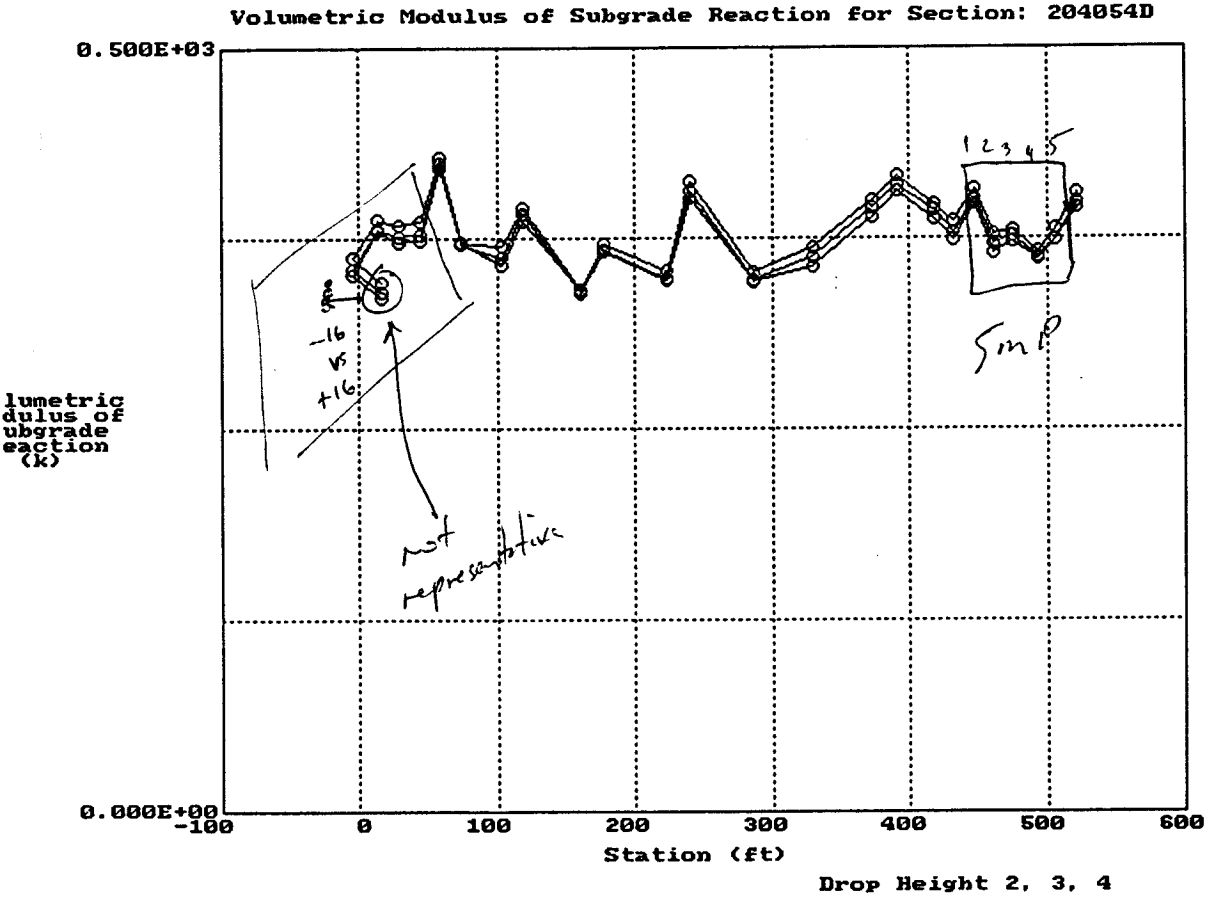
mposite
lodulus
Ec
tation 476

F10:ExitPlots Home End PgUp PgDn

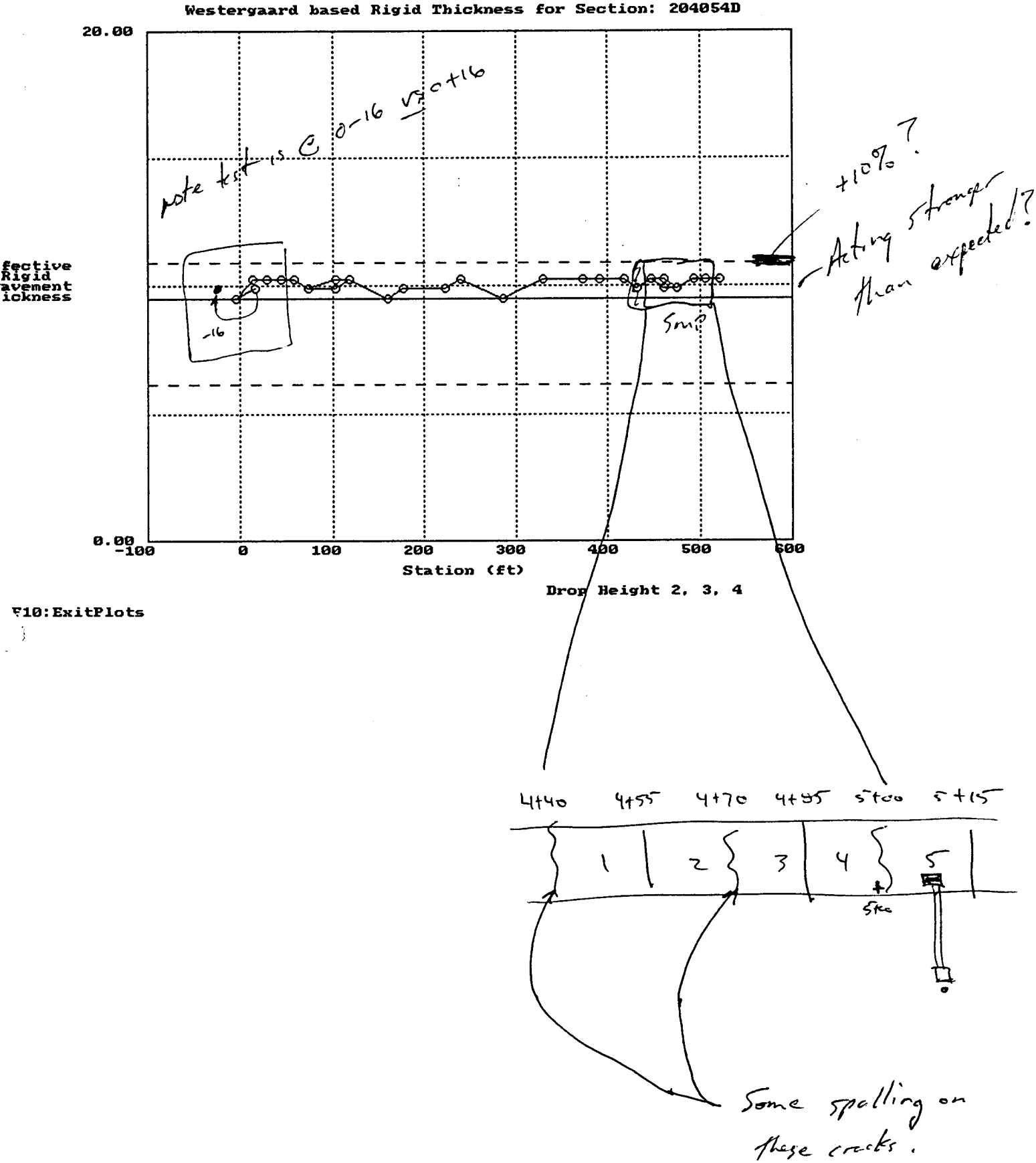

Composite Modulus vs Deflector for Section: 204054D
0.400E+06
0.000E+00
0.0
60.0
Radial Distance
Drop Height 2, 3, 4
F10:ExitPlots Home End PgUp PgDn



- plots for five MP tests almost identical



- use Sta. 5700 end.


Westergaard based Rigid Thickness for Section: 204054D
20.00
0.00
-100
0
100
200
300
400
500
600
Station (ft)
Drop Height 2, 3, 4
F10:ExitPlots
-16
5m?
+10%?
Acting stronger than expected!?
4+40
4+55
4+70
4+85
5+00
5+15
1
2
3
4
5
5+00
Some spalling on these cracks.

Appendix B-1: Pre-Installation Site Recruitment and Coordination Information

Appendix B-1 contains the following pre-installation site recruitment and coordination information:

- SMP site recruitment notes;
- Pre-installation meeting agenda, list of participants, and notes; and
- Site visit field notes.

to Slick
BTM
7-22-91

STATE OF KANSAS

KANSAS DEPARTMENT OF TRANSPORTATION
Docking State Office Building
Topeka 66612-1568
(913) 296-3566
FAX - (913) 296-1095

Michael L. Johnston
Secretary of Transportation

Joan Finney
Governor of Kansas

July 17, 1991

SHRP SMP Pilot on GPS 201005 201009 201010

Mr. Richard C. Ingberg, Regional Engineer
Strategic Highway Research Program
North Central Region
1404 Concordia Avenue
St. Paul. Minneosta 55104

Dear Mr. Ingberg:

The Kansas Department of Transportation (KDOT) will assist you in installing the test instrumentation at the three GPS sites referenced in your June 26, 1991 letter. KDOT will also provide traffic control for your monitoring operations.

Please contact William Parcells to coordinate your activities in Kansas (913-296-7410).

Sincerely,

L. S. Ingram, P.E., Chief
Materials and Research

LSI:je
c: James D. Jones, w/att.
William Parcells, w/att.
William Legge, w/att.
Dee Kimbell, w/att.
Wade Culwell, w/att.

201009 – 93 Rehab w/ mill + overlay
201010 – 94 Rehab w/ mill and overlay

already rehab. but look @ survey when rest of roadway is rehabbed ?

BRAUN℠
INTERTEC

Description: SEASONAL – KANSAS

Project No: DRIVX92700

Date: 3/3/93 By: RV

Parcells 913-296-7410

~~1005~~ – ST 68 OTTAWA – Very old surface w/ distress
– no indication of scheduled rehab
– DROP DUE TO AGE AND COND

~~0009~~ – US 281 ST JOHN – 1993 Rehab – thin mill + OL.
– is in bridge repair section that is newer pvmt; however, they want to mill 1" as machine moves through bridge area
– rest of road 3" mill? w/ OL.

* Ask ARAMIS about SEASONAL?
– OUT FOR NOW –

~~1010~~ – ST 154 FORD – 95 Rehab – 3" mill w/ 6" or 7" OL.
– will remove all SPS-3 sections at that time!

FACSIMILE MEMORANDUM

Braun Intertec Corporation
6875 Washington Avenue South, P.O. Box 39108, Minneapolis, MN 55439-0108
(612) 941-5600 FAX: (612) 942-3059

TO: Gonzalo Rada
PCS/Law
FAX (301) 210-5032

Pages 1

FROM: Robert J. Van Sambeek (612) 942-3047 RJV

DATE: April 11, 1995

SUBJECT: SMP Site Selection Change (204054 for 204016).
C:\SMP\WP\204054.SMP

Gonzalo, I talked to Bill Parcells of Kansas DOT this morning, and he said GPS section 204016 is scheduled for asphalt overlay in the next two to three years. Therefore, this site is not acceptable.

The best section to substitute is 204054. This section actually fits the seasonal cell for dry, no-freeze better than 204016 (These sections are in cell 27, but are filling in cell 25). However, this site was not originally selected because of the concerns below.

* Econocrete base that is 4.0 inches thick. Originally, PCC sections with DGAB were only acceptable?

* All panels have midpanel transverse cracks. The road was poured 40 feet wide with joints sawn at 30 foot spacings for the driving lane. However, the shoulders were sawn at 15 foot intervals, and all midpanel cracks match these saw cuts. Also, on the SPS-4 sites with dowel retrofit, the longitudinal strands of the steel mesh are broken.

The DOT is interested in using the site, and we have scheduled pre-installation FWD testing for April 18, 1995, when a manual distress survey will also be completed.

If you have any questions or need additional information regarding section 204054 for inclusion in the SMP, please call me at 612-942-3047. You can also talk to Gene Skok at the LTPP meeting Wednesday in Washington.

cc. Gene Skok

BRAUN
INTERTEC

SMP - 204054 FILE

ORIGINAL

Memorandum

To: Bob Van Sambeek

From: Ron Urbach

Re: AWS and Seasonal Installation Sites

Date: Wednesday Evening, April 12, 1995

SPS-1 and SPS-9, US-54 Eastbound

After talking to representatives from the DOT in Kansas, they indicated that they would like to install the AWS equipment at the maintenance yard in Greensburg, Kansas. The maintenance yard is located on the east side of town, just north of highway US-54. Approximately the north side of the lot is fenced in with a chain link fence. Photograph number one was taken looking east from the road towards the building and the fenced in area. There is equipment and supplies stored along the fence on the east side of the parking lot and about half of the north and south fenceline. There is a powerline running almost directly over the fence on the west side of the parking lot. Photograph number two is taken at the northwest corner of the fenced in area.

There is also a telephone junction box approximately 20 ft. east of the northwest corner. Photograph number three is taken looking south with the northwest corner on the right hand side of the photograph.

The northwest corner is relatively clear of any type of obstructions which would effect the weather conditions. Photograph number four was looking southwest at the northeast corner of the fenced in area.

Photograph number five is taken at the southeast corner of the property. Looking to the north, photograph number is six is taken at the southeast corner of the parking lot looking northwest.

There is an equipment storage building located approximately 100 ft. south of the north fenceline. I would estimate the height of this building is approximately 14 ft. $\pm$.

Based upon my observations, the first choice would be the northwest corner of the fenced in area. The limitations here is the storage building that is located approximately 100 ft. south of this location. The second best area would be in the northeast corner of the fenced in area. This area is now being used for storage of supplies. If the AWS was placed in this corner, there would have to be a restricted zone where they could not place equipment or supplies within so many feet of the fenced in area.

The distance from the maintenance yard to test section 200901 is 1.1 mi. I would estimate that across country (as a bird flies) is approximately eight tenths of a mile.

Possible Seasonal Installation Site

GPS test section 204054, this test section has met the criteria for a seasonal installation site. This section is located on westbound Interstate I-70. It located approximately mile post 281.5. This GPS section is part of the SPS-4 project.

It is approximately seven miles east of Abilene, Kansas, and it is just east of the Enterprise highway 43 exit. Project stationing of 385 + 00 is approximately 15 ft. before the beginning of the test section. It appears that the panels are approximately 30 ft. in length. The shoulders are PCC and approximately 10 ft. in width. In the shoulders there is intermediate joints. At these joints the panels have broken. At the beginning of the section, I am taking photos starting with photograph number 13.

On photograph number 15, the suitcase is approximately 30 ft. from the edge of the pavement. This is approximately the lowest part of the ditch.

Starting with photograph number 16, is at the end of the test section. Photograph number 16, the suitcase is again placed at approximately 30 ft. from the edge of the pavement. I would say that either end of this section would be good for the instrumentation placement. Although, the beginning of the test section may be better because of the site distance or the lane closures that have to be placed each time testing has to be done.

Possible AWS Site Installation

The AWS site will be installed as part of the SPS-2 project. This SPS-2 project is also located on I-70 westbound.

The SPS-2 project runs from the Milford Lake exit 290 to the Chapman exit number 286. The proposed site is approximately 15 miles west of Junction City and approximately 15 miles east of Abilene, Kansas.

The Kansas DOT has indicated that a good place to place the AWS site would be in the area of the WIM site. This WIM has approximately MP 287.5. The WIM is a station 309. The proposed area where the AWS would be at station 315. This area is a relatively flat area where the AWS site could be placed. Photograph number 23 was taken at station 315 + 00, looking to the north. I would estimate there is a slight rise going to the west. I would say the rise is no more than three or more feet in about 300 ft.

We do have a set of plans for the SPS-2 project. We may be able to review these plans and see what the exact elevation differences would be.

Photograph number 29 is taken at station 310, looking to the northeast.

Based upon what I have seen, I think this would be an okay site to place the AWS instrumentation equipment.

After meeting with Bill Parcels with the Kansas DOT, he indicated that he would like copies of the book that was published by FHWA on Seasonal Sites. He would also like a list that Bob prepared for MnDOT which lists the responsibilities of the agency and what supplies has to be supplied by them.

I also told him that some of the DOTs have been requesting information on how to collect the data on the FHWA/LTPP off-years.

s:\wp\becky\ron.u\vansamb

BRAUN[SM]
INTERTEC

Braun Intertec Corporation
6875 Washington Avenue South
P.O. Box 39108
Minneapolis, Minnesota 55439-0108
612-941-5600 Fax: 942-4844

Engineers and Scientists Serving the Built and Natural Environments®

913-296-7410

April 18, 1995

Mr. Bill Parcells
Kansas Department of Transportation
2300 Van Buren
Topeka, KS 66611-1195

Re: Seasonal Monitoring Program Information

Dear Mr. Parcells:

The information enclosed on the Seasonal Monitoring Program includes the following.

A video tape produced by the Colorado DOT at the pilot installation, which provides a quick overview of the program. For the most part, the video is still current except for minor changes to installation procedures.

Two copies of "LTPP Seasonal Monitoring Program: Instrumentation Installation and Data Collection Guidelines." This detailed report is for you to keep as a reference.

A partial pre-installation meeting agenda which would be scheduled if the potential GPS section 204054 on IH-70 near Enterprise is approved by the Kansas DOT and FHWA for seasonal monitoring. The last four pages of the draft agenda are most important at this point, and include sections titled as follows.

Removed for Installation Report. See Append. B-1

Installation and Monitoring Schedule

Kansas Department of Transportation Responsibilities

NCRCO (Braun Intertec) and FHWA Staff Responsibilities

I have sent preliminary information for Section 204054 to FHWA to see if they have concerns with the mid-panel cracks. We will also evaluate the falling weight deflectometer data and pavement distress survey data that was scheduled for collection on April 18, 1995.

If you have any questions regarding participation in the Seasonal Monitoring Program, please call me at 800-344-7477.

Sincerely,

Robert Van Sambeek
Project Engineer
C:\SMP\WP\KS1995.SMP

- May 9, 1995 { Message from Bill - no core barrel - no 12" auger
- talked about 12" auger from Braun - drive size * auger 6" dipth at a time
- Rocksaw to trench 3½ to 4" wide
- may have to saw if not core

BRAUN[SM]
INTERTEC

913 - 296 - 7410

5-15-95 9:00 T

BOB V

I GOT A CALL FROM BILL PARCELLS.

① HE WOULD LIKE TO KNOW IF THEY CAN PUSH A STEEL/PVC CONDUIT. THIS WOULD GO FROM THE GRASS UNDER THE SHOULDER AND EDGE OF PCC TO THE 12" CORE OR CUT HOLE.

THAT WAY THEY WOULD NOT HAVE CUT THE PAVEMENT EDGE OR PCC SHOULDER. WE WOULD THEN FISH OUR CONDUIT INTO THE PVC/STEEL CONDUIT. I TOLD BILL THIS WOULD TAKE MORE TIME. ALSO WOULD HAVE TO HAVE THE PAVEMENT SAW AS A BACK UP. WOULD NEED TO KNOW THE SIZE OF THE COUDUIT WE LOSE WITH THE BUSHING. I COULD NOT FIND A BUSHING.

② AWS, IS BOTH SITES ON. SPS-1/SPS-9 AND SPS-2 ON ETC.
I TOLD HIM I WOULD CHECK ON THE NE. SPS-1 SITE THIS WEEK. AND MAYBE TO THE NE AND TWO HS SITE IN ONE TRIP.

TOM U.

BRAUN SM
INTERTEC

Description: KS, VIDEO REVIEW OF SMP

Project No: DBRX92700 B6

Date: July 11, 95 By: RV

4054 — Ron M. note steep ditch — up hill — may not be able to get drill rig up the hill.
8/95) — from video it looks like the steep part starts after getting out the 25 ft.?

- Midpanel cracks match saw cuts on the PCC shoulders — induced cracks.
- Main distress is joint spalling
- Jt/crack @ 5+01
- Ron note that 5+00 end better for cabinet in the Ditch.

Bob U-Copy

FHWA-LTPP SEASONAL MONITORING PROGRAM IN KANSAS

MEETING AGENDA

July 21, 1995 at 9:00 AM to 11:00 AM

Kansas Department of Transportation

1006 North Third Street, Salina, Kansas

Introductions

FHWA-LTPP Seasonal Monitoring Program in Kansas

- Introduction
- Test Sections
- Sensor Description and Installation Procedures

Planning Session for Agency Staff Involved with Instrumentation and Monitoring

- Installation and Monitoring Schedule
- Special Concerns
- Kansas Department of Transportation Responsibilities
- NCRCO and FHWA Staff Responsibilities
- Closing Comments

FHWA-LTPP Seasonal Monitoring Program in Kansas

Introduction

Objectives of the Seasonal Monitoring Program

- Collect and analyze data to better understand the short and long term impacts of environmental factors including temperature, moisture, and frost/thaw depth on a pavement structure for improving pavement design.

- Factors defined in the core experiment monitored by FHWA-LTPP include
  - wet or dry climate
  - freeze or no freeze climate
  - pavement surface type (AC or PCC)
  - pavement surface thickness
  - original construction

- Agencies are encouraged to monitor supplemental sections to study factors not included in the core experiment
  - reduced monitoring requirements
  - use existing GPS or SPS sections

Overview of Sensor Installation and Monitoring Activities

- Two days for initial instrumentation installation and monitoring

- About $10,000 of equipment installed at each site

- Monitor sections every other year (70 days over a 10 year period)

- Relate environmental variations to changes in pavement performance
  - pavement, base and subgrade strength calculated from deflection data
    - collected monthly most of year and bi-weekly in the spring

  - ride quality determined from profile data
    - collected five times per year

  - pavement distress documented using detailed distress surveys
    - collected two times per year in addition to PASCO photo logging

  - frost heave/swelling soil monitored using elevation data
    - collected five times in the first year and two times per year after that

Test Sections

Section Location

- 64 sections in the Core Experiment for the United States and Canada monitored under FHWA-LTPP contract

- 16 sections in the North Central Region with one in Kansas

  - 204054 (GPS-4), WB IH-70, ~~west of Junction City~~ east of Enterprise Exit, MP 281.00 to 280.90
    - SMP Cell 27 - Dry, Freeze, Fine Subgrade, and JRC Pavement
    - 9.5 inch PCC on 3.5 inch soil cement

- see map of core sections in the North Central Region on the next page

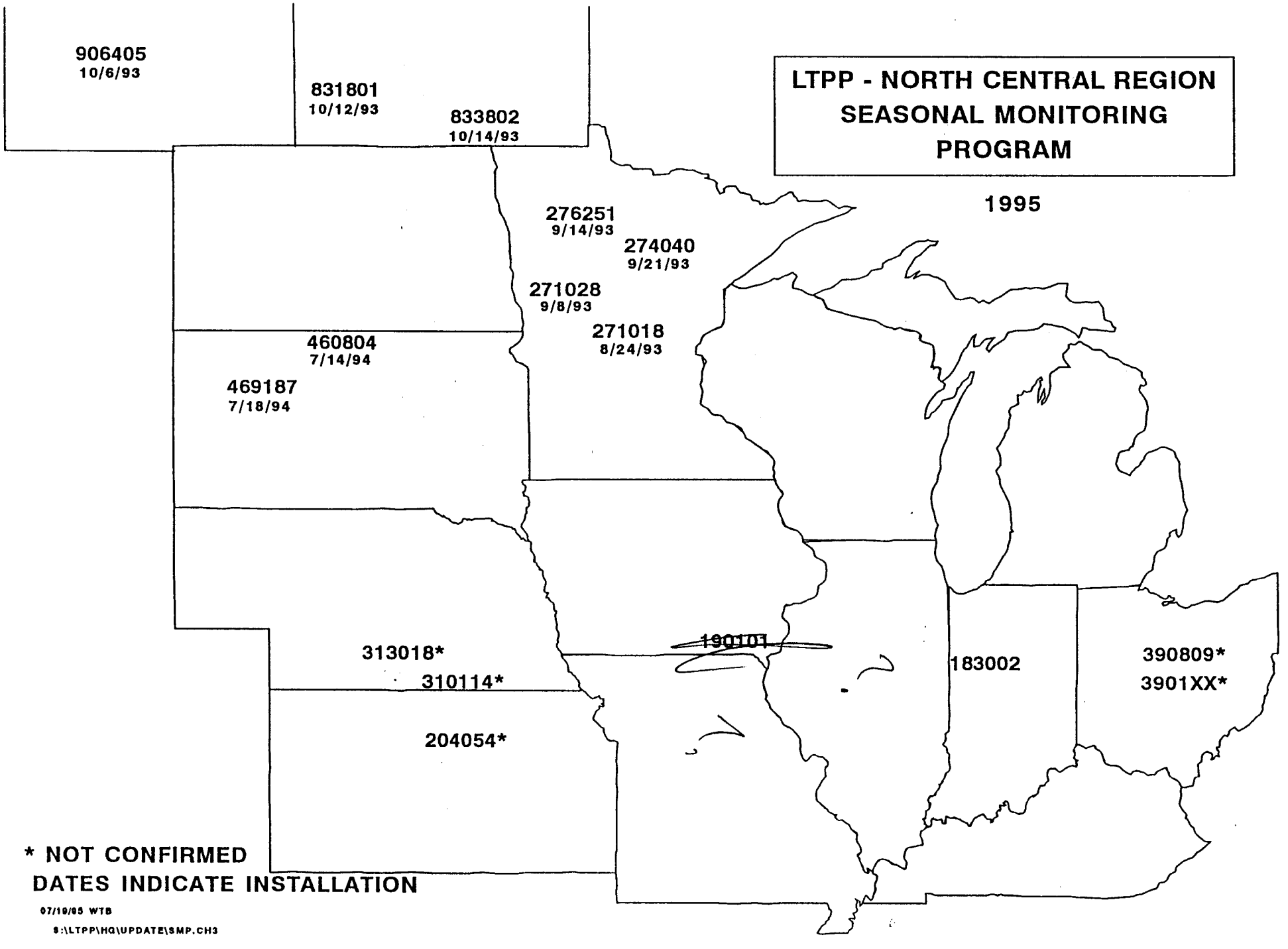
Allowable Maintenance

- any routine maintenance scheduled for this section? (would have been done as part of SPS-4
  - shoulder work?

- no structural rehabilitation preferred for ten years
  - safety is primary concern

- careful around buried cables and equipment
  - temperature probe one inch below pavement surface
  - piezometer cover two inches below the shoulder material
  - conduit one foot below surface from pavement edge to the cabinet

- careful plowing heavy snow and slush into the equipment cabinet


LTPP - NORTH CENTRAL REGION
SEASONAL MONITORING
PROGRAM
1995
906405
10/6/93
831801
10/12/93
833802
10/14/93
276251
9/14/93
274040
9/21/93
271028
9/8/93
271018
8/24/93
460804
7/14/94
469187
7/18/94
313018*
310114*
204054*
190101
183002
390809*
3901XX*
* NOT CONFIRMED
DATES INDICATE INSTALLATION
07/19/95 WTB
S:\LTPP\HQ\UPDATE\SMP.CH3

Sensor Description and Installation Procedure

TDR (Time Domain Reflectometry) Probes

- FHWA design available through Campbell Scientific @ $60.00 each (1993)

- measure dielectric of material between probes and relate to moisture content
  - material dielectrics - air = 1.0, dry soil = 3 to 4, and water = 80

- calibration
  - laboratory in air, water, and shorted
  - field moisture test on material placed around each probe
  - retain soil samples for additional laboratory calibration

- 10 probes per installation
  - one mid-depth in the base, seven at six inch intervals in the top of the subgrade, and two at 12 inch intervals approximately seven feet below the surface

Thermistor (Temperature) Probe

- Measurement Research Corporation (MRC) @ $1000.00 (1993)
  - built in multiplexer for automated readings on 18 channels

- thermistors change resistance with change in temperature

- stainless steel section (13 inches long) monitor pavement temperature gradient
  - one inch deep, mid depth, and one inch above bottom of pavement

- plexiglass section (72 inches long) monitor base and subgrade temperature gradient
  - 15 depths - three-inch intervals to 12 inch depth and six-inch intervals from 18 inch depth to 72 inch depth

- laboratory calibration (check) at 32°F and 100°F

Resistivity Instrumentation

- CRREL design probe @ $800.00 (1993)
  - PVC probe with 36 electrodes at two inch intervals

- large increase in resistance when moisture in the soil freezes
  - used to determine both frost and thaw depth

- require signal generator and multimeters for manual readings and CRREL multiplexer for automated readings

Air Temperature Probe

- Campbell Scientific @ $150.00 (1993)

- air probe and radiation shield mount on instrument pole nine feet above the ground

Rain Gauge/Tipping Bucket

- Texas Electronics @ $255.00 (1993)

- 0.1 mm (0.004 inches) liquid precipitation per tip

- mount on instrument pole nine feet above the ground

Equipment Cabinet and Instrument Pole

- telephone pedestal (break away classification)
    - contain power supply, data logger, sensor connections for mobile reader
    - conduit runs into cabinet from instrumentation hole
    - pea rock inside base to prevent condensation
    - located about 26 feet off edge of driving lane (limited by cable length)

- two-inch diameter instrument pole (break away classification)
    - extend below frost line
    - holds rain gauge and air temperature probe
    - located about 27 feet off edge of driving lane behind equipment cabinet

Interface/Communications Equipment

- FHWA "mobile" unit @ $5000.00 (1993)
    - used each site visit to automatically read TDR probes and resistivity probe

- Tektronics model 1502 cable reader @ $8000.00 (1993)
    - generates signal and monitors reflected energy from TDR probes
    - relate time for pulse to travel through probe to dielectric constant
        - relate dielectric constant to moisture content

- computer and software
    - "onsite" used to monitor temperatures and rainfall continuously
    - "mobile" used to monitor resistivity probe and TDR probes during site visits

Observation Piezometer

- monitor depth to ground water table

- designed to act as frost free bench mark with anchor at 14 foot depth
    - sliding section filled with grease extends eight feet below the surface

Measuring Points for Joint Movement on PCC Pavements

- install three sets of snap rings on each joint monitored
    - bonded 0.3 inched deep in the pavement at one, six and eleven feet from edge of slab

- measure distance between rings to the nearest 0.001 inch with digital caliper
    - use "hot" measurement as zero opening on the joint

Planning Session for Staff Involved with Instrumentation and Monitoring

Installation and Monitoring Schedule

Instrumentation Installation and Initial Monitoring

- two days required with third day as contingency
  - first day complete instrument installation
  - second day collect data
- tentative schedule
  - August 24 and 25 for 204054 on IH-70

Long Term Monitoring

- one day every month with the exception of two times per month in the spring
- every other year for 10 years to obtain about 70 days of FWD monitoring data

Special Concerns

Safety Issues

- bring up any safety concerns during installation
- buried utility markers and hazard markers for the cabinet and instrument pole?
  - standard "Buried Utility" marker for conduit?
  - hazard markers for snowmobiles?
- any special agency requirements other than safety vests and work boots?

Kansas Department of Transportation Responsibilities

Project Contacts for Maintenance Activities and Traffic Control
- will set up traffic control directly with district if desired

Utility Clearance
- 600 foot section (extend 50 foot outside both ends of 500 foot test section)
- utility clearance on driving lane and 40 feet into the ditch on the right side

Traffic Control
- two days for initial installation and monitoring in August
- full lane closure for 700 foot section
- set up as early as possible (7:30 AM?)
- may want to mark locations for placing traffic control signs

Establish Elevation Reference for Piezometer or Install Local Frost Free Bench Mark
- actual elevation not required (local reference only)
- check piezometer elevation every other year?

Equipment
- pavement saw and operator
  - only required for first day during instrument installation
  - saw 16 inch square block out of the pavement surface or option to core
    - located in the outer wheel path
    - agency has option to epoxy block or core back in-place or patch hole
  - equipment capable of cutting one inch deeper than estimated pavement thickness
    - 204054 has 9.5 inches PCC (cut 10.5 inches deep)
  - saw four-inch wide trench for conduit unless conduit is installed by other means
    - extend from outer wheel path to edge of 10 foot paved PCC shoulder
  - saw 13 inch slot for temperature probe or drill hole if coring
- drill rig and operator
  - only required for first day during instrument installation
  - able to reach location for instrument pole 27 feet off edge of driving lane
  - bore one six-inch diameter hole for piezometer
    - 14 feet deep
    - located just off paved shoulder
  - bore one 12-inch-diameter hole for instrumentation
    - eight feet deep in the outer wheel path
    - solid stem auger preferred
      - continuous flighting not required
      - NCRCO has 12-inch-diameter auger with 1-5/8 inch male hex drive

- bore one 12-inch-diameter hole for equipment cabinet (or will dig by hand)
    - two feet deep
    - located about 26 feet outside the driving lane in the ditch
- bore one six-inch-diameter hole for the instrumentation pole
    - 10 feet deep
    - located one foot behind the equipment cabinet in the ditch
- small portable generator if readily available to run small power tools

Materials for the Site

- cover assembly for piezometer (Braun Intertec can provide)
    - must function for ten years and be able to open in the winter
    - minimum four-inch inside diameter and 18 inches to 24 inches long
- sackcrete for piezometer cover and instrumentation pole
    - estimate six bags
- bentonite pellets for sealing piezometer
    - five-gallon pail
- clean filter sand for piezometer
    - 400 pounds (four bags)
    - particle size not critical (silica sand will work)
- pea gravel or trap rock for equipment cabinet
    - 500 pounds (four five-gallon pails)
    - 3/8 inch or 1/2 inch size preferred
- agency option to patch hole versus epoxy old block back in the pavement
    - additional materials required if patching
        - quick set patch or replace block?
        - rebar and epoxy if patching?
- patch for conduit trench if cut
    - 10 foot long by four inch wide by ___ inch deep
- water for mixing sackcrete and equipment clean-up
    - estimate 30 gallons (available on drill rig?)
- hazard markers for cabinet and instrument pole (if required by the agency)

Pavement Repairs

- patch conduit trench if cut
- assist with block replacement or patching

Miscellaneous Activities

- mow tall grass in area identified for utility clearance if needed

NCRCO (Braun Intertec) and FHWA Staff Responsibilities

Instrumentation

- provide all instrumentation
- install all instrumentation with assistance from anyone on-site
- collect all required monitoring data
- NCRCO phone 1-800-344-7477 or 612-942-3047
    - main contacts for the Seasonal Monitoring Program
        - Bob Van Sambeek (Coordination and instrumentation)
        - Ron Urbach (Geotechnical and materials)

Closing Comments

Questions or concerns?

JULY 21, 1995	DBNX92700 B6	KS PRE-INSTALL MTG.

NAME	DIVISION / DEPT	PHONE NUMBER
ROBERT VAN SAMBEEK	BRAUN INTERTEC	800-344-7477
Bill Parcells	LTPP Contact Engr KDOT	913-296-7410
Charles G. Luedders	Dist. 2 Materials	913-823-3754
Traffic Maint → Dale E Hershberger	Area Engr - Clay Center	913-632-3108
W.A. Legge	Dist Engr	913-823-3754
Doug (AS J. Thirtell)	ISY / III	913-823-3754
ROGER ALEXANDER	DIST MAINT ENGR	(913) 823-3754
Cris Hayes	Area Supervisor/Clay Center	(Home 913-652-3222)
DAVID STAHL	S/A SUPERVISOR/JUNCTION CITY	(913) 238-6532

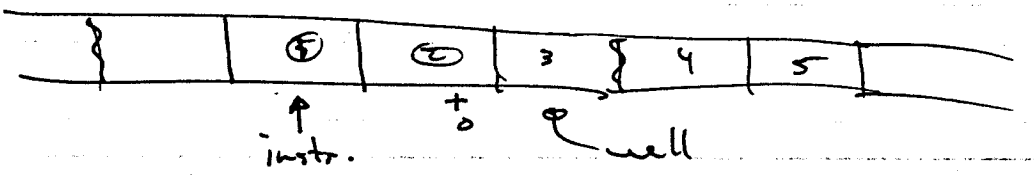
↳ Responsible for Arvs @ SPS-2

Steve Keim — will get # @ the site

Dale Hershberger — may want to call Area

Sta. 0+00

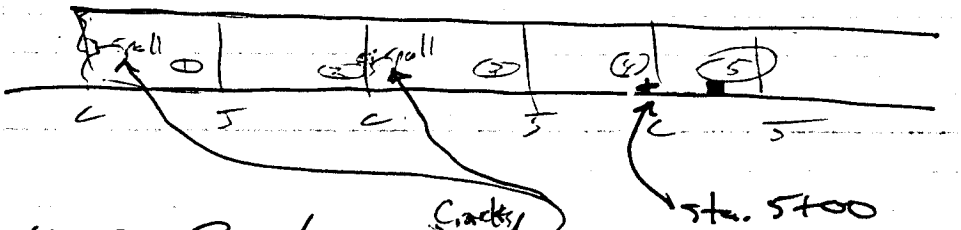
1 3/4 panels out at Sta. 0+00
@ top of hill



— ok - if monitor ± 2 panel outside of us.
skip panel

5+00

panel #1



* Spalling worse @ two joints
* better to tie in telephone if wanted by DOT
— Delineator ≅ 2' off paved shoulder
—
Spall could affect location of snaprings — appear to be close to ML.

* FLUDCHECK FAILOR Sta. 5+00 END

FACSIMILE MEMORANDUM

Braun Intertec Corporation
6875 Washington Avenue South, P.O. Box 39108, Minneapolis, MN 55439-0108
(612) 941-5600 FAX: (612) 942-3059

TO: Gonzalo Rada PCS/Law 301-210-5053
Gary Elkins PCS/Law 702-827-0137
Aramis Lopez FHWA 703-285-2767

Pages 4

FROM: Robert J. Van Sambeek (612) 942-3047

DATE: August 21, 1995

SUBJECT: SMP Site 204054 Monitoring End
C:\SMP\WP\204AEND.SMP

This fax continues items brought up in my April 11, 1995 fax and later telephone conversations with Gonzalo regarding section 204054 in the SMP. Section 204054 is the best substitute for section 204016 that had been originally selected. This section is in cell 27, but also helps with seasonal cell 25 for dry, no-freeze. This site was not originally selected because of concerns previously discussed regarding the following.

* Treated base (material code 332) that is 3.5 inches thick.

* All panels have mid-panel transverse cracks. The road was poured 40 feet wide with joints sawn at 30 foot spacings for the driving lane. However, the shoulders were sawn at 15 foot intervals, and all mid-panel cracks match these saw cuts. Also, on the SPS-4 sites with dowel retrofit, the longitudinal strands of the steel mesh are broken at the cracks.

Treated Base Concerns

I will install the site similar to 313018 in Nebraska regarding the treated base.

* The DOT will install a conduit using a horizontal boring machine (not allow the tied PCC shoulder to be cut). The conduit will come in below the soil cement base at about 14 inches below the PCC surface.

* Core the PCC surface +9.5" depth and break the core loose from the treated base.

* Auger through the soil cement base (3.5" thick) and discard this material (The treated base will be replaced with quick-set concrete patch extended 50% with aggregate).

* Auger subgrade to 85.5" depth required for placing MRC and resistivity probes 2.0 inches below the soil cement (top of probes 14.7" below the pavement surface).

Att. FWDCHECK 204054D - Rigid thick + Subgrade Reaction

* Place TDR#10 84.7" below PCC surface, which corresponds to TDR#1 at 6.0" below the base.

* Make slot in soil cement for lead from metal part of MRC. Will drill 0.5" diameter hole for the metal part of the MRC probe.

Monitoring End

Pre-SMP installation FWD done this spring included tests outside both ends of the section to evaluate which end of the section to monitor. I have selected the Sta. 5 end to monitor based on the following.

Sta. 0 - FWD analysis results for the J1 test at Sta 0-16 (instrumentation area) has low subgrade strength compared to the other four J1 tests.

- Would have to monitor almost 1.75 panels outside the section limit to avoid having to skip a panel while not instrumenting in a panel partially into the section. See sketch on FWDCHECK sheets.

Sta. 5 - Crack is at Sta. 5+01 and instrumentation would be at Sta. 5+08. This is at the crest of the grade, and there is less chance of water in the ditch at this location.

- DOT would like to use Sta. 5 end to tie in telephone to the datalogger at a later time (This end is closer to the WIM).

There is a concern with placing the snap rings for joint movement measurements on some of the cracks because of low severity spalling. However, I think the 5.0" spacing for the snap rings will clear the spalls. However, if the location of the snap rings need to be adjusted, should the spacing be increased (up to 6.0 inch with the current digital caliper), or should the transverse offset be adjusted and documented?

The installation is scheduled for Thursday, August 24. However, the SMP crew will be traveling on August 23. If you disagree with any of the details above, please call me on Tuesday August 22.

FILE

Memorandum

Date: August 22, 1995

To: Ron Urbach

From: Robert Van Sambeek

Re: Summary of Kansas Seasonal Installation Meeting
C:\SMP\WP\KSMTGSUM.SMP

Motel - Best Western in Abilene - 913-263-2050 - Jct. IH-70 and SR-15 - Exit 275

Aug. 22 - 1 Smile
23 - 1Sm + 2NS
24 - 1Sm + 2NS.

Traffic Control - 7:30am for both days
- Contact is Steve Keim at ???? or Dale Hershberger at 913-632-3108

Installation Specifics for 204054 (20SA) on August 24 and 25:

* Monitor the Sta. 5 end of the section. See info sheet for FWD testing and installation sheet SMP-I02 for locations.

* Drill rig is scheduled to start at 9:00am.

* H-bore contractor is scheduled to start at 10:00am (Not sawing the shoulder).
(3" O.D. ok)

* DOT will help with moistures and instrument installation (2 people)

* Patch the soil cement base and epoxy the core back in place.

↑ DOT will core - 12.25" O.D.
- ok w/ current auger
- check Ludders in charge of drill rig

Equipment:
- Spare core barrel

Materials:
- piezometer access assembly
- plumbers putty and expanding foam for sealing the conduit
- epoxy for core (one gallon)
- large base on piezometer pipe

- No guide for snapring install!

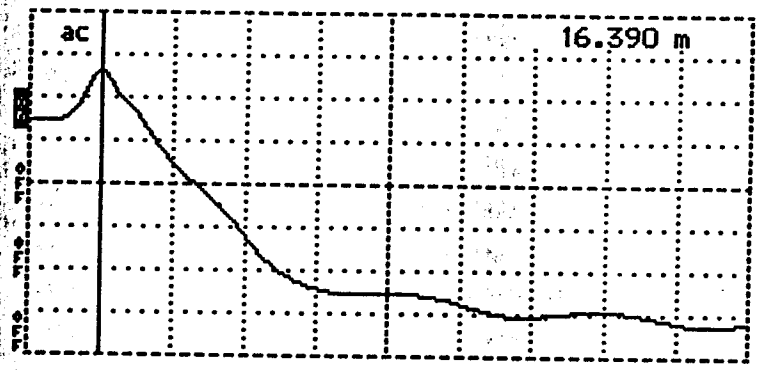
Appendix B-2: Pre-Installation Equipment Checks/Calibration Information

Appendix B-2 contains the following data sheets for the pre-installation equipment checks/calibration:

- Data Sheet SMP-C01: TDR Probe Check;
- Data Sheet SMP-C02: Thermistor and Air Temperature Probe Check;
- Data Sheet SMP-C03: Electrical Resistivity Probe Check;
- Data Sheet SMP-C04: Function Generator, Multi-meter, and Switch Box Checks; and
- Data Sheet SMP-C05: Tipping-Bucket Rain Gauge Calibration.

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 1) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

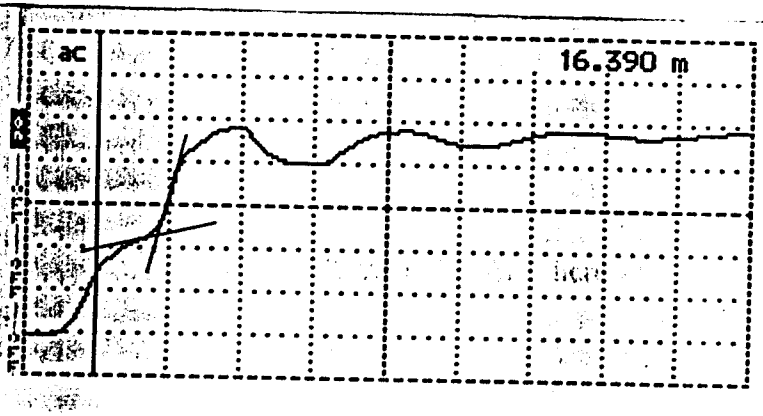
Cursor ..... 16.390 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 27 Jul 95
Cable 20A 01
Notes Short
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"Shorted at Start"		

Cursor ..... 16.390 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac

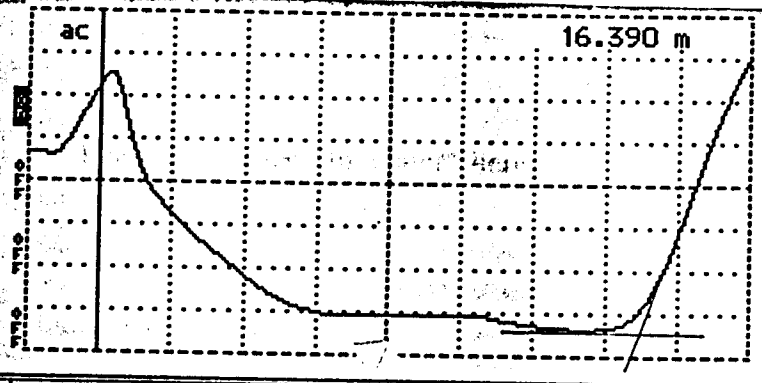


Tektronix 1502B TDR
Date 27 Jul 95
Cable 20A 01
Notes Air
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"In Air"	0.31	1.08

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 2) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

Cursor ..... 16.390 m
Distance/Div..... .25 m/div
Vertical Scale.... 74.8 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 27 Jul 95
Cable 20A01
Notes Water @ Room temp
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant[2]
"In Water"	1.85	83.91

[1] If dielectric constant not between 0.75 and 2.0, contact FHWA LTPP Division
[2] If dielectric constant not between 76 and 84, contact FHWA LTPP Division

Note: Dielectric constant is determined as follows:

$$\varepsilon = \left[\frac{(L_a)}{(L)(V_p)}\right]^2 = \left[\frac{(D_2 - D_1)}{(L)(V_p)}\right]^2$$

where ε = dielectric constant; L_a = apparent length of probe, m; L = actual length of probe units (= 0.203 m (8 in) for FHWA probes); V_p = phase velocity setting (= 0.99).

TDR Probe Serial Number: 20401 TDR Probe Length, L: 0.204 m Length of Coax Cable: ___.__ m

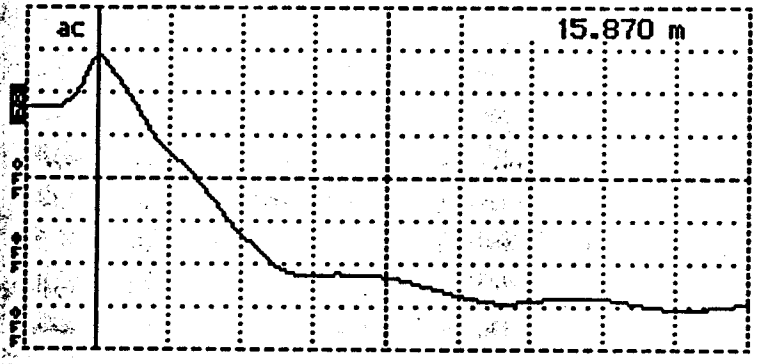
Comments: _____

Prepared by: Jerome Dicks Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 27/Jul/1995

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 1) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

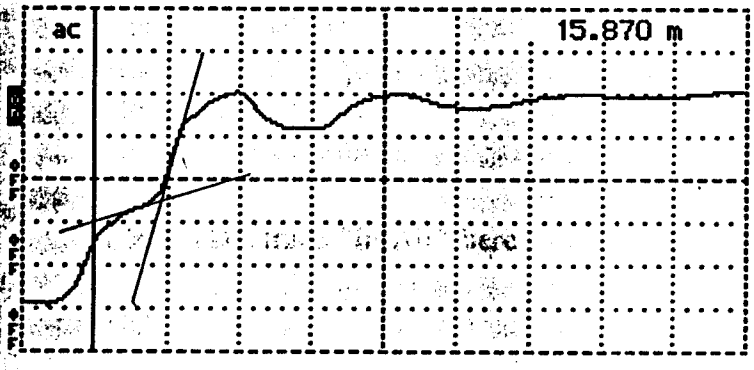
Cursor ..... 15.870 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 27 July 95
Cable 20A 02
Notes Short
L=0.204
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"Shorted at Start"		

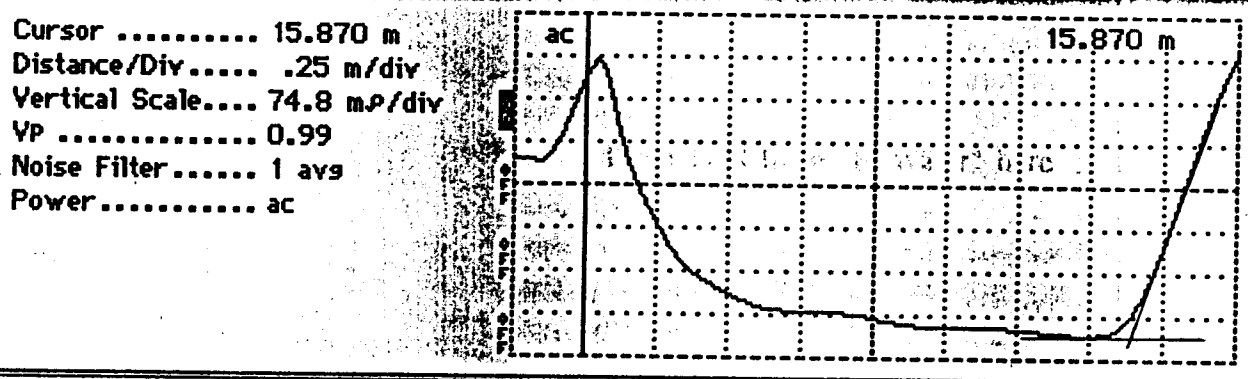
Cursor ..... 15.870 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 27 July 95
Cable 1 20A 02
Notes Air
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"In Air"	0.23	1.29

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 2) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]



TDR Trace	Apparent Length, (m)	Dielectric Constant[2]
"In Water"	1.85	83.91

[1] If dielectric constant not between 0.75 and 2.0, contact FHWA LTPP Division
[2] If dielectric constant not between 76 and 84, contact FHWA LTPP Division

Note: Dielectric constant is determined as follows:

$$\varepsilon = \left[\frac{(L_a)}{(L)(V_p)}\right]^2 = \left[\frac{(D_2 - D_1)}{(L)(V_p)}\right]^2$$

where ε = dielectric constant; L_a = apparent length of probe, m; L = actual length of probe units (= 0.203 m (8 in) for FHWA probes); V_p = phase velocity setting (= 0.99).

TDR Probe Serial Number: 20A02 TDR Probe Length, L: 0.204 m Length of Coax Cable: ___.__ m

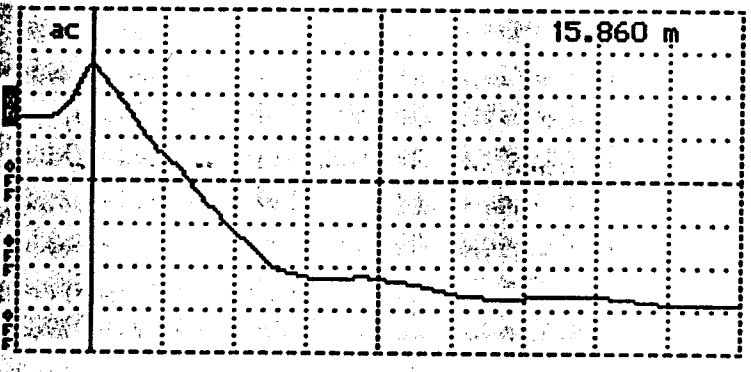
Comments: _____

Prepared by: Jerome Dicks Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 27/Jul/95

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 1) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

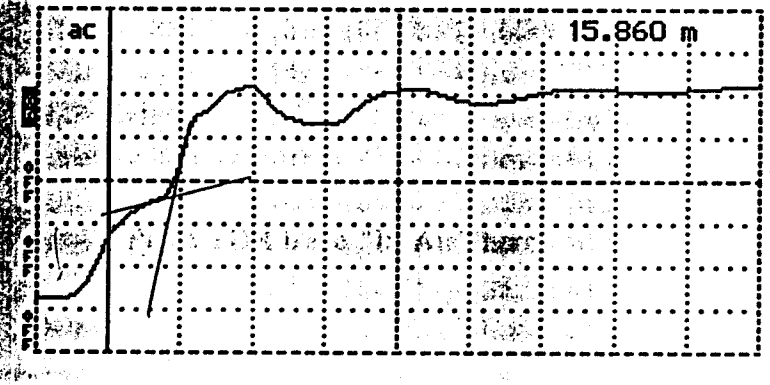
Cursor ..... 15.860 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 27 Jul 95
Cable 20A 03
Notes Short
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"Shorted at Start"		

Cursor ..... 15.860 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 27 Jul 95
Cable 20A 03
Notes Air
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"In Air"	0.24	1.41

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 2) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

Cursor ..... 15.860 m
Distance/Div..... .25 m/div
Vertical Scale.... 74.8 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac

Tektronix 1502B TDR
Date 27 Jul 95
Cable 20A03
Notes Water @ room temp.

Input Trace _____
Stored Trace _____
Difference Trace _____

TDR Trace	Apparent Length, (m)	Dielectric Constant[2]
"In Water"	1.85	83.91

[1] If dielectric constant not between 0.75 and 2.0, contact FHWA LTPP Division
[2] If dielectric constant not between 76 and 84, contact FHWA LTPP Division

Note: Dielectric constant is determined as follows:

$$\varepsilon = \left[\frac{(L_a)}{(L)(V_p)}\right]^2 = \left[\frac{(D_2 - D_1)}{(L)(V_p)}\right]^2$$

where ε = dielectric constant; L_a = apparent length of probe, m; L = actual length of probe units (= 0.203 m (8 in) for FHWA probes); V_p = phase velocity setting (= 0.99).

TDR Probe Serial Number: 20A03 TDR Probe Length, L: 0.204 m Length of Coax Cable: ___.__ m

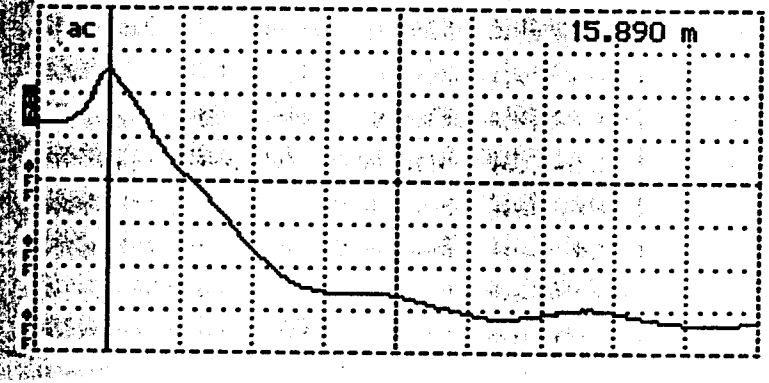
Comments: _____

Prepared by: Jerome Dicks Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 27/Jul/95

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 1) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

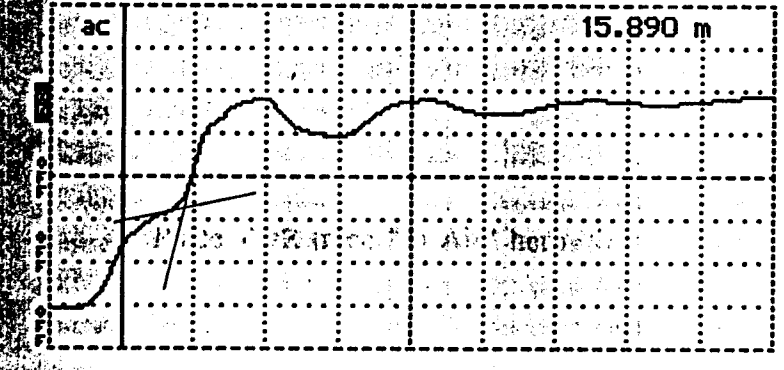
Cursor ..... 15.890 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 27 Jul 95
Cable 20A 04
Notes Short
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"Shorted at Start"		

Cursor ..... 15.890 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac

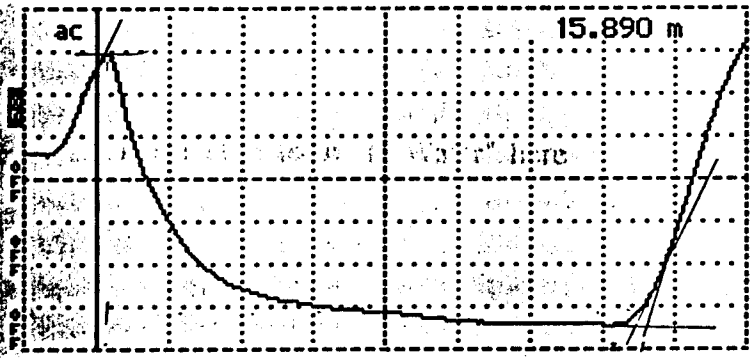


Tektronix 1502B TDR
Date 27 Jul 95
Cable 20A 04
Notes Air
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"In Air"	0.22	1.19

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 2) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

Cursor ..... 15.890 m
Distance/Div..... .25 m/div
Vertical Scale.... 74.8 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 27 Jul 95
Cable 20A04
Notes Water @ room temp
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant[2]
"In Water"	1.85	83.91

[1] If dielectric constant not between 0.75 and 2.0, contact FHWA LTPP Division
[2] If dielectric constant not between 76 and 84, contact FHWA LTPP Division

Note: Dielectric constant is determined as follows:

$$\varepsilon = \left[\frac{(L_a)}{(L)(V_p)}\right]^2 = \left[\frac{(D_2 - D_1)}{(L)(V_p)}\right]^2$$

where ε = dielectric constant; L_a = apparent length of probe, m; L = actual length of probe units (= 0.203 m (8 in) for FHWA probes); V_p = phase velocity setting (= 0.99).

TDR Probe Serial Number: 20A04 TDR Probe Length, L: 0.204 m Length of Coax Cable: ___.__ m

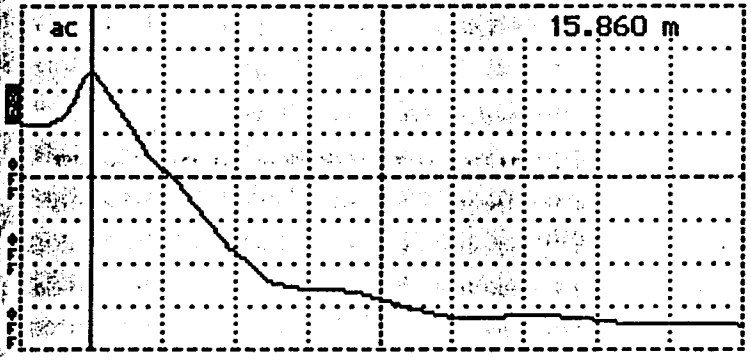
Comments: _____

Prepared by: Jerome Dick Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 27/Jul/95

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 1) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

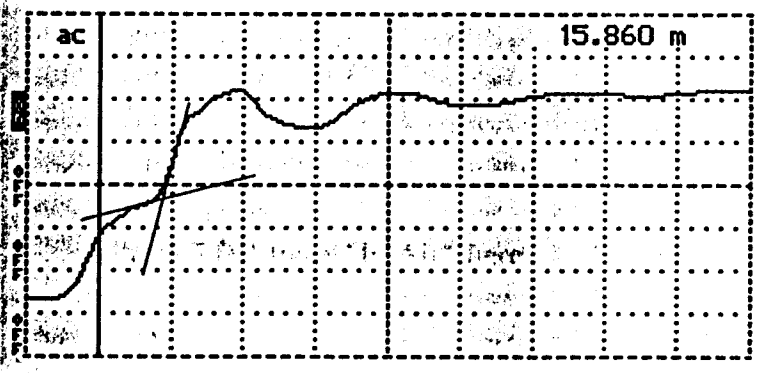
Cursor ..... 15.860 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 27 Jul 95
Cable 20A 05
Notes Short
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant[1]
"Shorted at Start"		

Cursor ..... 15.860 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac

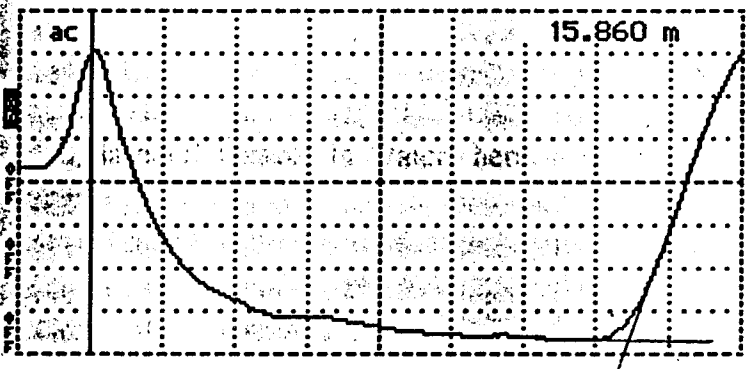


Tektronix 1502B TDR
Date 27 Jul 95
Cable 20A 05
Notes Air
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant[1]
"In Air"	0.22	1.19

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 2) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

Cursor ..... 15.860 m
Distance/Div..... .25 m/div
Vertical Scale.... 74.8 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 27 Jul 95
Cable 20A05
Notes Water
@ room temp
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant[2]
"In Water"	1.85	83.91

[1] If dielectric constant not between 0.75 and 2.0, contact FHWA LTPP Division
[2] If dielectric constant not between 76 and 84, contact FHWA LTPP Division

Note: Dielectric constant is determined as follows:

$$\varepsilon = \left[\frac{(L_a)}{(L)(V_p)}\right]^2 = \left[\frac{(D_2 - D_1)}{(L)(V_p)}\right]^2$$

where ε = dielectric constant; L_a = apparent length of probe, m; L = actual length of probe units (= 0.203 m (8 in) for FHWA probes); V_p = phase velocity setting (= 0.99).

TDR Probe Serial Number: 20A05 TDR Probe Length, L: 0.204 m Length of Coax Cable: ___.__ m

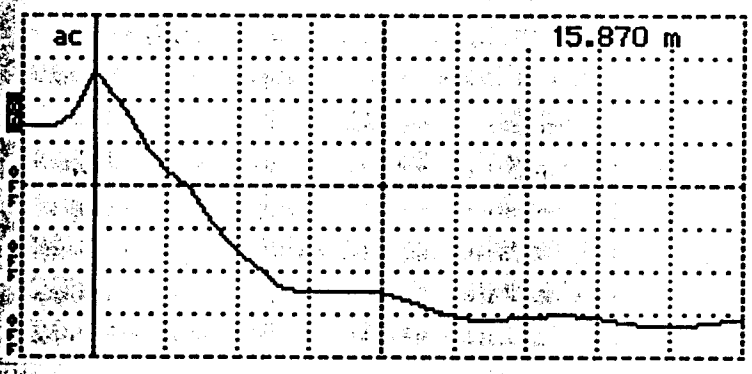
Comments: _____

Prepared by: Jerome Dicks Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 27/Jul/95

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 1) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

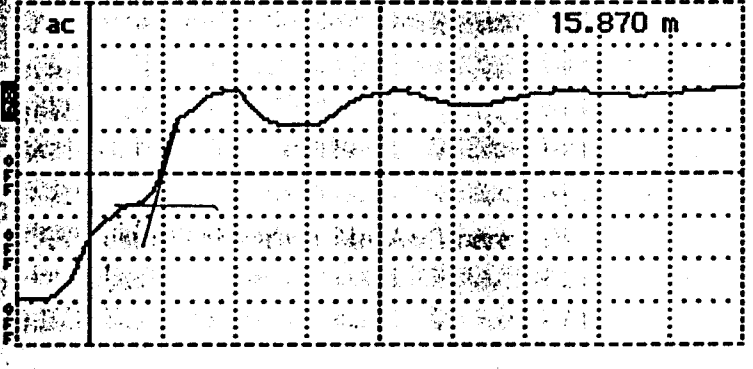
Cursor ..... 15.870 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 28 July 95
Cable 20A 06
Notes Short
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"Shorted at Start"		

Cursor ..... 15.870 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac

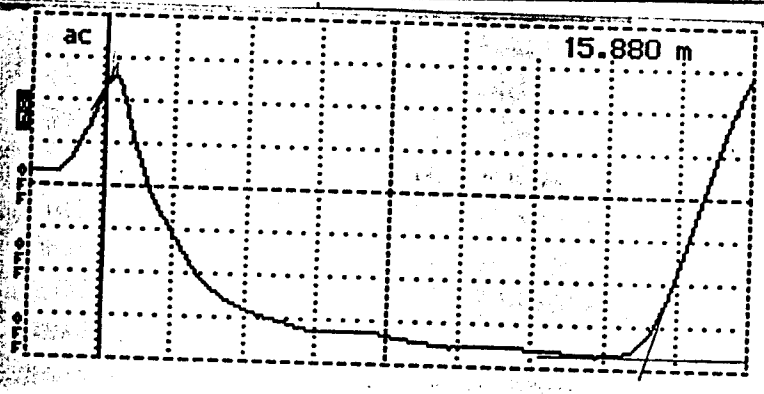


Tektronix 1502B TDR
Date 28 July 95
Cable 20A 06
Notes Air
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"In Air"	0.21	1.08

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 2) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

Cursor ..... 15.880 m
Distance/Div..... .25 m/div
Vertical Scale.... 74.8 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 28 July 95
Cable 20A06
Notes Water @ room temp.

Input Trace _____
Stored Trace _____
Difference Trace _____

TDR Trace	Apparent Length, (m)	Dielectric Constant[2]
"In Water"	1.85	83.91

[1] If dielectric constant not between 0.75 and 2.0, contact FHWA LTPP Division
[2] If dielectric constant not between 76 and 84, contact FHWA LTPP Division

Note: Dielectric constant is determined as follows:

$$\varepsilon = \left[\frac{(L_a)}{(L)(V_p)}\right]^2 = \left[\frac{(D_2 - D_1)}{(L)(V_p)}\right]^2$$

where ε = dielectric constant; L_a = apparent length of probe, m; L = actual length of probe units (= 0.203 m (8 in) for FHWA probes); V_p = phase velocity setting (= 0.99).

TDR Probe Serial Number: 20A06 TDR Probe Length, L: 0.204 m Length of Coax Cable: ___.__ m

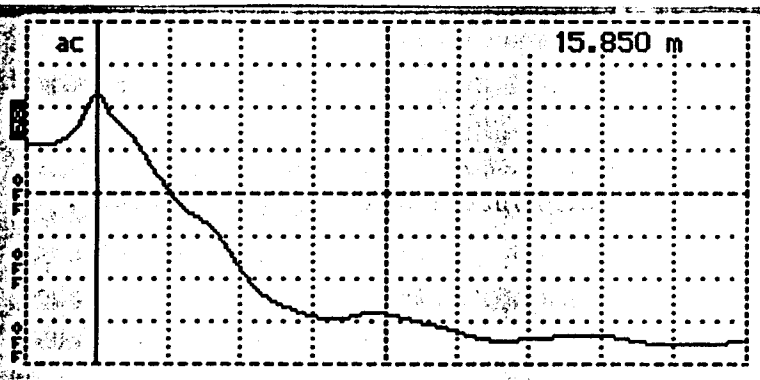
Comments: _____

Prepared by: Jerome Dick Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 28/JuL/95

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 1) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

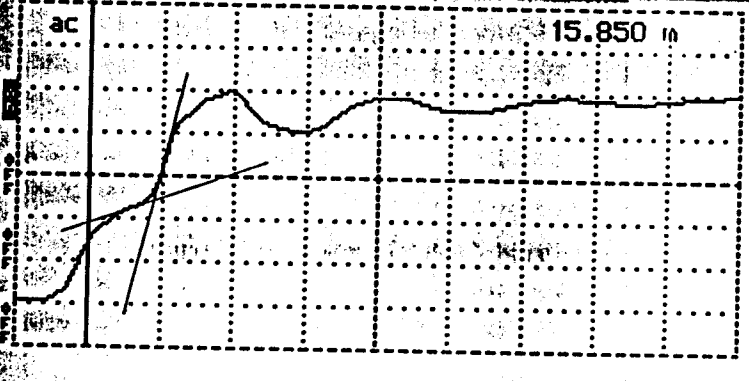
Cursor ..... 15.850 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 28 Jul 95
Cable 20A 07
Notes Short
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"Shorted at Start"		

Cursor ..... 15.850 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac

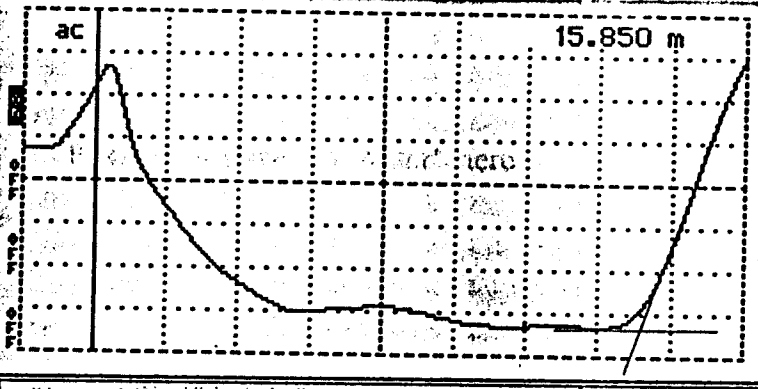


Tektronix 1502B TDR
Date 28 Jul 95
Cable 20A 07
Notes Air
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"In Air"	0.23	1.30

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 2) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

Cursor ..... 15.850 m
Distance/Div..... .25 m/div
Vertical Scale.... 74.8 mρ/div
VP 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 28 Jul 95
Cable 20A 07
Notes Water @ room temp
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant[2]
"In Water"	1.85	83.91

[1] If dielectric constant not between 0.75 and 2.0, contact FHWA LTPP Division
[2] If dielectric constant not between 76 and 84, contact FHWA LTPP Division

Note: Dielectric constant is determined as follows:

$$\varepsilon = \left[\frac{(L_a)}{(L)(V_p)}\right]^2 = \left[\frac{(D_2 - D_1)}{(L)(V_p)}\right]^2$$

where ε = dielectric constant; L_a = apparent length of probe, m; L = actual length of probe units (= 0.203 m (8 in) for FHWA probes); V_p = phase velocity setting (= 0.99).

TDR Probe Serial Number: 20A07 TDR Probe Length, L: 0.204 m Length of Coax Cable: ___.__ m

Comments: _____

Prepared by: Jerome Dicks Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 28/Jul/95

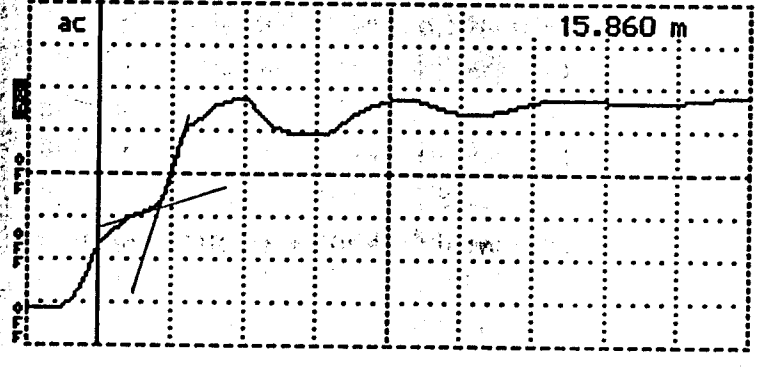
LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 1) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

Cursor ..... 15.860 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac

Tektronix 1502B TDR
Date 28 July 95
Cable 20A 08
Notes Short
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"Shorted at Start"		

Cursor ..... 15.860 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac

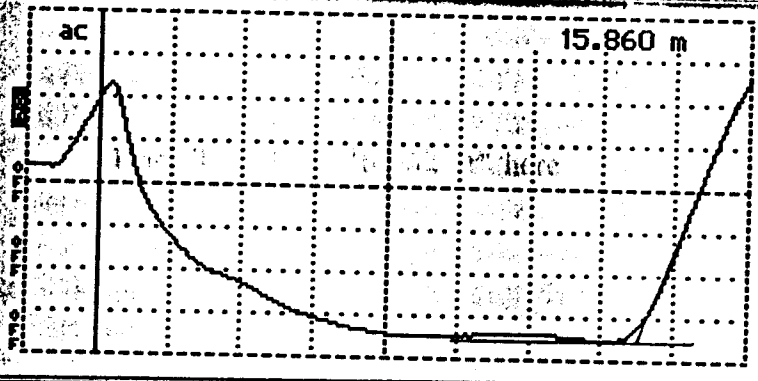


Tektronix 1502B TDR
Date 28 July 95
Cable 20A 08
Notes Air
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"In Air"	0.21	1.08

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 2) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

Cursor ..... 15.860 m
Distance/Div..... .25 m/div
Vertical Scale.... 74.8 mρ/div
VP 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 28 Jul 95
Cable 20A08
Notes Water @ room temp.
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant[2]
"In Water"	1.85	83.91

[1] If dielectric constant not between 0.75 and 2.0, contact FHWA LTPP Division
[2] If dielectric constant not between 76 and 84, contact FHWA LTPP Division

Note: Dielectric constant is determined as follows:

$$\varepsilon = \left[\frac{(L_a)}{(L)(V_p)}\right]^2 = \left[\frac{(D_2 - D_1)}{(L)(V_p)}\right]^2$$

where ε = dielectric constant; L_a = apparent length of probe, m; L = actual length of probe units (= 0.203 m (8 in) for FHWA probes); V_p = phase velocity setting (= 0.99).

TDR Probe Serial Number: 20A08 TDR Probe Length, L: 0.204 m Length of Coax Cable: ___.__ m

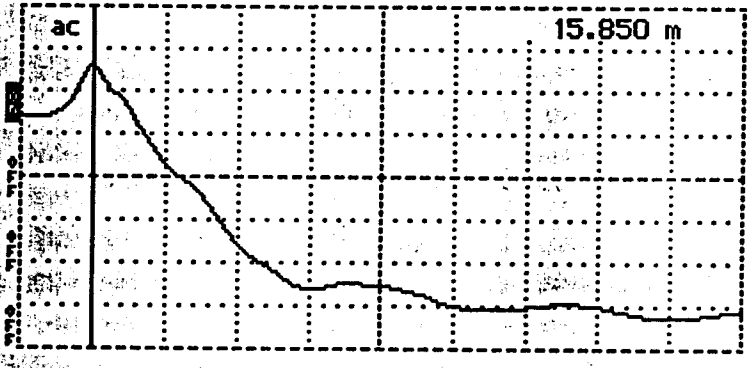
Comments: _____

Prepared by: Jerome Dicks Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 28/Jul/95

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 1) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

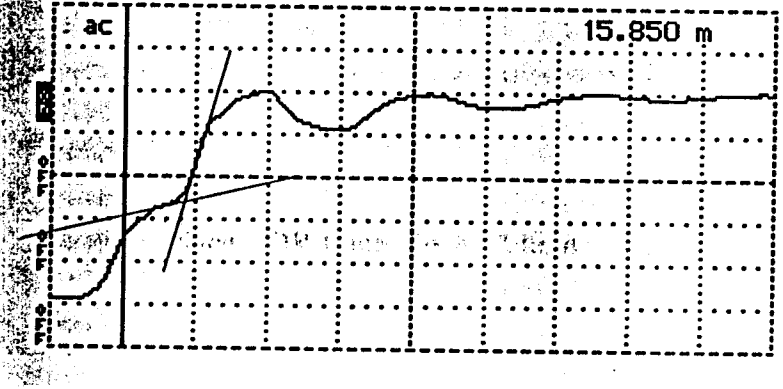
Cursor ..... 15.850 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 28 Jul 95
Cable 20A 09
Notes Short
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"Shorted at Start"		

Cursor ..... 15.850 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac

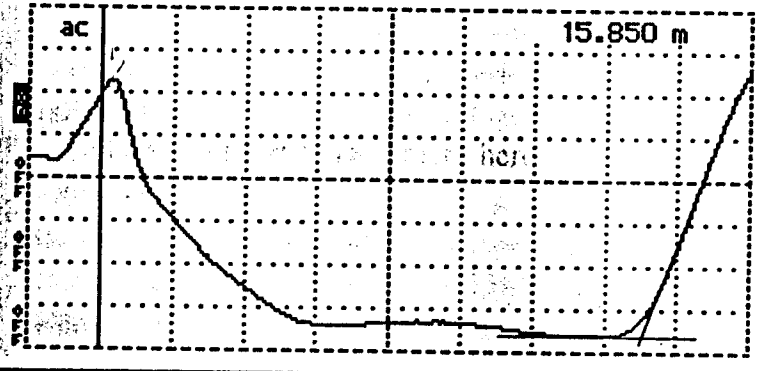


Tektronix 1502B TDR
Date 28 Jul 95
Cable 20A 09
Notes Air
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant[1]
"In Air"	0.21	1.08

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 2) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

Cursor ..... 15.850 m
Distance/Div..... .25 m/div
Vertical Scale.... 74.8 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 28 July 95
Cable 20A09
Notes Water @ room temp.

Input Trace _____
Stored Trace _____
Difference Trace _____

TDR Trace	Apparent Length, (m)	Dielectric Constant[2]
"In Water"	1.85	83.91

[1] If dielectric constant not between 0.75 and 2.0, contact FHWA LTPP Division
[2] If dielectric constant not between 76 and 84, contact FHWA LTPP Division

Note: Dielectric constant is determined as follows:

$$\varepsilon = \left[\frac{(L_a)}{(L)(V_p)}\right]^2 = \left[\frac{(D_2 - D_1)}{(L)(V_p)}\right]^2$$

where ε = dielectric constant; L_a = apparent length of probe, m; L = actual length of probe units (= 0.203 m (8 in) for FHWA probes); V_p = phase velocity setting (= 0.99).

TDR Probe Serial Number: 20A09 TDR Probe Length, L: 0.204 m Length of Coax Cable: ___.__ m

Comments: _____

Prepared by: Jenna Dicks Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 28/Jul/95

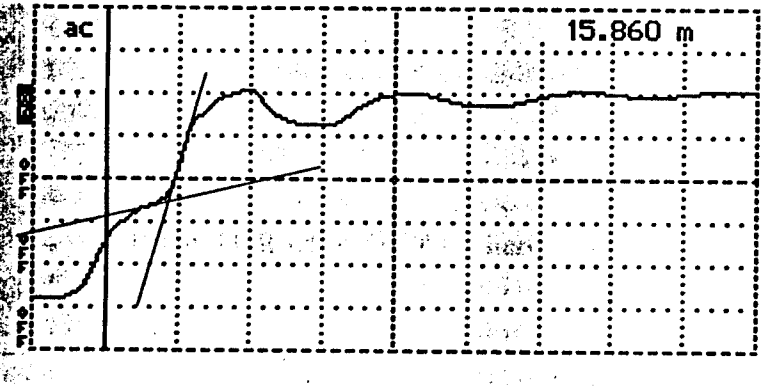
LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 1) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

Cursor ..... 15.860 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac

Tektronix 1502B TDR
Date 28 Jul 95
Cable 20A10
Notes Short
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant
"Shorted at Start"		

Cursor ..... 15.860 m
Distance/Div..... .25 m/div
Vertical Scale.... 177 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac

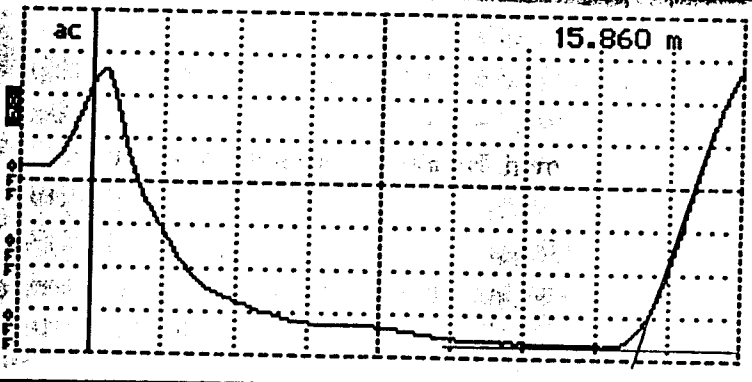


Tektronix 1502B TDR
Date 28 July 95
Cable 20A10
Notes Av
Input Trace
Stored Trace
Difference Trace

TDR Trace	Apparent Length, (m)	Dielectric Constant[1]
"In Air"	0.22	1.19

LTPP Seasonal Monitoring Program Data Sheet SMP-C01 (Page 2) TDR Probe Check	Agency Code [20] LTPP Section ID [4054]

Cursor ..... 15.860 m
Distance/Div..... .25 m/div
Vertical Scale.... 74.8 mρ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Tektronix 1502B TDR
Date 28 Jul 95
Cable 20A 10
Notes water @ room temp.

Input Trace _____
Stored Trace _____
Difference Trace _____

TDR Trace	Apparent Length, (m)	Dielectric Constant[2]
"In Water"	1.85	83.91

[1] If dielectric constant not between 0.75 and 2.0, contact FHWA LTPP Division
[2] If dielectric constant not between 76 and 84, contact FHWA LTPP Division

Note: Dielectric constant is determined as follows:

$$\varepsilon = \left[\frac{(L_a)}{(L)(V_p)}\right]^2 = \left[\frac{(D_2 - D_1)}{(L)(V_p)}\right]^2$$

where ε = dielectric constant; L_a = apparent length of probe, m; L = actual length of probe units (= 0.203 m (8 in) for FHWA probes); V_p = phase velocity setting (= 0.99).

TDR Probe Serial Number: 20A10 TDR Probe Length, L: 0.204 m Length of Coax Cable: ___.__ m

Comments: _____

Prepared by: Jerome Dicks Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 28/Jul/95

LTPP Seasonal Monitoring Program Data Sheet SMP-C02 Thermistor Probe Check	Agency Code [20] LTPP Section ID [40 54]

Thermistor Probe Assigned Serial Number : [20 A T]

Air Temperature Probe Assigned Serial Number: [20 A A T]

Thermistor Number	Distance from Top (m)	Temperature (°C) – Calibration in: Ice-Bath; T = 1.7 °C	Other Hot; T = 38.8 °C	Comments
1	./	1.64	38.2	
2	./	1.64	38.2	
3	./	1.60	38.2	
4	0.017	1.45	38.4	
5	0.095	1.57	38.4	
6	0.169	1.64	38.4	
7	0.244	1.57	38.3	
8	0.321	1.60	38.3	
9	0.474	1.64	38.3	
10	0.627	1.74	38.3	
11	0.778	1.78	38.3	
12	0.933	1.74	38.2	
13	1.085	1.74	38.2	
14	1.236	1.82	38.3	
15	1.394	1.96	38.2	
16	1.540	1.85	38.2	
17	1.695	1.78	38.3	
18	1.845	1.74	38.1	
End	1.854	n/a	n/a	
Air Probe	n/a	1.78	38.7	

Comments:

COLD CYCLE: TIME = 3 Aug 95 1252, DISPLAY = 1.17°C, HG TEMP = 1.67°C

HOT CYCLE: TIME = 2 Aug 95 1438, DISPLAY TEMP = 38.0°C, HG TEMP = 38.8°C

Prepared by: Jeff Henrichson Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 12/JUL/95

LTPP Seasonal Monitoring Program Data Sheet SMP-C03 Resistivity Probe Check	Agency Code 20 [redacted] LTPP Section ID 4054 [redacted]

Electrical Resistivity Serial Number: [redacted]R 20A

DB37 Connector Pin Number	Electrode Number	Distance from Top (m) (round up) Line 1	Line 2	Avg	Continuity ✓	Spacing (m)	Comments
36	1	0.030	.030	.030	✓	———	
35	2	0.078	.081	.080	✓	.050	
34	3	0.131	.132	.132	✓	.052	
33	4	0.181	.182	.182	✓	.050	
32	5	0.231	.233	.232	✓	.050	
31	6	0.282	.283	.282	✓	.050	
30	7	0.334	.334	.334	✓	.052	
29	8	0.384	.385	.385	✓	.051	
28	9	0.436	.436	.436	✓	.051	
27	10	0.487	.486	.487	✓	.051	
26	11	0.535	.532	.536	✓	.049	
25	12	0.585	.587	.586	✓	.050	
24	13	0.637	.638	.638	✓	.052	
23	14	0.688	.690	.689	✓	.051	
22	15	0.738	.740	.739	✓	.050	
21	16	0.790	.791	.791	✓	.052	
20	17	0.840	.842	.841	✓	.050	
19	18	0.889	.891	.890	✓	.049	
18	19	0.941	.942	.942	✓	.052	
17	20	0.991	.993	.992	✓	.050	
16	21	1.043	1.046	1.045	✓	.053	
15	22	1.094	1.095	1.095	✓	.050	
14	23	1.145	1.146	1.146	✓	.051	
13	24	1.195	1.196	1.196	✓	.050	
12	25	1.245	1.246	1.246	✓	.050	
11	26	1.296	1.298	1.297	✓	.051	
10	27	1.348	1.349	1.349	✓	.052	
9	28	1.400	1.400	1.400	✓	.051	
8	29	1.450	1.451	1.451	✓	.051	
7	30	1.501	1.502	1.502	✓	.051	
6	31	1.549	1.552	1.551	✓	.049	
5	32	1.600	1.602	1.602	✓	.051	
4	33	1.651	1.653	1.652	✓	.050	
3	34	1.701	1.703	1.702	✓	.050	
2	35	1.753	1.755	1.754	✓	.052	
1	36	1.803	1.805	1.804	✓	.050	
	Bottom	1.828	1.830	1.829	n/a	n/a	

Comments: need to add RTV

Prepared by: Jeff Henrichson Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 20/JUN/95

LTPP Seasonal Monitoring Program Data Sheet SMP-C04 Function Generator, Multimeter, and Switch Box Checks	Agency Code [20] LTPP Section ID [4054]

Start Time (military): _ _ _ _

Test Position	Switch Settings		Voltage (ACV)		Current (ACA)		Measured Resistance R = V/I (ohms)	Known Resistance (ohms)
	I_1, V_1	I_2, V_2	Range Setting	Reading	Range Setting	Reading		
36	36	37					R1 =	R1 =
37	37	38					R2 =	R2 =
38	38	39					R3 =	R3 =
39	39	00					R4 =	R4 =
36	36	37					R1 =	R1 =
37	37	38					R2 =	R2 =
38	38	39					R3 =	R3 =
39	39	00					R4 =	R4 =
36	36	37					R1 =	R1 =
37	37	38					R2 =	R1 =
38	38	39					R3 =	R1 =
39	39	00					R4 =	R2 =

Comments: SEE SMP-C04 FROM NEBRASKA INSTALLATIONS.

Prepared by: Robert Van Sambeek Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 22/Aug/95

LTPP Seasonal Monitoring Program Data Sheet SMP-C05 Rain Gauge Calibration	Agency Code [20] LTPP Section ID [4054]

General Information:

Manufacturer: Texas Electronics Inc.

Model Number: TRP-525M

Serial Number: 12030

Note: The screen should be tacked inside the funnel using silicon at three to four points to prevent loss from wind.

Rain Gauge Calibration Data					
Trial	Start Time (Military)	End Time (Military)	Volume (ml)	Number of Tips	Adjustment[1] No. of Turns
1	0700	0800	473.	102.	−0.4
2	0900	1000	473.	101.	0.0
3	____	____	____.	____.	_._

+ = cw

[1] Adjust gauge to obtain 100 tips ± 3 for 473 ml of water.

Comments: _____

Prepared by: Jerome Dicks Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 02/Aug/95

Appendix C-1: Instrumentation Installation Information

Appendix C-1 contains the following installation data sheets and associated field notes, as well as, certificate of registration for instrumentation, and photographs documenting the installation:

- Data Sheet SMP-D10: SMP Field Activity Report;
- Data Sheet SMP-I01: List of Installed Instrumentation;
- Data Sheet SMP-I02: Instrumentation Locations;
- Data Sheet SMP-I03: Log of Piezometer Hole;
- Data Sheet SMP-I04: Log of Instrumentation Hole;
- Data Sheet SMP-I05: Field Gravimetric Moisture Contents;
- Data Sheet SMP-I05(A): Lab Gravimetric Moisture Contents;
- Data Sheet SMP-I05(B): Gravimetric Moisture Comparison;
- Data Sheet SMP-I06: TDR Moisture Content;
- Data Sheet SMP-I07: Representative Dry Density;
- Plot of Gravimetric Moisture Results; and
- Installation Photographs.

20 S A 9 5 A

Seasonal Monitoring Program Guidelines: Version 2.1a/March 1995

LTPP Seasonal Monitoring Program Data Sheet SMP-D10 SMP Field Activity Report	Agency Code [20] LTPP Section ID [4054]

Onsite Datalogger and Instrumentation		
File Name - *.ONS	INSTALL	Comments: —
Battery Replace	~~Yes~~ ~~No~~	Voltages 12.5
Repairs/Calib.	INSTALL SITE	
Other:	—	

Mobile Datalogger		
File Name - *.MOB	MANUAL	Comments: —
TDR/Resistance Voltages	Sets (0)	—
Other:	—	

Manual Data Collection		
Piezometer	Yes - (No)	Comments: INSTALL — M
Resistance 2 pt.	Sets (0)	←
Resistivity 4 pt.	Sets (0)	—
Elevations	Sets (0)	—
Distress Survey	Yes - (No)	—
Long. Dipstick Profile	Yes - (No)	—
Photos or Video	(Yes) - No	OF INSTALLATION
Other:	—	

FWD and Associated Data		
FWD Testing	Sets (1)	Operator: TOM RYAN
JCP - Snap Rings	Sets (0)	—
JCP - Faulting	Sets (0)	
Other:	—	

IF REQUIRED, ATTACH SKETCHES TO THIS DATA SHEET

Comments: _____

Prepared by: Robert Van Sluyters Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 24 / Aug / 95 Daylight Savings Time (Y or N) Y

20 S A 9 5 A

Seasonal Monitoring Program Guidelines: Version 2.1a/March 1995

LTPP Seasonal Monitoring Program Data Sheet SMP-I01 Instrumentation Installed and Participants	Agency Code [20] LTPP Section ID [4054]

List of Equipment:

Equipment	Quantity	Serial Number(s)
Instrument Hole:		
Thermistor Probe	01	20AT
Resistivity Probe	01	20AR
TDR Sensors	10	20A01 to 20A10
Equipment Cabinet:		
Campbell Scientific CR10 Datalogger	01	16544
Battery Package	01	5531
Weather Station:		
Rain Gauge	01	12030
Air Temperature Probe	01	20AAT
Radiation Shield	01	20A—
Observation Piezometer/Bench Mark:	01	n/a

List of Participants:

Name of Participant	Agency/Employer
Bob Van Sambeek	Braun Intertec Corp.
Ron Urbach	" " "
Tom Ryan	" " "
Bill Parcells	KS DOT
Chuck Luedders	KS DOT
Cris Hayes	KS DOT

Prepared by: Robert Van Sambeek Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 22/Aug/95

20 S A 9 5 A

Seasonal Monitoring Program Guidelines: Version 2.1a/March 1995

LTPP Seasonal Monitoring Program Data Sheet SMP-I02 Installed Instrument Location	Agency Code [20] LTPP Section ID [40 54]

Longitudinal and Transverse Location of Instrumentation:

Instrument	Station (Customary Units)		Offset (m)[1]	
	Planned	Actual	Planned	Actual
Instrumentation Hole	5+07	5+08	+0.76	0.76
Observation Piezometer	4+78	4+78	-3.35	-3.33
Equipment Cabinet	5+07	5+08	-7.93	-7.40
Weather Station	5+07	5+08	-7.93	-7.95

[1] Transverse distance in meters from pavement edge (see LTTP Manual for FWD Testing) with (+) values toward mid-lane and (-) towards shoulder

0.252M (9 7/8")

0.090M (3½")

Depth Location of Instrumentation:

Instrument		Depth from Pavement Surface to Top of Probe (m)		Comments
		Planned	Actual	
Thermistor Probe	Metal Top	0.025	0.023	—
	Metal Bottom	0.210	0.230	PCC = 10" vs. 9"
	PVC Top	0.375	0.394	Bottom @ 86.7"
Resistivity Probe		0.375	0.412	-Drill to 85.5" Depth.

Deeper because of to" PCC

TDR Number	Depth from Pavement Surface to Probe (m)		Comments
	Planned Location	Actual Location	
1	0.475	0.500	
2	0.630	0.650	
3	0.780	0.794	0.794
4	0.930	0.950	
5	1.085	1.074	
6	1.240	1.234	
7	1.390	1.388	
8	1.540	1.567	
9	1.850	1.855	
10	2.150	2.145	(84.7") - Drill to 85.5"

ATTACH TOP-VIEW SKETCH OF INSTRUMENTATION HOLE SHOWING DIRECTION OF TRAFFIC AND LOCATION OF THERMISTOR AND RESISTIVITY PROBES. LABEL PROBES "T" AND "R", RESPECTIVELY

Prepared by: [signature] Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 22/Aug/95 (installed Aug. 24)

20 S A 9 5 A

Seasonal Monitoring Program Guidelines: Version 2.1a/March 1995

LTPP Seasonal Monitoring Program Data Sheet SMP-I03 Log of Piezometer Hole	Agency Code [20] LTPP Section ID [4054]

Operator: _____ Equipment Used: CME 55 (1992)

Location: Station: 4+78 Offset: 3.33 m (from lane edge)

Bore Hole Diameter: 165. mm Auger Type: 6½ SOLID STEM

Scale (m)	Depth from Surface[1] (m)	Material Description	Material Code[2]
0.5	0.50	CL SILTY CLAY DARK BROWN TO BACK (TOPSOIL)	131
1.0		CL SILTY CLAY BROWN	131
1.5			
2.0			
2.5			
3.0			
3.5			
4.0			
4.5	4.45		
5.0			

[1] Format: __.____ m; [2] Format: ____

Prepared by: RONALD R URBACH Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 24 AUG 95

BRAUN SM
INTERTEC

SMP-I03

20SA95A (204054)

PIEZOMETER.

TOOK ONE 5 GAL. PAIL OF SOIL FROM 1.6M TO 1.9 M. TO BE USED FOR TESTING AT A LATER DATE.

TOTAL LENGTH OF PIEZOMETER WAS 14' 7" 4.43 m

PIEZOMETER PLACED IN HOLE 4.45m DEEP. FILTER SAND PLACED AND COMPACTED FROM BOTTOM OF HOLE 4.45 m TO 3.6m

A BENTONITE LAYER OF BENTONITE CHIPS WERE PLACED AND COMPACTED. THIS LAYER WAS FROM TOP OF FILTER SAND 3.6M TO 3.2m

FROM THE TOP OF THE BENTONITE LAYER AT 3.2 TO ABOUT 0.2m. THE SILTY CLAY SOIL REMOVED DURING DRILLING WAS PLACED AND COMPACTED.

THE PROTECTIVE SLEEVE WITH A COVER WAS PLACED AROUND THE PIEZOMETER AT THE TOP OF THE SILTY CLAY. CONCRETE MIX WAS PLACED TO ABOUT 6" FROM THE TOP OF THE PROTECTIVE SLEEVE. FILTER SAND WAS PLACED TO FILL THE AREA BETWEEN THE INSIDE OF THE SLEEVE AND THE PIEZOMETER.

THE TOP OF THE PROTECTIVE COVER WAS ABOUT 2" BELOW GROUND LEVEL.

ROIN URBACH

20 5A 9 5 A

Seasonal Monitoring Program Guidelines: Version 2.1a/March 1995

LTPP Seasonal Monitoring Program Data Sheet SMP-I04 Log of Instrumentation Hole	Agency Code [20] LTPP Section ID [4054]

Operator: _____ Equipment Used: CME 55 (1992)

Location: Station: 5+08 Offset: 0.76 m (from lane edge)

Bore Hole Diameter: 292± mm (11.5"±) 12"OS DIAM. CORE BARREL

Scale (m)	Strata Change[1] (m)	PAIL #	Material Description	Material Code[2]
0.10 / 0.20 / 0.30	.3		PCC ? 9 3/4" (11 3/4")	730
0.40	.39		LEAN CONCRETE BASE 3 1/2"	334
0.50	.5	1	CL SILTY CLAY BROWN AND BLACK MOIST	131
0.60	.61	2	CL SILTY CLAY GRAY MOIST	131
0.70	.71	3		
0.80 / 0.90	.90	4	CL SILTY CLAY BROWN MOIST TO DRY	131
1.00	1.04	5		
1.10	1.11	6		
1.20 / 1.30	1.31	7		
1.40	1.43	8		
1.50	1.54	9		
1.60 / 1.70	1.70	10		
1.80	1.87	11		
1.90	1.99	12		
2.00	2.11	13		
2.10	2.21	14		
2.20 / 2.30 / 2.40 / 2.50				

0.25m on 10"

[1] Format: __.____ m; [2] Format: ___

Prepared by: RONALD R URBACH Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 24/AUG/95

LTPP Seasonal Monitoring Program Data Sheet SMP-I05 Field Gravimetric Moisture Content — FIELD	Agency Code [28]
	LTPP Section ID [4054]

TDR Probe	Probe Depth[1] (m)	Moisture Sample No.	Pan No.	Wt. of Pan (gms) = A	Wt. of Pan + Wet Soil (gms) = B	Wt. of Pan + Dry Soil (gms) = C	Wt. of Dry Soil (gms) = D = C - A	Wt. of Water (gms) = E = B - C	Moisture Content (%) = w = E/D * 100
1	0.475	1	1	223.6	500.5	453.5	229.9	47.0	20.4
2	0.630	2	2	223.0	573.9	504.6	281.6	69.3	24.6
3	0.780	3	3	224.0	517.0	477.6	253.6	39.4	15.5
4	0.930	4	1	223.6	517.1	476.3	252.7	40.7	16.1
5	1.085	5	4	220.7	477.5	438.3	217.6	39.2	18.0
6	1.240	6	2	223.0	476.0	436.3	213.3	40.0	18.8
7	1.390	7	1	223.6	494.0	453.5	229.9	40.5	17.6
8	1.540	8	2	223.0	504.7	463.5	240.5	41.2	17.1
9	1.850	9	4	220.7	506.0	470.0	249.3	36.0	14.4
10	2.150	10	4	~~220.7~~ 211.2	546.2	493.6	~~272.9~~ 282.4	52.6	19.3
ONE POINT PROFILE.			4	~~211.2~~ 220.7	509.5	469.3	~~258.1~~ 248.6	40.2	16.2

[1] Distance in meters from pavement surface to TDR probe

Comments: _____

Prepared by: DOT Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 24 AUG 95

LAB 28 SHEET 1

Seasonal Monitoring Program Guidelines: Version 2.1a/March 1995

LTPP Seasonal Monitoring Program Data Sheet SMP-I05 (LAB) (A) LAB ~~Field~~ Gravimetric Moisture Content	Agency Code [28] LTPP Section ID [4054]

TDR Probe	Probe Depth[1] (m)	Moisture Sample No.	Pan No.	Wt. of Pan (gms) = A	Wt. of Pan + Wet Soil (gms) = B	Wt. of Pan + Dry Soil (gms) = C	Wt. of Dry Soil (gms) = D = C - A	Wt. of Water (gms) = E = B - C	Moisture Content (%) = w = E/D * 100
1	0.475	1	1	315.8	971.2	873.5	557.7	97.7	17.5
2	0.630	2	2	313.6	1124.0	975.6	662.0	148.4	22.4
3	0.780	3	3	314.0	781.7	722.6	408.6	59.1	14.6
4	0.930	4	4	312.5	981.1	893.8	574.3	87.3	15.2
5	1.085	5	5	320.1	823.0	752.3	432.2	70.2	16.4
6	1.240	6	6	321.4	815.7	750.2	427.8	65.5	15.3
7	1.390	7	7	317.3	603.2	564.4	247.1	38.8	15.7
8	1.540	8	8	322.7	213.5	660.6	232.9	52.9	22.2
9	1.850	9	9	328.4	777.8	687.2	358.8	60.6	16.9
10	2.150	10	10	300.5	659.7	607.1	306.6	52.6	17.2
1½"x4" Proctor 204054		11	11	313.5	1088.7	982.8	669.2	105.9	15.8

[1] Distance in meters from pavement surface to TDR probe

Comments: Proctor Sample No. 11 Volume = 0.01244 ft³

PCF = 118.59 lb/ft³

fax from Charles G. Liedders – 913-823-1649

Prepared by: KANSAS DOT Employer: Braun Intertec Corporation

Date (dd/mmm/yy): __/__/95

LAB

Data Sheet SMP-I05: ~~Field~~ Gravimetric Moisture Contents

LTPP Seasonal Monitoring Program Data Sheet SMP-I05 (B) Gravimetric Moisture Comparison	Agency Code [20] LTPP Section ID [4054]

TDR	SMP-I02 TDR Depth (m)	SMP-I04 Material Code	Lab Data Dry Density (pcf)	TDR Installation Data		Gravimetric Moistures		Comments
				SMP-I06 La (m)	Calculated Gravimetric (percent)	SMP-I05 Field (percent)	SMP-I05A Lab (percent)	
1	0.500	131	105.4	1.20	28.7	20.4	17.5	wet from coring
2	0.650	131	105.4	1.69	45.6	24.6	22.4	wet from coring
3	0.794	131	105.4	0.95	22.2	15.5	14.6	FLAT TRACE.
4	0.950	131	105.4	0.99	23.4	16.1	15.2	
5	1.074	131	105.4	0.94	21.9	18.0	16.4	
6	1.234	131	105.4	0.90	20.6	18.8	15.3	
7	1.388	131	105.4	0.95	22.2	17.6	15.7	
8	1.567	131	105.4	0.90	20.6	17.1	(22.2)	Not consistant with other probes
9	1.855	131	105.4	1.03	24.5	14.4	16.9	
10	2.145	131	105.4	1.06	25.3	19.3	17.2	

TDR Gravimetric moistures calculated using equations on pages II-2 and II-5 of FHWA-RD-94-110 with La = 0.203 m, and Vp = 0.99.

Comments: No testpits from original drilling and sampling — No 504 Data sheet. For subgrade soil dry density used 0.95 * 111.0 pcf = 105pcf based on Data sheet SMP I07.

Prepared by: _____ Employer: Braun Intertec Corporation Date (dd/mmm/yy): __/____/__

$$\omega = \left(-330.72 + 4526.78\,La^2 - 2103.88\,La^4 + 402.25\,La^6\right)/\gamma_d$$; La (meters), γ_d (pcf), ω (%)

20 S A 9 5 A

Seasonal Monitoring Program Guidelines: Version 2.1a/March 1995

LTPP Seasonal Monitoring Program Data Sheet SMP-I06 TDR Moisture Content	Agency Code [20] LTPP Section ID [4054]

Required Settings:

Dist./Division: 0.25 m
Phase Velocity: 0.99
Noise Filter: 1 average

Probe Number	Probe Depth[1] (m)	Time (military)	Apparent Length (m)	Dielectric Constant[2]	Comments
1	0.500	(1)	1.20	35.64	wet from coring
2	0.650		1.69	70.69	FLAT TRACE wet from coring
3	0.794		0.95	22.34	
4	0.950		0.99	24.26	
5	1.074		0.94	21.87	
6	1.234		0.90	20.05	
7	1.388		0.95	22.34	
8	1.567		0.90	20.05	
9	1.855		1.03	26.26	
10	2145		1.06	27.81	

[1] Distance in meters from pavement surface to TDR probe
[2] Dielectric constant is determined as follows:

$$\varepsilon = \left[\frac{(L_a)}{(L)(V_p)}\right]^2 = \left[\frac{(D_2 - D_1)}{(L)(V_p)}\right]^2$$

where ε = dielectric constant; L_a = apparent length of probe, m; L = actual length of probe units (= 0.203 m (8 in) for FHWA probes); V_p = phase velocity setting (= 0.99).

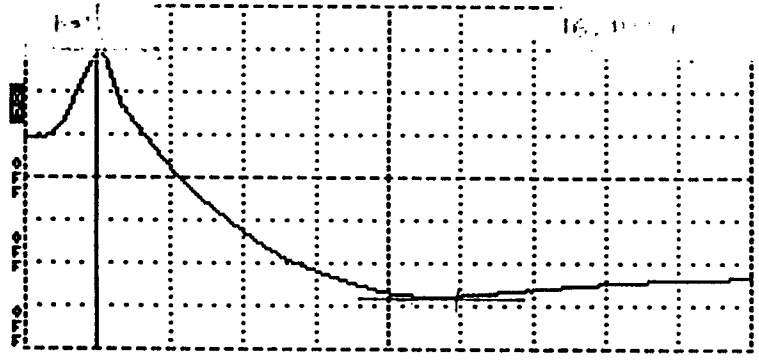
ATTACH TDR TRACES TO THIS DATA SHEET.

Comments: (1) NOT RECORDED – ALL TDR's PLACED AFTER 1600 HOURS (DRILL-RIG PROBLEMS) TO 1730 HOURS.

Prepared by: RJV Employer: Braun Intertec Corporation

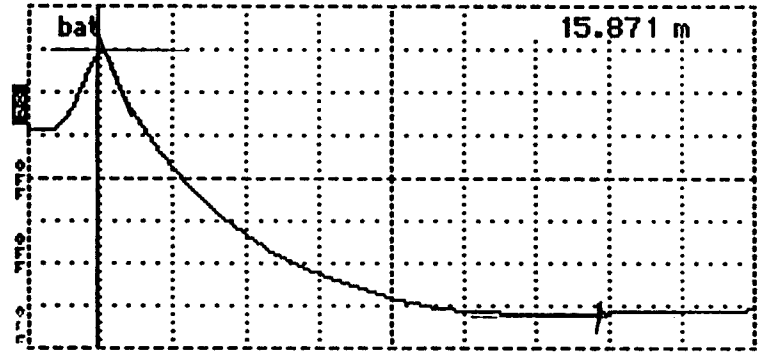
Date (dd/mmm/yy): 22/AUG/95

Cursor ..... 16.[illegible]
Distance/Div..... .25 m/div
Vertical Scale.... 96.9 mΩ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... bat



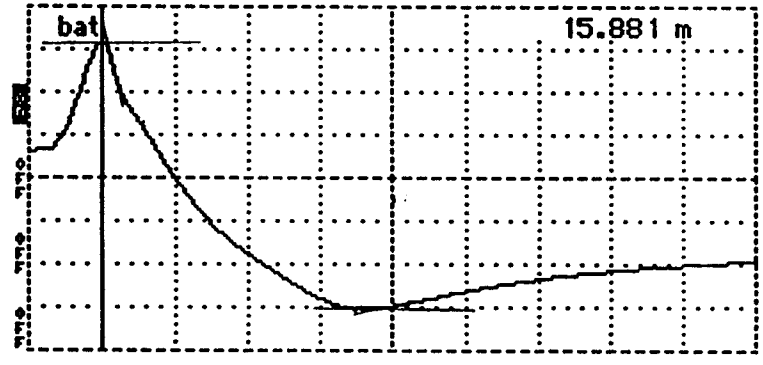
1502B TDR
Date 8-24-95
Cable 20A1
Notes INSTALLATION
- Soil wet from coring
Input Trace
Stored Trace
Difference Trace

Cursor
Distance/Div..... .25 m/div
Vertical Scale.... 103 mΩ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... bat



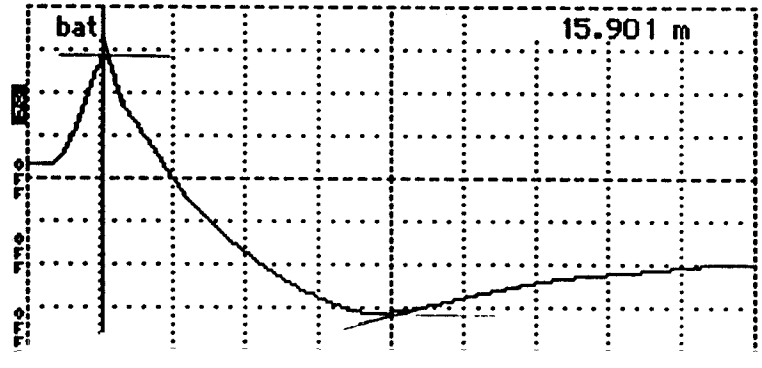
Tektronix 1502B TDR
Date 8-24-95
Cable 20A2
Notes INSTALLATION
- Soil wet from coring
Input Trace
Stored Trace
Difference Trace

Cursor
Distance/Div..... .25 m/div
Vertical Scale.... 72.7 mΩ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... bat



Tektronix 1502B TDR
Date 8-24-95
Cable 20A3
Notes INSTALLATION
Input Trace
Stored Trace
Difference Trace

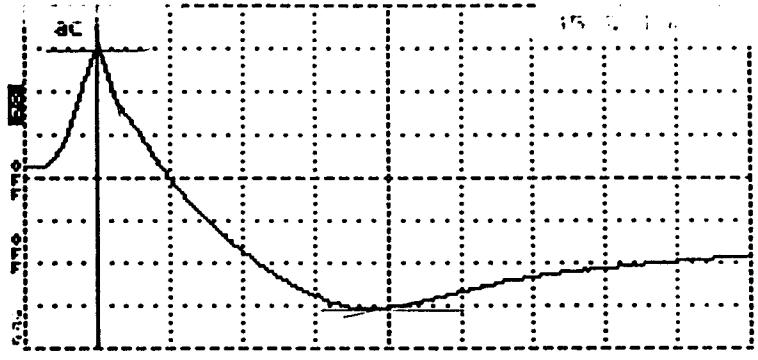
Cursor
Distance/Div..... .25 m/div
Vertical Scale.... 77.0 mΩ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... bat



Tektronix 1502B TDR
Date 8-24-95
Cable 20A4
Notes INSTALLATION
Input Trace
Stored Trace
Difference Trace

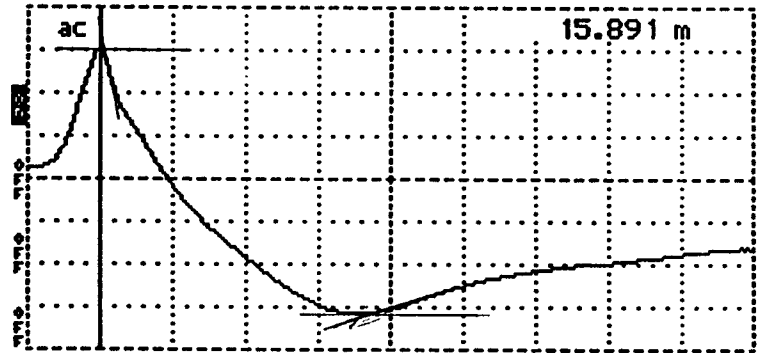
Aug. 24 1995
DBMS2 700 86
20SA (Custom)

Cursor ..... 15.8[illegible] m
Distance/Div..... .25 m/div
Vertical Scale.... 77.0 mΩ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



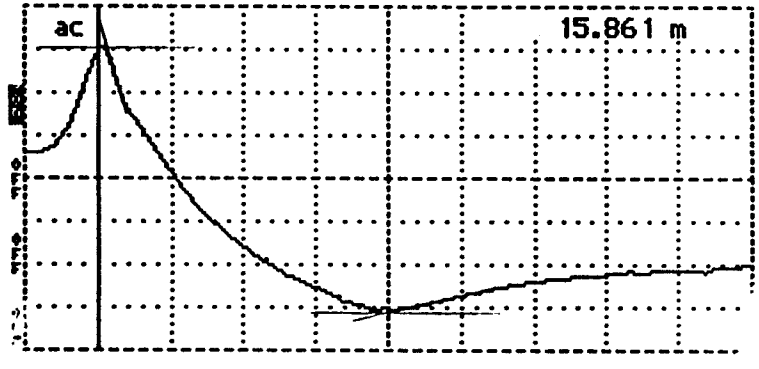
[illegible]502B TDR
Date 8-24-95
Cable 20A5
Notes INSTALLATION
Input Trace
[illegible] Trace

Cursor [illegible] m
Distance/Div..... .25 m/div
Vertical Scale.... 70.6 mΩ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



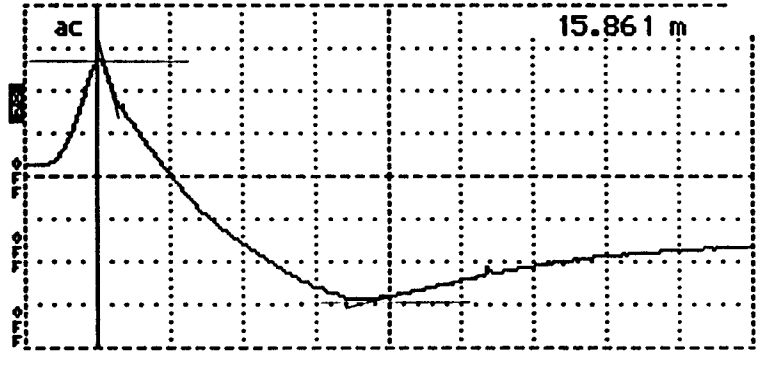
Tektronix 1502B TDR
Date 8-24-95
Cable 20A6
Notes INSTALLATION
Input Trace
Stored Trace
Difference Trace

Cursor [illegible]
Distance/Div..... .25 m/div
Vertical Scale.... 77.0 mΩ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Date 8-24-95
Cable 20A7
Notes INSTALLATION
Input Trace
Stored Trace
[illegible] Trace

Cursor [illegible]
Distance/Div..... .25 m/div
Vertical Scale.... 81.6 mΩ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



Date 8-24-95
Cable 20A8
Notes INSTALLATION
Input Trace
Stored Trace
Difference Trace

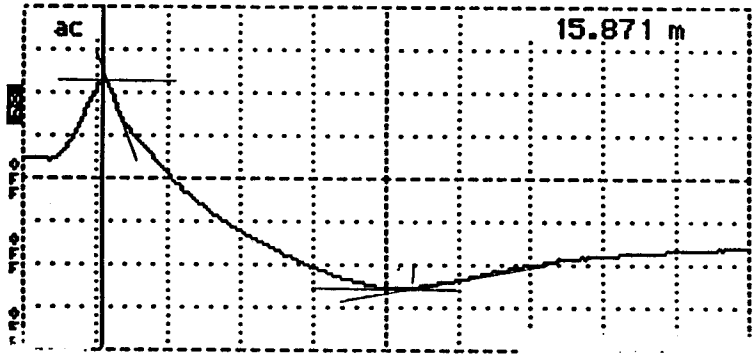
Fig. 24 1995 DRUX 92 200 RC 2 of 4 (20454)

Cursor ..... 15.[illegible] m
Distance/Div..... .25 m/div
Vertical Scale.... 79.2 mΩ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac

Tektronix 1502B TDR
Date 8-24-95
Cable 2049
Notes INSTALLATION

Input Trace _____
Stored Trace .....

Cursor ..... [illegible] m
Distance/Div..... .25 m/div
Vertical Scale.... 103 mΩ/div
Vp 0.99
Noise Filter..... 1 avg
Power..... ac



[illegible]
Date 8-24-95
Cable 2041.0
Notes INSTALLATION

Input Trace _____
Stored Trace .....
Difference Trace .....

Aug. 25, 1995
DBNY92700 86
2054 (2049)

20 S A 9 5 A

Seasonal Monitoring Program Guidelines: Version 2.1a/March 1995

LTPP Seasonal Monitoring Program Data Sheet SMP-I07 Representative Dry Density	Agency Code [20] LTPP Section ID [40 54]

PAIL #7 1.11 TO 1.31 M

Depth of Representative Sample (from pavement surface): 1.21 m

454 gm/#

Dry Density Determination:

a.	Tare Weight of Empty Mold:	4272 g	(9.41 lb)
b.	Weight of Mold and Compacted Soil:	6224 g	(13.71 lb)
c.	Weight of Compacted Sample (b - a):	1952 g	(4.30 lb)
d.	Unit Weight of Compacted Soil = [(b - a) / 943.0] =	2.07 g/cm³	
	([(b - a) * 30] =	129.0 lb/ft³)	
e.	Dry Density of Compacted Soil = [d / (100 - r)] =	1.78 g/cm³	
	1.78 X 62.4 = 111.1 PCF	(111.0 lb/ft³)	

Moisture Content Determination:

m.	Tare Weight of Pan:	220.7 g
n.	Weight of Pan and Moisture Sample: WET SOIL	509.5 g
o.	Weight of Pan and Dry Sample:	469.3 g
p.	Weight of Moisture (n - o):	40.2 g
q.	Weight of Dry Sample (o - m):	248.6 g
r.	Moisture Content by Weight = [(p / (p + q) * 100] =	16.2 %

Comments: _____

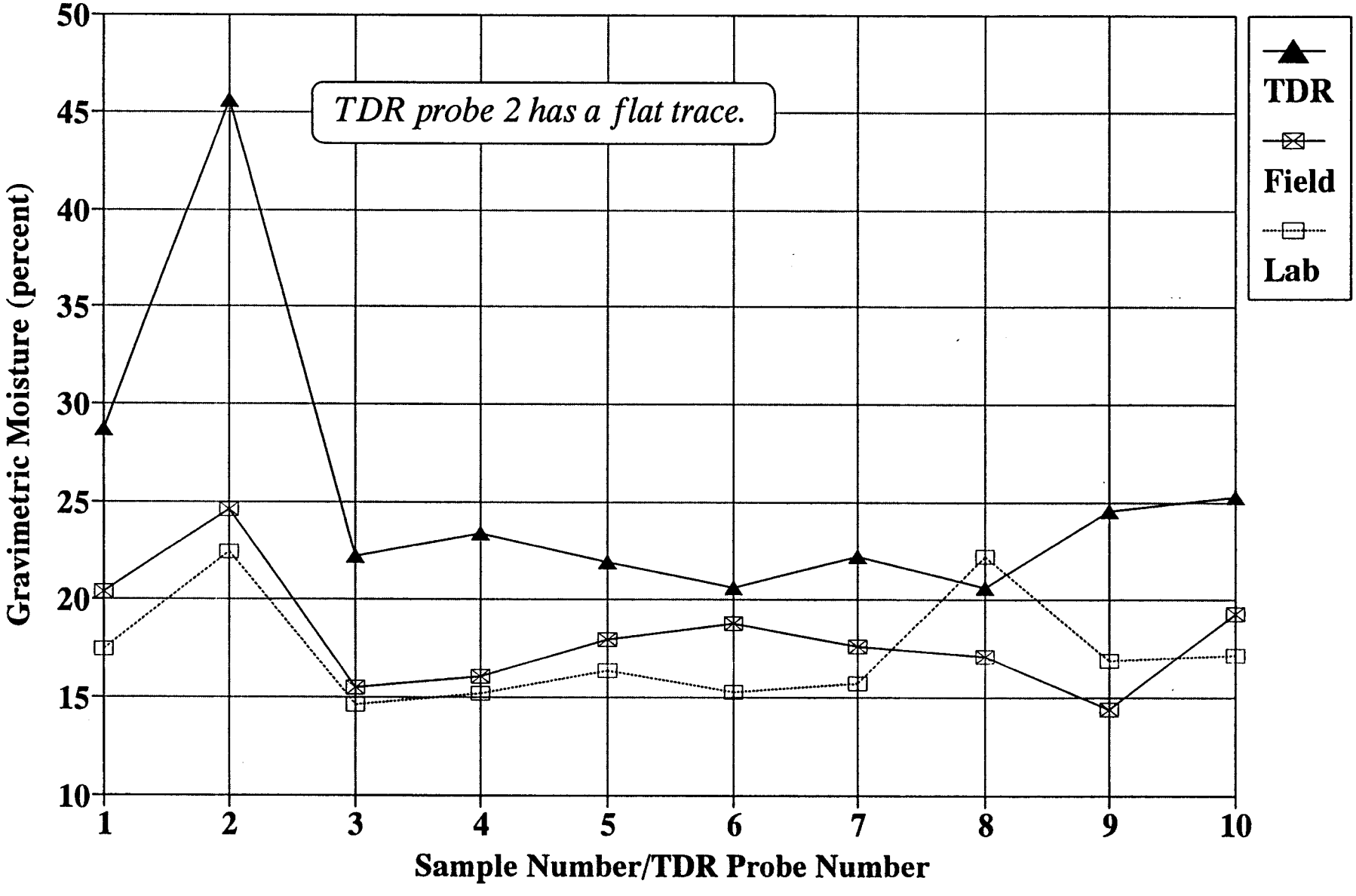
_____

_____

Prepared by: RONALD R URBACH Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 24/AUG/95

GPS 204054 - Enterprise, Kansas



40 #0 0

BRAUN SM
INTERTEC

Description: ESSA (204054) INSTALL

Project No: DBNX 92700 BG

Date: 25-AUG-95 By: RV

Install Summary

ets. - drive down
- stop @ Ars site for SPS-2
- marks for fill @ the site - no fence yet
- stop @ 204054 - flags for utility clearance area

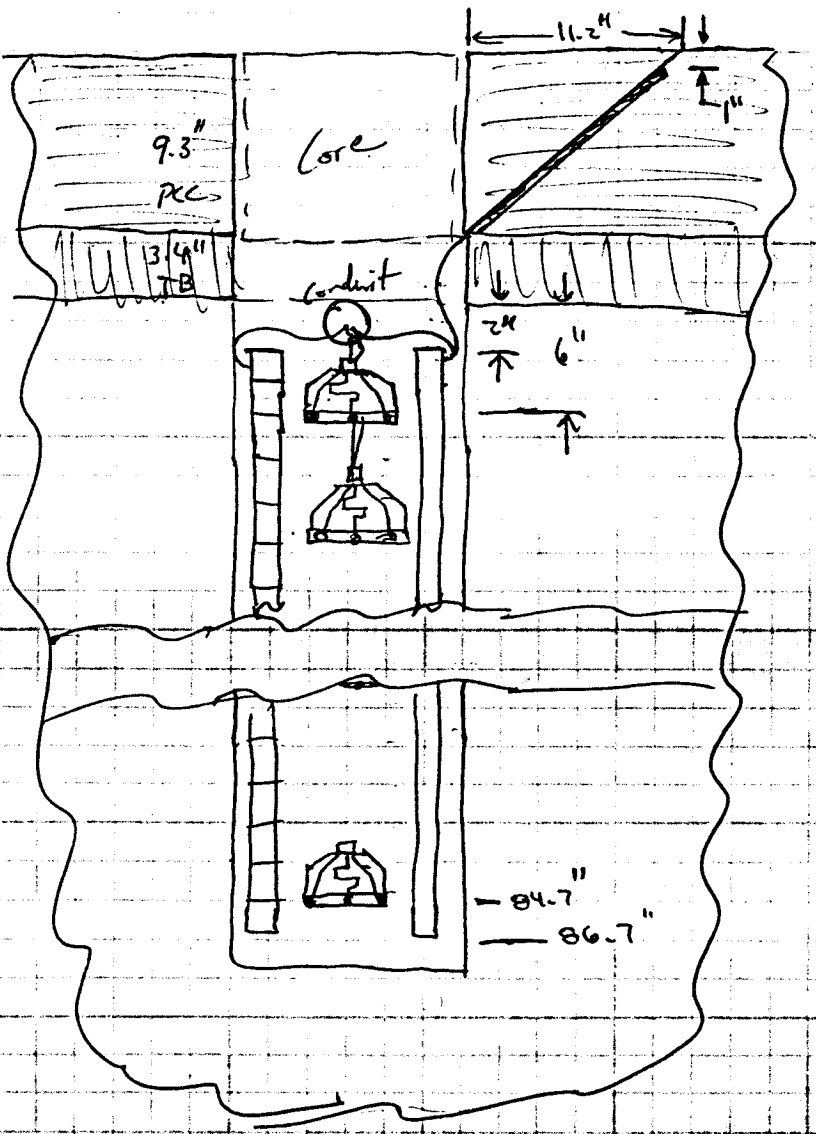
es - found all five panels and 39 on marked core location
- measured locations for info sheet

- Core point w/ 12" O.D. core
- ran out of H2O - 2 Hour delay.

Problem - Auger too large
- touched off ½" on all flighting
- Contractor pressed pipe into hole and pulled expander back thru w/ conduit
- finished augering material @ ~4:00 (conduit in when auger down 3'
- sensors back in hole
- drilled hole at angle for probe
- pulled cable when placing TDR #2
- pulled slack to keep #1 down point
- had to add material (over-compacted) ~3"
- test fit core - had to add material
- put epoxy around edge of hole
- put core back in (~¼" high)
- drove over with truck to push core into soft soil
- poured epoxy to top of core and on temp probe
- hooked up "Onsite"

- finish wiring, adjusted lengths in MOBILE6.
- data collection

PLAN (NOT ACTUAL)



0 (surface)
1 – MRC #1
4.6 – MRC #2
8.3 – MRC #3
9.3 – PCC bottom
12.7 (Lower Bound)
14.7 (MRC + RESIST.)
18.7 (#1 TDR)
24.7 (#2 TDR)
30.7 (#3
36.7 (#4)
42.7 (#5)
48.7 (#6)
54.7 (#7)
60.7 (#8)
72.7 (#9)
84.7 (#10)
86.7 (MRC + RESIS

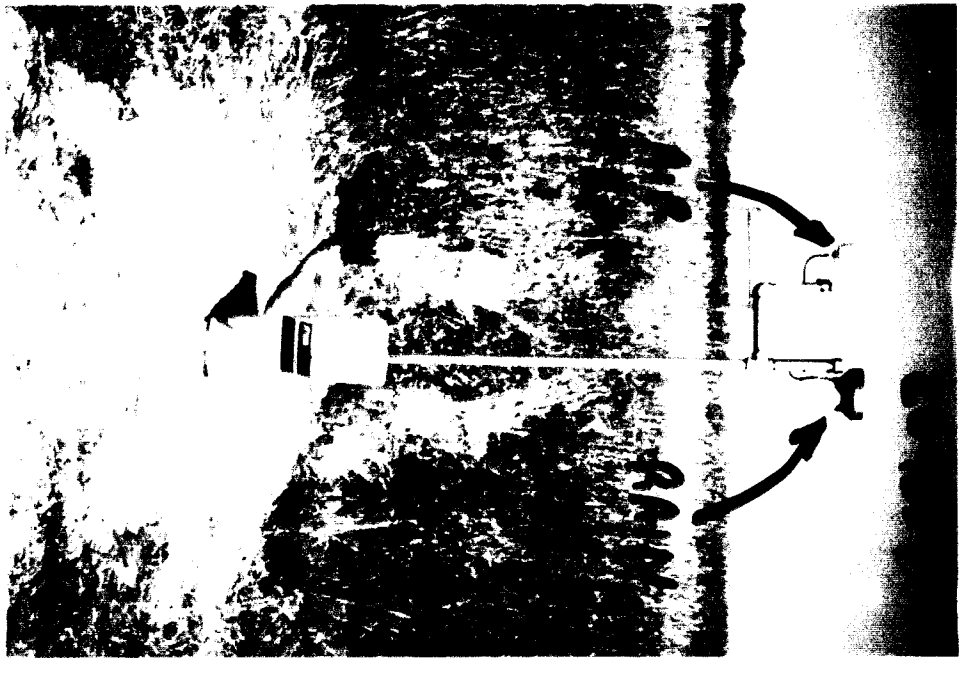
DRILL $85\frac{1}{2}$ DEEP

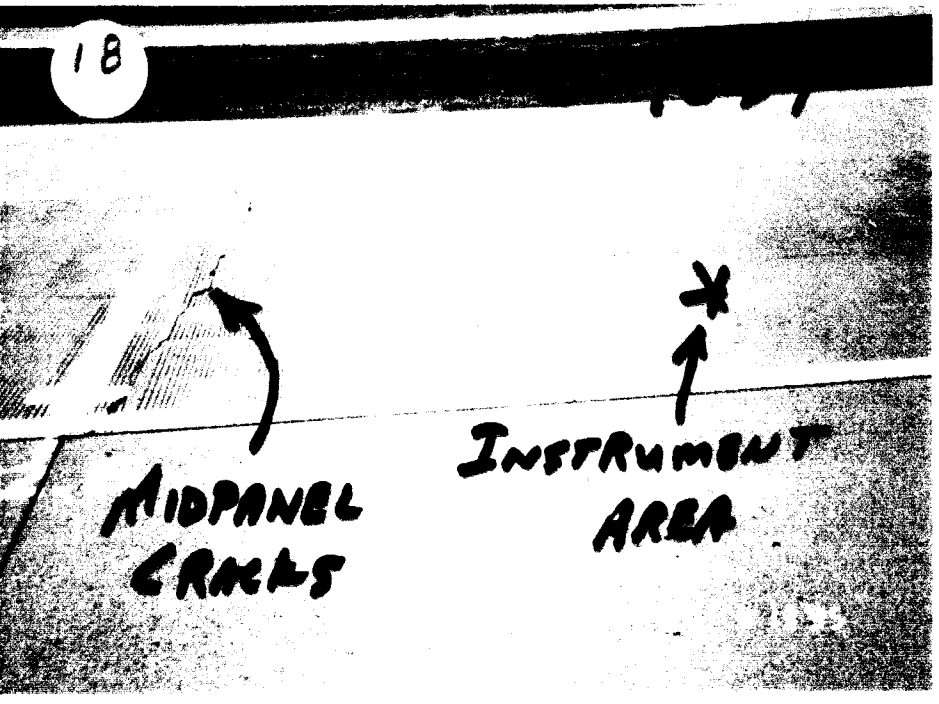
Aug 25, 1995

– PCC = 10" ← adjusted MRC + RESIST. DEPTH and TDR #1 only.


PULL
CONDUIT


204054




18
MIDPANEL CRACKS
INSTRUMENT AREA


CORE PC


20405Y
INSTRUMENT HOLE


20405Y

Appendix D-1: Initial SMP Monitoring Data Collection

Appendix D-1 contains the following data sheets with information collected the day after instrumentation installation:

- Data Sheet SMP-D10: SMP Field Activity Report;
- Data Sheet SMP-D03: Contact Resistance Measurements;
- Data Sheet SMP-D04: Four-Point Resistivity Measurements;
- Data Sheet SMP-D05: Ground Water Table Measurements; and
- Data Sheet SMP-D06: Joint Opening Measurement;
- Data Sheet SMP-D07: Joint Faulting Measurement; and
- Data Sheet SMP-D09: Surface Elevation Measurements - PCC Pavements.

20 SA95B

Seasonal Monitoring Program Guidelines: Version 2.1a/March 1995

LTPP Seasonal Monitoring Program Data Sheet SMP-D10 SMP Field Activity Report	Agency Code [20] LTPP Section ID [4054]

Onsite Datalogger and Instrumentation		
File Name - *.ONS	20SA95BH	Comments: 3/4 day of data
Battery Replace	Yes - (No)	Voltages 12.5
Repairs/Calib.		finish install - wiring
Other:		

Mobile Datalogger		
File Name - *.MOB	20SA95BH	Comments: Adjusted lengths after
TDR/Resistance Voltages	Sets (2)	first set - file name
Other:		MOB20SA.DOC.

Manual Data Collection		
Piezometer	(Yes) No	Comments: ~~0.350~~ m 4.03
Resistance 2 pt.	Sets (1)	3 data points bad from
Resistivity 4 pt.	Sets (1)	problem w/ switch box
Elevations	Sets (1)	included elevation on core
Distress Survey	Yes (No)	
Long. Dipstick Profile	Yes (No)	
Photos or Video	(Yes) No	Installation
Other:		

FWD and Associated Data		
FWD Testing	Sets (2)	Operator: Tom Ryan
JCP - Snap Rings	Sets (0)	Not installed yet - no drill guide
JCP - Faulting	Sets (2)	
Other:		

IF REQUIRED, ATTACH SKETCHES TO THIS DATA SHEET

Comments: _____

Prepared by: _____ Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 25/Aug/95 Daylight Savings Time (Y or ~~N~~) N Y

20 S A 95 B

LTPP Seasonal Monitoring Program Data Sheet SMP-M1 (Page 2) Distress Survey of Instrumentation Area	Agency Code [20] SHRP Section ID [4054] Survey Date [25 / Aug / 95]

Rate the condition of the instrumentation area (check one):

X Good (little or no distress; repairs are not required in the immediate future)

____ Poor (significant distress, repairs required now or in the immediate future)

List any repairs (type and extent) done since instrumentation installation and/or last survey of instrumentation area:

- DAY AFTER INSTALLATION
- CORE WAS EPOXIED BACK IN PLACE

Additional Comments

PLEASE REMEMBER TO ATTACH COLOR PHOTOGRAPH(S) OF INSTRUMENTATION AREA TO THIS DATA SHEET.

Prepared by: Robert Van Sambeek Employer: BRAUN INTERTEC COR?.

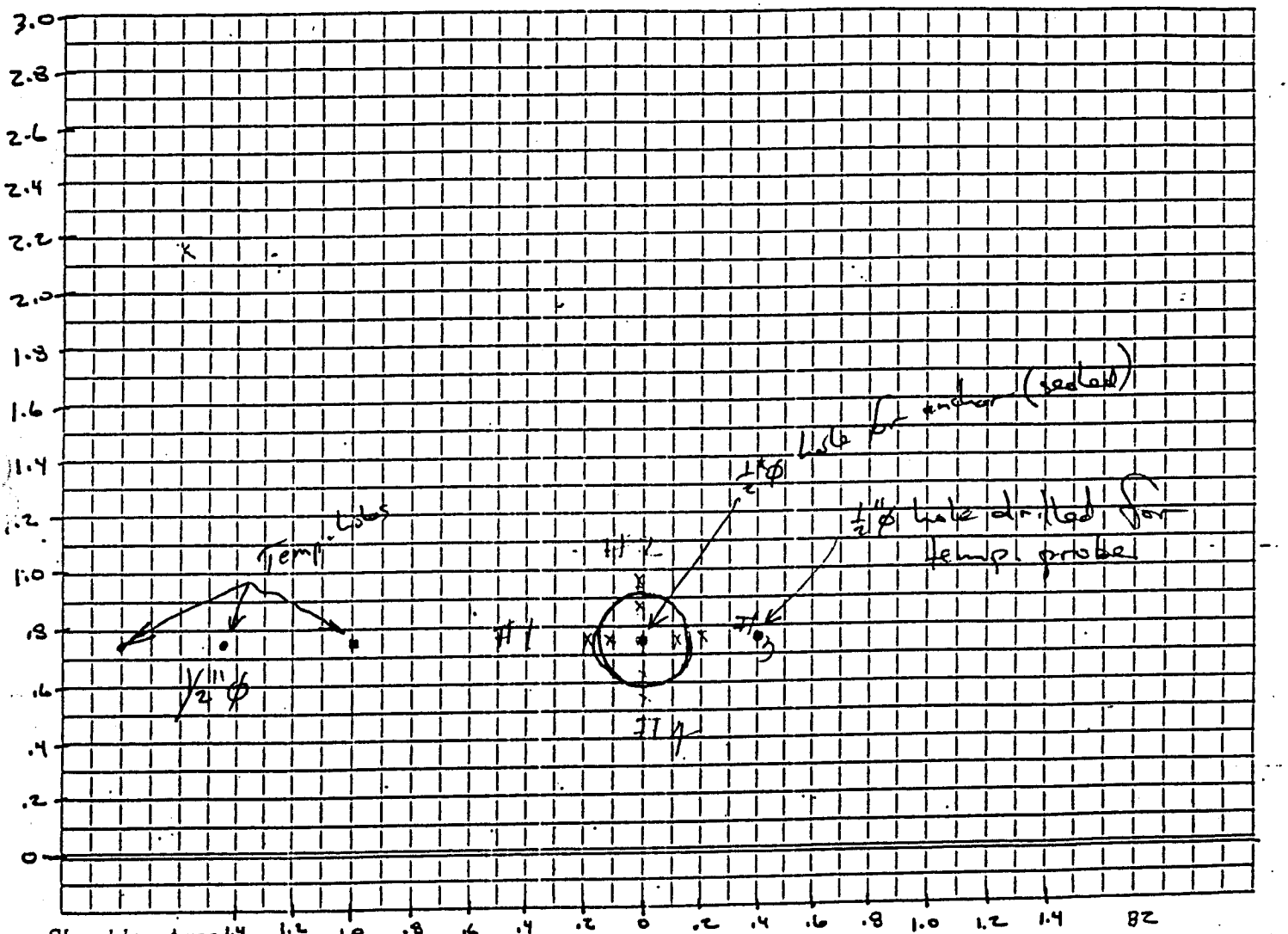
Date: (ddmmm yy) 25 / Aug / 95

20 S A 95 B

LTPP Seasonal Monitoring Program Data Sheet SMP-M1 (Page 1) Distress Survey of Instrumentation Area	Agency Code [20] SHRP Section ID [4054] Survey Date [25 / AUG / 95]

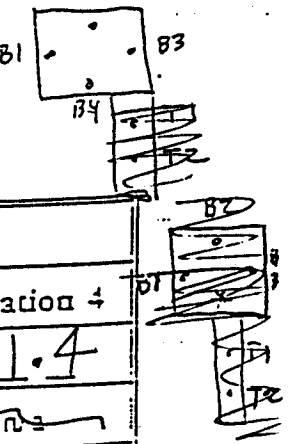
Use grid below to sketch distresses within 1.5 m (5 ft) of instrumentation block/hole and trench. Use LTPP Distress Identification Manual to extent possible. (Note: each square in grid equals 0.1 m by 0.1 m area)

Traffic ⟹



Shoulder Area

FAULTMETER ON PCC



Use table below to record settlement of pavement in instrumentation area.

Measurement Device: FAULTMETER

Location	Settlement, mm:			
	Location 1	Location 2	Location 3	Location 4
Instrumentation block/hole	1.3	1.2	1.3	1.4
Trench	2.2	2.0	n/a	n/a

* with trench centered on block, take reading on each

Entered: 9/6/95 ..... 20 S A 9 5 B

LTPP Seasonal Monitoring Program Data Sheet SMP-D03 Contact Resistance Measurements	Agency Code [20] LTPP Section ID [4054]

Start Time (military): 0930

Test Position	Switch Settings I1 V1	Switch Settings I2 V2	Voltage (ACV) Range Setting	Voltage (ACV) Reading	Current (ACA) Range Setting	Current (ACA) Reading	Comments
1	1	2	milli	48.6	micro	14.8	
2	2	3		54.4		11.8	
3	3	4		63.3		12.0	
4	4	5		49.6		12.1	
5	5	6		51.8		12.2	
6	6	7		74.5		10.1	
7	7	8		100.2		10.6	
8	8	9		99.9		12.3	
9	9	10		85.8		14.1	
10	10	11		87.4		9.5	
11	11	12		156.9		7.0	
12	12	13		134.9		9.9	
13	13	14		~~103.7~~		~~1.0~~	Problem w/ switch box - same settings as on other sites. (Not site specific)
14	14	15		~~7.1~~		~~51.9~~	
15	15	16		~~201.0~~		~~2.5~~	
16	16	17		173.8		7.7	
17	17	18		108.5		11.1	
18	18	19		106.3		13.9	
19	19	20		103.8		14.8	
20	20	21		76.0		16.1	
21	21	22		73.1		19.8	
22	22	23		75.7		16.8	
23	23	24		99.3		16.8	
24	24	25		76.1		16.7	
25	25	26		76.2		19.8	
26	26	27		84.1		18.4	
27	27	28		85.2		17.5	
28	28	29		90.5		15.8	
29	29	30		104.0		16.8	
30	30	31		88.6		20.4	
31	31	32		69.3		23.2	
32	32	33		68.6		22.9	
33	33	34		70.2		22.3	
34	34	35		71.7		16.9	
35	35	36		72.0		16.6	
36	36	37		0.4		198.6	R1 = 2.0
37	37	38		10.9		104.8	R2 = 104.0
38	38	39		65.1		64.7	R3 = 1006.2
39	39	00		234.0		0.3	R4 = 0.78 MΩ

Note: R = V/I, in ohms; measured resistances should be compared with known values.

Comments: Day after install

Prepared by: Robert Van Sambeek / Ron Urbach Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 25/Aug/95

Entered: JAD

20 S A 9 5 B

LTPP Seasonal Monitoring Program Data Sheet SMP-D04 Four-Point Resistivity Measurements	Agency Code [20] LTPP Section ID [4054]

Start Time (military): 0940

Test Position	Switch Settings I1	V1	V2	I2	Voltage (ACV) Range Setting	Reading (Volts)	Current (ACA) Range Setting	Reading (Amps)	Comments
1	1	2	3	4	milli	3.5	micro	8.9	
2	2	3	4	5		1.9		8.3	
3	3	4	5	6		2.0		7.1	
4	4	5	6	7		1.6		6.2	
5	5	6	7	8		2.4		6.1	
6	6	7	8	9		2.2		7.2	
7	7	8	9	10		3.2		5.3	
8	8	9	10	11		3.5		5.0	
9	9	10	11	12		4.2		6.2	
10	10	11	12	13		4.1		6.1	
11	11	12	13	14		2.6		2.8	
12	12	13	14	15		4.6		2.0	
13	13	14	15	16		0.6		0.9	Problem w/ switchbox - not site specific
14	14	15	16	17		0.6		106.9	
15	15	16	17	18		2.4		0.8	
16	16	17	18	19		3.0		3.9	
17	17	18	19	20		3.6		4.6	
18	18	19	20	21		4.1		6.4	
19	19	20	21	22		3.5		6.7	
20	20	21	22	23		3.5		6.8	
21	21	22	23	24		4.4		8.7	
22	22	23	24	25		4.5		8.3	
23	23	24	25	26		3.5		7.1	
24	24	25	26	27		5.0		8.2	
25	25	26	27	28		4.7		8.2	
26	26	27	28	29		4.0		7.1	
27	27	28	29	30		4.0		7.9	
28	28	29	30	31		4.4		8.7	
29	29	30	31	32		4.1		8.4	
30	30	31	32	33		4.0		7.4	
31	31	32	33	34		4.6		10.0	
32	32	33	34	35		4.7		10.1	
33	33	34	35	36		4.7		9.5	
36	36	36	37	37		0.4		197.6	R1 = 2.0
37	37	37	38	38		16.6		162.2	R2 = 102.3
38	38	38	39	39		77.4		17.0	R3 = 1005.2
39	39	39	00	00		234.1		0.3	R4 = 0.78 MΩ

R = V/I, in ohms; measured resistances should be compared with known values.

Comments: Day after install

Prepared by: Robert Von Swarbek / Ann Urbach Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 25/AUG/95

Entered: 4/96

20 S A 9 5 B

Seasonal Monitoring Program Guidelines: Version 2.1a/March 1995

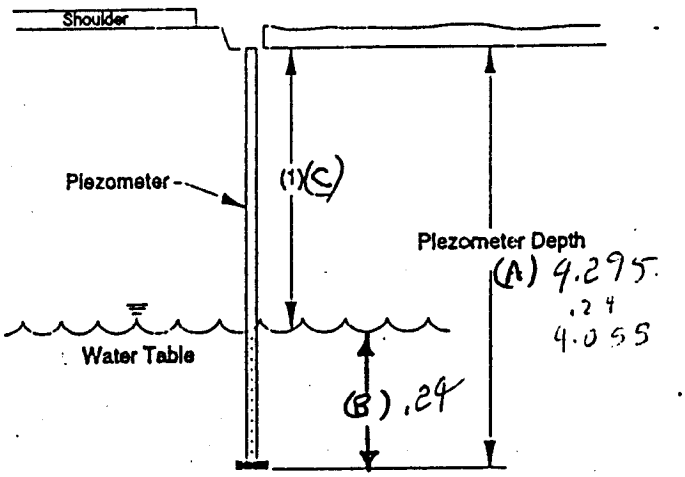
LTPP Seasonal Monitoring Program Data Sheet SMP-D05 Ground Water Table Measurement	Agency Code [20] LTPP Section ID [4054]

Piezometer Depth (m): (A) 4.295

Measurement Number	Time (military)	(C) Calculated (A−B) Depth to Water[1,2] (m)	(B) measure Depth of Water (m)	Comments
1	0735	4.06	0.240	
2	0943	4.00	0.294	

[1] Distance from top of piezometer pipe to top of ground water table; to an accuracy of ±10 mm (0.4 in)

[2] If piezometer pipe is dry or frozen, enter "time" when observation was made, leave "depth to water" field blank, and enter "pipe is dry" or "pipe is frozen" under comments column.



Comments: Day after install - level not stabilized

Prepared by: [signature] Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 25/Aug/95

20 S A 9 5 B

LTPP Seasonal Monitoring Program Data Sheet SMP-D06 Joint Opening Measurement	Agency Code [20] LTPP Section ID [4054]

Station	Time (military)	Joint Opening (mm) Offset (PE): _._ m	Offset (ML): _._ m	Offset (ILE): _._ m	Joint Width (mm)
____	____	___.__	___.__	___.__	__.
		___.__	___.__	___.__	
	____	___.__	___.__	___.__	__.
	____	___.__	___.__	___.__	__.
____	____	___.__	___.__	___.__	__.
		___.__	___.__	___.__	
	____	___.__	___.__	___.__	__.
	____	___.__	___.__	___.__	__.
____	____	___.__	___.__	___.__	__.
		___.__	___.__	___.__	
	____	___.__	___.__	___.__	__.
	____	___.__	___.__	___.__	__.
____	____	___.__	___.__	___.__	__.
		___.__	___.__	___.__	
	____	___.__	___.__	___.__	__.
	____	___.__	___.__	___.__	__.
____	____	___.__	___.__	___.__	__.
		___.__	___.__	___.__	
	____	___.__	___.__	___.__	__.
	____	___.__	___.__	___.__	__.
____	____	___.__	___.__	___.__	__.
		___.__	___.__	___.__	
	____	___.__	___.__	___.__	__.
	____	___.__	___.__	___.__	__.

SEE SET 95D

Comments: Snap rings not installed yet. No drill guide

Prepared by: Robert Van S[illegible] Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 25/Aug/95

entered: AV
11-JAN-96
All polarities switched for faultmeter reading opposite other from region per [illegible]

20 5 A 9 5 B

LTPP Seasonal Monitoring Program Data Sheet SMP-D07 Joint Faulting Measurement	Agency Code [20] LTPP Section ID [4054]

Suspect are polarity in red.

Station	Time (military)	Joint Faulting (mm) Offset (OWP): 0.76 m	Offset (ML): 1.83 m	Offset (IWP): 2.90 m
4+39 (~~440~~ 440)	0810	-0.4	-0.4	+1.6
	1125	-0.3	-0.4	+1.7
4+54 (~~455~~ 456)	0812	+1.1	+0.4	+0.4
	1126	+1.1	+0.5	+0.5
4+69 (~~470~~ 471)	0815	+1.5	+2.2	+1.9
	1127	+1.6	+2.3	+1.8
4+81 (~~485~~ 485)	0818	-0.2	-0.4	-1.0
	1129	-0.2	-0.4	-0.9
5+00 (~~501~~ 500)	0820	+1.7	+2.0	+2.2
	1130	+1.8	+2.1	+2.3
5+15 (~~515~~ 515)	0823	+1.2	+0.5	+0.5
	1132	+1.2	+0.4	+0.6

Comments: 08:03 0 CHECK -7.4 ON CAL. BLOCK

Prepared by: Tom Ryan Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 25/AUG/95

Entered: 4/10

20 S A 9 5 B

Seasonal Monitoring Program Guidelines: Version 2.1a/March 1995

LTPP Seasonal Monitoring Program Data Sheet SMP-D09 Elevation Measurements - PCC	Agency Code [20]
	LTPP Section ID [4054]

Type of Instrument: NA2000

Start Time (military): 0855

check "close" at midpoint of survey.

BM	Station	BS	HI	~~HPS~~	FS	ELEV	CLOSE
Piez.	4+78	1.4141		1.4140			1.4141
D.O.T. BM Other							

Station	Offset (PE): 0.3 m	Offset (ML): 1.83 m	Offset (ILE): 3.29 m	Comments
4+40	1.0569	1.0267 final	.9959	AS
4+47	1.0696	1.0391	1.0076	MP
4+55	1.0867	1.0570	1.0244	BS
4+55	1.0872	1.0578	1.0270	AS
4+63	1.0987	1.0680	1.0375	MP
4+70	1.1066	1.0769	1.0445	BS
4+70	1.1081	1.0789	1.0463	AS
4+77	1.1217	1.0921	1.0617	MP
4+85	1.1346	1.1062	1.0751	BS
4+85	1.1341	1.1061	1.0744	AS
4+93	1.1486	1.1170	1.0869	MP
5+01	1.1610	1.1320	1.1018	BS
5+01	1.1634	1.1340	1.1030	AS
5008	1.1763	1.1465	1.1151	MP
5+15	1.1907	1.1626	1.1317	BS

Comments: CENTER OF 12" CORE FOR INSTRUMENTATION LOCATION 1.1682

Prepared by: R R Urbach

Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 25/AUG/95

20SA95D

S20SA

Seasonal Monitoring Program Guidelines: Version 2.1a/March 1995

LTPP Seasonal Monitoring Program Data Sheet SMP-D10 SMP Field Activity Report	Agency Code [20] LTPP Section ID [4054]

Onsite Datalogger and Instrumentation		
File Name - *.ONS	20SA95OJ	Comments:
Battery Replace	~~Yes~~ - (No)	Voltages Did not replace battery, because everything looks perfect. (12.1V)
Repairs/Calib.		
Other:		

Mobile Datalogger		
File Name - *.MOB	20SA95OJ	Comments:
TDR/Resistance Voltages	Sets (02)	
Other:		

Manual Data Collection		
Piezometer	(Yes) - No	Comments: 3.614 m
Resistance 2 pt.	Sets (01)	
Resistivity 4 pt.	Sets (01)	
Elevations	Sets (01)	
Distress Survey	Yes - ~~No~~	
Long. Dipstick Profile	Yes - ~~No~~	
Photos or Video	Yes - ~~No~~	
Other:		

FWD and Associated Data		
FWD Testing	Sets (03)	Operator: JJD
JCP - Snap Rings	Sets (03)	Installed Snap Rings.
JCP - Faulting	Sets (00)	Faultmeter in shop.
Other:		

IF REQUIRED, ATTACH SKETCHES TO THIS DATA SHEET

Comments: No problems today.

Prepared by: Jerome Dicks

Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 18/Oct/95

Daylight Savings Time (Y or ~~N~~) N

V
1

Entered: 4/20

20 S A 9 5 0

Seasonal Monitoring Program Guidelines: Version 2.1a/March 1995

LTPP Seasonal Monitoring Program Data Sheet SMP-D06 Joint Opening Measurement	Agency Code [20] LTPP Section ID [4054]

Station	Time (military)	Joint Opening (mm) Offset (PE): 0.30 m	Offset (ML): 1.83 m	Offset (ILE): 3.35 m	Joint Width (mm)	
4+39	0905	115.63	115.80	115.38		
	0905 906	115.65	115.80	115.40	01.	05
	907	115.62	115.79	115.41		
	1050	115.38	115.63	115.28	01.	05
	1250	115.19	115.50	114.99	01.	05
4+54	916	116.18	115.54	116.11		
	0910 911	116.17	115.57	116.11	07.	28
	912	116.14	115.57	116.13		
	1100	116.02	115.35	115.95	07.	28
	1300	115.71	115.00	115.53	07.	27
4+69	915	115.72	116.67	116.43		
	0915 916	115.76	116.69	116.38	01.	05
	917	115.69	116.69	116.37		
	1105	115.44	116.37	116.23	01.	05
	1305	115.39	116.33	116.04	01.	05
4+84	920	115.40	116.41	116.13		
	0920 921	115.40	116.31	116.11	09.	35
	922	115.46	116.35	116.12		
	1120	115.19	116.18	115.95	09.	34
	1310	115.09	116.04	115.73	09.	34
5+00	930	116.06	116.96	115.67		
	0930 931	116.02	116.96	115.58	01.	05
	932	116.07	116.98	115.58		
	1130	115.74	116.63	115.26	01.	05
	1320	115.47	116.42	115.23	01.	05
5+15	940	116.20	115.91	~~116.09~~	115.87	
	0940 941	116.22	115.95	115.88	07.	29
	942	116.21	115.97	115.93		
	1130	115.95	115.68	115.59	07.	28
	1325	115.69	115.37	115.21	07.	27

Comments: _____

Prepared by: Jerome Dicks Employer: Braun Intertec Corporation

Date (dd/mmm/yy): 18 Oct 95

Appendix D-2: Routine SMP Monitoring Data Collection Summary

Appendix D-2 contains the following information:

- Standard LTPP SMP data tracking log;
- Field testing information sheet; and
- Screen prints and photographs documenting equipment problems.

20SA - 204054, I-70 WB LANES, JUST EAST OF ENTERPRISE, KS (MP 281)

Date dd/mmm/yy (ctrl+shft+d)	Visit ID	ONSITE Data			MOBILE Data		Manual Data								FWD Data				Distress		Profile		Comments
		Pvmt. Temp.	Air Temp.	Rain	TDR	Frost Volts	Backup Temp	Backup TDR	Frost 2-Pt.	Frost 4-Pt.	Water Table	Pvmt. Elev.	Joint Open.	Joint Fault	Man. Temp.	No. of Cycles/Visit OWP	ML	PE	M	P	P	D	
?????																				X			
10-Mar-93																					X		
18-Feb-95																					X		PROFILE DATA NOT RECIEVED BY RCO.
18-Apr-95																			X				DISTRESS SURVEY/FWD DATA PRIOR TO INSTALLATION.
24-Aug-95	95A														X	1	1	1					INSTALLATION
25-Aug-95	95B	X	X	X	X	X			X	X	X	X		X	X	2	2	2					FINISHED INSTALL, NO SNAPRINGS INSTALLED YET.
21-Sep-95	95C	X	X	X	X	X			X	X	X	X		X	X	1	1	1					RAIN; ONE FWD CYCLE, NO SNAPRINGS INSTALLED YET.
18-Oct-95	95D	X	X	X	X	X			X	X	X	X	X		X	3	3	3					Installed snaprings.
26-Oct-95																					X		
16-Nov-95	95E	X	X	X	X	X			X	X	X	X	X	X	X	3	3	3					RESET TIME TO STANDARD TIME.
11-Dec-95	95F	X	X	X	X	X					X		X	X	X	2	2	2					
24-Jan-96	96A	X	X	X	X	X			X	X	X	X	X	X	X	2	2	2	X				REPLACE RELAY FOR ONSITE CR10.

204054 - 20SA

Updated 31-Oct-95

LOCATION - IH-70 WB Lanes, Just East of Enterprise, KS (MP 281)
CONTACTS - Steve Keim 913-263-1801 (Second contact is Dale Hershberger 913-632-3108)
TEMP HOLES - Sta 5+03, Depths about 1.3", 5.7", and 9.3" (PCC = 10.0")

TEST LOCATIONS:	J1	J2	J3	J4	J5
	447	440	447	439	440
	462	455	463	454	455
	477	470	477	469	470
	493	485	493	484	485
	508	501	BLK	500	501
	---	---	---	515	516

DISTRESS COMMENTS:

Sta J1 - Midpanel tests.

508 LP ADJACENT TO INSTRUMENTATION HOLE

Sta J2 and J3 - Corner and Mid-edge tests.

Sta J4 and J5 - Load transfer tests in the OWP.

PIEZOMETER - Sta 4+78, 1.0 feet from edge of paved shoulder, Depth = 4.295M.
(Located longitudinally at midpanel of third panel tested.)

ELEVATIONS - No DOT BM.

Offsets:	PE	ML	ILE
(M)	0.30	1.83	3.35
(ft)	1.0	6.0	11.0
	(hole)	(hole)	(hole)

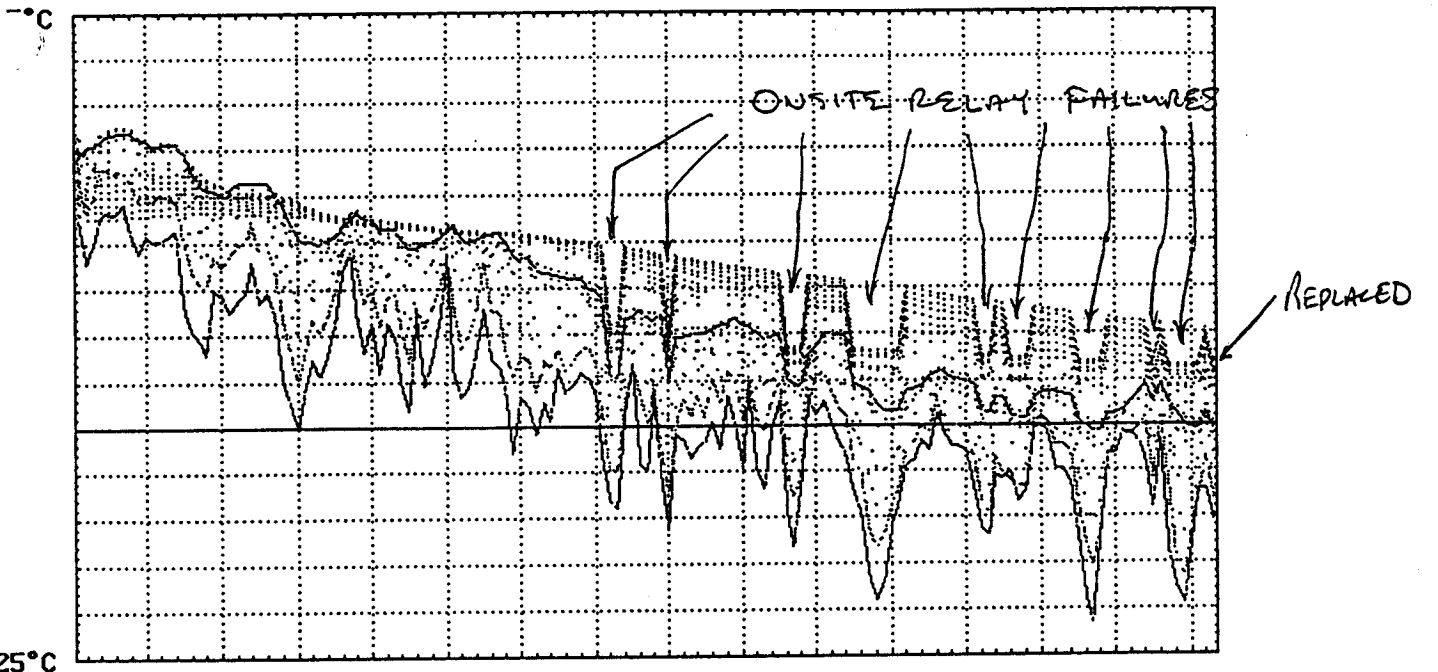
Sta: - BJ/AJ 439 454 469 484 500 515
- at MP 447 462 477 493 508
(Only AJ at 439 and BJ at 515.)

FAULTMETER	Offsets:	OWP	ML	IWP
	(M)	0.76	1.83	2.90
	(ft)	2.5	6.0	9.5

Sta: 439 454 469 484 500 515

COMMENTS - use "MOB20SA" versus "MOBILE" - has modified cable lengths

Record Type 4 - Daily Minimum Air & 18 MRC Sensor Temperatures
State: Kansas Site: A



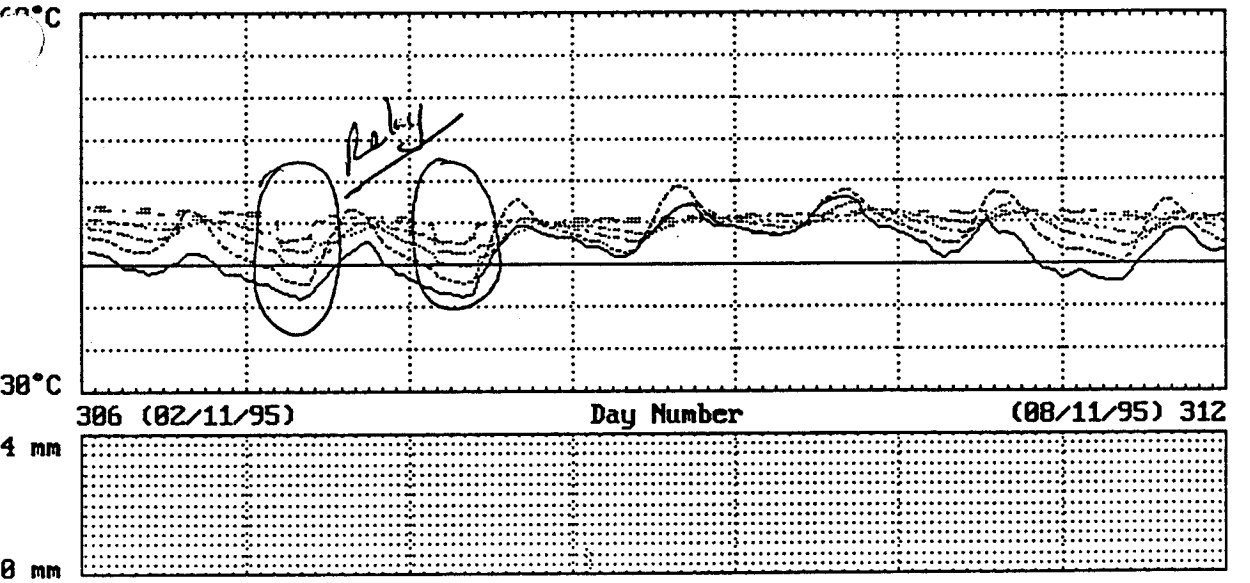
236 (24/08/95) Day Number (23/01/96) 23
Legend: Min. Air Temperature — First MRC Sensor Temperature —

MRC Sensor: 6

Esc=Exit: ↑↓=Sensor: F8,F9=Edit Ln: F2=PrntScrn

DAILY MINIMUMS WORK WELL TO IDENTIFY RELAY PROBLEM FOR MRC PROBE — TEMPS ALWAYS DECREASE WHEN RELAY GOES BAD.

Record Type 5 & 6 - Hourly Air & First 5 MRC Sensor Temperatures
State: Kansas Site: A

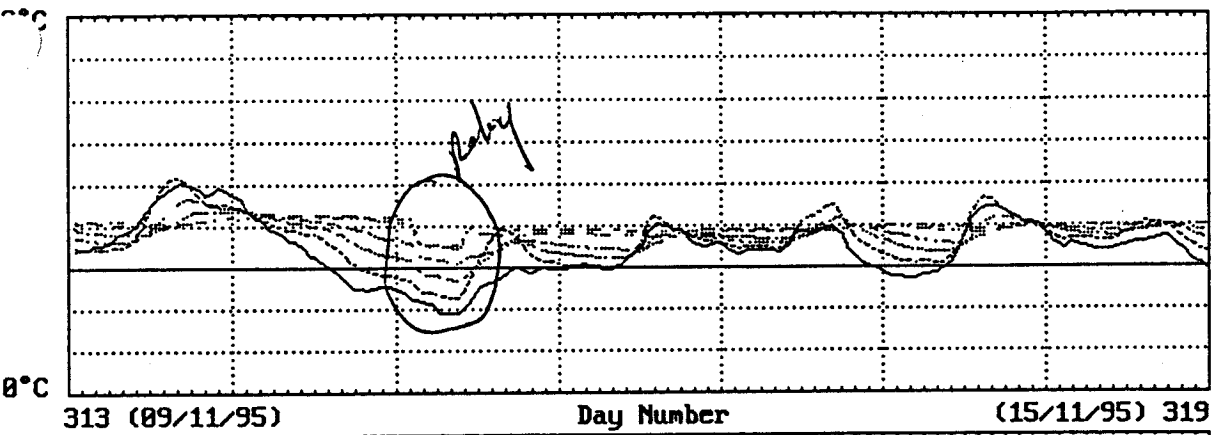


306 (02/11/95) Day Number (08/11/95) 312

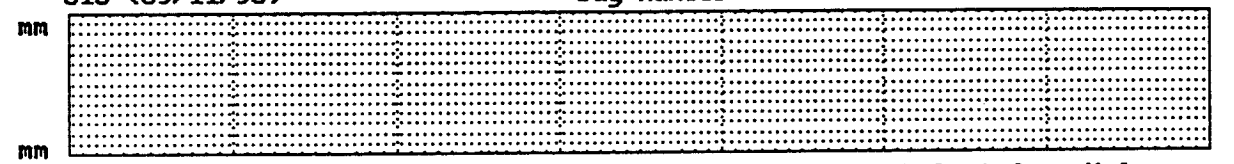
Legend	Start Day	Time	Selected	End Day	Time	Selected	Value
AirT	0 306	100		0 313	000		
MRC1	1 306	100		1 313	000		
MRC2	2 306	100		2 313	000		
MRC3	3 306	100		3 313	000		
MRC4	4 306	100		4 313	000		
MRC5	5 306	100		5 313	000		
[illegible]	6 306	100		6 313	000		

F1=Menu: PgUp,PgDn=Prior/Next Week: F8,F9=Edit: Ctrl+F10=Remove: F2=PrintScreen

Record Type 5 & 6 - Hourly Air & First 5 MRC Sensor Temperatures
State: Kansas Site: A



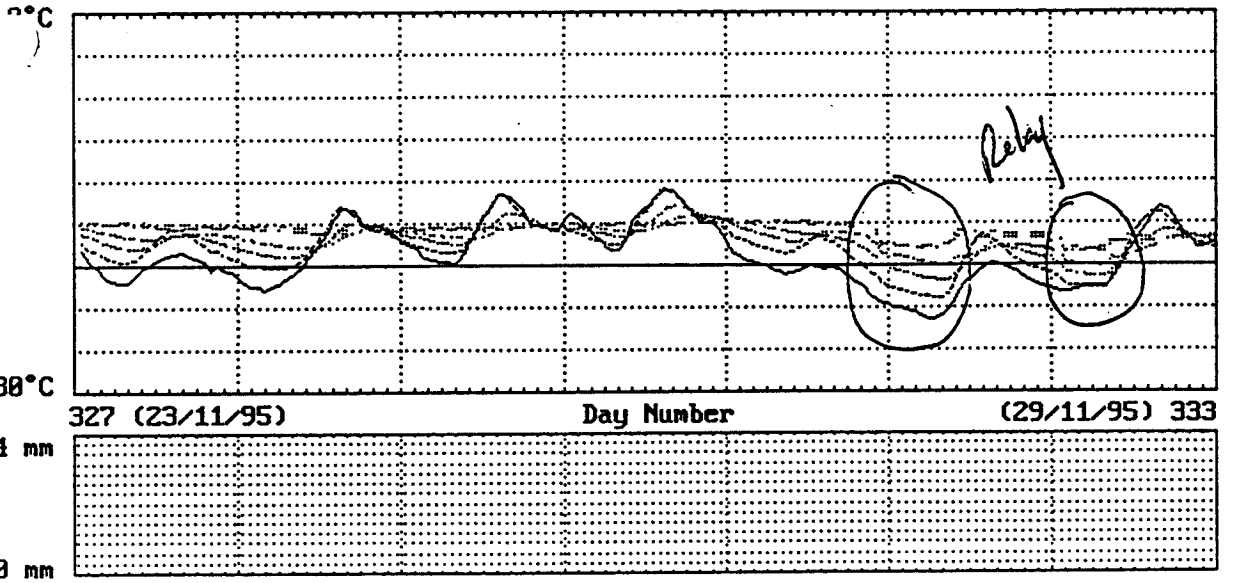
313 (09/11/95) Day Number (15/11/95) 319



Legend	Start	Day	Time	Selected	End	Day	Time	Selected	Value
AirT	0	313	100		0	320	000		
MRC1	1	313	100		1	320	000		
MRC2	2	313	100		2	320	000		
MRC3	3	313	100		3	320	000		
MRC4	4	313	100		4	320	000		
MRC5	5	313	100		5	320	000		
[illegible]	6	313	100		6	320	000		

Menu: PgUp,PgDn=Prior/Next Week; F8,F9=Edit; Ctrl+F10=Remove; F2=PrintScreen

Record Type 5 & 6 - Hourly Air & First 5 MRC Sensor Temperatures
State: Kansas Site: A

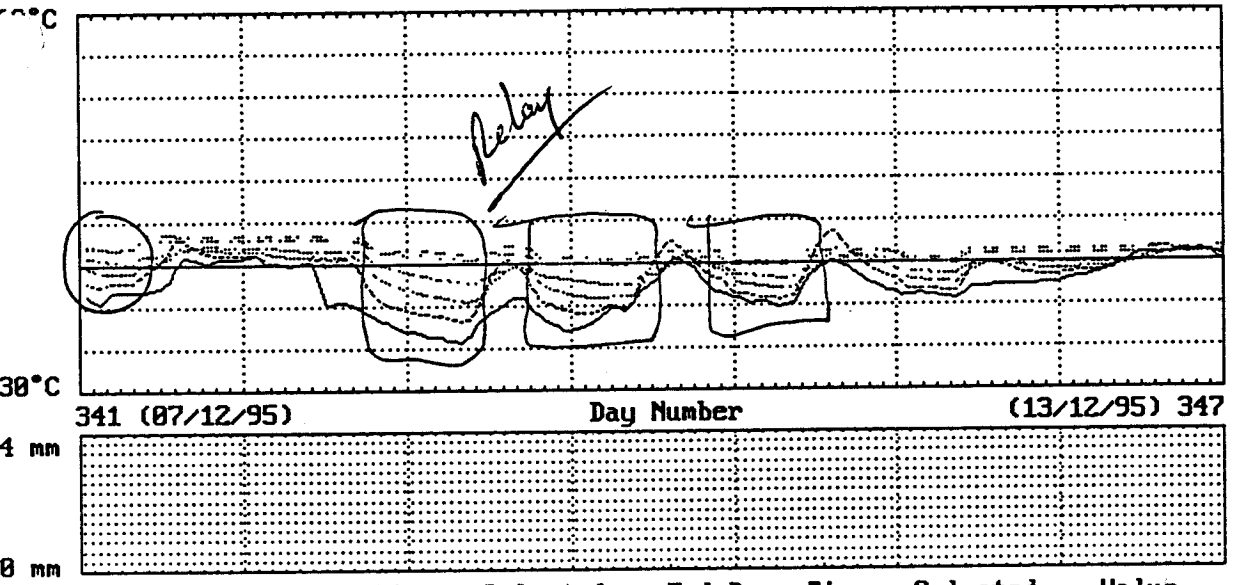


327 (23/11/95) Day Number (29/11/95) 333

Legend	Start	Day	Time	Selected	End	Day	Time	Selected	Value
AirT	0	327	100		0	334	000		
MRC1	1	327	100		1	334	000		
MRC2	2	327	100		2	334	000		
MRC3	3	327	100		3	334	000		
MRC4	4	327	100		4	334	000		
MRC5	5	327	100		5	334	000		
[illegible]	6	327	100		6	334	000		

=Menu: PgUp.PgDn=Prior/Next Week: F8.F9=Edit: Ctrl+F10=Remove: F2=PrintScreen

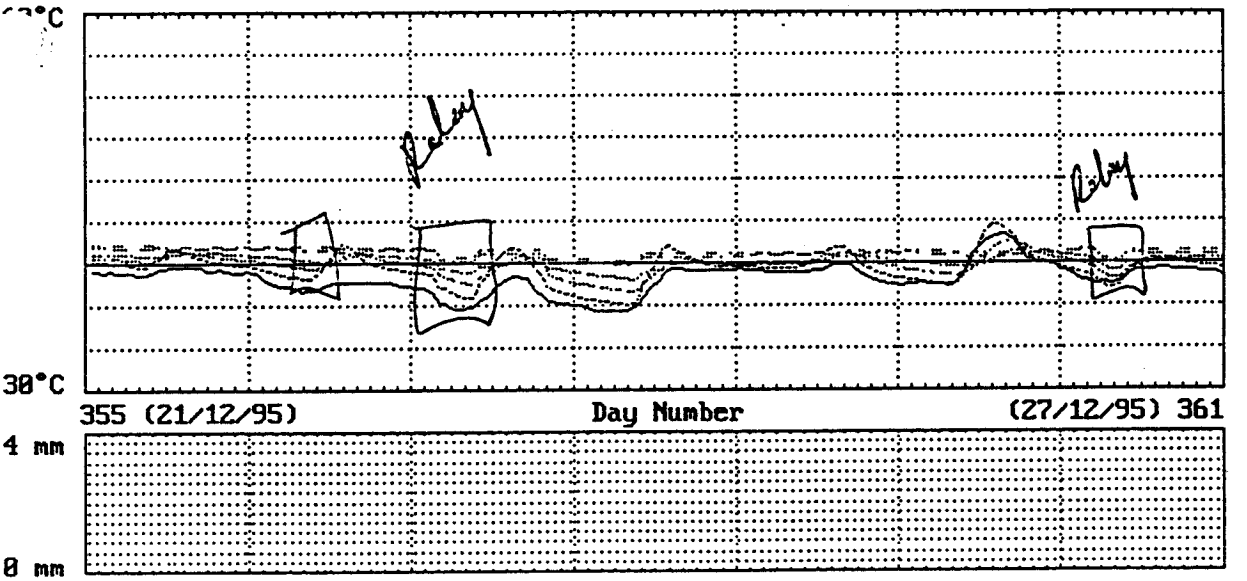
Record Type 5 & 6 - Hourly Air & First 5 MRC Sensor Temperatures
State: Kansas Site: A



Legend	Start	Day	Time	Selected	End	Day	Time	Selected	Value
AirT	0	341	100		0	348	000		
MRC1	1	341	100		1	348	000		
MRC2	2	341	100		2	348	000		
MRC3	3	341	100		3	348	000		
MRC4	4	341	100		4	348	000		
MRC5	5	341	100		5	348	000		
[illegible]	6	341	100		6	348	000		

=Menu: PgUp.PgDn=Prior/Next Week: F8.F9=Edit: Ctrl+F10=Remove: F2=PrintScreen

Record Type 5 & 6 - Hourly Air & First 5 MRC Sensor Temperatures
State: Kansas Site: A

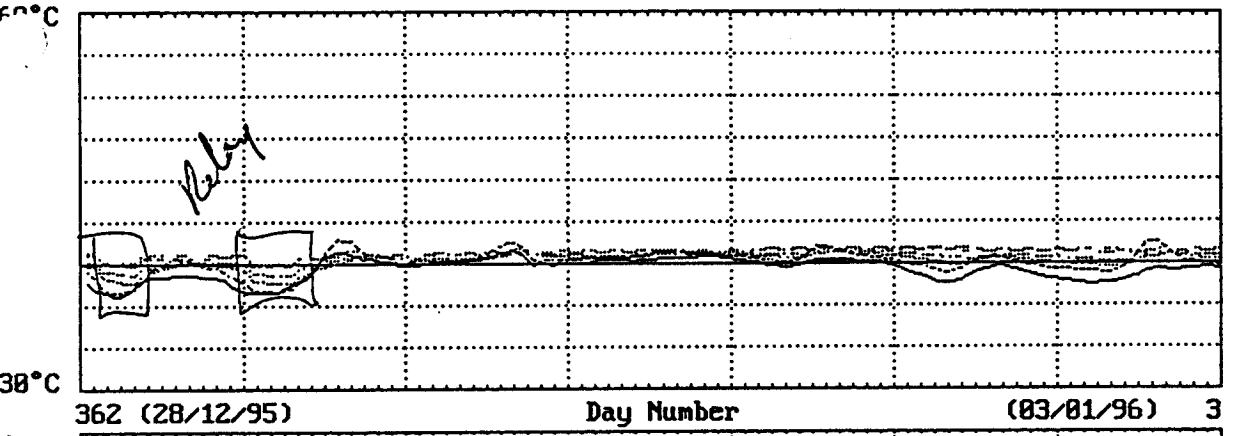


355 (21/12/95) Day Number (27/12/95) 361

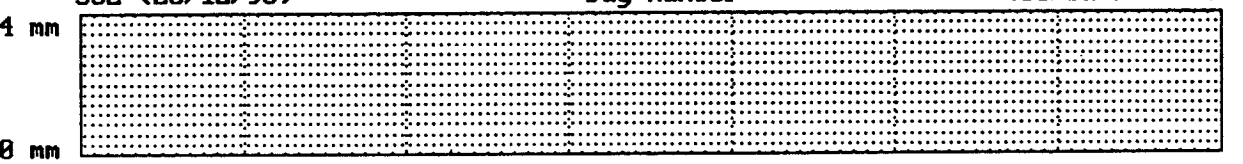
Legend	Start	Day	Time	Selected	End	Day	Time	Selected	Value
AirT	0	355	100		0	362	000		
MRC1	1	355	100		1	362	000		
MRC2	2	355	100		2	362	000		
MRC3	3	355	100		3	362	000		
MRC4	4	355	100		4	362	000		
MRC5	5	355	100		5	362	000		
[illegible]	6	355	100		6	362	000		

=Menu: PgUp.PgDn=Prior/Next Week: F8.F9=Edit: Ctrl+F10=Remove: F2=PrintScreen

Record Type 5 & 6 - Hourly Air & First 5 MRC Sensor Temperatures
State: Kansas Site: A



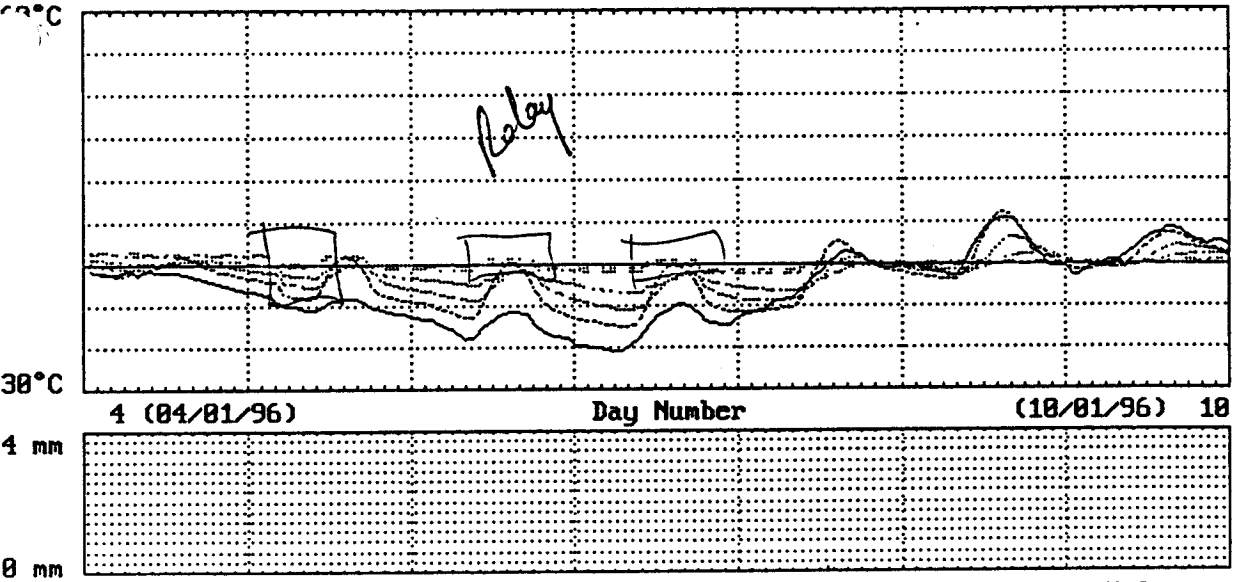
362 (28/12/95) Day Number (03/01/96) 3



Legend	Start Day	Time	Selected	End Day	Time	Selected	Value
AirT	0 362	100		0 4	000		
MRC1	1 362	100		1 4	000		
MRC2	2 362	100		2 4	000		
MRC3	3 362	100		3 4	000		
MRC4	4 362	100		4 4	000		
MRC5	5 362	100		5 4	000		
[illegible]	6 362	100		6 4	000		

Menu: PgUp.PgDn=Prior/Next Week: F8.F9=Edit: Ctrl+F10=Remove: F2=PrintScreen

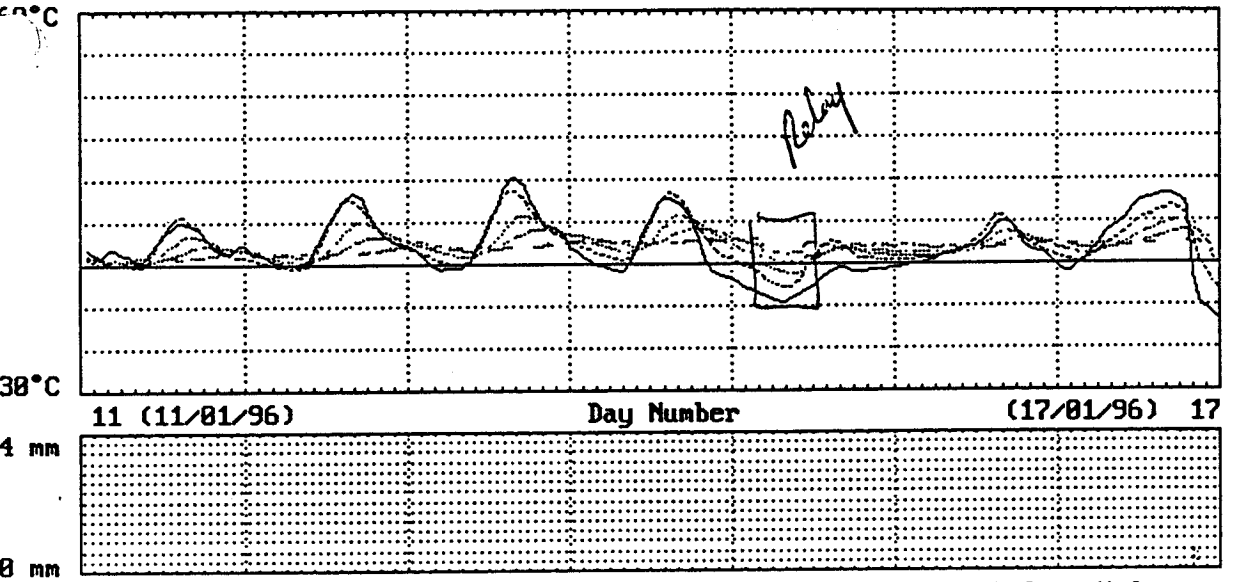
Record Type 5 & 6 - Hourly Air & First 5 MRC Sensor Temperatures
State: Kansas Site: A



Legend	Start Day	Time	Selected	End Day	Time	Selected	Value
AirT	0 4	100		0 11	000		
MRC1	1 4	100		1 11	000		
MRC2	2 4	100		2 11	000		
MRC3	3 4	100		3 11	000		
MRC4	4 4	100		4 11	000		
MRC5	5 4	100		5 11	000		
[illegible]	6 4	100		6 11	000		

=Menu; PgUp,PgDn=Prior/Next Week; F8,F9=Edit; Ctrl+F10=Remove; F2=PrintScreen

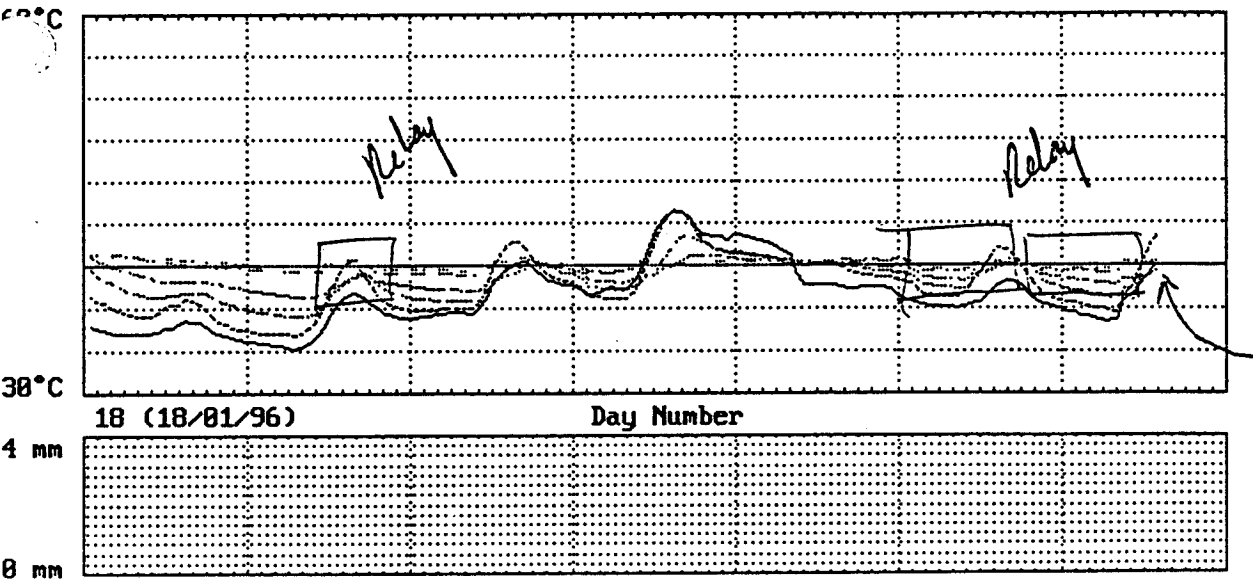
Record Type 5 & 6 - Hourly Air & First 5 MRC Sensor Temperatures
State: Kansas Site: A



Legend	Start Day	Time	Selected	End Day	Time	Selected	Value
AirT	0 11	100		0 18	000		
MRC1	1 11	100		1 18	000		
MRC2	2 11	100		2 18	000		
MRC3	3 11	100		3 18	000		
MRC4	4 11	100		4 18	000		
MRC5	5 11	100		5 18	000		
[illegible]	6 11	100		6 18	000		

=Menu: PgUp,PgDn=Prior/Next Week: F8,F9=Edit: Ctrl+F10=Remove: F2=PrintScreen

Record Type 5 & 6 - Hourly Air & First 5 MRC Sensor Temperatures
State: Kansas Site: A

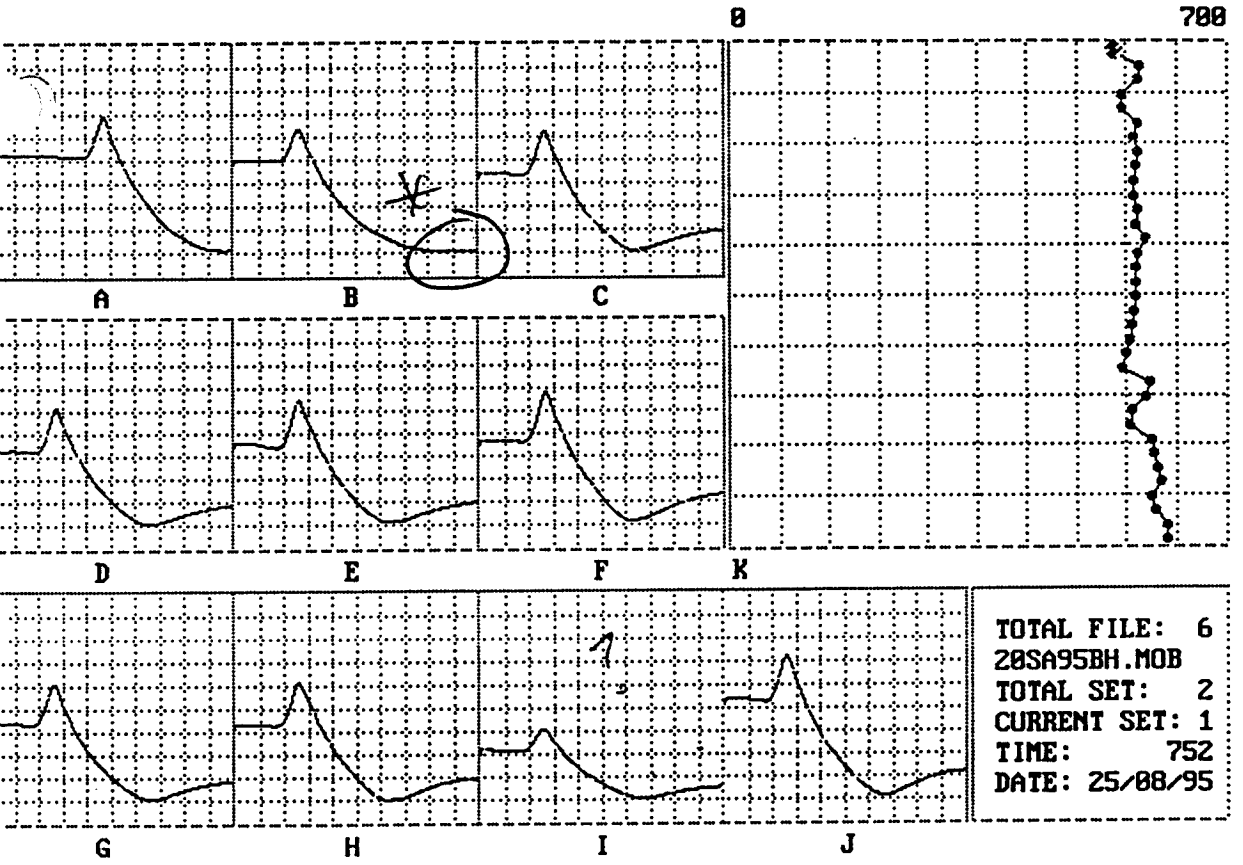


REPLACED RELAY

24-JAN-91

Legend	Start	Day	Time	Selected	End	Day	Time	Selected	Value
AirT	0	18	100		0	24	1400		
MRC1	1	18	100		1	24	1400		
MRC2	2	18	100		2	24	1400		
MRC3	3	18	100		3	24	1400		
MRC4	4	18	100		4	24	1400		
MRC5	5	18	100		5	24	1400		
[illegible]	6	18	100		6	24	1400		

Menu: PgUp.PgDn=Prior/Next Week: F8.F9=Edit: Ctrl+F10=Remove: F2=PrintScreen

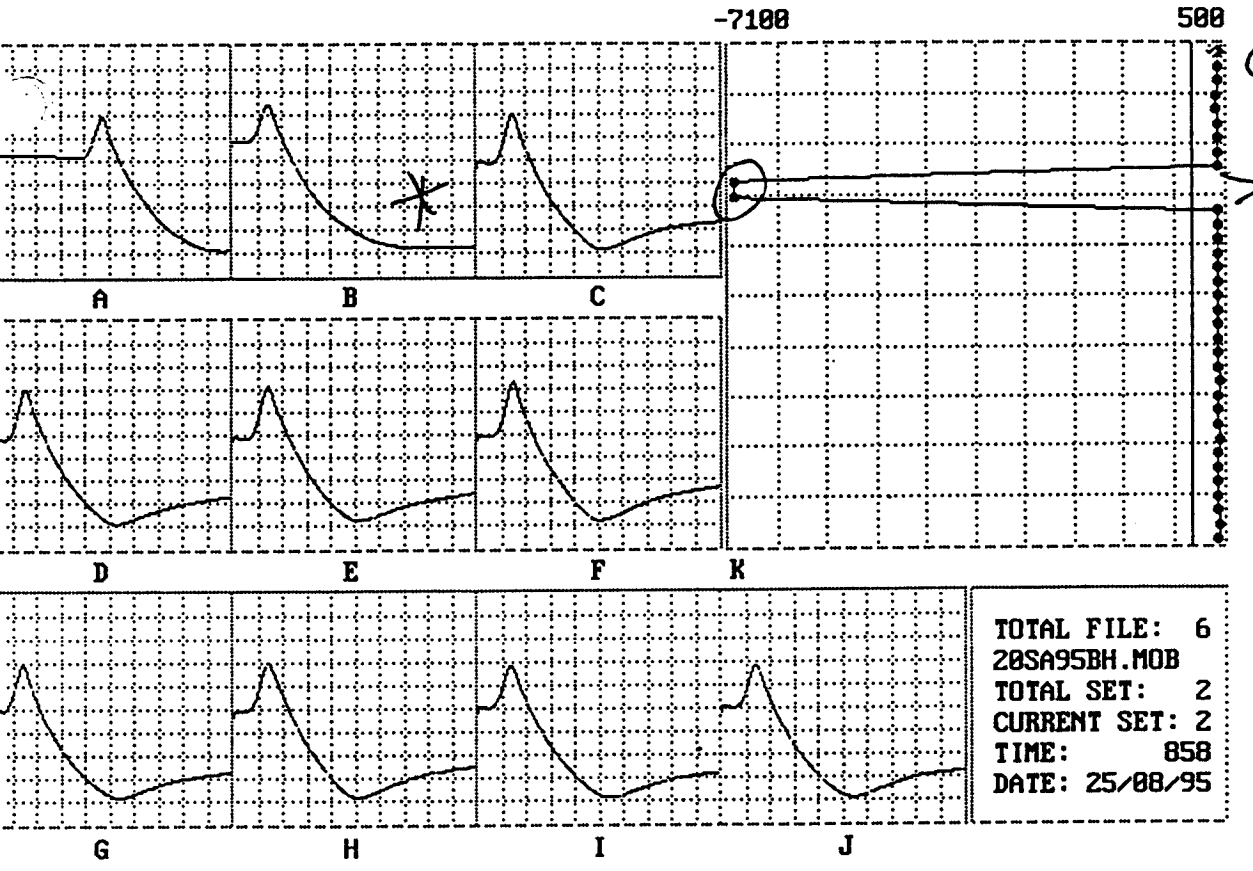


er=Curve to select (*); PgU/PgD=Prior/Next set: Ctrl+PgU/PgD=Prior/Next File

CABLE LENGTHS ADJUSTED ON NEXT LOOP

* FLAT TRACE - FHWA/TAC ADVISE

- WITH #9 GAIN SO LOW? - SEE 2/2

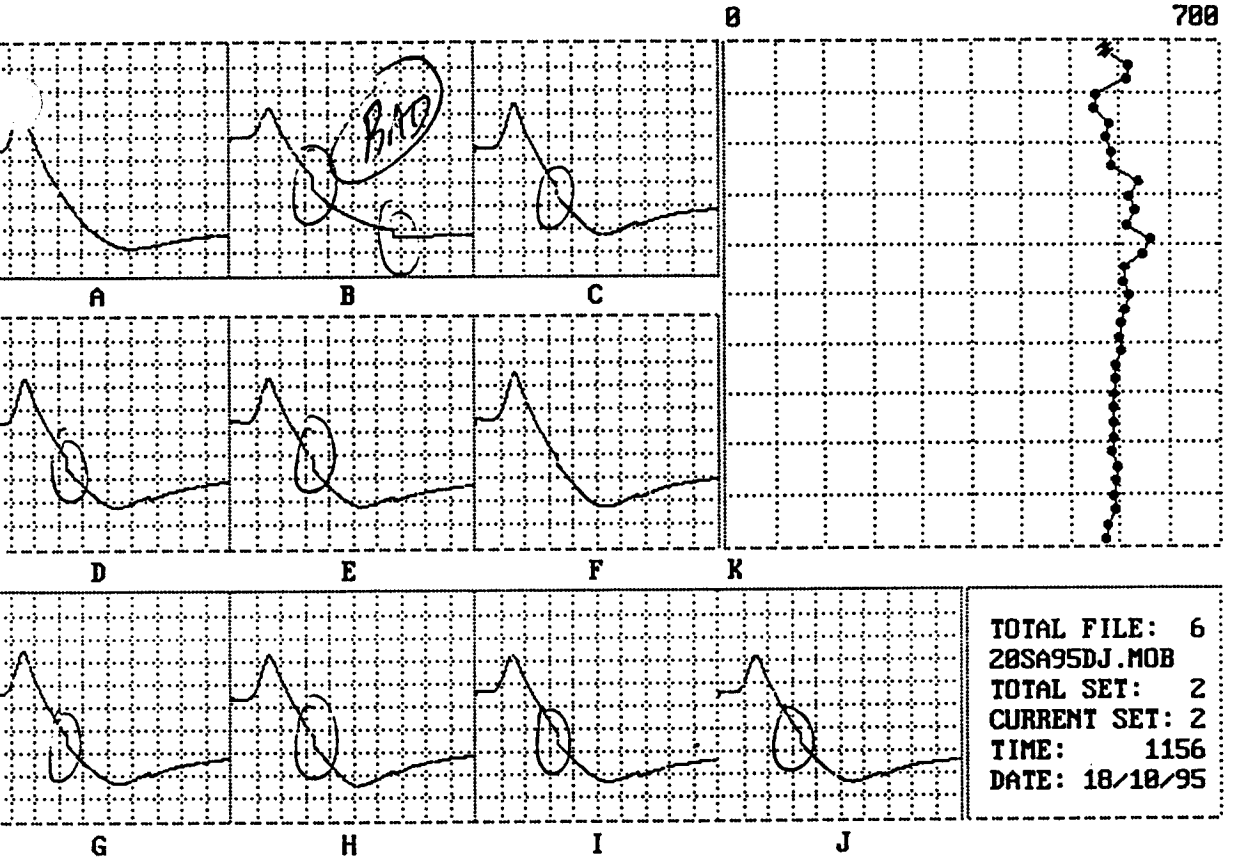


CRRSL PROBLEM ON POSITION 10/11.

ASSIGN -6999 to -1

er=Curve to select (*): PgU/PgD=Prior/Next set: Ctrl+PgU/PgD=Prior/Next File

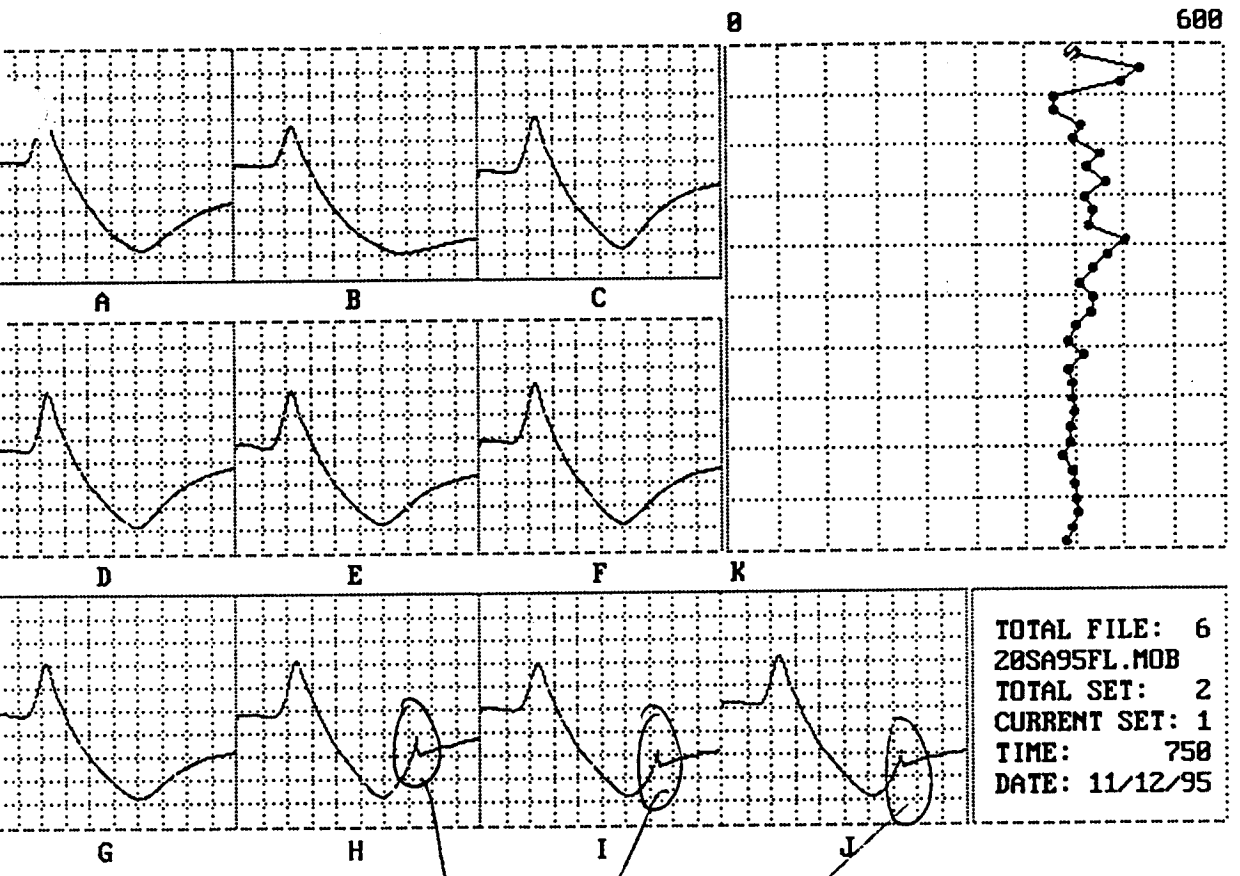
* FLAT TRACE



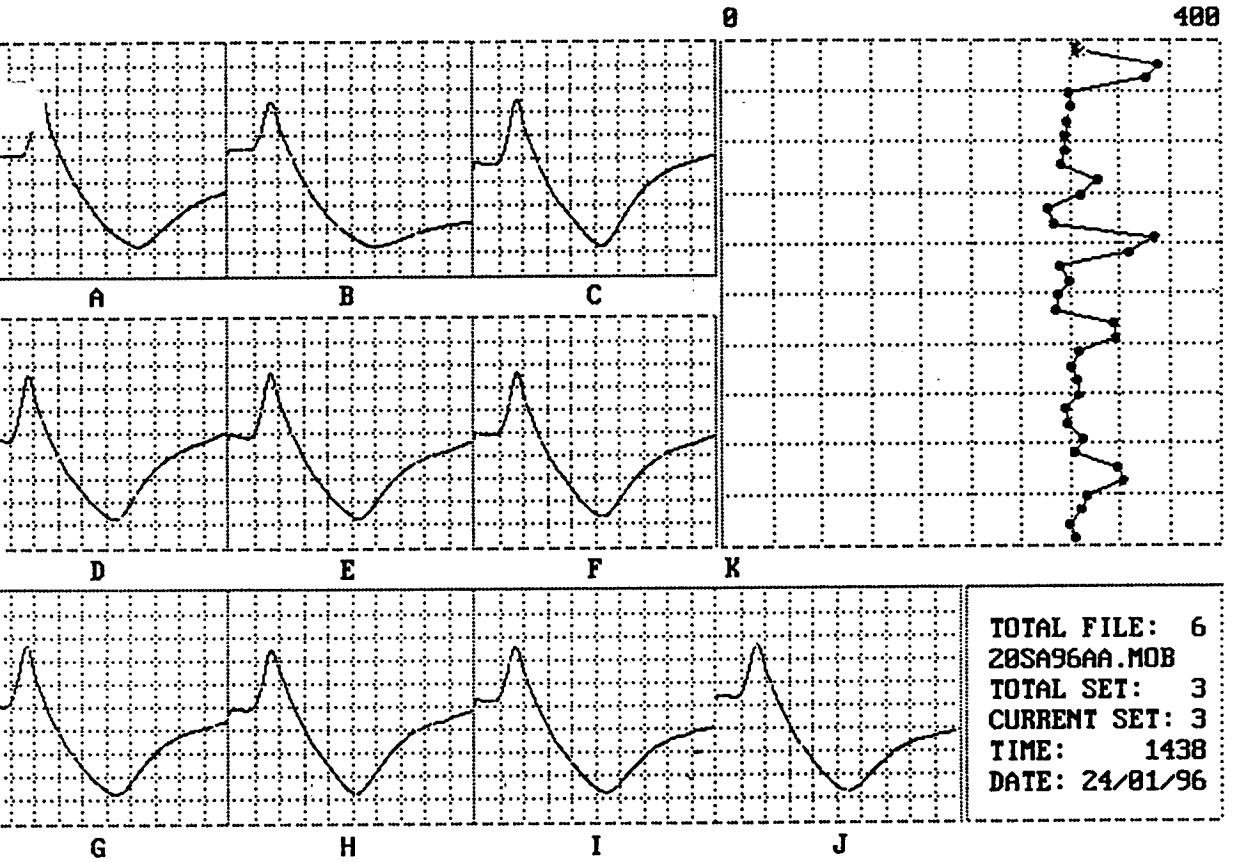
er=Curve to select (*): PgU/PgD=Prior/Next set: Ctrl+PgU/PgD=Prior/Next File

O- shifts from cold cable reader

FHWA/TAC ADVISE ON TDR #2



COLD – SPIKES FROM CABLE READER



ter=Curve to select (↑↓): PgU/PgD=Prior/Next set: Ctrl+PgU/PgD=Prior/Next File

- LAST SET BEFORE REPORT

- LOW MOISTURE (/FIRST?) MAKING TOR #2 USEABLE.