



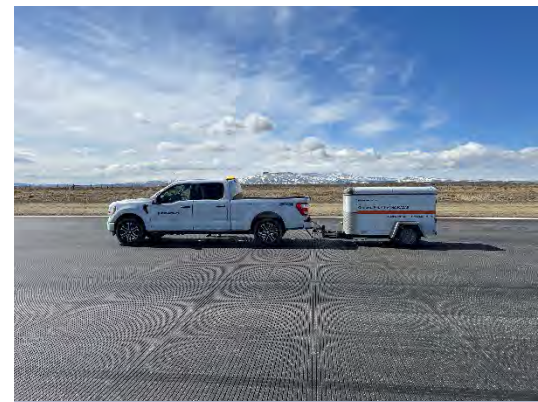
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DRAFT

AIRFIELD PAVEMENT EVALUATION & STRATEGY REPORT  
RKS Master Plan  
ROCK SPRINGS, WYOMING



Submitted To: Ardurra  
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Attn: Contact Name

Subject: AIRFIELD PAVEMENT EVALUATION & STRATEGY REPORT, RKS MASTER PLAN, ROCK SPRINGS, WYOMING

Shannon & Wilson prepared this report and participated in this project as a subconsultant to Ardurra. Our scope of services was specified in the Ardurra professional subconsultant agreement for Project Number 220794, dated March 16, 2023. This report presents the findings and recommendation for the RKS Master Plan Project 5.2t for the SW Wyoming Regional Airport with regards to an Airfield Pavement Evaluation and was prepared by the undersigned.

We appreciate the opportunity to be of service to you on this project. If you have questions concerning this report, or we may be of further service, please contact us.

Sincerely,

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## 1.0 INTRODUCTION

### 1.1 Purpose & Scope of Work

This Airfield Pavement Evaluation and Strategy report is for the SW Wyoming Regional Airport (RKS). This report focuses on various branches of the airfield pavement asset network, as highlighted on Figure 1-1.

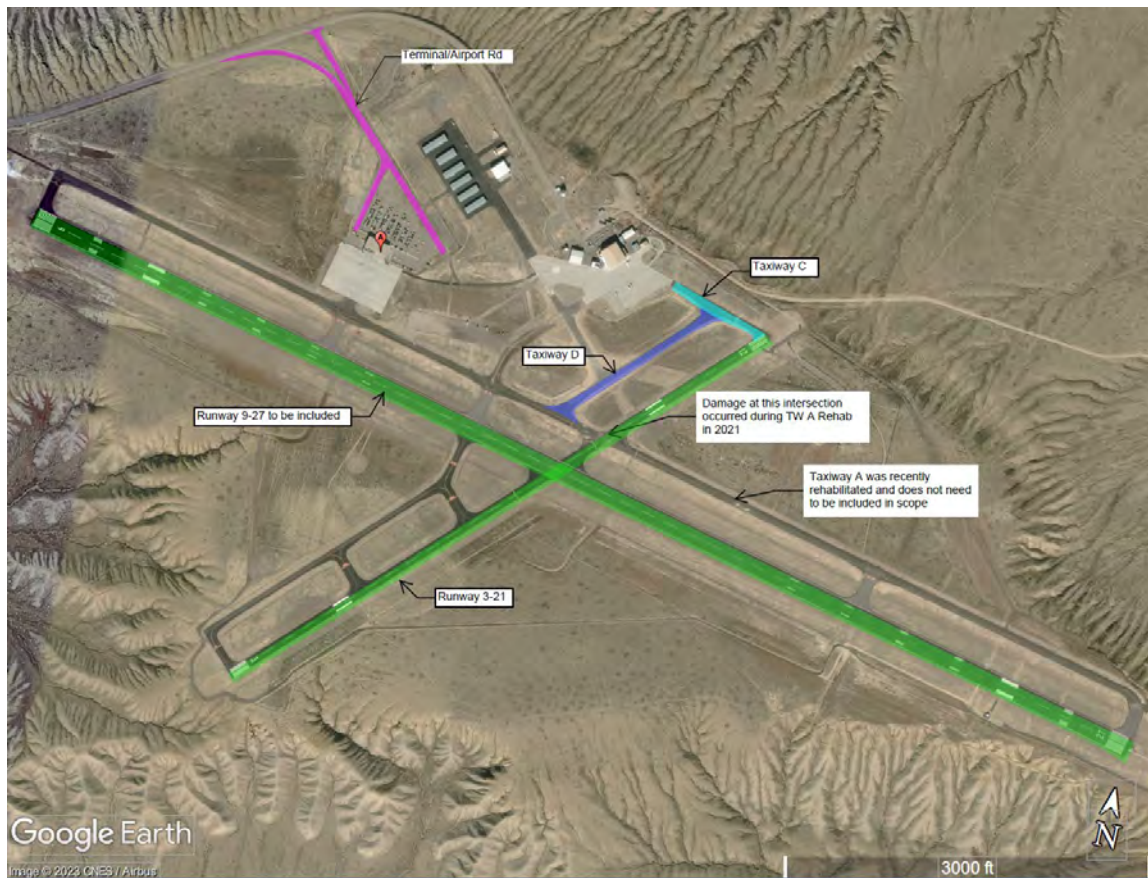


Figure 1-1: General Layout of the RKS Airfield Pavement Assets Evaluated

The purpose of this report is to present findings related to the current condition of the pavement structures and offer recommendations to extend the service of the RKS pavement assets for the next 20 years.

The scope of this report includes the following for the pavement assets included in this evaluation:

- An assessment of the pavement surface conditions.

- An assessment of the pavement structure conditions.
- Assignment of Pavement Condition Ratings (PCRs).
- Identification of the primary causes of the pavement distresses.
- Recommendations to extend the service of the pavement structures to assist in airfield planning.

## 1.2 Project Description

The Southwest Wyoming Regional Airport (RKS) is located eight miles east of Rock Springs in Sweetwater County, Wyoming and is operated by the Rock Springs-Sweetwater County Joint Powers Airport Board. The RKS includes over 104 acres of pavement assets and is categorized as a primary commercial service airport, per the National Plan of Integrated Airport Systems (NPIAS). A Vicinity Map and General Airfield Site Map are shown in Appendix A.



Figure 1-2: South End of Runway 3/21, Looking North

This airfield pavement evaluation assessed over 2.04 million square feet of existing airfield pavements, as well as about 104,000 square feet of landside pavements on Terminal/Airport Rd (Terminal Rd). Table 1-3 summarizes the areas of pavement assets evaluated.



Table 1-3: Summary of Airfield Facilities Evaluated<sup>1</sup>

Pavement Asset	Description	Approximate Size (square feet)
Runway 9-27	Primary Runway (155 ft wide x 10,000 ft long)	1,500,000
Runway 3-21	Secondary Runway	396,758
Taxiway C	Connects the GA Apron with Taxiway D and Runway 3-21	44,495
Taxiway D	Connects Taxiway C with Taxiway E and Taxiway A	99,717
Terminal Rd	Provides access to the airport terminal for arrivals/departures	104,000
Total Area		2,144,970

Note:

- 1 Areas listed are as defined by Applied Pavement Technology website for the for the Rock Springs-Southwest Wyoming Regional Airport (<https://idea.appliedpavement.com/hosting/wyoming/airport-details/airport-details.html>)

### 1.3 Important Information Regarding this Report

This report presents airfield pavement strength and condition information that may be utilized to manage and control an airfield network. Airfield managers and engineering representatives may use this report to:

- Evaluate the sizes, types, gear configuration, and gross weight of aircraft that can operate on each pavement branch included in this evaluation without excessive damage to the existing pavements.
- Identify and predict major maintenance or repair strategies to support present and future aircraft traffic.
- Consider data to assist in future, project-level design.
- Understand current pavement structure information.
- Assist in the development of planning and programming documents for pavement restoration.

The information and recommendations contained in this report are network-level and are not intended to provide detailed project-level design information for construction plans and specifications. Additionally, much of the information provided in this report, including observed pavement conditions, pavement thickness, and structural capacity measurements are only valid at the issuance of this report.

## 2.0 METHODS OF STUDY

This Airfield Pavement Evaluation and Strategy report was prepared in general accordance with FAA methodologies associated with the following advisory circulars published by the Federal Aviation Administration (FAA):

- AC 150/5320-6G – Airport Pavement Design and Evaluation
- AC150/5335-5D – Standardized Method of reporting Airport Pavement Strength – PCR
- AC 150/5370-11B – Use of Nondestructive Testing in the Evaluation of Airport Pavements
- AC 150/5380-7B – Airport Pavement Management Program (PMP)

A variety of test methods were used in the evaluation to qualify the site, including general reconnaissance; visual pavement condition surveys; Dynamic Cone Penetrometer (DCP) testing; pavement coring; subsurface boring and soil sampling; Ground Penetrating Radar (GPR) imaging; and Falling Weight Deflectometer (FWD) testing. This section provides a brief description of the test methods.

### 2.1 General Reconnaissance

The RKS is located about 7 miles northeast of the City of Rock Springs in Sweetwater County, Wyoming. The airport is situated on a plateau located just east of the intersection of the North Baxter Basin and South Baxter basin and is within the Rock Springs Uplift.

The Rock Springs Uplift is an area of uplifted Cretaceous to Eocene rocks surrounded and once covered by sediments of the Green River Formation which were deposited in the Eocene Lake Gosiute (Surdam & Stanley 1979). RKS is located near the center of the uplift. The geologic setting is characterized as Baxter Shale (Upper Cretaceous), which consists of thick, gray to black soft sandy shale and shaly sandstone (Lucke, et. al. 2007)

The USDA NRCS Soil Survey of Sweetwater Wyoming (WY737) characterizes the RKS site as “Urbanland”, which is described as “mine spoil or earthy fill derived from sandstone and shale”. Soils surrounding RKS are identified as Jansley-Rock Outcrop Complex which is characterized as residuum weathered from calcareous shale (NRCS 2023).

The project area consists of various paved areas for airfield runways, taxiways, and aprons, as well as several structures for aircraft, administration and maintenance and private and public use. The site generally slopes down towards the west and consists of native grasses and scrub vegetation.

## 2.2 Existing Pavement Conditions

The following section provide information pertaining the existing airfield pavements included in this evaluation.

### 2.2.1 History of Construction & Maintenance

According to RKS official website, the airport was functioning prior to 1932. However, the airport commercial terminal was not opened until 1978. Of the original airport configuration, it appears that only Runway 3/21 and the west portion of Taxiway C have maintained their original alignment. Of the available plans provided by Ardurra, the following summarizes the construction activities at the airfield.

Table 2-1: Summary of Historic Airfield Construction Activities and Related Information<sup>1</sup>

Pavement Asset	Year	Description
Runway 9-27	1977-1983	New Construction. plans not provided. Inferred from 1997 plans: 11" AC (3 lifts at 3"/3"/5") over 9" Asphalt Base Course
	1997	Reconstruct Western Portion of RW 9/27 (0+00 to 29+00). Remove Deteriorated Asphalt and Replace with P-401. Mill/Inlay of Approx. 8" AC.
	2016	Rehab Runway 9/27. 1.5" Cold Mill/Inlay with cut grooves, 9.5" existing AC, over 9" asphalt base course. CBR=17
Runway 3-21	1972	Plans were not provided. Inferred from 2013 plans. 2.0" AC, 7.0" P-209 base.
	1990	Plans were not provided. Inferred from 2013 plans. Less than 5.45" Porous Friction Course (PFC).
	2013	Rehabilitate Runway 3/21. 3" HMA, 2.5" PFC, 7" P-209 base, Subgrade CBR=17.
	2017	Seal Coat
Taxiway C	Before 1977	New Construction. No plans provided.
	1994-2006	Reconstruction. No plans provided. Inferred from Google Earth aerial imagery.
	2017	Seal Coat
Taxiway D	2012	New Construction to construct New Parallel Taxiway D and F. 6" P401a, 6" P209, Class 1 Geotextile Fabric (P-152D)
	2017	Seal Coat
Terminal Rd	--	No construction history was provided to S&W.

Note:

- 1 Historical record engineering reports and record drawings were provided to S&W by Ardurra.

### 2.2.2 Recent Observations from RKS and Ardurra

Personnel from RKS and Ardurra noted damage was observed on Runway 3/21, north of the Intersection of Taxiway A, from construction traffic for the Taxiway A rehabilitation project in 2021. Additionally, subsidence observed at the surface of the existing AC was observed on Taxiway C between Taxiway D and the Runway 3/21 hold line.

### 2.2.3 Visual Pavement Condition Index (PCI) Surveys

The Pavement Condition Index (PCI) is a numerical indicator that rates the surface condition of an existing pavement, based on visual observations. The PCI standard is ASTM D 5340 – Standard Test method for Airport Pavement Condition Index Surveys. A PCI provides a quantifiable measure (from 0 to 100) of the present condition of the pavement based on the accumulation of various distresses observed on the pavement surface, which also indicates the structural integrity and surface operation condition (ASTM 2020). Generally, PCI ratings provide helpful guidance as to the existing condition of the roadway using a predetermined scale and can offer target values when assigned to maintenance and repair tasks. The following Figure shows the PCI scale used recently by Applied Pavement Technology for their assessment of the RKS airport in 2020.

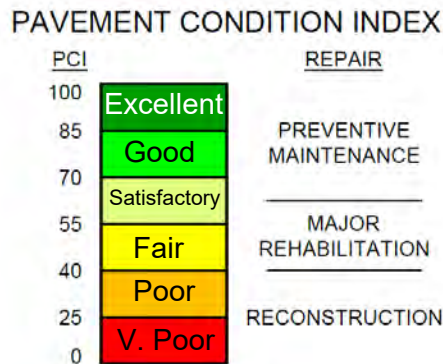


Figure 2-2: 2020 Applied Pavement Technologies PCI Scale

The following sections describe the results of historic and recent PCI surveys for the RKS airfield pavement.

#### [Previous Pavement Distress Surveys](#)

Previous PCI distress surveys have been performed for RKS and some records were made available to Shannon & Wilson by Ardurra for this airfield evaluation. Historic PCI survey data and maps are in Appendix A.

On April 8, 2023, Shannon & Wilson completed a pavement distress survey for the airfield pavements included in this evaluation in general accordance with the ASTM D6433 – Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys (2020). FAA PAVEAIR was used to calculate pavement section PCI values. The recent PCI survey results are in Appendix A.



Figure 2-3: PCI Survey Being Conducted on Runway 3/21

Table 2-4 summarize the results of the Airfield PCI surveys.

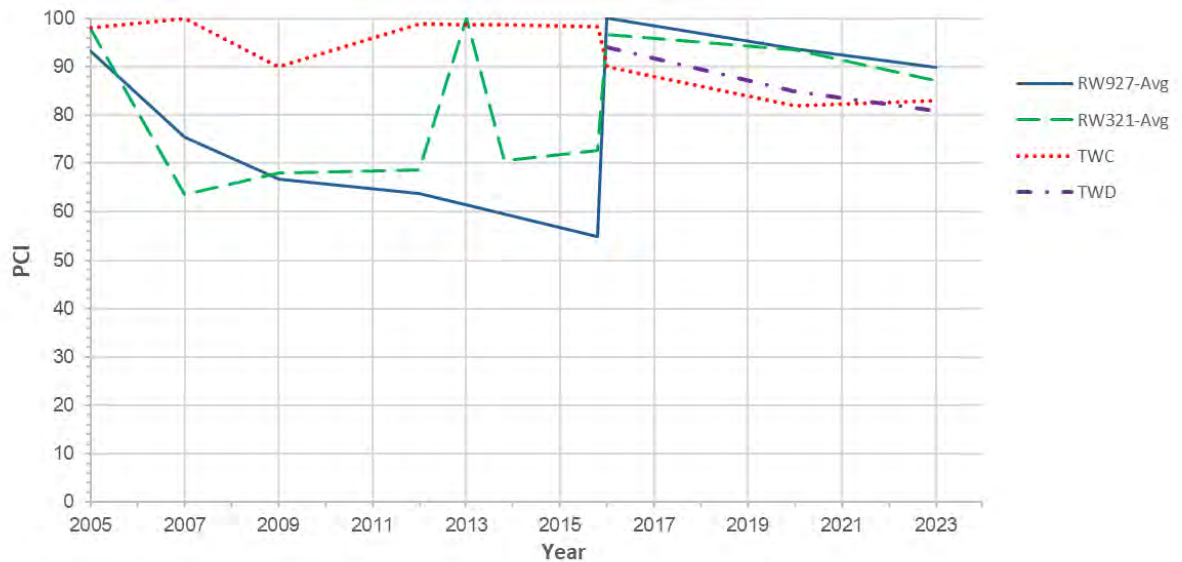
Table 2-4: Summary of PCI Surveys<sup>1</sup>

Pavement Asset		PCI by Year							
Branch	Segment	2005	2007	2009	2012	2016	2020	2023	
Runway 9-27	10	98	89	85	83	100	94	87	
	20	98	74	64	56	100	92	90	
	30	79	64	46	55	100	96	94	
	40	98	75	72	61	100	93	89	
	Weighted Average	93	76	67	64	100	94	89	
Runway 3-21	10	98	80	81	82	93	87	78	
	20	98	66	60	60	100	98	95	
	30	98	37	56	59	100	100	95	
	40	98	71	75	74	94	89	81	
	Weighted Average	98	64	68	69	97	94	81	
Taxiway C	10	98	100	90	99	90	82	83	
Taxiway D	10	--	--	--	--	94	85	81	
Terminal Rd	10	PCI Data Not Provided							57

Note:

1 Historical record engineering reports and record drawings were provided to S&W by Ardurra.

Chart 2-5: Summary of Airfield PCI Surveys<sup>1</sup>



In general, the RKS airfield pavement network is in good to excellent condition. Runway 9/27 was observed to be in excellent condition, but Runway 3/21, Taxiway C, and Taxiway D was observed to have slightly lower PCI values. Based on the visual observations and the PCI values, the Terminal Rd pavements appeared to be near the end of its serviceable life.

## 2.3 Subsurface Explorations

### 2.3.1 Borings

A total of 23 pavement borings were advanced to a depth of up to 10 feet below the existing pavement surface, as shown on the Exploration Location Map in Appendix B. The pavement borings were generally spaced at 1,000-foot spacing, whenever possible, or placed to bracket possible pavement condition changes. Four-inch-diameter asphalt concrete (AC) cores were obtained at each boring. Subgrade soil, aggregate base, and AC core descriptions are on the boring logs in Appendix B. Table 2-6 summarizes the general core condition descriptions throughout the project.

Table 2-6: Summary General Core Condition Descriptions

Pavement Asset	General Core Condition Description
Runway 9/27	AC core thicknesses ranged from 16.2" to 19.7". AC was generally fresh with delamination evident at various depth but most common at 2.5" and 7.5". Asphalt stripping was observed in some cores at various depths, but generally below about 11".

Pavement Asset	General Core Condition Description
Runway 3/21	AC core thicknesses ranged from 5.6" to 14.0". Generally fresh AC condition with delamination between 3.63" and 4.0" south of Runway 9/27. More variability with the AC thickness was observed due to the transitions at Runway 9/27.
Taxiway C	AC core thicknesses ranged from 4.08" to 4.44" were fresh and in-tact.
Taxiway D	AC core thicknesses ranged from 6.2" to 6.5". AC was fresh with delamination at 1.73" on Boring SW23-TWD-02.
Terminal Rd	AC core thicknesses ranged from 5.2" to 7". Aside from the core taken at Boring SW23-TERM-01, the AC was generally in poor condition with delamination, stripping and fragmented.

Core photographs are in Appendix B.



Figure 2-7: Pavement Core Collected at Boring SW23-927-01

The borings served several purposes:

- Assessing stripping, delamination, fragmentation, and soft zones within the AC pavement course
- Providing ground truthing for the GPR layer (reflection) picking to develop profiles for the various pavement structure layer thicknesses.
- Providing an opportunity to examine the condition and quality of the various pavement structure layer materials and the nature of the native subgrade and to obtain samples for laboratory testing.
- Identifying the near-surface bedrock or groundwater, if encountered

Neither Bedrock nor groundwater was observed in the borings at the time of drilling.

The boring logs in Appendix B were updated to include laboratory ASTM D2487 (USCS) soils classification information. Laboratory test reports are in Appendix C.



Figure 2-8: Pavement Drilling on Runway 9/27

Base materials observed at the site were in good condition on Taxiway C and Taxiway D where geotextile fabric was observed on subgrade. However, On Runway 9/27 and Runway 3/21, aggregate base was either was not observed or contaminated and difficult to identify in the exposed boring hole. Additionally, the historic 2016 Engineering Report for Runway 9/27 refers to Asphalt Treated Base (ATB) being used during its original constructed but was not noted in the boring logs for this evaluation. When observed in more depth, the ATB referenced appears to be similar to the rest of the AC, and the FWD testing indicated that the layer had similar stiffness to the AC. For the purposes of this evaluation, the ATB was combined with the AC for this evaluation.

Historic geotechnical documents for RKS indicated weathered siltstone and claystone would be present. However, the subgrade materials observed for this evaluation included soils that could be evaluated using standard methods. Some weak to moderate cementation was encountered throughout the site for subgrade soils, but for the purposes of this report, the subgrade soils are referred to as soil, not weathered rock.

Generally, subgrade soils throughout the project generally classified as Sandy Lean Clay (CL), Clayey Sand (SC), and Silty Sand (SM). The soils generally have FG-3 frost susceptibility characteristics, as classified in AC 150/5320-6G (FAA 2021). However, some select soils in areas across the site classified as FG-4 and should be considered for future design. Subgrade soil moisture conditions across the site appeared to be relatively consistent and reasonable although in several areas the in-situ moisture content was near the plastic limit of the subgrade soil. Saturated soils were not observed at the time the borings were advanced.

### 2.3.2 Dynamic Cone Penetrometer Testing (DCP)

Dynamic Cone Penetrometer (DCP) testing was performed throughout the project in general accordance with ASTM D6951/6951M. The DCP tests were conducted to refusal or



to a maximum depth of 10 feet BGS. The DCP test data was collected, and results were developed in accordance with the ASTM D6951. Table 2-9 summarizes the reduced project DCP and correlated CBR values for project subgrade resistance.

Table 2-9: DCP Subgrade Resistance Summary

Pavement Asset	Boring ID	Depth (ft) <sup>1</sup>	Subgrade USCS Soil Class	Minimum DCP Correlated CBR (%)
Runway 9/27	SW23-927-01	0.0-7.4	SC, CL	18.1
	SW23-927-04	0.0-2.5	SC	39.3
	SW23-927-07	0.0-5.7	SC	48.1
	SW23-927-09	0.0-9.4	SC	30.6
	SW23-927-11	0.0-5.9	SC, SM	24.9
Runway 3/21	SW23-321-01	0.0-5.1	CL, SM	41.2
	SW23-321-04	0.0-7.4	SC	16.9
Taxiway C	SW23-TWC-02	0.0-10.0	SM, SC	22.2
Taxiway D	SW23-TWD-01	0.0-9.0	SC-SM, SC	18.9
Terminal Rd	SW23-TRM-01	0.0-8.6	SC	3.7
	SW23-TRM-03	0-2.8	SC	30.6

NOTE:

1 Effective Pavement subgrade is considered to be up to 6 feet below ground surface (BGS).

## 2.4 Nondestructive Testing

### 2.4.1 Ground Penetrating Radar (GPR)

On April 17, 2023 Shannon & Wilson collected GPR data to supplement pavement layer thickness measurements between boring explorations using a short-pulse GPR imaging system in general accordance with ASTM D4748. The components of the Shannon & Wilson GPR system include a GSSI SIR-30 controller and two antennas. The 2 GHz, air-coupled antenna is especially suited for collecting detailed data collection in the upper 24 inches of the pavement structure. The 400 MHz, ground-coupled antenna collected data to about 5 feet below the pavement surface for project-level analysis.



Figure 2-10: The Shannon & Wilson GPR Trailer

The GPR data was post processed using GSSI RADAN 7™ software and the facilitated a substantial understanding of the variability of the roadway pavement structure layers. Pavement structure layer imaging was developed from scans obtained at 4-inch intervals along the length of the roadway and 512 samples per scan. In all, about 84.6 million discrete GPR data points were collected for use on this project. The following Figures 2-7 and 2-8 provide example images of the project GPR data.

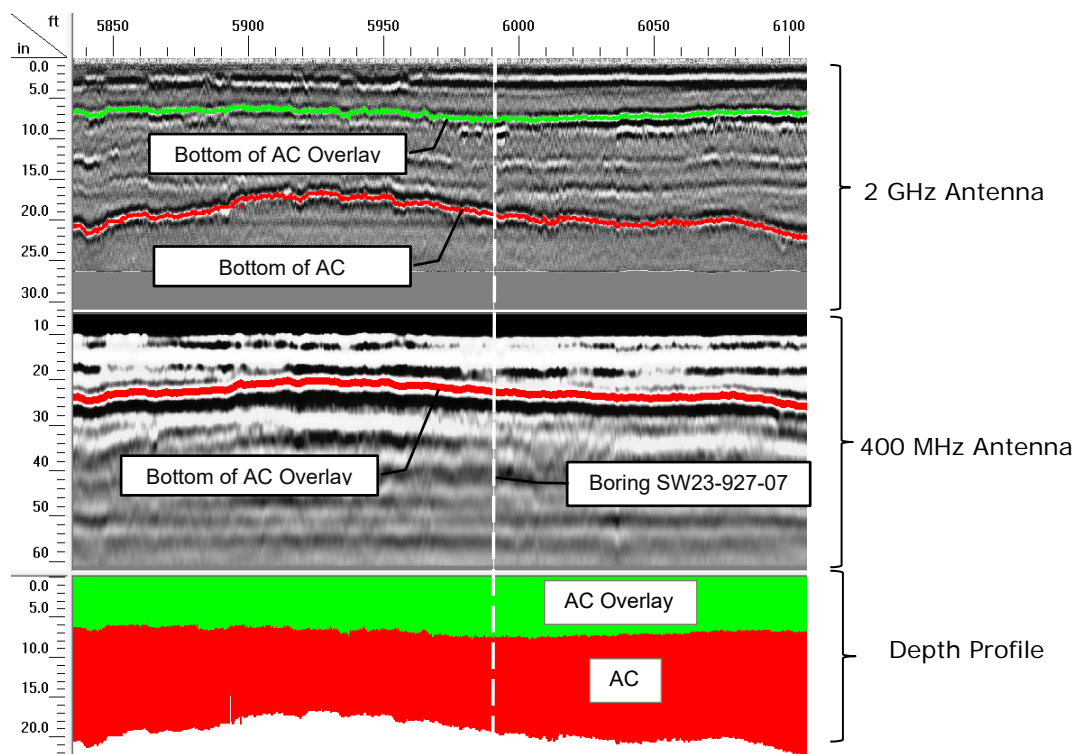


Figure 2-11: Example GPR Image at Boring SW23-927-07

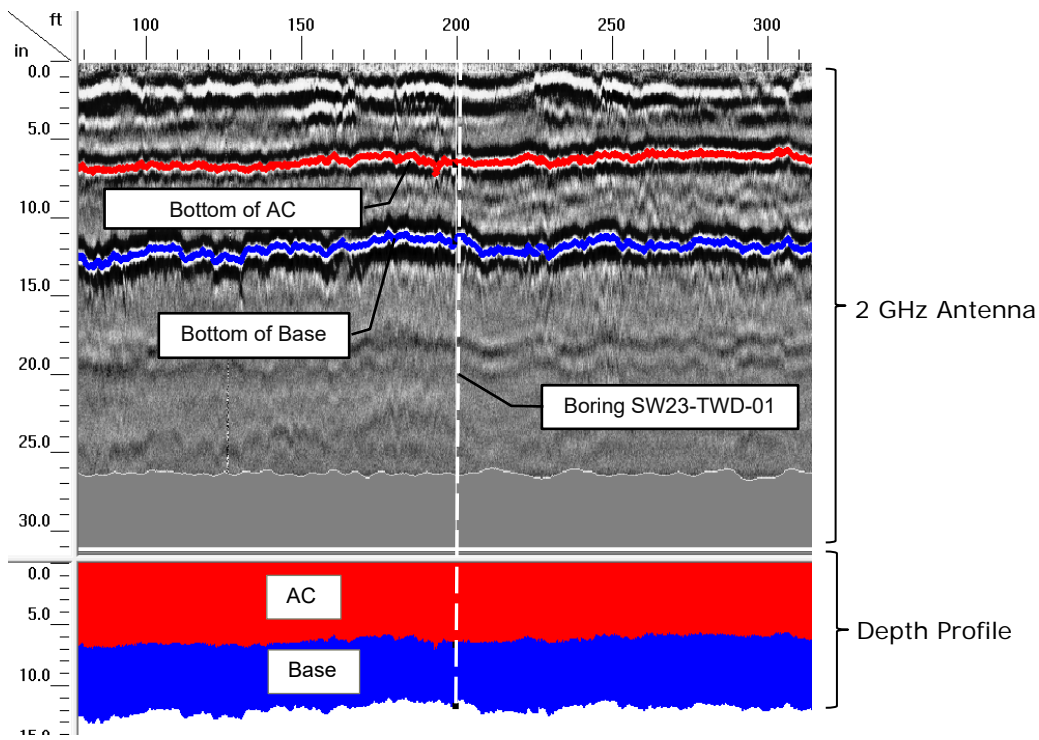


Figure 2-12: Example GPR Image at Boring SW23-TWD-01

Although the construction history for Runway 9/27 indicated an asphalt treated base layer within the pavement structure, the ATB layer was not readily obvious in either the AC cores or the GPR imaging and appeared very similar to the rest of the AC. For the purposes of this report, the pavement structure layers selected for analysis for Runway 9/27 included the overall AC and an AC Overlay that was readily evident in both the AC cores and the GPR imaging. GPR layers profiles and statistics are in Appendix B.

Table 2-13 summarizes the existing pavement layer thicknesses measured using GPR.

Table 2-13: GPR Existing Pavement Layer Thickness Summary

Pavement Asset	Location	Pavement Layer Statistics in Inches					
		AC Overlay		AC		Base	
		Mean	SD	Mean	SD	Mean	SD
Runway 9/27	T1 (34' Lt)	7.8	1.1	9.8	1.4	--	--
	T2 (4' Lt)	7.1	1.1	11.4	1.6	--	--
	T3 (15' Rt)	7.8	1.5	10.3	1.5	--	--
	T4 (45' Rt)	7.4	1.2	10.9	1.5	--	--
	Average	7.5	1.2	10.6	1.5	--	--
Runway 3/21	T1 (24' Lt) <sup>1</sup>	--	--	6.2	0.9	8.1	2.0

Pavement Asset	Location	Pavement Layer Statistics in Inches					
		AC Overlay		AC		Base	
		Mean	SD	Mean	SD	Mean	SD
	T2 (18' Rt) <sup>1</sup>	--	--	6.9	1.1	7.5	1.0
	Average	--	--	6.6	1.0	7.8	1.6
Taxiway C	T1 (8' Lt)	--	--	4.7	0.3	7.5	1.7
	T2 (8' Rt)	--	--	4.5	0.4	6.9	1.5
	Average	--	--	4.6	0.4	7.2	1.6
Taxiway D	T1 (10' Lt)	--	--	6.0	0.5	6.2	0.6
	T2 (6' Rt)	--	--	6.2	0.3	5.8	0.8
	Average	--	--	6.1	0.4	6.0	0.7

NOTE:

- Due to observed thick pavements on Runway 3/21 approaching Runway 9/27, the GPR statistics indicate the average thickness and standard deviation for the AC and Base thicknesses for Runway 3/21, except for those areas at 9/27 that are significantly thicker. See the GPR Layer profiles and statistics in Appendix B for more details.

The RKS pavements thicknesses evaluated using GPR technology appeared to be very consistent in thickness with small standard deviations, overall. The standard deviations for the AC layer on Runway 3/21 were higher than the other pavement assets primarily due to the gradual transitions leading to Runway 9/27, so the pavement GPR thickness statistics were modified to exclude the areas approaching the standard deviation for the sections of Runway 3/21 north and south of the Runway 9/27 hold lines. See the GPR layer profiles and statistics in Appendix B which include both overall information for Runway 3/21 and also information pertaining to the north and south segments only.



Figure 2-14: Example GPR Image at Boring SW23-927-07

*Note: For pavement structure analysis, layer thicknesses developed from the GPR subsurface imaging were applied to each of the FWD test locations. See Section 3.2.1 – FWD Backcalculations and Layer Moduli.*

## 2.4.2 Falling Weight Deflectometer (FWD)

On May 16, 2023 Shannon & Wilson concluded obtaining pavement deflection measurements for each of the airfield pavement assets included in this evaluation, except the Terminal Rd. The testing was performed using a Dynatest 8002-158 Falling Weight Deflectometer (FWD), in accordance with ASTM D4694 (ASTM International 2015). FWD deflection measurements were generally collected at 200 feet on center, offset from adjacent collection tracks, and coinciding with the lines used for GPR measurements.

The FWD had ten deflection sensors capable of 100-mil deflections located at -12" (LTE), 0" D(0)-Plate, 8", 12", 18", 24", 30", 36", 48", and 60" D(60). The plate diameter was 5.91". Each test location included two targeted 16,000-lb load drops, and two 20,000-lb drops. The measurements were located with a Trimble AG 332 GPS survey instrument for subsequent correlation with GPR layer thicknesses. At each test location, infrared pavement surface temperature and air temperature were measured. The FWD equipment annual reference calibration certificate and monthly relative calibrations were up-to-date.

In general, all FWD deflection measurements were reasonable and within the range of the deflection sensors. The FWD Deflection Data and Backcalculation results are in Appendix B.

## 2.5 Laboratory Moisture-Density and CBR Testing

The Shannon & Wilson laboratory performed a soaked California Bearing Ratio (CBR) test on the subgrade sample taken from project borings. Table 2-15 summarizes the CBR laboratory test results, as well as the results of the moisture-density compaction tests performed as part of the CBR test procedure.

Table 2-15: Laboratory Subgrade CBR and Compaction Data Summary

Boring ID	Sample ID	Sample Depth (feet)	USCS Soil Class	LL	PI	$W_n$ (%)	$W_{opt}$ (%)	$\gamma_{dmax}$ (pcf)	CBR (%) <sup>1</sup>
SW23-927-01	BK-03A	1.0-6.0	SC	23	10	9.5	8.2	133.0	29.0
SW23-927-04	BK-14	1.5-4.0	SC	25	13	9.1	8.4	131.4	24.8
SW23-927-07	BK-19	1.6-4.0	SC	25	14	4.2	7.6	134.7	41.0
SW23-927-09	BK-68	1.4-4.0	SC	26	15	7.7	7.3	133.8	22.3
SW23-927-11	BK-51	1.5-4.0	SC	26	15	2.5	8.0	131.5	19.4
SW23-321-01	BK-23	1.0-4.0	CL	26	13	11.2	8.7	131.4	18.5
SW23-321-04	BK-35	1.8-4.0	SC	28	15	6.2	7.5	133.6	11.8
SW23-TWC-02	BK-62	1.2-4.0	SM	17	2	2.1	7.2	130.2	32.9
SW23-TWD-01	BK-77	1.0-4.0	SC-SM	20	4	5.1	7.8	132.4	25.9

Boring ID	Sample ID	Sample Depth (feet)	USCS Soil Class	LL	PI	W <sub>n</sub> (%)	W <sub>opt</sub> (%)	γ <sub>dmax</sub> (pcf)	CBR (%) <sup>1</sup>
SW23-TRM-01	BK-85	1.1-5.5	SC	24	9	9.3	8.4	128.4	17.2
SW23-TRM-03	BK-92	4.6-6.5	CL	26	13	10.5	7.6	135.8	13.1

## NOTES:

- 1 CBR samples were soaked until achieving the maximum their swell as determined by change in swell being less than 0.001 inch over 72 hours.

Laboratory CBR values ranged from 11.8 to 41.0 percent. Appendix B provides the CBR and moisture-density compaction test results.

## 3.0 INTERPRETATION

### 3.1 Climate

The climate at the SW Wyoming Regional Airport is influenced by both Pacific and arctic air masses. Due to the high elevation winters are fairly severe and can be long lasting. Summers tend to be mild and arid. Most precipitation is blocked by coastal mountains but precipitation that does fall is typically product of warm, moist air masses from the Pacific Ocean. In Rock Springs, the summers are warm, dry, and mostly clear and the winters are freezing, snowy, windy, and partly cloudy. Over the course of the year, the temperature typically varies from 15°F to 84°F and is rarely below 0°F or above 91°F. The average precipitation at RKS is about 12.0 inches per year with the wettest month as May.

### 3.2 Subgrade Resistance

#### 3.2.1 FWD Backcalculations and Layer Moduli

The stiffness or elastic modulus of the asphalt concrete (AC) surface course is sensitive to temperature. Elastic modulus backcalculation for the AC layer stiffness was adjusted to a reference temperature of 70°F using the BELLS method and the previous average annual daily temperature (PAADT), in accordance with ASTM D7228 (ASTM International 2006). The PAADT was 52°F on May 15, 2023.

Elastic moduli backcalculation is also sensitive to the thickness of the pavement structure layers. Constructed roadway pavement structure layers may vary significantly. For each FWD drop location, layer thicknesses measured from the GPR imaging were correlated via submeter accurate GPS for true multipoint analysis.

The “deflection basin fit” method was used to backcalculate layer elastic moduli, and ELMOD6™ facilitated the backcalculation of elastic moduli of the layered ballast (Dynatest

International 2018). Table 3-1 summarizes the FWD backcalculated elastic moduli statistics for pavement asset included in this evaluation.

Table 3-1: Summary of Backcalculated Elastic Moduli (EFWD) for Existing Pavement Layers<sup>1</sup>

Pavement Asset	Location	Elastic Moduli, E <sub>FWD</sub> (ksi)							
		AC Overlay		AC		Base		Subgrade	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Runway 9/27	T1 (34' Lt)	160.4	56.7	812.5	431.1	--	--	50	12.4
	T2 (4' Lt)	575.0	269.4	396.9	207.1	--	--	43.4	11.7
	T3 (15' Rt)	313.7	123.1	528.3	208.8	--	--	46.6	11.6
	T4 (45' Rt)	298.3	102.9	689	365.6	--	--	43.1	10.9
	Average	336.9	159.3	606.7	318.6	--	--	45.8	11.7
Runway 3/21	T1 (24' Lt)	--	--	171.1	58.4	30.8	18.3	8.2	5.2
	T2 (18' Rt)	--	--	158.3	59.4	32.4	17.4	8.7	5.2
	Average	--	--	164.7	58.9	31.6	17.9	8.5	5.2
Taxiway C	T1 (8' Lt)	--	--	285.8	99.5	30.9	6.1	10.8	3.9
	T2 (8' Rt)	--	--	302.3	102.4	33.1	6.2	12.1	5.7
	Average	--	--	294.1	101.0	32.0	6.2	11.5	4.9
Taxiway D	T1 (10' Lt)	--	--	198.5	65	61.5	14.7	7.8	7
	T2 (6' Rt)	--	--	324.0	94.5	77.4	26.6	11.3	3.6
	Average	--	--	261.3	81.1	69.5	21.5	9.6	5.6

NOTES:

- 1 Backcalculation results were computed using Dynatest ELMOD6™ Software.
- 2 Adjusted to Reference Condition (77 ° F)

From the backcalculated FWD results, it appeared that the pavement materials of Runway 9/27 have maintained much of their structural capacity. However, low subgrade values observed for Runway 3/21, Taxiway C, and Taxiway D.

In all, the backcalculation results appeared to be plausible and had reasonable root mean square (RMS – quality check) error values.

### 3.2.2 Subgrade C-Values

The FAA FAARFIELD analysis method is performed on Resilient Modulus (M<sub>R</sub>) or CBR inputs for pavement materials. Therefore, E<sub>FWD</sub> values are converted to resilient moduli using the following correlation: M<sub>R</sub> = C-Value × E<sub>FWD</sub>.

The recommended C-Value for subgrade soils beneath an unbound aggregate base in the US is 0.35. For aggregate base materials beneath an existing AC layer, the default C-Value is 0.62 (AASHTO 2020).

Improving data quality can lead to a more cost-effective design solution. A higher C-Value may be justified when CBR or resilient modulus testing is performed in conjunction with FWD Testing.

For this airfield pavement evaluation, subgrade CBR tests were performed on undisturbed subgrade samples obtained during subsurface drilling. The CBR test reports are in Appendix C.

FWD back calculations at the CBR soil sample locations were compared and a reasonable C-Value was assigned for existing project materials. Table 3-2 summarizes the correlated C-Values for existing unbound pavement layers.

Table 3-2: Correlated C-Values for Existing Unbound Pavement Layers

Layer	Location	CBR (%)	CBR Correlated Mr (psi)	E <sub>FWD</sub> (psi)	C-Value	Remarks
Existing Base	---	---	--	--	0.62	US Default Value
Subgrade	SW23-927-01	29.0	43,500	41,925 <sup>1</sup>	1.04	In-situ near 95% D1557
	SW23-927-04	24.8	27,200	48,950 <sup>1</sup>	0.76	
	SW23-927-07	41.0	61,500	63,931 <sup>1</sup>	0.96	In-situ near 95% D1557
	SW23-927-09	22.3	33,450	36,900 <sup>1</sup>	0.91	In-situ near 95% D1557
	SW23-927-11	19.4	29,100	34,975 <sup>1</sup>	0.83	
	SW23-321-01	18.5	27,750	3,800 <sup>1</sup>	7.30	Suspect loose subgrade
	SW23-321-04	11.8	17,700	14,900 <sup>1</sup>	1.19	
	SW23-TWC-02	32.9	49,300	9,600 <sup>1</sup>	5.14	Suspect loose subgrade
	SW23-TWD-01	25.9	38,850	7,792 <sup>1</sup>	4.99	Suspect loose subgrade

Notes:

1 Average E<sub>FWD</sub> values of the closest FWD drops at the boring location where the soil was sample for the CBR test.

Based on the results of the C-Value analysis it is observed that the in-situ subgrade at Runway 9/27 is near the same density as the laboratory CBR tests which were conducted at 95% ASTM D1557. It is also observed that the subgrade soils for Runway 3/21, Taxiway C, and Taxiway D appear to be in a looser state than the density of the laboratory CBRs. Several other factors may have contributed in the observed results, including the possibility of inadequate subgrade compaction of the subgrade prior to the pavement construction. However, the determination of specific causes of these results are beyond the scope of this evaluation.



In general, it appears the use of a C-Value of 0.80 will provide reasonably conservative results for Runway 9/27 while improving significantly on the default value of 0.35. For Runway 3/21, Taxiway C, and Taxiway D, the use of a C-Value of 1.0 appears to be reasonable for use.

Design Moduli and Subgrade Category for Pavement Layers

The FAA adopts four standard levels of subgrade strength for rigid and flexible pavements. These standard categories are used to represent a range of subgrade conditions and are shown in Table 3-3.

Table 3-3: Standard FAA Subgrade Strength Categories<sup>1</sup>

Subgrade Strength Category	Code Designation	Represents CBR (%)	Represents E (psi)
High	A	$E \geq 14.5$	$E \geq 21,756$
Medium	B	$9.7 \leq E < 14.5$	$14,504 \leq E < 21,756$
Low	C	$5.8 \leq E < 9.7$	$8,702 \leq E < 14,504$
Ultra Low	D	$E < 5.8$	$E < 8,702$

Notes:

1 Per FAA AC 150/5335-5D, Table 2-1.

Table 3-4 shows the design moduli and Subgrade Category assumed for pavement layers in the design analyses.

Table 3-4: Design Resilient Moduli ( $M_R$ ) for Pavement Layers<sup>1</sup>

Pavement Asset	Layer	Design $M_R$ (psi)	Correlated CBR (%)	Subgrade Category <sup>7</sup>
Runway 9/27	AC Overlay <sup>1</sup>	336,900	--	
	AC <sup>1</sup>	400,000 <sup>5</sup>	--	
	Subgrade <sup>3</sup>	27,300	18.2	A
Runway 3/21	AC <sup>1</sup>	164,700	--	
	Base <sup>2</sup>	19,600	--	
	Subgrade <sup>4</sup>	3,300	2.2	D
Taxiway C	AC <sup>1</sup>	294,100	--	
	Base <sup>2</sup>	19,800	--	
	Subgrade <sup>4</sup>	6,600	4.4	D
Taxiway D	AC <sup>1</sup>	261,300	--	
	Base <sup>2</sup>	43,100	--	
	Subgrade <sup>4</sup>	5,400	3.6	D

Pavement Asset	Layer	Design M <sub>R</sub> (psi)	Correlated CBR (%)	Subgrade Category <sup>7</sup>
Terminal Rd (AASHTO 1993)	AC	SN=0.44	--	
	Base	SN=0.15	--	
	Subgrade <sup>6</sup>	23,250	15.2	A

Notes:

- 1 At reference condition (77° F).
- 2 Design Base Values determined using default C-Value of 0.62.
- 3 Design Subgrade values for Runway 9/27 were determined by subtracting the standard deviation from the pavement asset average E<sub>FWD</sub> value (per FAA guidelines), then applying a C-Value of 0.80.
- 4 Design Subgrade values for Runway 3/21, Taxiway C, and Taxiway D were determined by subtracting the standard deviation from the pavement asset average E<sub>FWD</sub> value (per FAA guidelines), then applying a C-Value of 1.00.
- 5 The back calculated value is limited to 400,000 in the FAARFIELD design software.
- 6 Subgrade CBR for the Terminal Rd was determined based on the average of the laboratory tests for that asset, per AASHTO 1993 guidelines.
- 7 Subgrade Categories determined based on AC 150/5335-5D, Table 2-1.

### 3.3 Traffic

#### 3.3.1 Airfield Aircraft Traffic

Projected airfield aircraft traffic for use in this evaluation was provided by Ardurra, in coordination with RKS and Mead and Hunt. RKS proposed aircraft traffic is comprised of a variety of aircraft that range from small private, single engine propeller planes to large, multi-jet engine cargo and passenger aircraft with aircraft gross taxi weights ranging from 4,00 lbs to about 175,000 lbs and tire pressures more than 200 psi. In all, approximately 8,500 proposed landings/departures are estimated in 2023 with an assumed annual compound growth rate of 2.0 percent. See Appendix E for airfield aircraft traffic projections.



Figure 3-5: Example of Bombardier 700 (BD700) Aircraft (Image from Aviation International News)

In addition to the proposed airfield aircraft traffic, an additional 100 passes of heavy snow removal equipment was included in the analyses for all pavement asset segments. It did not

appear that the addition of the heavy snow equipment was a controlling load during the analyses.

### 3.3.2 Terminal Road Traffic

Ardurra provided estimated traffic data for the Terminal Rd. Table 3-6 summarizes the project design parameters for traffic loading.

Table 3-6: Terminal Rd Traffic Loading Parameters Summary

Traffic Data Summary	Design Parameter
ADT	1,342
Commercial Traffic (CADTT)	123 (8.4%)
Number of Lanes in Design Direction	1
Percent Trucks in the Design Direction	60%
Percent Trucks in the Design Lane	100%
Assumed Annual Growth Rate	2.0%
20-Year Flexible ESALS	3,752,490

Notes:

- 1 Terminal Rd traffic projections were calculated based on the ITD projected commercial and 18,000 ESAL loadings.

Appendix B contains the traffic data, together with a traffic projection summary.

## 4.0 EVALUATION & RESULTS

### 4.1 FAARFIELD Airfield Pavement Evaluation Results

The FAA FAARFIELD v2.0 was used to evaluate the structural capacity and estimated remaining service life of each of the airfield pavement assets. Additionally, the FAARFIELD software also provides beneficial information for the performance and load-carrying capacity of each airfield pavement asset for unrestricted operations, which is expressed by a single unique number, the Pavement Classification Rating (PCR), without specifying a particular aircraft or detailed information about the pavement structure (FAA 2022).

The FAARFIELD software also provides insight as to the Cumulative Damage Factor (CDF) which describes the amount of structural fatigue life of a pavement that has been used and is expressed as the ratio of applied load repetitions to allowable load repetitions to failure. When a CDF sums to a value of 1.0, the structural design conditions have been satisfied for the specified design life of the pavement. A value of CDF greater than one does not necessarily mean the pavement will no longer support traffic, but that it will not support the

projected traffic conditions assumed for the pavement analysis. A CDF of less than one indicates the pavement has excess structural capacity for the proposed traffic conditions and will likely exceed the expectations assigned for the design period.

Table 4-1 summarizes the evaluation results from the analyses for each pavement asset.

Table 4-1: FAARFIELD v2.0 Evaluation Results

Pavement Asset	Calculated PCR	Total CDF	Max Aircraft CDF	Max CDF Aircraft	Critical Aircraft Weight (lbs)	Max Allowable Gross Weight (MAGW) (lbs)	Est. Remaining Life (Years)
Runway 9/27	1852/F/A/X/T	0.00	0.00	NA	200,000+	1,222,970	20+
Runway 3/21	112/F/D/X/T	10.70	10.43	Bombardier Challenger 300 (CL30/CL35)	48,200	35,832	5.2
Taxiway C	126/F/D/X/T	5.26	4.98	Bombardier Challenger 300 (CL30/CL35)	48,200	39,117	4.3
Taxiway D	143/F/D/X/T	236.79	232.05	Global Express 6000	99,500	48,623	0.1

Based on the FAARFIELD evaluation results, Runway 9/27 had a maximum CDF contribution of 0.00, meaning the structural capacity of the runway will provide continued use for the proposed aircraft traffic without a noticeable reduction in useable pavement life. However, Runway 3/21, Taxiway C, and Taxiway D will be significantly impacted with the proposed, heavier aircraft traffic, as indicated by the maximum CDF values of greater than one and the reduced estimated remaining lives predicted in the software. Taxiway D is not currently compatible with the proposed aircraft traffic and is projected fail quickly following the introduction of the proposed, heavier aircraft.

Aircraft Classification Rating values for each airfield pavement asset are shown on the PCR reports included in Appendix F.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Surface Condition

Overall, all the RKS airport pavements are currently in good condition from a visual distress perspective and only exhibit limited observable distresses throughout the current airfield pavement network.

## 5.2 Structural Capability

The RKS airfield pavements on Runway 9/27 appear to be capable of supporting proposed airfield aircraft traffic requirements for at least 20 years with appropriate maintenance and preservation techniques.

Runway 3/21 pavement are anticipated to support the proposed airfield traffic for about the next 5 years and may be extended with reduction in aircraft loading from the proposed Bombardier Challenger 300 aircraft.

Taxiway C may support another 4 years of traffic and may be extended to at least five years with reductions in loading from the proposed Bombardier Challenger 300 aircraft.

Taxiway D is not structurally sufficient for the current projected mix of aircraft loads including Global Express 6000 and Embraer Praetor 600 aircraft.

Pavement PCR values are listed in Table 4-1.

## 5.3 Asset Management Strategy Recommendations

The following tasks, in proposed order of priority, are recommended to support proposed airfield aircraft traffic:

1. Reconstruct Taxiway D as soon as practical to support proposed airfield traffic. The FAARFIELD analysis indicated inadequate pavement structure, which could lead to near-term failure of the pavement course, if certain heavier aircraft are directed onto Taxiway D. The pavement reconstruction section in Figure 5-1 may serve as a basis for budgetary considerations to possibly provide an additional 20 years of service.

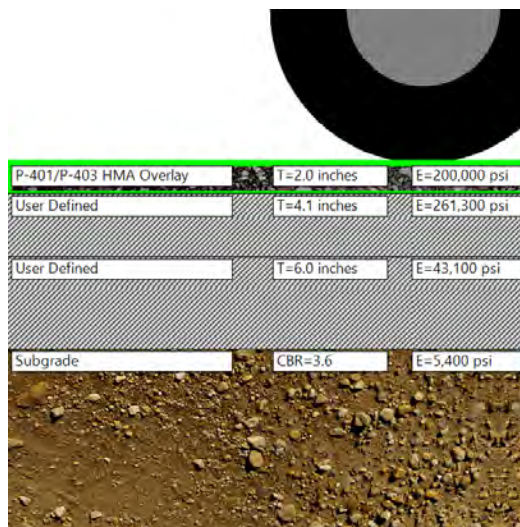


Figure 5-1: FAARFIELD Pavement Reconstruction Typical Section

2. Rehabilitate Taxiway C within about the next 4 or 5 years or eliminate aircraft traffic associated with Bombardier Challenger 300 (CL30/CL35)/ Learjet 70/75 class aircraft. Preliminary analyses in FAARFIELD indicate a 2" mill/ 3.5" inlay will allow the use of the proposed heavier aircraft on the taxiway for about another 20 years. Another acceptable remedial measure would be to eliminate the heavier proposed traffic from aircraft Taxiway C. Both of these remedial measures are expected to possibly provide an additional 20 years of service on Taxiway C.
3. Rehabilitate Runway 3/21 within about the next 5 or 6 years or eliminate aircraft traffic associated with Bombardier Challenger 300 (CL30/CL35)/ Learjet 70/75 class aircraft. Analyses in FAARFIELD indicate a 1" mill/ 3.5" inlay will provide the structural capacity to allow the use of the proposed heavier aircraft for approximately the next 20 years. Another acceptable remedial measure would be to eliminate the heavier aircraft from Runway 3/21. Both of these proposed measures are expected to possibly provide a continual service of about 20 years for Runway 3/21.
4. Reconstruct the existing Terminal Rd. The visual PCI survey indicated the existing roadway was at the end of its useful service life and should be repaired. An AASHTO 1993 design calculation indicated an AC Removal and HMA replacement strategy would be sufficient for repair to support project traffic. This strategy would involve the removal of the existing AC (average thickness = 5.6 inches) recompact, adjust grades, and shape, as necessary, then place a minimum 5.0 inches of HMA overlay surface course on the existing base and subgrade.
5. Continue regular maintenance and repair on Runway 9/27. Currently, Runway 9/27 is expected to accommodate the proposed aircraft traffic 10 years or more, when limited observed cracking are sealed appropriately and new defects are addressed in a timely manner. A surface preservation event involving a 2.5" mill/inlay is suggested within about the next 10 years to repair surface distresses that will continue to reflect to the surface of the Runway, and also to fully replace the most recent overlay applied to the surface.

Table 5-2 provides an outline of the proposed repair and maintenance activities proposed in this report.

**Table 5-2: Proposed Repair and Maintenance Activities for RKS Pavement Assets<sup>1</sup>**

Year	Pavement Asset	Proposed Activity
2023-2043	General	Implement and maintain an appropriate Airport Pavement Management Program (PMP), per AC 150/5380-7B
		Measure runway surface friction semi-annually (every 6 months).
		Perform a detailed inspection of all RKS pavement assets at least annually.
		Perform bi-annual PCI surveys for all RKS pavement assets
2025	General	Crack seal and seal coat
2027	Taxiway D	Reconstruct Taxiway D: Preliminary section per Figure 5-1

Year	Pavement Asset	Proposed Activity
2028	Taxiway C	Major Rehabilitation or Reconstruct: Preliminary 1" Mill/ 3.5 Inlay, seal coat
2029	Runway 3/21	Major Rehabilitation: Preliminary 2" Mill/ 3.5" Inlay, seal coat
	General	Crack seal and seal coat
2032	Runway 9/27	Minor Rehabilitation: Preliminary 2.5" Mill/Inlay, groove surface
2033	General	Crack seal and seal coat
2035	Terminal Rd	Reconstruction: Preliminary Remove AC and 5" HMA overlay and seal coat
2037	General	Crack seal and seal coat
2039	Runway 3/21	Preservation 2" Mill/Inlay
2041	General	Crack seal and seal coat
2044	Runway 9/27	Major Rehabilitation: Preliminary 8" mill/inlay and seal coat

1 Proposed repair and maintenance activities are based on current practices of RKS for crack seal and seal coat applications on a 4-year rotation and the asset management activities proposed in this report. These proposed repair and maintenance activities include activities and estimated timelines that should be adjusted based on regular PCI inspections throughout the life of each pavement asset. All proposed repair and maintenance activities and timelines are roughly based on a 24-year pavement life cycle with a 2" mill/inlay preservation activity included, except Runway 9/27 which is proposed at a 2.5" mill/inlay.

## 6.0 REFERENCES

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- Federal Aviation Administration (FAA). 2021. AC 150/5320-6G – Airport Pavement Design and Evaluation.
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Appendix A

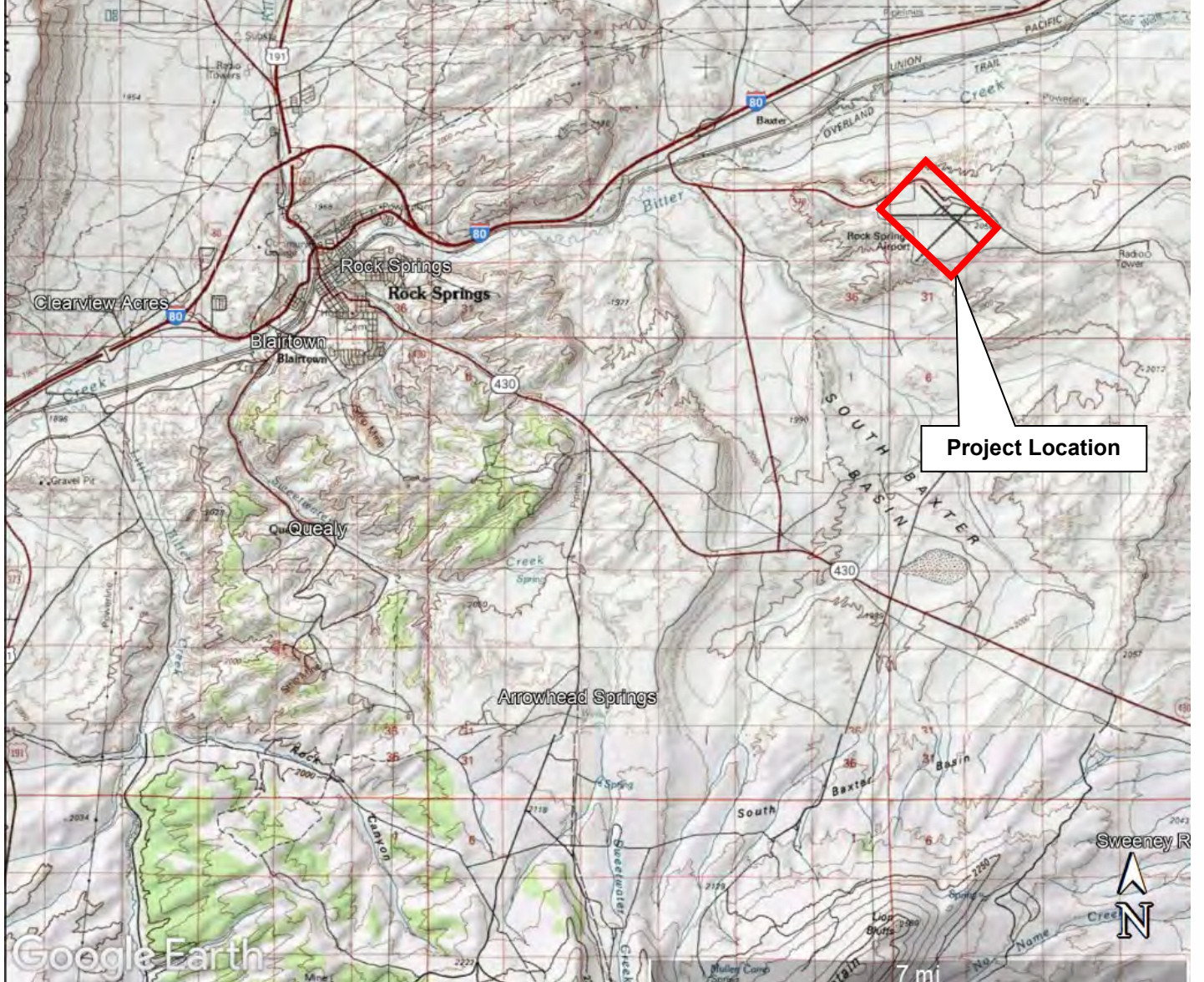
# General Information & Site Data

Subtitle if Applicable

## CONTENTS

- Vicinity Map
- General Site Photographs
- Airfield Site Map
- Visual PCI Surveys
  - Historic 2012 PCI Map
  - Historic 2020 Pavement Condition Index Map
  - 2023 PAVEAIR PCI Results





Project Location

RKS Master Plan  
SW Wyoming Regional Airport  
Sweetwater County, Idaho

**VICINITY MAP**

August 18, 2023

71-110339



General Site Photo 1: West End of Runway 9/27, Looking East



General Site Photo 2: S&W Drilling on Runway 9/27, looking West



General Site Photo 3: Runway 9/27 at Runway 3/21, Looking West



General Site Photo 4: Runway 9/27 at Runway 3/21, Looking East



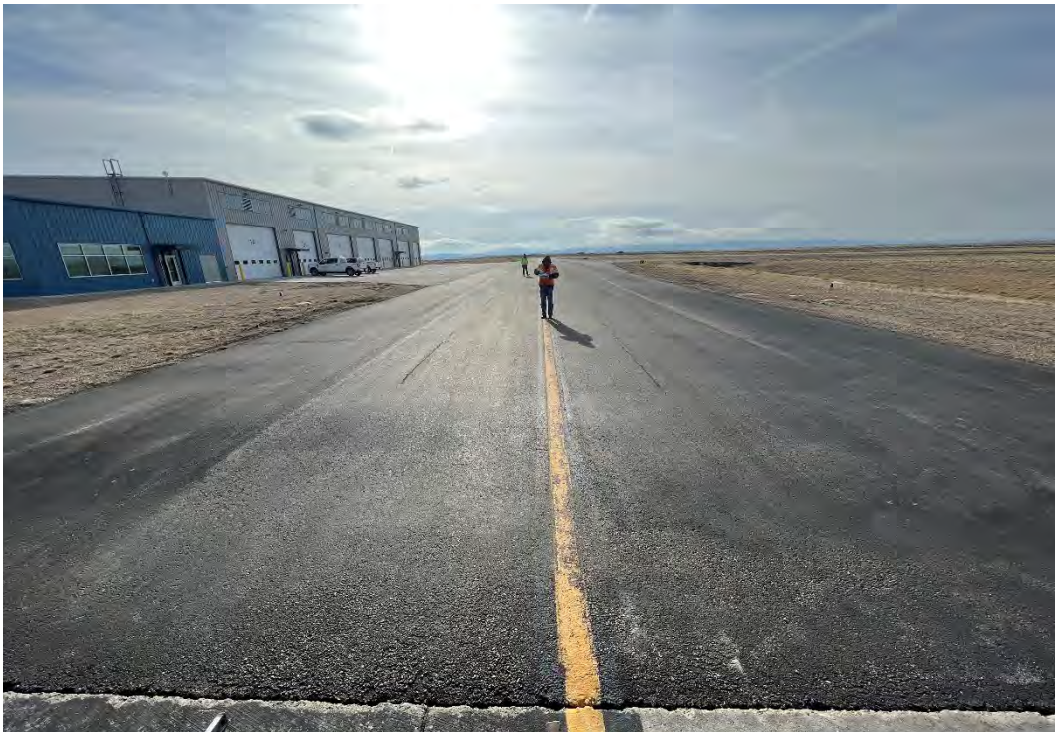
General Site Photo 5: South End of Runway 3/21, Looking Northeast



General Site Photo 6: Runway 3/21 at Runway 9/27, Looking Southwest



General Site Photo 7: Runway 3/21 at Runway 9/27, Looking Northeast



General Site Photo 8: West End of Taxiway C, Looking Southeast



General Site Photo 9: Taxiway C at Boring SW23-321-02, looking Northwest



General Site Photo 10: Taxiway C at the Runway 3/21 Hold Line, Looking Northwest



General Site Photo 11: Taxiway D at Taxiway A, looking Northeast



General Site Photo 12: S&W Drilling at S End of Taxiway D, looking Southeast



General Site Photo 13: Taxiway D at Taxiway C, looking Southwest

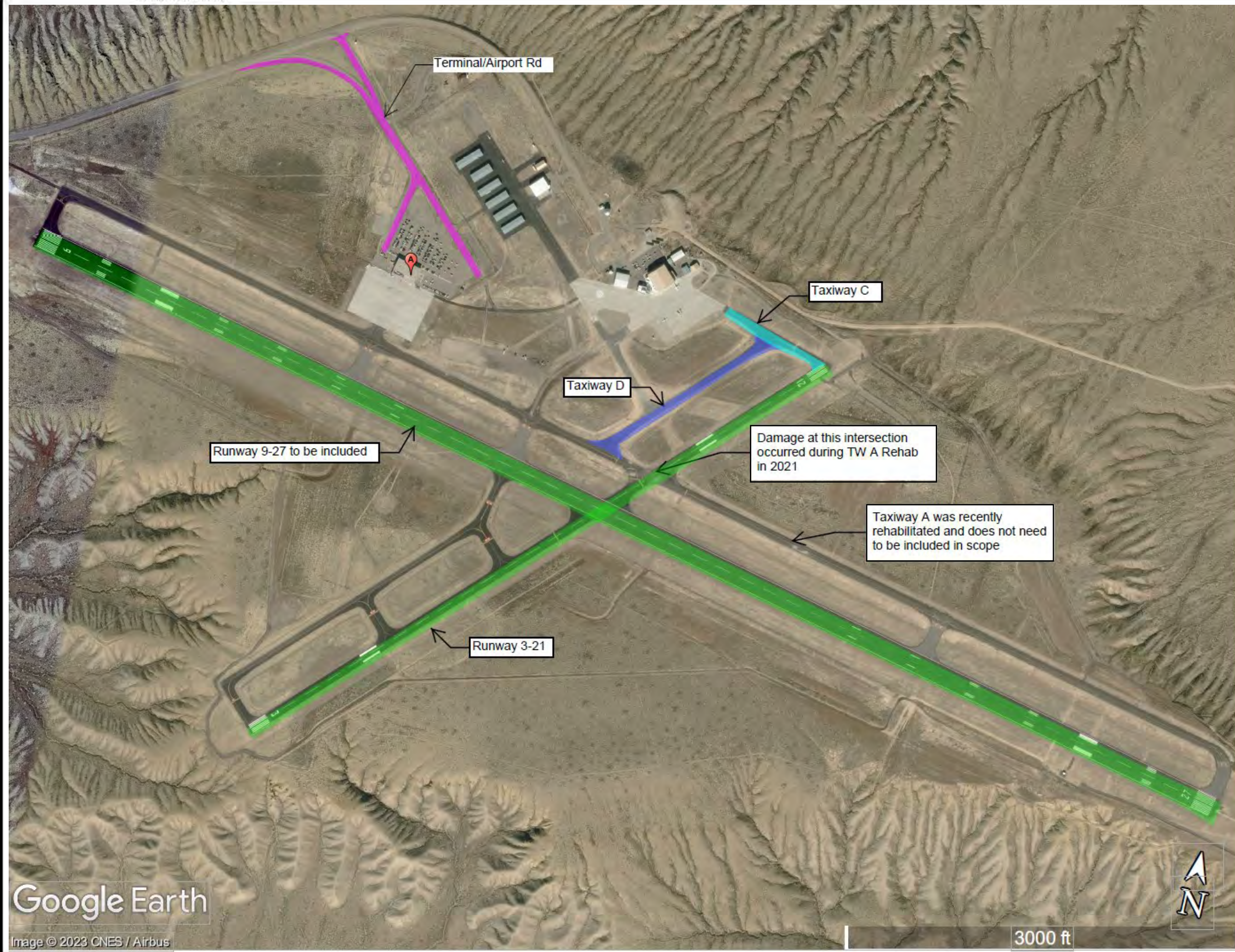


General Site Photo 14: Terminal Rd at SH370, looking Northeast





General Site Photo 15: Runway 9/27 at Runway 3/21, looking Northwest



Google Earth  
Image © 2023 CNES / Airbus

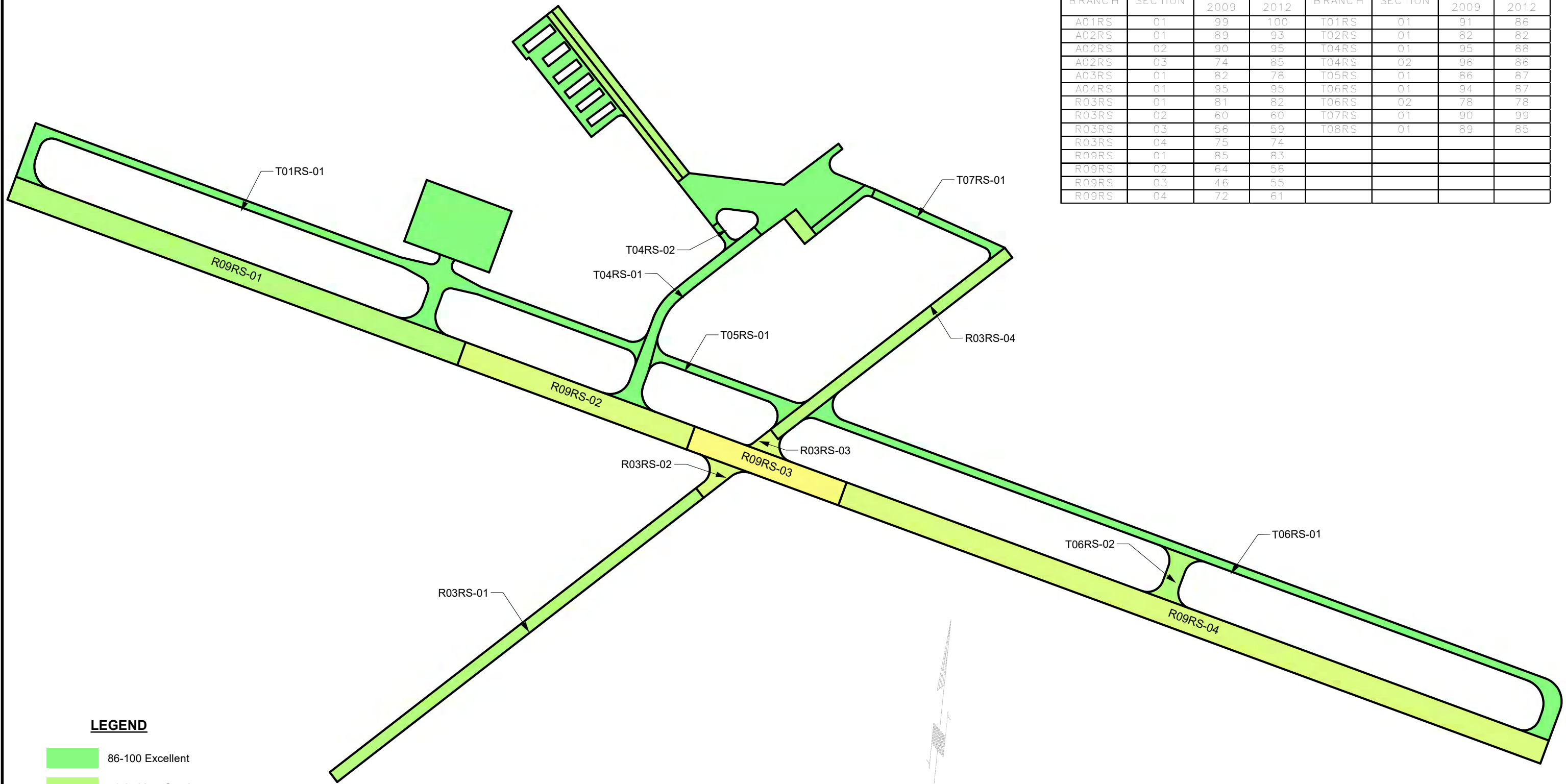
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QC: SY

RKS Master Plan  
SW Wyoming Regional Airport  
Sweetwater County, Wyoming

**Airfield Site Map**

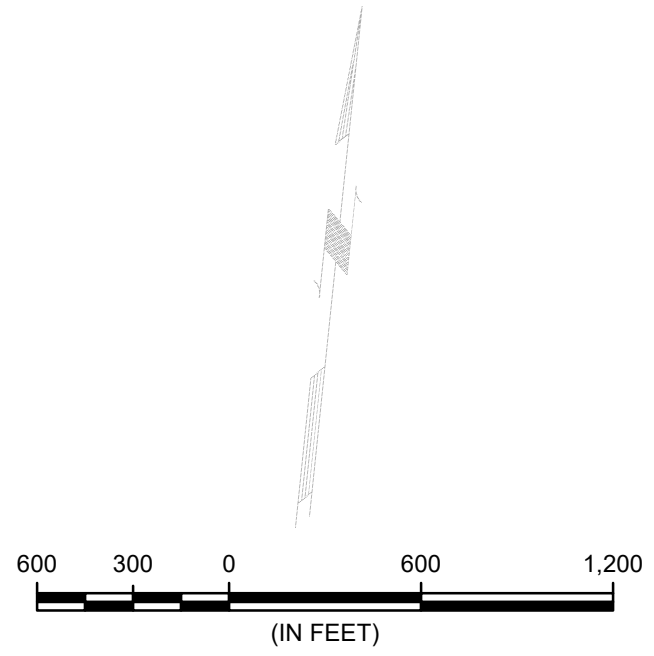
August 17, 2023 71-110339

BRANCH	SECTION	PCI 2009	PCI 2012	BRANCH	SECTION	PCI 2009	PCI 2012
A01RS	01	99	100	T01RS	01	91	86
A02RS	01	89	93	T02RS	01	82	82
A02RS	02	90	95	T04RS	01	95	88
A02RS	03	74	85	T04RS	02	96	86
A03RS	01	82	78	T05RS	01	86	87
A04RS	01	95	95	T06RS	01	94	87
R03RS	01	81	82	T06RS	02	78	78
R03RS	02	60	60	T07RS	01	90	99
R03RS	03	56	59	T08RS	01	89	85
R03RS	04	75	74				
R09RS	01	85	83				
R09RS	02	64	56				
R09RS	03	46	55				
R09RS	04	72	61				

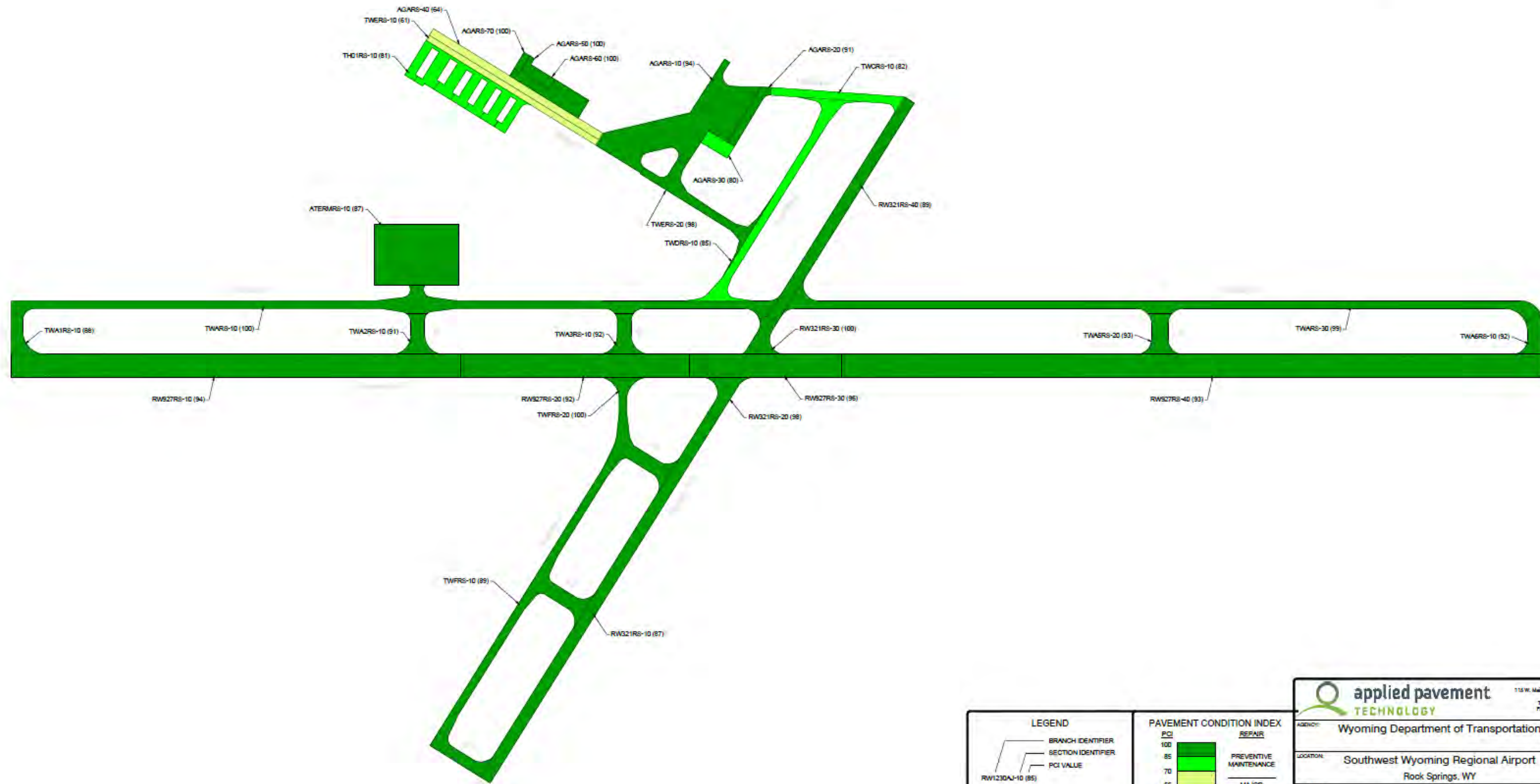


**LEGEND**

- 86-100 Excellent
- 71-85 Very Good
- 56-70 Good
- 41-55 Fair
- 26-40 Poor
- 11-25 Very Poor
- 0-10 Failed



SWEETWATER COUNTY AIRPORT ROCK SPRINGS, WYOMING	
PCI MAP 2012	
MAIN RUNWAY & TAXIWAY AREAS	1 OF 2



**LEGEND**

- BRANCH IDENTIFIER
- SECTION IDENTIFIER
- PCI VALUE
- SECTION BREAK LINE

**PAVEMENT CONDITION INDEX**

100	REPAIR
85	PREVENTIVE MAINTENANCE
70	MAJOR REHABILITATION
55	MAJOR REHABILITATION
40	RECONSTRUCTION
25	RECONSTRUCTION
0	RECONSTRUCTION

**applied pavement TECHNOLOGY**  
 115 W. Main Street, Suite 400  
 Cheyenne, WY 82001  
 Tel: (307) 398-4077  
 Fax: (307) 398-4077

AGENCY: Wyoming Department of Transportation

LOCATION: Southwest Wyoming Regional Airport  
 Rock Springs, WY

PAGE TITLE: 2020 Pavement Condition Index Map

PROJECT DATE: MAY 2016	CREATION DATE: MAY 2016	PROJECT MANAGER: KMP	JOB NUMBER: 15-098-AM01
DRAWING SCALE: 1"=300'	LAST MODIFIED DATE: NOV. 2020	REVIEWED BY: MDK	DRAWN BY: ABF
FILENAME: Rock Springs.dwg	LAYOUT NAME/NUMBER: PCI	PLAQUE NUMBER: X	

# Branch Condition Report

Report Date: 8/16/2023 2:38:09 AM  
 Inspection Date: 4/8/2023

Pavement Database: SW\_RKS

page.1 of 1

Network	Branch	Number of Sections	Sum Section Length(ft)	Average Section Width(ft)	True Area(ft <sup>2</sup> )	Branch Use	Average PCI	PCI Standard Deviation	Weighted Average PCI
SW_WY_Regional_Airport	Runway 321	4	5055.00	77.65	395057.50	RUNWAY	85	7	80
SW_WY_Regional_Airport	Runway 927	4	10000.00	150.00	1500000.00	RUNWAY	90	3	89
SW_WY_Regional_Airport	Taxiway C	1	846.00	52.60	44499.60	TAXIWAY	84	0	84
SW_WY_Regional_Airport	Taxiway D	1	1558.00	64.00	99712.00	TAXIWAY	81	0	81
SW_WY_Regional_Airport	Terminal Rd	1	2600.00	24.00	62400.00	ROADWAY	75	0	75

## Branch Condition Summary Report

Use Category	Number of Sections	Total Area(ff <sup>2</sup> )	Arithmetic Average PCI	Standard Deviation PCI	Weighted Average PCI
ROADWAY	1	62,400.00	74.93	0.00	74.93
RUNWAY	8	1,895,057.50	87.58	5.77	85.78
TAXIWAY	2	144,211.60	82.32	1.20	81.86
All	11	2,101,669.10	85.26	6.30	85.19

# Section Condition Report

Report Date: 8/16/2023 2:41:21 AM  
 Inspection Date: 4/8/2023

Pavement Database: SW\_RKS

page.1 of 1

Network	Branch	Section	Construction Date	Surface	Branch Use	Rank	Lane	True Area(ft²)	Age at Inspection	Last Inspection Date	PCI
SW_WY_Regional_Airport	Runway 321	RW321RS-10	8/2/2016	AAC	RUNWAY	S	0	212,844	7	4/18/2023	78
SW_WY_Regional_Airport	Runway 321	RW321RS-20	8/2/2016	AAC	RUNWAY	S	0	27,807	7	4/18/2023	0
SW_WY_Regional_Airport	Runway 321	RW321RS-30	8/2/2016	AAC	RUNWAY	S	0	18,328	7	4/18/2023	95
SW_WY_Regional_Airport	Runway 321	RW321RS-40	8/2/2016	AAC	RUNWAY	S	0	136,081	7	4/18/2023	81
SW_WY_Regional_Airport	Runway 927	RW927RS-10	8/2/2016	AAC	RUNWAY	P	0	440,104	7	4/18/2023	86
SW_WY_Regional_Airport	Runway 927	RW927RS-20	8/2/2016	AAC	RUNWAY	P	0	224,402	7	4/18/2023	90
SW_WY_Regional_Airport	Runway 927	RW927RS-30	8/2/2016	AAC	RUNWAY	P	0	148,501	7	4/18/2023	94
SW_WY_Regional_Airport	Runway 927	RW927RS-40	8/2/2016	AAC	RUNWAY	P	0	687,006	7	4/18/2023	89
SW_WY_Regional_Airport	Taxiway C	TWCRS-10	7/1/2021	AC	TAXIWAY	T	0	44,500	2	4/18/2023	84
SW_WY_Regional_Airport	Taxiway D	TWDRS-10	8/3/2013	AC	TAXIWAY	T	0	99,713	10	4/18/2023	81
SW_WY_Regional_Airport	Terminal Rd	Terminal RD	7/1/1990	AC	ROADWAY	C	0	62,401	33	4/18/2023	75

## Section Condition Summary Report

Age Category	Average Age at Inspection	Total Area(ft²)	Number of Sections	Arithmetic Average PCI	Standard Deviation PCI	Weighted Average PCI
[0-2]	2	44,499.60	1	83.53	0.00	83.53
[06-10]	7	1,994,769.50	9	86.77	27.81	85.55
[31-35]	33	62,400.00	1	74.93	0.00	74.93
All	9	2,101,669.10	11	85.26	25.24	85.19

Appendix B

# Field Test Data

Subtitle if Applicable

## CONTENTS

- Exploration Location Map
- Soil Classification Legend
- Boring Logs
- Pavement Core Photographs
- DCP Reports
- GPR Pavement Layer Thickness Profiles & Statistics
- FWD Data and Backcalculations



- LEGEND**
- B-1** Boring Designation and Location
  - B-1** Boring with Dynamic Cone Penetrometer (DCP) Test Designation and Location
  - FWD Test Location
  - GPR Scan Lines

RKS Master Plan SW WY Regional Airport Sweetwater County, Wyoming	
<b>EXPLORATION LOCATION MAP</b>	
August 17, 2023	71-110339
SHANNON & WILSON	<b>Fig. 3</b>

I:\059 - Exploration Location Map - 15-Aug-2023.dwg

8/16/2023 12:00 AM

QC: JS



# ASTM D2488 Field Classification Legend

MAJOR DIVISION		GRAPHIC LOG	GROUP SYMBOL
<b>COARSE GRAINED SOILS</b> CONTAINS LESS THAN 50% FINES	<b>GRAVEL AND GRAVELLY SOILS</b> MORE THAN 50% OF COARSE FRACTION <u>RETAINED</u> ON NO. 4 SIEVE	GRAVEL WITH ~ 5% FINES	GW
		GRAVEL WITH BETWEEN 5% AND 15% FINES	GP
		GRAVEL WITH BETWEEN 5% AND 15% FINES	GW-GM
		GRAVEL WITH BETWEEN 5% AND 15% FINES	GW-GC
		GRAVEL WITH BETWEEN 5% AND 15% FINES	GP-GM
		GRAVEL WITH BETWEEN 5% AND 15% FINES	GP-GC
	<b>SAND AND SANDY SOILS</b> MORE THAN 50% OF COARSE FRACTION <u>PASSING</u> ON NO. 4 SIEVE	GRAVEL WITH ≥ 15% FINES	GM
		GRAVEL WITH ≥ 15% FINES	GC
		SAND WITH ~ 5% FINES	SW
		SAND WITH ~ 5% FINES	SP
		SAND WITH BETWEEN 5% AND 15% FINES	SW-SM
		SAND WITH BETWEEN 5% AND 15% FINES	SW-SC
<b>FINE GRAINED SOILS</b> CONTAINS MORE THAN 50% FINES	SILT AND CLAY	SAND WITH ≥ 15% FINES	SP-SM
		SAND WITH ≥ 15% FINES	SP-SC
		SAND WITH ≥ 15% FINES	SM
	<b>LIQUID LIMIT LESS THAN 50</b>	SAND WITH ≥ 15% FINES	SC
		LIQUID LIMIT <u>LESS</u> THAN 50	ML
		LIQUID LIMIT <u>LESS</u> THAN 50	CL
<b>LIQUID LIMIT GREATER THAN 50</b>	LIQUID LIMIT <u>LESS</u> THAN 50	OL	
	LIQUID LIMIT <u>GREATER</u> THAN 50	MH	
	LIQUID LIMIT <u>GREATER</u> THAN 50	CH	
<b>HIGHLY ORGANIC SOILS</b>		OH	PT

### ABBREVIATIONS

AU	Auger cuttings
BK	Bulk sample
GB	Grab bag sample
NR	No Recovery
OSS	Oversized split-spoon sample with an outside diameter of 3 inches. Blow counts are not corrected to N-values unless specifically noted on the logs.
PT	Piston tube sample with an inside diameter of 2.88 inches, unless otherwise noted on the logs (reference ASTM D 1587)
CR	Core barrel sample (reference ASTM D 2113)
SS	Standard split-spoon sample (reference ASTM D 1586), driven by a hydraulic hammer in pavements
ST	Thin-walled (Shelby) tube sample with an inside diameter of 2.88 inches, unless otherwise noted on the logs (reference ASTM D 1587)
OST	Thin-walled (Shelby) tube sample with an inside diameter of 3.88 inches, used for resilient modulus testing.
VS	Vane shear test
PP	Pocket penetrometer
TV	Torvane
MC	Moisture content (%)
LL	Liquid limit (%)
PL	Plastic limit (%)
PI	Plasticity index
▽	Water level reading at time of drilling
▽	Water level reading ___ hrs after drilling

**NOTES:**

- 1) Sample descriptions are based on visual field and laboratory observations using classification methods of ASTM D2488. Where laboratory data are available, classifications are in accordance with ASTM D2487.
- 2) Solid lines between soil descriptions indicate change in interpreted geologic unit. Dashed lines indicate an assumed stratigraphic change within the unit.
- 3) Fines are material passing the U.S. Std. #200 Sieve.

STANDARD PENETRATION RESISTANCE				
SAND & GRAVEL		SILT & CLAY		
RELATIVE DENSITY	BLOWS/FOOT*	CONSISTENCY	BLOWS/FOOT*	COMPRESSIVE STRENGTH (TSF)
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 4	0.25 - 0.50
MEDIUM DENSE	10 - 30	FIRM	4 - 8	0.50 - 1.0
DENSE	30 - 50	STIFF	8 - 15	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	15 - 30	2.0 - 4.0
		HARD	OVER 30	OVER 4.0

NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/14/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-321-01

**GROUNDWATER:**

COLLAR ELEVATION: 6734.9 ft  
 LATITUDE: 41.58866577°  
 LONGITUDE: -109.0733651° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/14/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5		CR-21		Asphalt Concrete - AC interfaces at 4.0" (delaminated); stripped.	0.65	0.65	Located on RW 321, about 45 feet N of the S EOP, Lt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch. CBR=18.5% (95% ASTM D1557)
	1.0				Poorly Graded Gravel with Silt and Sand (GP-GM) - (Leveling Coarse) About 50% hard, subangular gravel to 3/4"; About 40% fine to coarse, subangular sand; About 10% nonplastic fines; Wet from coring; Brown.	0.30	0.95	
6732.5	2.0	BK-23			Sandy Lean Clay (CL) - 54% Low plasticity fines: LL=26, PL=13, PI=13; 40% Fine sand; 6% Hard, subrounded gravel to 3/4"; Moist, $w=11.2%$ ; Gray-brown with yellow mottles.	3.05		
	3.0		SS-22					
	4.0						4.00	
6730.0	4.5				Silty Sand (SM) - About 70% fine sand; about 30% nonplastic fines; moist; gray-brown with yellow mottles; weakly cemented.			
	5.0		OSS-24					
	6.0				As above except weak to moderate cementation.			
6727.5	7.0		OSS-25			6.00		
	8.0				As above except red-yellow mottles.			
	8.5							
6725.0	9.0		SS-26					
	10.0				Bottom of Boring at 10.0 ft on 6/14/2023.		10.00	

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/14/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-321-02

**GROUNDWATER:**

COLLAR ELEVATION: 6738.1 ft  
 LATITUDE: 41.5905088°  
 LONGITUDE: -109.0707938°  
 Groundwater not encountered on 6/14/2023  
 by Juniper Geode GNS3S

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
6737.5	0.5	CR-27		Asphalt Concrete - Seal coat to 0.5"; AC interfaces at 1.5" and 4.25".	0.51	0.51	Located on RW 321, about 1,020 feet from the S EOP, Rt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.
	0.71	GB-28		Poorly Graded Gravel with Silt and Sand (GP-GM) - (Leveling Coarse) About 50% hard, subangular gravel to 3/4"; about 40% fine to coarse, subangular sand; about 10% nonplastic fines; wet from coring; brown.	0.20	0.71	
	2.71	OSS-29		Clayey Sand (SC) - About 70% fine sand; about 30% low plasticity fines; moist; yellow-brown with red-yellow mottles.	2.00	2.71	

Bottom of Boring at 2.7 ft on 6/14/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/14/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-321-03

**GROUNDWATER:**

COLLAR ELEVATION: 6740.1 ft  
 LATITUDE: 41.59249915°  
 LONGITUDE: -109.0682162°  
 Groundwater not encountered on 6/14/2023  
 by Juniper Geode GNS3S

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
		CR-30		Asphalt Concrete - AC interface at 1.25" and 3.63" (delaminated); stripping below 3.63".	0.48	0.48	Located on RW 321, about 2,030 feet from the S EOP, Lt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.
	0.5	GB-31		Poorly Graded Gravel with Silt and Sand (GP-GM) - (Leveling Coarse) About 50% hard, subangular gravel to 3/4"; about 40% fine to coarse, subangular sand; about 10% nonplastic fines; wet from coring; brown.	0.14	0.62	
	1.0	OSS-32		Clayey Sand (SC) - About 70% fine sand; about 30% low plasticity plastic fines; moist; yellow-brown.	2.00		
6737.5	2.5					2.62	

Bottom of Boring at 2.6 ft on 6/14/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/14/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-321-04

**GROUNDWATER:**

COLLAR ELEVATION: 6744.8 ft  
 LATITUDE: 41.59396967°  
 LONGITUDE: -109.0661351° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/14/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5		CR-33		Asphalt Concrete - AC interfaces at 1.25", 4.25", 9.0" (mechanical break), and 12.75"	1.42		Located on RW 321, about 2,820 feet N of the S EOP, Rt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch. CBR=11.8% (95% ASTM D1557)
	1.0				Poorly Graded Gravel with Silt and Sand (GP-GM) - (Leveling Coarse)	0.38	1.42	
6742.5	1.5				About 50% hard, subangular gravel to 3/4"; about 40% fine to coarse, subangular sand; about 10% nonplastic fines; wet from coring; brown.		1.80	
	2.0	BK-35	SS-34		Clayey Sand (SC) - 49% fine sand; 40% low plasticity fines: LL=28, PL=13, PI=13; 11% hard, subrounded gravel to 3/4"; moist, w=6.2%; yellow-brown with red-yellow mottles.			
	2.5				As above except weakly cemented.			
6740.0	4.0		OSS-36		As above.		8.20	
	4.5				As above.			
	5.0		OSS-37		As above.			
6737.5	6.0				As above.			
	6.5				As above.			
	7.0		OSS-38		As above.			
	7.5				As above.			
	8.0				As above.			
	8.5				As above.			
	9.0				As above.			
6735.0	9.5				As above.			
	10.0				Bottom of Boring at 10.0 ft on 6/14/2023.		10.00	

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/14/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-321-05

**GROUNDWATER:**

COLLAR ELEVATION: 6745.8 ft  
 LATITUDE: 41.5959114°  
 LONGITUDE: -109.0636406° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/14/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
6745.0	0.5	CR-39		Asphalt Concete - AC interface at 4.0".	0.52	0.52	Located on RW 321, about 3,790 feet N of the S EOP, Lt of Center
	1.0			Poorly Graded Gravel with Silt and Sand (GP-GM) - (Leveling Coarse) About 50% hard, subangular gravel to 3/4"; about 40% fine to coarse, subangular sand; about 10% nonplastic fines; wet from coring; brown.	0.26	0.78	
	2.5	OSS-40		Silty Sand (SM) - 63% fine sand; 30% nonplastic fines; 7% hard, subrounded gravel to 3/4"; moist, $\omega$ =10.9%; yellow-brown.	1.74	2.52	Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.

Bottom of Boring at 2.5 ft on 6/14/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/15/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-321-06

**GROUNDWATER:**

COLLAR ELEVATION: 6747.6 ft  
 LATITUDE: 41.59830691°  
 LONGITUDE: -109.0603164° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/15/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5	CR-57		Asphalt Concrete - Asphalt interface at 3.33".	0.47	0.47	Located on RW 321, about 5,055 feet N of the S EOP, Rt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.
	1.0			Silty Sand (SM) - About 70% fine to medium sand; about 20% nonplastic to low plasticity fines; about 10% hard, subangular gravel to 1/2"; moist; yellow-brown.	0.29	0.76	
	1.5	OSS-58		Clayey Sand (SP) - About 80% fine to medium sand; about 20% nonplastic fines; moist; yellow-brown.	1.70	2.46	
	2.0						

Bottom of Boring at 2.5 ft on 6/15/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/13/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-927-01

**GROUNDWATER:**

COLLAR ELEVATION: 6732.3 ft  
 LATITUDE: 41.5977732°  
 LONGITUDE: -109.0820229° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/13/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5		CR-01		Asphalt Concrete - AC interfaces at 2.25", 5.5", 7.5" (delaminated), 10.5" 13.25", and 15.75" (delaminated); slightly weathered below 7.5".	1.64		Located on RW 927, about 50 feet from the W EOP, Lt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch. CBR=29.0% (95% ASTM D1557)
	1.0						1.64	
6730.0	2.0	BK-03a	SS-02		Clayey Sand (SC) - 52% fine to medium sand; 40% low plasticity fines: LL=23, PL=13, PI=10 8% hard, subrounded to subangular gravel to 3/4"; moist, $w=9.5%$ ; yellow-brown; weakly cemented.	2.36		
	3.0						4.00	
6727.5	4.0		OSS-03		Sandy Lean Clay (CL) - 64% low plasticity fines: LL=24, PL=12, PI=12; 35% fine to medium sand; 1% hard, subrounded gravel to 3/8"; moist, $w=9.2%$ ; yellow-brown; weakly cemented.			
	5.0							
	6.0		OSS-04			6.00		
6725.0	7.0							
	8.0							
	8.5							
	9.0		SS-05					
6722.5	9.5							
	10.0						10.00	

Bottom of Boring at 10.0 ft on 6/13/2023.



PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/13/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-927-02

**GROUNDWATER:**

COLLAR ELEVATION: 6734.1 ft  
 LATITUDE: 41.59692077°  
 LONGITUDE: -109.078658°  
 Groundwater not encountered on 6/13/2023  
 by Juniper Geode GNS3S

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
6732.5	0.5	CR-06		Asphalt Concrete - AC interfaces at 2.63" (delaminated), 5.5", 7.5" (delaminated), 11.5", and 14.0".	1.63	1.63	Located on RW 927, about 1,020 feet from the W EOP, Rt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.
	2.0	OSS-07		Clayey Sand (SC) - About 60% fine to medium sand; about 30% low plasticity fines; about 10% hard, subangular to angular gravel to 1/2"; moist; yellow-brown with red-yellow mottles; weakly cemented.	2.00	3.63	

Bottom of Boring at 3.6 ft on 6/13/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/13/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-927-03

**GROUNDWATER:**

COLLAR ELEVATION: 6737.3 ft  
 LATITUDE: 41.59650682°  
 LONGITUDE: -109.0754964°  
 Groundwater not encountered on 6/13/2023  
 by Juniper Geode GNS3S

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5	CR-08		Asphalt Concrete - AC interfaces at 2.63", 7.0", 10.0", and 14.0" (delaminated).	1.53		Located on RW 927, about 1,890 feet from the W EOP, Lt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.
	1.5	OSS-09		Clayey Sand (SC) - About 60% fine to medium sand; about 30% low plasticity fines; about 10% hard, subangular to angular gravel to 1/2"; moist; yellow-brown with red-yellow mottles; weakly cemented.	2.00	1.53	
6735.0	2.0					2.00	
	2.5						
	3.0						
	3.5					3.53	

Bottom of Boring at 3.5 ft on 6/13/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/13/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-927-04

**GROUNDWATER:**

COLLAR ELEVATION: 6739.3 ft  
 LATITUDE: 41.5957749°  
 LONGITUDE: -109.0716513°  
 Groundwater not encountered on 6/13/2023  
 by Juniper Geode GNS3S

ELEV. (ft)	DEPTH (ft)	TYPE - No.	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5		CR-10		Asphalt Concrete - AC interfaces at 2.63" (delaminated), 7.0", 9.63" (delaminated), and 12.5".	1.53		Located on RW 927, about 2,980 feet from the W EOP, Rt of Center
6737.5	1.0						1.53	Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.
	1.5							
	2.0				Clayey Sand (SC) -			
	2.5							
	3.0		SS-11					
	3.5	BK-14			52% fine to medium sand; 35% low plasticity fines: LL=25, PL=12, PI=13; 12% hard, subangular to angular gravel to 1"; moist, $w_p=9.1\%$ ; light gray-brown; weakly cemented.			CBR=24.8% (ASTM D1557)
6735.0	4.0				As above except yellow and fine to coarse, subangular sand.			
	4.5							
	5.0		OSS-12					
	5.5							
	6.0				As above.		8.47	
6732.5	6.5							
	7.0		OSS-13					
	7.5							
	8.0							
	8.5				About 80% fine sand; about 20% nonplastic fines; moist; yellow-brown; weakly cemented			
6730.0	9.0		SS-15					
	9.5							
	10.0						10.00	

Bottom of Boring at 10.0 ft on 6/13/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/14/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-927-05

**GROUNDWATER:**

COLLAR ELEVATION: 6742.0 ft  
 LATITUDE: 41.59525846°  
 LONGITUDE: -109.0679848°  
 Groundwater not encountered on 6/14/2023  
 by Juniper Geode GNS3S

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5	CR-41		Asphalt Concrete - AC interfaces at 2.5", 11.0" (delaminated and fragmented to 15.0"), and 15.0".	1.35	1.35	Located on RW 927, about 4,000 feet from the W EOP, Lt of Center at TW A3.  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.
	1.0						
6740.0	1.5	OSS-42		Clayey Sand (SC) - About 60% fine to medium sand; about 30% low plasticity fines; about 10% hard, subangular to angular gravel to 1/2"; moist; yellow-brown with red-yellow mottles; weakly cemented.	2.00	3.35	
	2.0						
	2.5						
	3.0						

Bottom of Boring at 3.4 ft on 6/14/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/15/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-927-06

**GROUNDWATER:**

COLLAR ELEVATION: 6745.2 ft  
 LATITUDE: 41.59440224°  
 LONGITUDE: -109.064308°  
 Groundwater not encountered on 6/15/2023  
 by Juniper Geode GNS3S

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
6745.0	0.5	CR-55		Asphalt Concrete - Seal Coat; AC interfaces at 3.13", 6.63" (delaminated), and 11.63".	1.48	1.48	Located on RW 927, about 5,055 feet from the W EOP, Rt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.
	1.0						
	1.5	OSS-56		Clayey Sand (SC) - About 60% fine to coarse, subangular sand; about 30% low plasticity fines; about 10% hard, subangular to angular gravel to 1/2"; moist; yellow-brown; weakly cemented.	2.00	3.48	
	2.0						
6742.5	2.5						
	3.0						

Bottom of Boring at 3.5 ft on 6/15/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/13/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-927-07

**GROUNDWATER:**

COLLAR ELEVATION: 6747.4 ft  
 LATITUDE: 41.59392506°  
 LONGITUDE: -109.0608263° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/13/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5		CR-16		Asphalt Concrete - Seal coat; AC interfaces at 2.5" (delaminated), 9.5" (delaminated), and 11.5" (delaminated).	1.63		Located on RW 927, about 6,015 feet from the W EOP, Lt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch. CBR=41.0% (95% ASTM D1557)
6745.0	2.0	BK-19	SS-17		Clayey Sand (SC) - 52% fine to medium sand; 36% low plasticity fines: LL=25, PL=11, PI=14; 12% hard, subangular to angular gravel to 1"; moist, $w=4.2%$ ; yellow-brown.		1.63	
6742.5	4.0		OSS-18		As above except more dense, weak to moderately cemented, and red-yellow mottles present.	5.27		
	6.0		SS-20				6.90	

Bottom of Boring at 6.9 ft on 6/13/2023.

Very hard driving the SS. No recovery in OSS-20. Auger and SS refusal at 6.9'.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY


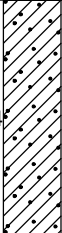


METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/14/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-927-08

**GROUNDWATER:**

COLLAR ELEVATION: 6753.3 ft  
 LATITUDE: 41.59325745°  
 LONGITUDE: -109.0573741°  
 Groundwater not encountered on 6/14/2023  
 by Juniper Geode GNS3S

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
6752.5	0.5	CR-43		Asphalt Concrete - Seal coat; AC interfaces at 6.0", 8.75", 15.0" (delaminated), and 17.0" (delaminated); stripped below 1.5".	1.58	1.58	Located on RW 927, about 7,000 feet from the W EOP, Rt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.
6750.0	2.0	OSS-44		Clayey Sand (SC) - About 60% fine to medium sand; about 30% nonplastic fines; about 10% hard, subangular to angular gravel to 1"; moist; yellow-brown; weakly cemented.	2.00	3.58	

Bottom of Boring at 3.6 ft on 6/14/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/15/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-927-09

**GROUNDWATER:**

COLLAR ELEVATION: 6756.5 ft  
 LATITUDE: 41.5927489°  
 LONGITUDE: -109.0537344° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/15/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5		CR-66		Asphalt Concrete - Seal coat; AC interfaces at 2.33", 3.25 (delaminated), 7.25", 8.33", 11.5" (delaminated), and 14.5 (delaminated); stripped below 11.5".	1.35		Located on RW 927, about 8,000 feet from the W EOP, Lt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch. CBR=22.3% (95% ASTM D1557)
6755.0	1.5	BK-68	SS-67		Clayey Sand with Gravel (SC) - 50% fine to medium sand; 34% low plasticity fines; 16% hard, subrounded to subangular gravel to 1"; moist, $w=7.7\%$ ; yellow-brown with red-yellow mottles; weakly cemented.		1.35	
6752.5	4.0		OSS-69		As above except gravel to 1.5".			
6750.0	6.5		OSS-70		About 60% fine to medium sand about 40% low plasticity fines; moist; yellow brown.			
6747.5	9.0		SS-71		As above.			
	10.0				Bottom of Boring at 10.0 ft on 6/15/2023.		10.00	



PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY


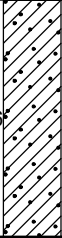


METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/14/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-927-10

**GROUNDWATER:**

COLLAR ELEVATION: 6760.4 ft  
 LATITUDE: 41.59191598°  
 LONGITUDE: -109.0502728° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/14/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
6760.0	0.5	CR-45		Asphalt Concrete - Seal coat; AC interfaces at 2.75", 11.5", and 16.5"; stripped below 2.75".	1.58	1.58	Located on RW 927, about 9,000 feet from the W EOP, Rt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.
6757.5	2.0	OSS-46		Clayey Sand (SC) - About 60% fine to medium sand; about 30% nonplastic fines; about 10% hard, subangular to angular gravel to 1"; moist; yellow-brown; weakly cemented.	2.00	3.58	

Bottom of Boring at 3.6 ft on 6/14/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/15/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-927-11

**GROUNDWATER:**

COLLAR ELEVATION: 6764.7 ft  
 LATITUDE: 41.5914675°  
 LONGITUDE: -109.0469501° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/15/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5		CR-49		Asphalt Concrete - Seal coat to 0.75"; 2.5", 7.63", 10.75", and 13.5" (delaminated).	1.45	1.45	Located on RW 927, about 9,915 feet from the W EOP, Lt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch. CBR=19.4% (95% ASTM D1557)
6762.5	1.5				Clayey Sand (SC) - 45% fine to medium sand; 41% low plasticity fines: LL=26, PL=11, PI=15; 14% hard, subrounded gravel to 1"; dry, w=2.5%; yellow-brown; weakly cemented.			
	2.0	BK-51	SS-50					
	3.0							
	4.0				As above.			
6760.0	4.5		OSS-52				5.70	
	5.0							
6757.5	6.0		OSS-53		Silty Sand with Gravel (SM) - About 50% fine to coarse, subangular sand; about 30% nonplastic fines; about 20% hard, subangular gravel to 1"; moist; yellow; weakly cemented.		2.50	
	6.5							
	7.0							
	7.5							
	8.0							
	8.0						8.20	
	8.5							
	8.5		SS-54		Clayey Sand (SC) - About 80% fine to medium sand; about 20% low plasticity fines; moist; yellow-brown.		1.80	
6755.0	9.0							
	9.5							
	10.0						10.00	

Bottom of Boring at 10.0 ft on 6/15/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/16/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-TERM-01

**GROUNDWATER:**

COLLAR ELEVATION: 6729.3 ft  
 LATITUDE: 41.60253101°  
 LONGITUDE: -109.0752847°  
 Groundwater not encountered on 6/16/2023  
 by Juniper Geode GNS3S

ELEV. (ft)	DEPTH (ft)	TYPE - No.	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5		CR-82		Asphalt Concrete - AC interface at 2.13"; fresh.	0.43	0.43	Located on Terminal Rd, about 600 feet E of SR370 on curve and E shoulder.  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch. CBR=17.2% (95% ASTM D1557)
	1.0		GB-83		Poorly Graded Gravel with Silt and Sand (GP-GM) - (Base) 63% hard, subrounded to subangular gravel to 1"; 29% fine to coarse, subangular sand; 8% nonplastic fines; moist; brown.	0.66	1.09	
6727.5	1.5				Clayey Sand with Gravel (SC) - 42% fine to medium sand; 39% low plasticity fines: LL=24, PL=13, PI=9; 19% hard, subrounded to subangular gravel to 3/4"; moist, w=9.3%; yellow-brown.			
	3.0	BK-85	SS-84				4.91	
6725.0	5.0		SS-86				6.00	

Bottom of Boring at 6.0 ft on 6/16/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/16/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-TERM-02

**GROUNDWATER:**

COLLAR ELEVATION: 6731.9 ft  
 LATITUDE: 41.602315°  
 LONGITUDE: -109.0741379° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/16/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
6730.0	0.5	CR-94		Asphalt Concrete - AC interface at 2.5" (delaminated); stripped.	0.43	0.43	Located on Airport Rd, about 430 feet E of SR370 in WB lane.  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.
	1.0			Poorly Graded Sand with Silt and Gravel (SP-SM) - (Base) About 50% fine to coarse, subangular sand; about 40% hard, subangular gravel to 3/4"; about 10% nonplastic fines; moist; yellow.	0.60	1.03	
	1.5	OSS-95		Clayey Sand (SC) - About 70% fine to medium sand; about 20% low plasticity fines; about 10% hard, subrounded to subangular gravel to 1"; moist; yellow-brown with red-yellow mottles.	1.40	2.43	

Bottom of Boring at 2.4 ft on 6/16/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/16/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-TERM-03

**GROUNDWATER:**

COLLAR ELEVATION: 6739.9 ft  
 LATITUDE: 41.6000642°  
 LONGITUDE: -109.0725033° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/16/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5		CR-89		Asphalt Concrete - AC interfaces at 2.5" (delaminated) and 4.25" (delaminated); stripped below 2.5".	0.43	0.43	Located on Airport Rd, about 1,785 feet E of SR370 in WB lane. Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.
	1.0		GB-90		Well Graded Gravel with Silt and Sand (GP-GM) - (Base) 55% hard, subangular gravel to 1"; 35% fine to coarse, subangular sand; 10% nonplastic fines; moist; yellow.	1.00	1.43	
	1.5				Poorly Graded Sand with Silt and Gravel (SP-SM) - (Fill) About 80% fine to coarse, subangular sand; about 10% hard, subrounded to subangular gravel to 1"; about 10% nonplastic fines; moist; yellow-brown			
6737.5	2.5		SS-91			3.07		
	4.5		SS-93		Sandy Lean Clay (CL) - 52% low plasticity fines: LL=26, PL=13, PI=13; 43% fine to medium sand; 5% hard, subrounded to subangular gravel to 1/2"; moist, $\omega$ =10.5%; yellow-brown.		4.50	CBR=13.1% (95% ASTM D1557)
6735.0	5.0		BK-92					
	6.0					3.10		
6732.5	7.5						7.60	

Bottom of Boring at 7.6 ft on 6/16/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/16/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-TERM-04

**GROUNDWATER:**

COLLAR ELEVATION: 6738.3 ft  
 LATITUDE: 41.5996216°  
 LONGITUDE: -109.0707864° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/16/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
6737.5	0.5	CR-87		Asphalt Concrete - AC interface at 1.0"; stripped and fragmented.	0.58	0.58	Located on Terminal Rd, about 245 feet S of Airport Rd in R through lane.  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch.
	1.0			Poorly Graded Sand with Silt and Gravel (SP-SM) - (Base) About 50% fine to coarse, subangular sand; about 40% hard, subangular gravel to 3/4"; about 10% nonplastic fines; moist; brown.	0.55	1.13	
	1.5	OSS-88		Clayey Sand (SM) - About 70% fine to medium sand; about 30% low plasticity fines; moist; yellow-brown.	1.45	2.58	

Bottom of Boring at 2.6 ft on 6/16/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/14/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-TWC-01

**GROUNDWATER:**

COLLAR ELEVATION: 6747.8 ft  
 LATITUDE: 41.59924828°  
 LONGITUDE: -109.0627242°  
 Groundwater not encountered on 6/14/2023  
 by Juniper Geode GNS3S

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
6747.5	0.5	CR-47		Asphalt Concrete - Single life; fresh.	0.34	0.34	Located on TWC, about 100 feet E of GA Apron EOC, Rt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch. Woven geotextile fabric observed at 0.82 feet at bottom of base material.
	1.0			Poorly Graded Gravel with Silt and Sand (GP-GM) - (Base) About 50% hard, subangular gravel to 3/4"; about 40% fine to coarse, subangular sand; about 10% nonplastic fines; wet from coring; red-brown.	0.48	0.82	
	1.5	OSS-48		Silty Sand (SM) - 73% fine sand; 19% nonplastic fines; 8% hard, subangular gravel to 1"; moist, $\omega=6.3\%$ ; yellow-brown.	1.51	2.33	
	2.0			Bottom of Boring at 2.3 ft on 6/14/2023.			

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/15/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-TWC-02

**GROUNDWATER:**

COLLAR ELEVATION: 6746.8 ft  
 LATITUDE: 41.59881765°  
 LONGITUDE: -109.0605475° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/15/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5		CR-59		Asphalt Concrete - AC interface at 2.5".	0.37	0.37	Located on TWC, about 715 feet E of GA Apron EOC, Lt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch. Woven geotextile fabric observed at 1.2 feet at bottom of base material. CBR=32.9% (95% ASTM D1557)
	1.0		GB-60		Poorly Graded Gravel with Silt and Sand (GP-GM) - (Base) 57% hard, subangular gravel to 1"; 35% fine to coarse, subangular sand; 8% nonplastic fines; wet from coring; yellow-brown.	0.83	1.20	
6745.0	2.0		BK-62		Silty Sand (SM) - 68% fine to medium sand; 25% nonplastic to low plasticity fines: LL=17, PL=15, PI=2; 7% hard, subrounded to subangular gravel to 3/4"; dry, $\omega$ =2.1%; yellow-brown.	2.80		
	3.0		SS-61					
	4.0						4.00	
6742.5	4.5		OSS-63		Clayey Sand (SC) - About 80% fine to medium sand; about 20% low plasticity fines; moist; yellow-brown; weakly cemented.			
	6.0				About 70% fine to medium sand; about 30% low plasticity fines; moist; yellow-brown, weakly cemented.			
6740.0	7.0		OSS-64				6.00	
	8.0				As above.			
6737.5	9.0		SS-65					
	10.0						10.00	

Bottom of Boring at 10.0 ft on 6/15/2023.



PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/16/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-TWD-01

**GROUNDWATER:**

COLLAR ELEVATION: 6745.5 ft  
 LATITUDE: 41.59628263°  
 LONGITUDE: -109.0652147° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/16/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
6745.0	0.5		CR-74		Asphalt Concrete - AC interface at 3.63"; fresh.	0.54	0.54	Located on TWD, about 150 feet N of TWA, Lt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch. Nonwoven geotextile fabric observed at 0.95 feet at bottom of base material. CBR=25.9% (95% ASTM D1557)
	1.0		GB-75		Well Graded Gravel with Silt and Sand (GW-GM) - (Base) 51% hard, subangular gravel to 3/4"; 43% fine to coarse, subangular sand; 6% nonplastic fines; moist; yellow.	0.41	0.95	
	1.5				Silty, Clayey Sand with Gravel (SC-SM) - 60% fine to coarse, subangular to angular sand; 21% hard, subangular to angular gravel to 1.5"; 19% low plasticity fines: LL=20, PL=16; PI=4; moist, w=5.1%; yellow-brown.			
	2.0		BK-77					
	2.5							
6742.5	3.0		SS-76					
	3.5							
	4.0							
	4.5							
	5.0		BK-79					
6740.0	5.5		OSS-78		Clayey Sand (SC) - About 70% fine sand; about 30% low plasticity fines; moist; yellow-brown with red-brown mottles; weakly cemented.			
	6.0				As above.			
	6.5							
	7.0		OSS-80					
	7.5							
6737.5	8.0				As above.			
	8.5							
	9.0		SS-81					
	9.5							
	10.0							

Bottom of Boring at 10.0 ft on 6/16/2023.

PROJECT: RKS Master Plan  
 LOCATION: Sweetwater County, WY



METHOD: Hollow-Stem Auger  
 DATE LOGGED: 6/16/2023  
 LOGGED BY: Justin Stoffel, PE

BORING NO. SW23-TWD-02

**GROUNDWATER:**

COLLAR ELEVATION: 6746.7 ft  
 LATITUDE: 41.59809044°  
 LONGITUDE: -109.0626883° by Juniper Geode GNS3S  
 Groundwater not encountered on 6/16/2023

ELEV. (ft)	DEPTH (ft)	TYPE - No.	LITHOLOGY	MATERIAL DESCRIPTION (Stratification lines represent approximate boundaries between materials)	LAYER THICKNESS (ft.)	DEPTH (ft)	REMARKS
	0.5	CR-72		Asphalt Concrete - AC interfaces at 1.73" (delaminated) and 5.13"; stripping below 5.13".	0.52	0.52	Located on TWD, about 1,100 feet N of TWA, Rt of Center  Driller: S&W Drill: Custom Trailer Auger ID: 3.25" Backfill: Auger cuttings, gravel & asphalt cold patch. Nonwoven geotextile observed at 1.0 feet below the base material.
	1.0			Poorly Graded Sand with Silt and Gravel (SP-SM) - (Base) About 50% fine to coarse, subangular sand; about 40% hard, subangular gravel to 3/4"; about 10% nonplastic fines; moist; yellow.	0.48	1.00	
6745.0	1.5	OSS-73		Clayey Sand (SC) - About 60% fine to medium sand; about 30% nonplastic fines; about 10% hard, subangular to angular gravel to 1"; moist; yellow-brown; weakly cemented.	1.52	2.52	
	2.5			Bottom of Boring at 2.5 ft on 6/16/2023.			



Photo 1: SW23-321-01, CR-21; 0.0'-0.58'



Photo 2: SW23-321-02, CR-27; 0.0'-0.5'



Photo 3: SW23-321-03, CR-30; 0.0'-0.45'



Photo 4: SW23-321-04, CR-33; 0.0'-1.18'



Photo 5: SW23-321-05, CR-39; 0.0'-0.53'



Photo 6: SW23-321-06, CR-57; 0.0'-0.45'



Photo 7: SW23-927-01, CR-01; 0.0'-1.6'



Photo 8: SW23-927-02, CR-06; 0.0'-1.52'





Photo 9: SW23-927-03, CR-08; 0.0'-1.55'



Photo 10: SW23-927-04, CR-10; 0.0'-1.4'



Photo 11: SW23-927-05, CR-41; 0.0'-1.37'



Photo 12: SW23-927-06, CR-55; 0.0'-1.45'



Photo 13: SW23-927-07, CR-16; 0.0'-1.29'



Photo 14: SW23-927-08, CR-43; 0.0'-1.56'



Photo 15: SW23-927-09, CR-66; 0.0'-1.2'

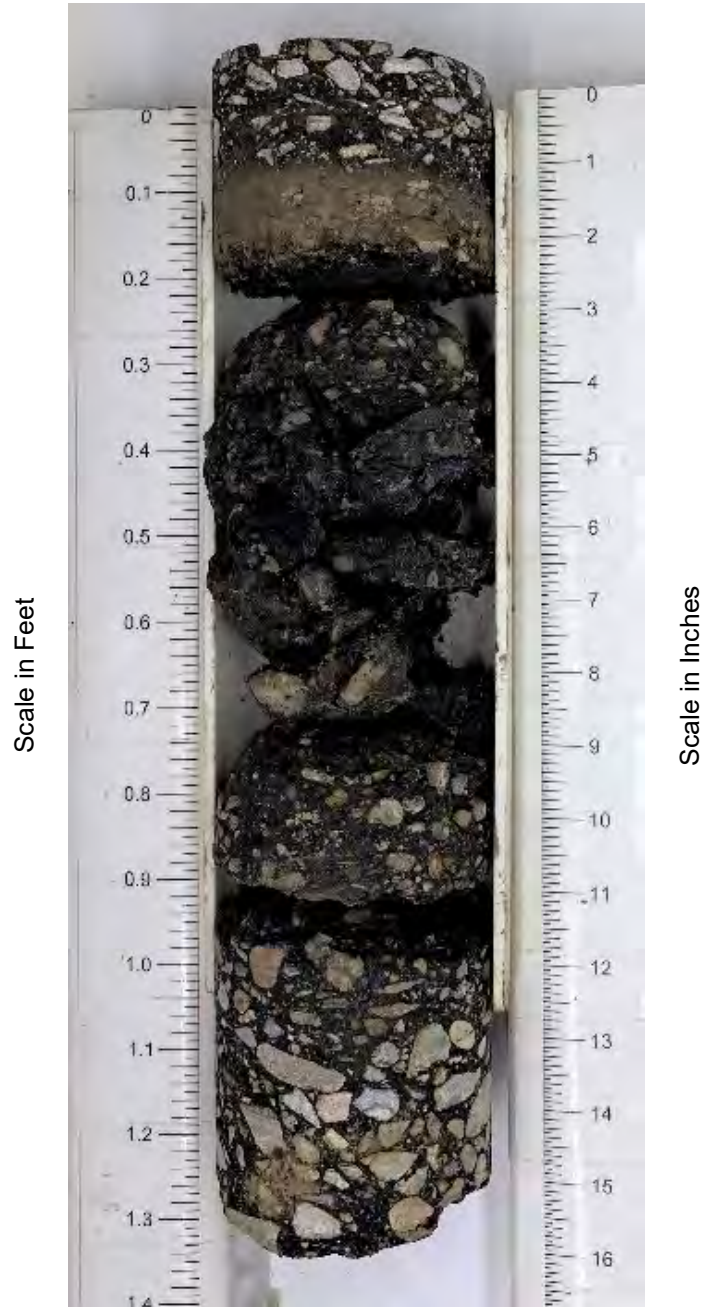


Photo 16: SW23-927-10, CR-45; 0.0'-1.28'





Photo 17: SW23-927-11, CR-49; 0.0'-1.43'



Photo 18: SW23-TERM-01, CR-82; 0.0'-0.40'



Photo 19: SW23-TERM-02, CR-94; 0.0'-0.43'



Photo 20: SW23-TERM-03, CR-89; 0.0'-0.38'



Photo 21: SW23-TERM-04, CR-87; 0.0'-0.25'



Photo 22: SW23-TWC-01, CR-47; 0.0'-0.35'



Photo 23: SW23-TWC-02, CR-59; 0.0'-0.37'



Photo 24: SW23-TWD-01, CR-74; 0.0'-0.54'



Photo 25: SW23-TWD-02, CR-72; 0.0'-0.52'



# DCP TEST RESULTS

Project No: 110339

Prep: SY      QC: JSS

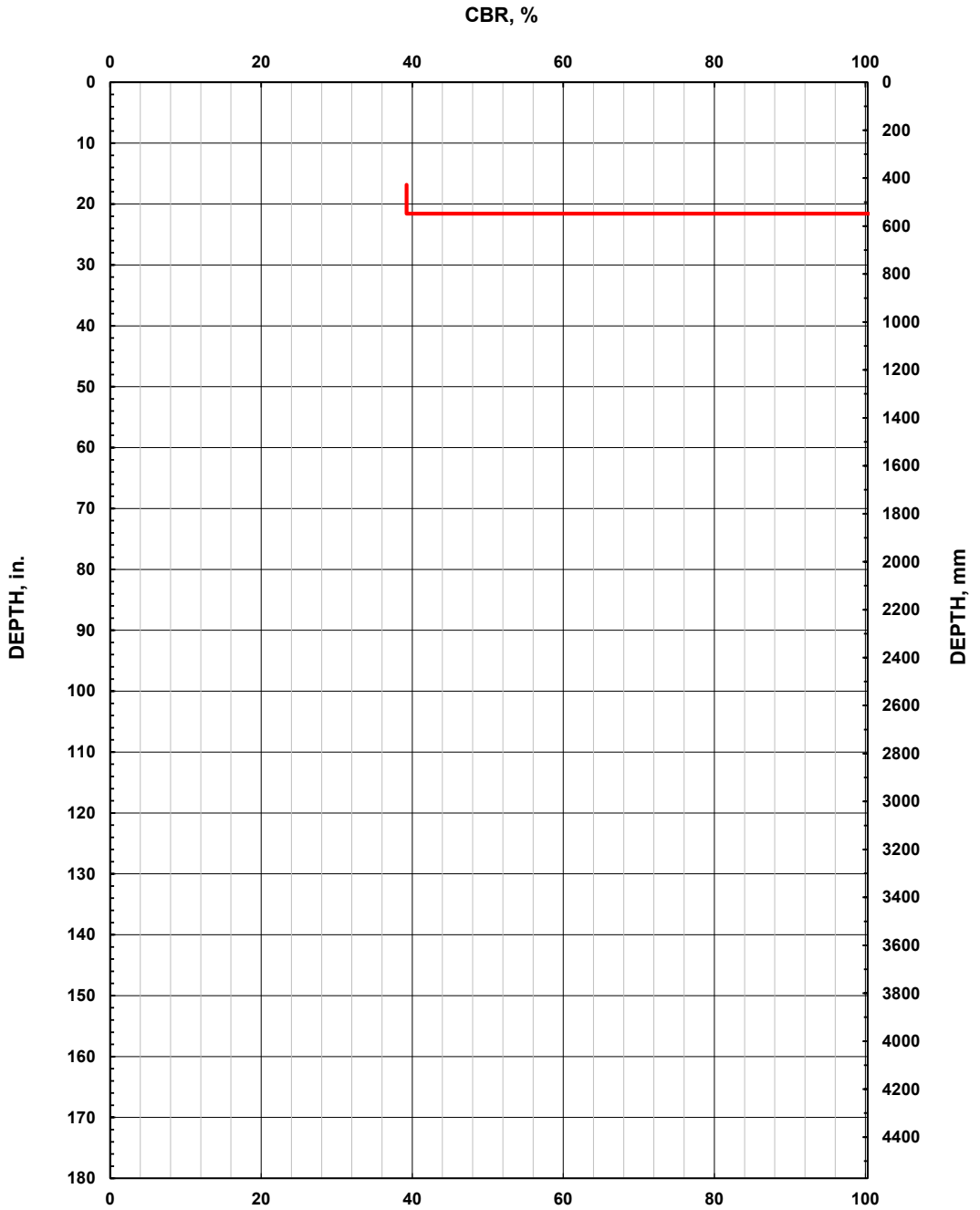
**Project:** RKS Master Plan  
**Location:** SW23-927-04 @ 1.4' BGS

**Date:** June 14, 2023  
**Soil Type(s):** SM or SC

Hammer  
 10.1 lbs.  
 17.6 lbs.  
 Both hammers used

Soil Type  
 CH  
 CL  
 All other soils

No. of Blows	Accumulative Penetration (mm)	Type of Hammer
0	427.7	1
10	487.7	1
10	547.7	1
20	577.7	1
20	617.7	1
20	637.7	1
20	687.7	1
20	712.7	1
20	727.7	1
20	737.7	1
20	747.7	1
20	757.7	1
20	767.7	1
		1
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# DCP TEST RESULTS



Project No: 110339

Prep: SY      QC: JSS

**Project:** RKS Master Plan

**Date:** June 14, 2023

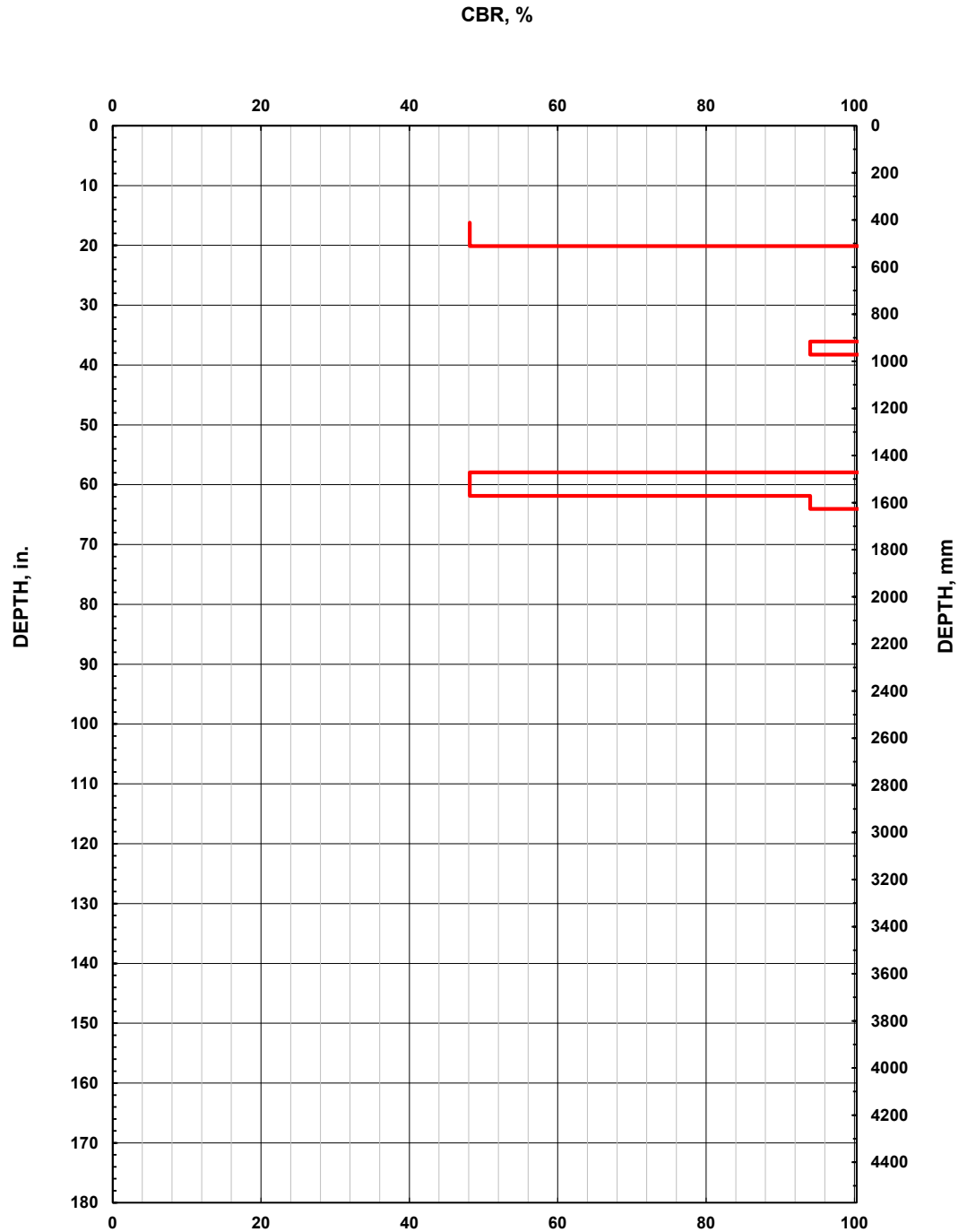
**Location:** SW23-927-07@ 1.35' BGS

**Soil Type(s):** SM or SC

- Hammer
- 10.1 lbs.
  - 17.6 lbs.
  - Both hammers used

- Soil Type
- CH
  - CL
  - All other soils

No. of Blows	Accumulative Penetration (mm)	Type of Hammer
0	411.5	1
20	511.5	1
20	531.5	1
20	561.5	1
20	591.5	1
20	611.5	1
20	641.5	1
20	661.5	1
20	691.5	1
20	711.5	1
20	741.5	1
20	771.5	1
20	796.5	1
20	841.5	1
20	876.5	1
20	916.5	1
20	971.5	1
20	1021.5	1
20	1051.5	1
20	1061.5	1
20	1076.5	1
20	1086.5	1
20	1111.5	1
20	1151.5	1
20	1196.5	1
20	1241.5	1
20	1291.5	1
20	1341.5	1
20	1376.5	1
20	1416.5	1
20	1436.5	1
20	1471.5	1
20	1571.5	1
20	1626.5	1
20	1666.5	1
20	1686.5	1
20	1706.5	1
20	1716.5	1
20	1731.5	1
		1
		1
		1
		1



# DCP TEST RESULTS



Project No: 110339

Prep: SY      QC: JSS

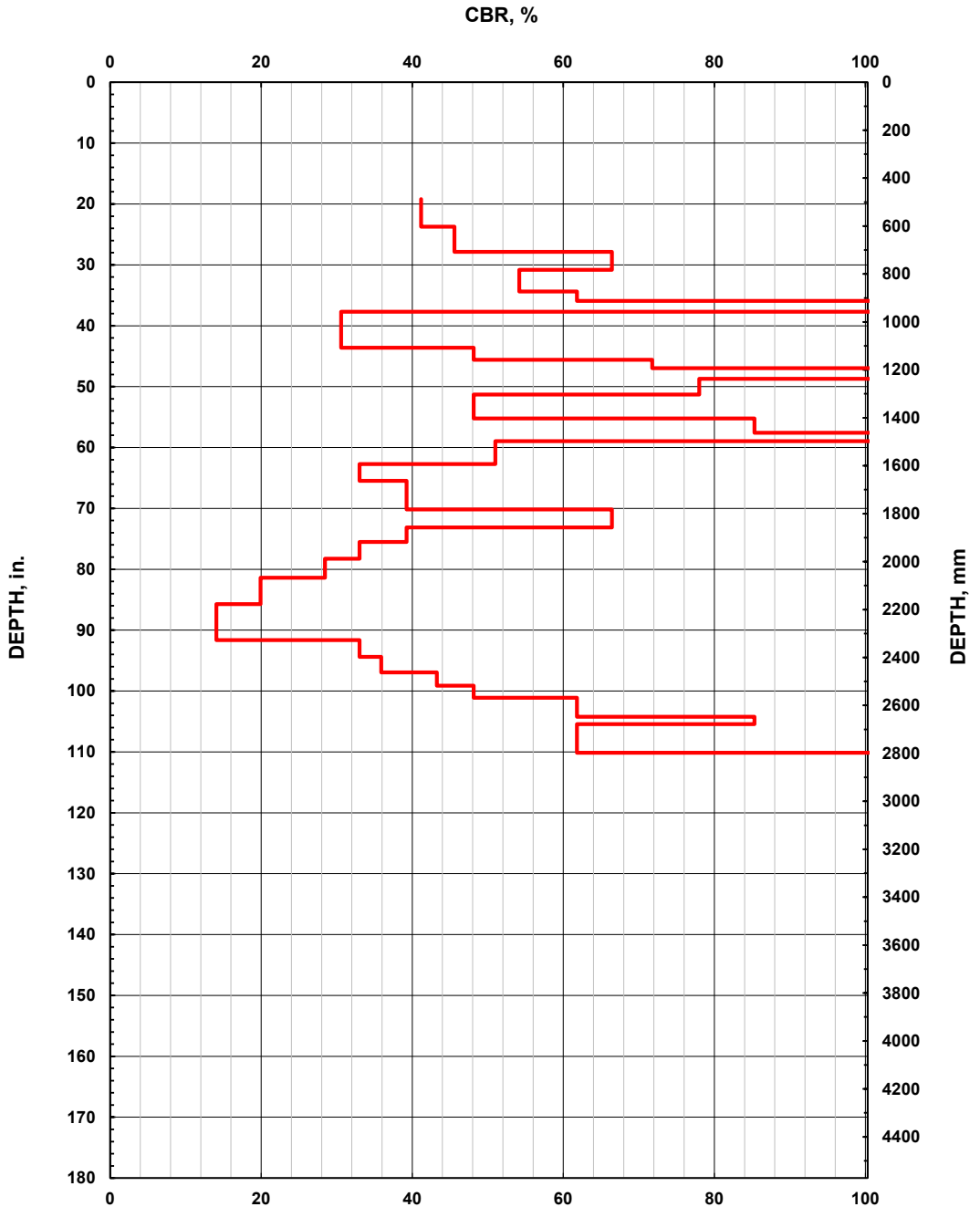
**Project:** RKS Master Plan  
**Location:** SW23-927-09 @ 1.60' BGS

**Date:** June 14, 2023  
**Soil Type(s):** SM or SC

- Hammer**
- 10.1 lbs.
  - 17.6 lbs.
  - Both hammers used

- Soil Type**
- CH
  - CL
  - All other soils

No. of Blows	Accumulative Penetration (mm)	Type of Hammer
0	487.7	1
20	602.7	1
20	707.7	1
20	782.7	1
20	872.7	1
10	912.7	1
20	957.7	1
20	1107.7	1
10	1157.7	1
10	1192.7	1
20	1237.7	1
20	1302.7	1
20	1402.7	1
20	1462.7	1
20	1497.7	1
20	1592.7	1
10	1662.7	1
10	1722.7	1
10	1782.7	1
20	1857.7	1
10	1917.7	1
10	1987.7	1
10	2067.7	1
10	2177.7	1
10	2327.7	1
10	2397.7	1
10	2462.7	1
10	2517.7	1
10	2567.7	1
10	2607.7	1
10	2647.7	1
10	2677.7	1
10	2717.7	1
10	2757.7	1
10	2797.7	1
10	2837.7	1
20	2877.7	1
		1
		1
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		1
		1
		1
		1
		1











# DCP TEST RESULTS



Project No: 110339

Prep: SY      QC: JSS

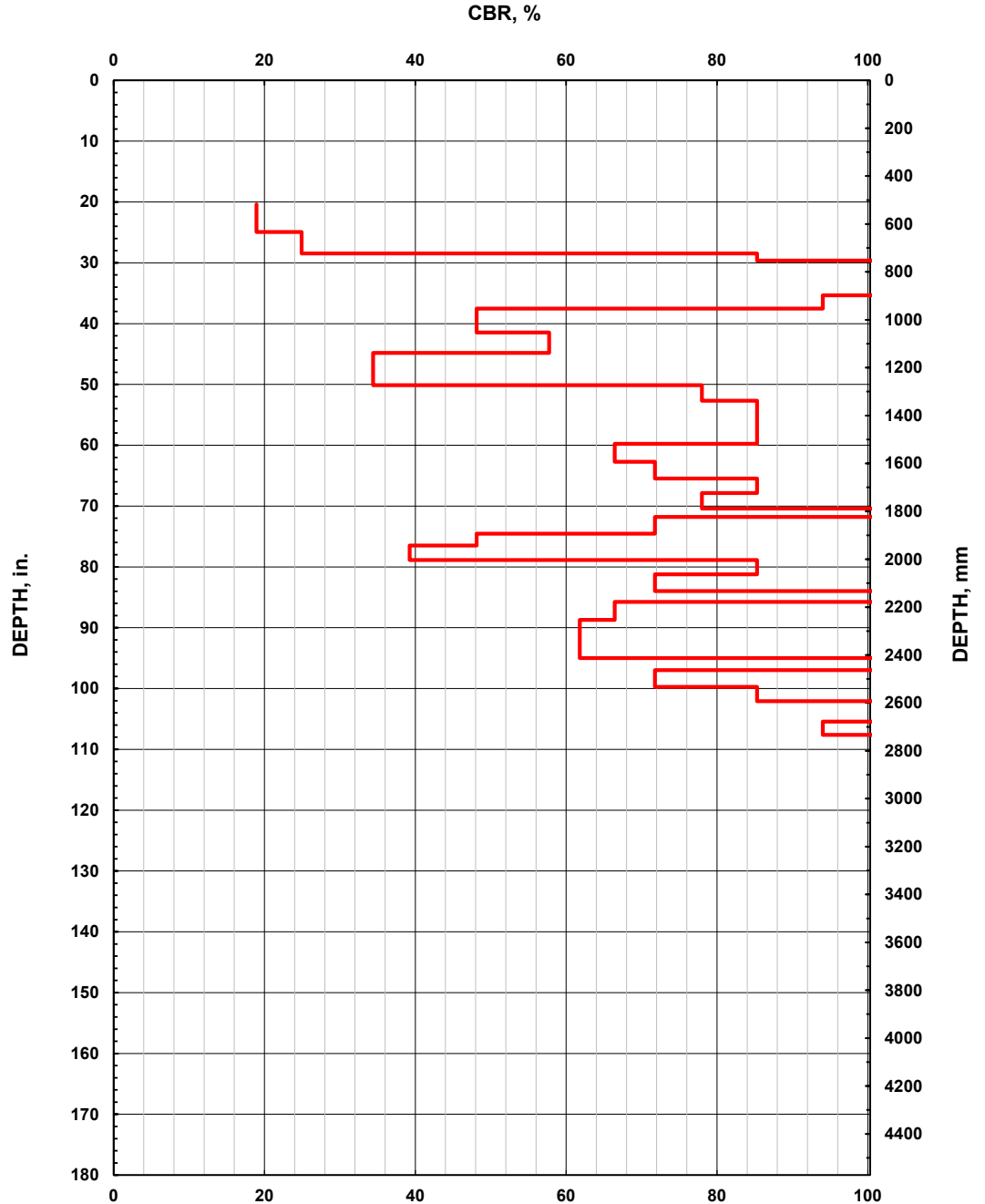
**Project:** RKS Master Plan  
**Location:** SW23-TWD-01 @ 1.70' BGS

**Date:** June 14, 2023  
**Soil Type(s):** SM or SC

- Hammer
- 10.1 lbs.
  - 17.6 lbs.
  - Both hammers used

- Soil Type
- CH
  - CL
  - All other soils

No. of Blows	Accumulative Penetration (mm)	Type of Hammer
0	518.2	1
10	633.2	1
10	723.2	1
10	753.2	1
10	778.2	1
10	788.2	1
10	813.2	1
10	828.2	1
10	843.2	1
10	858.2	1
10	878.2	1
10	898.2	1
20	953.2	1
20	1053.2	1
20	1138.2	1
20	1273.2	1
20	1338.2	1
20	1398.2	1
20	1458.2	1
20	1518.2	1
20	1593.2	1
20	1663.2	1
20	1723.2	1
20	1788.2	1
20	1823.2	1
20	1893.2	1
20	1943.2	1
10	2003.2	1
10	2063.2	1
20	2133.2	1
20	2178.2	1
20	2253.2	1
20	2333.2	1
20	2413.2	1
20	2463.2	1
20	2533.2	1
20	2593.2	1
20	2623.2	1
30	2678.2	1
40	2733.2	1
20	2738.2	1
20	2743.2	1
		1







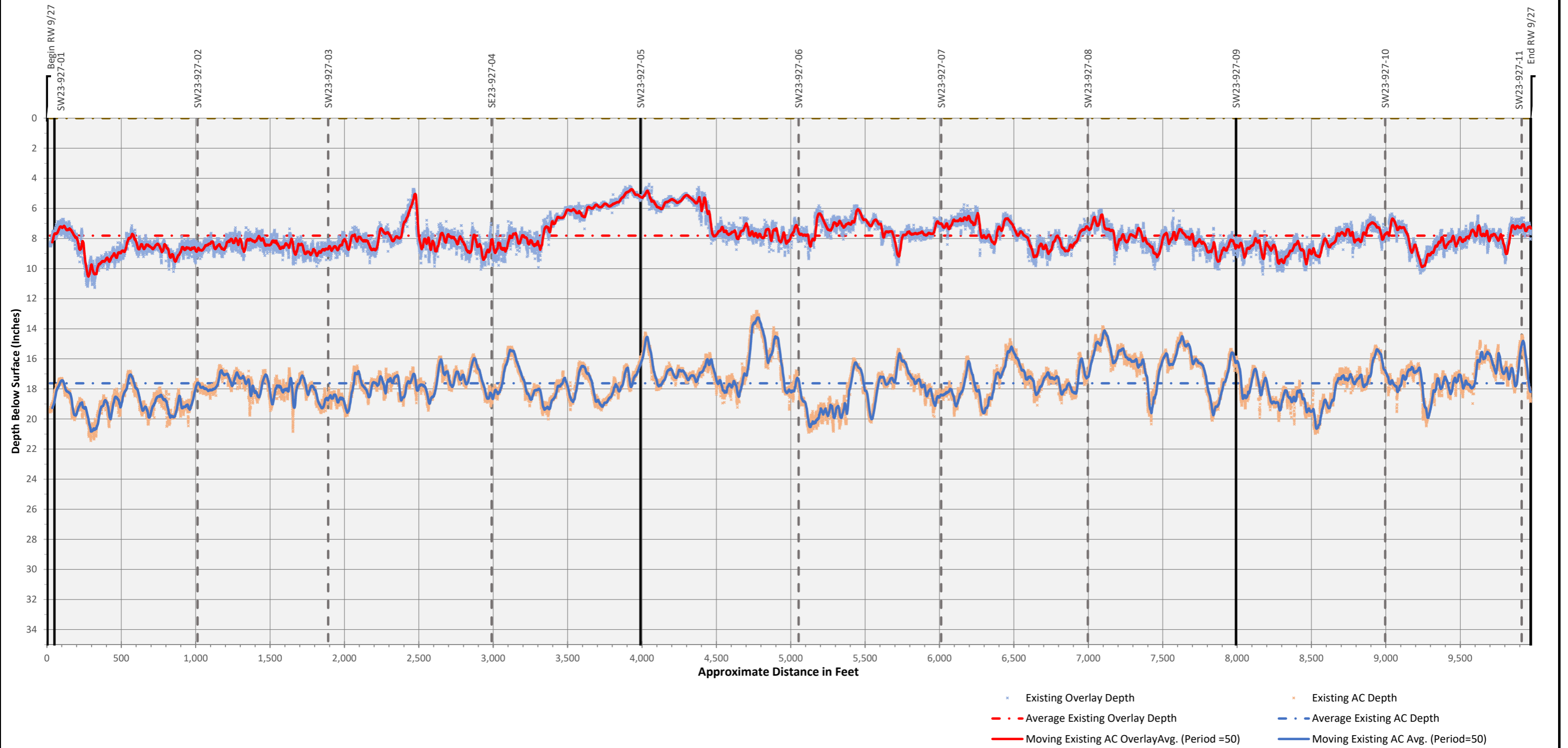


# Existing Pavement Layer Depths

## RKS Master Plan Airfield Pavement Evaluation

### Runway 9-27 Track 1 (34' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



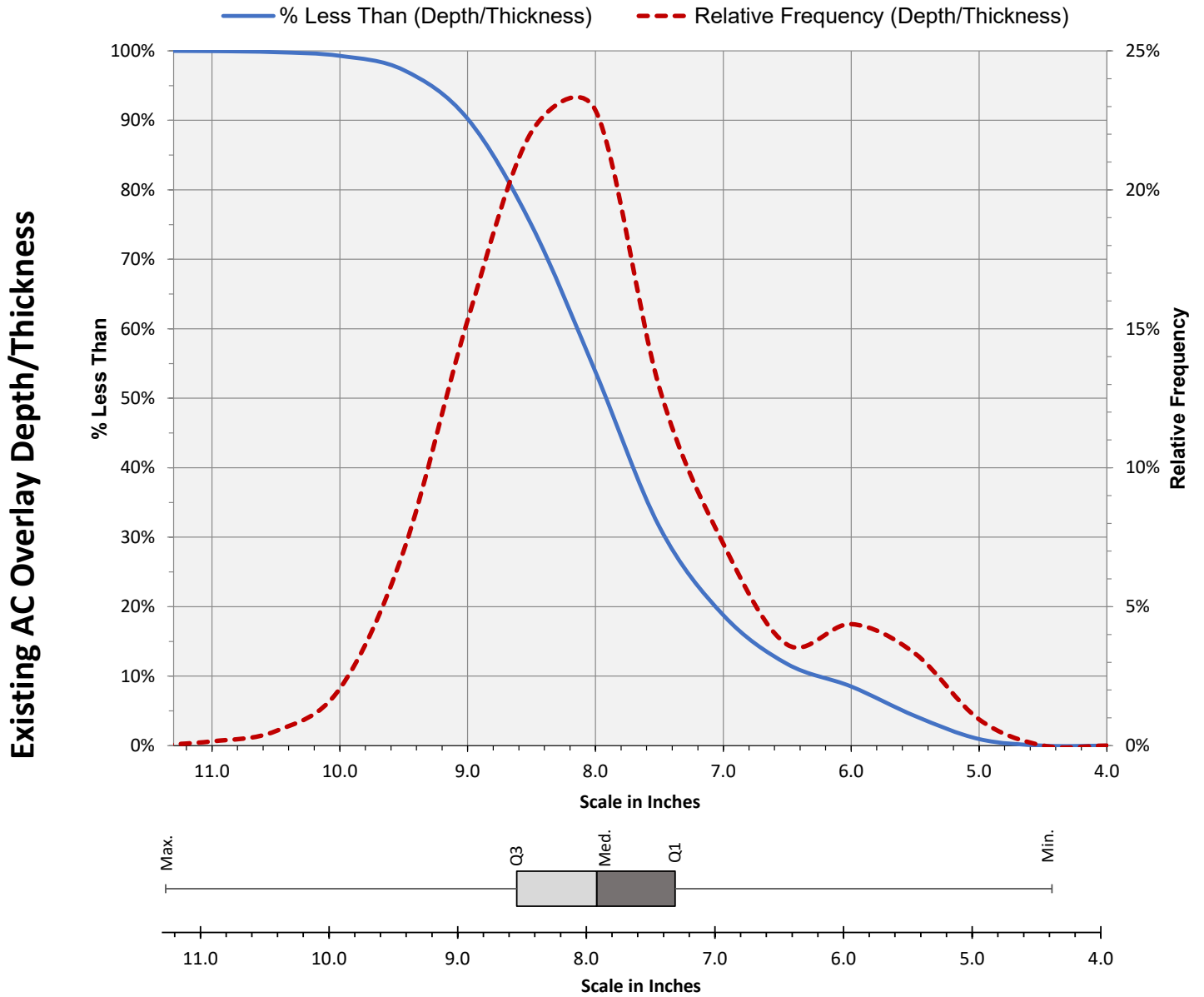
Note: GPR distance scale along the x-axis may not correspond exactly with project stationing.

## Existing Overlay Depth/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Runway 9-27 Track 1  
(34' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



### Existing Overlay Depth/Thickness Statistics

**Average=** 7.8 in. (0.65 ft.)  
**Max=** 11.3 in. (0.94 ft.)  
**Min=** 4.4 in. (0.37 ft.)  
**SD=** 1.1 in. (0.09 ft.)  
**Median=** 7.9 in. (0.66 ft.)  
**Q1=** 7.3 in. (0.61 ft.)  
**Q3=** 8.5 in. (0.71 ft.)

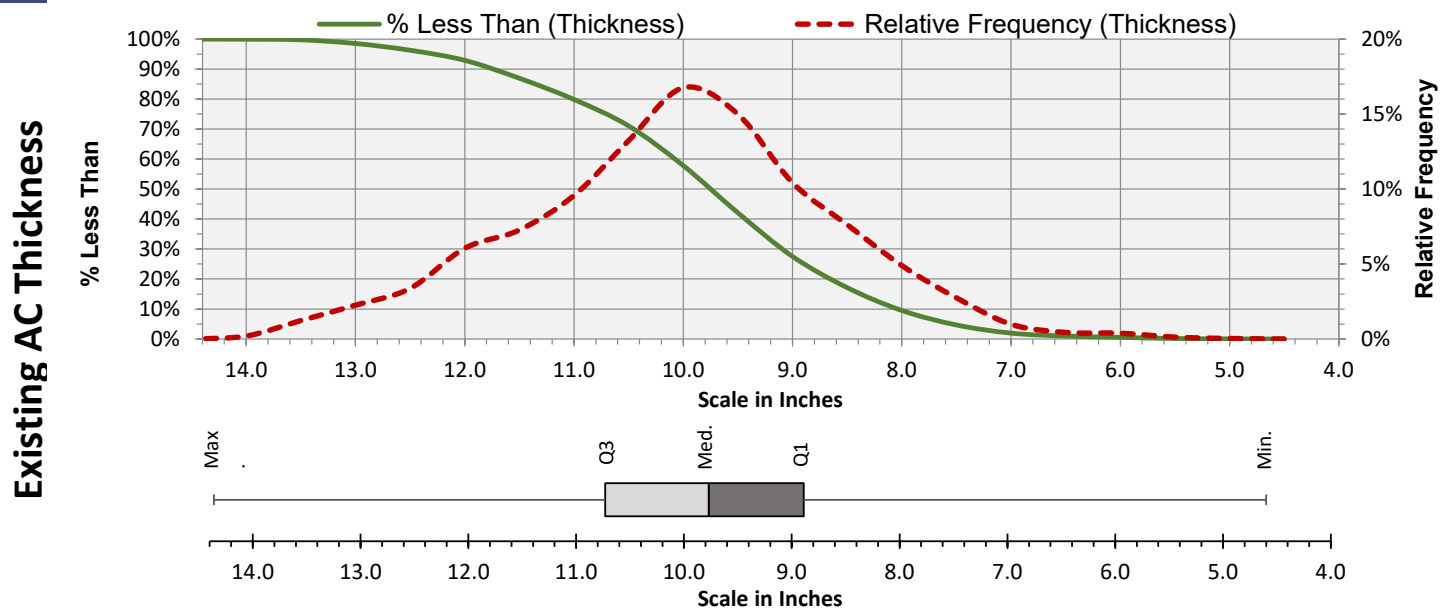
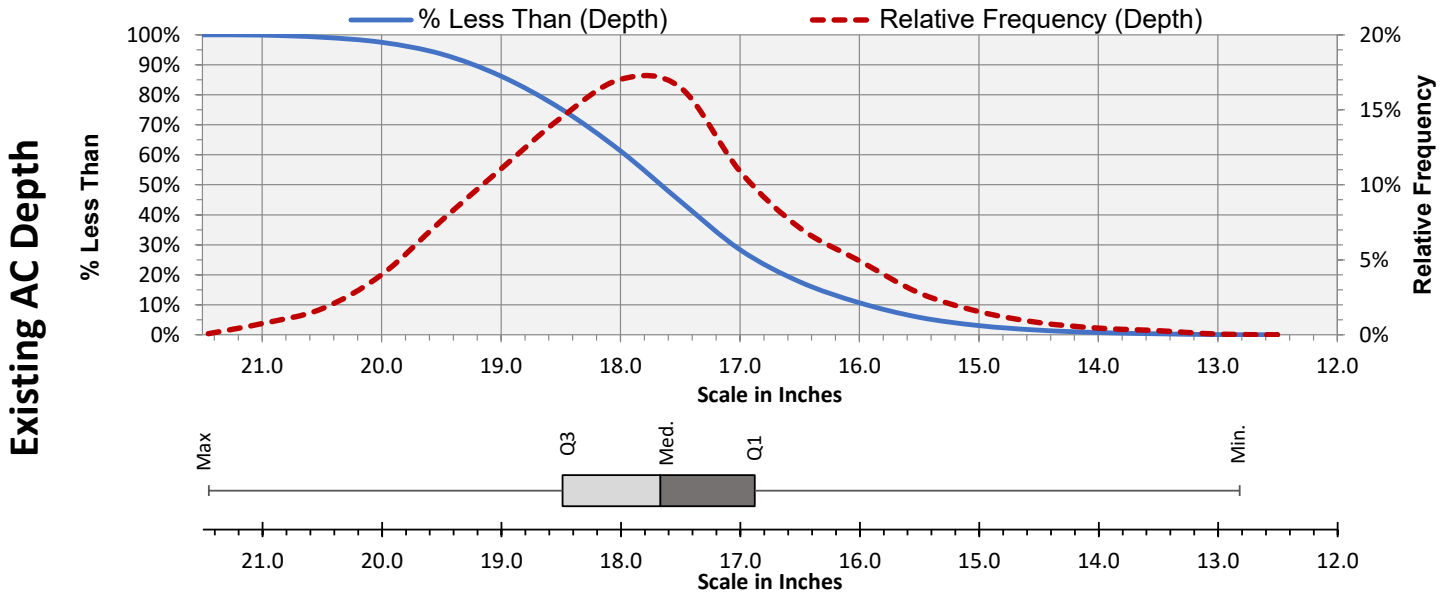
**Total Number of Scans=** 29863

## Existing Overlay Depth/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Runway 9-27 Track 1  
(34' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



**Existing AC Depth Statistics**

Average= 17.6 in. (1.47 ft.)  
 Max= 21.5 in. (1.79 ft.)  
 Min= 12.8 in. (1.07 ft.)  
 SD= 1.3 in. (0.11 ft.)  
 Median= 17.7 in. (1.47 ft.)  
 Q1= 16.9 in. (1.41 ft.)  
 Q3= 18.5 in. (1.54 ft.)

**Existing AC Thickness Statistics**

Average= 9.8 in. (0.82 ft.)  
 Max= 14.4 in. (1.2 ft.)  
 Min= 4.6 in. (0.38 ft.)  
 SD= 1.4 in. (0.12 ft.)  
 Median= 9.8 in. (0.81 ft.)  
 Q1= 8.9 in. (0.74 ft.)  
 Q3= 10.7 in. (0.89 ft.)

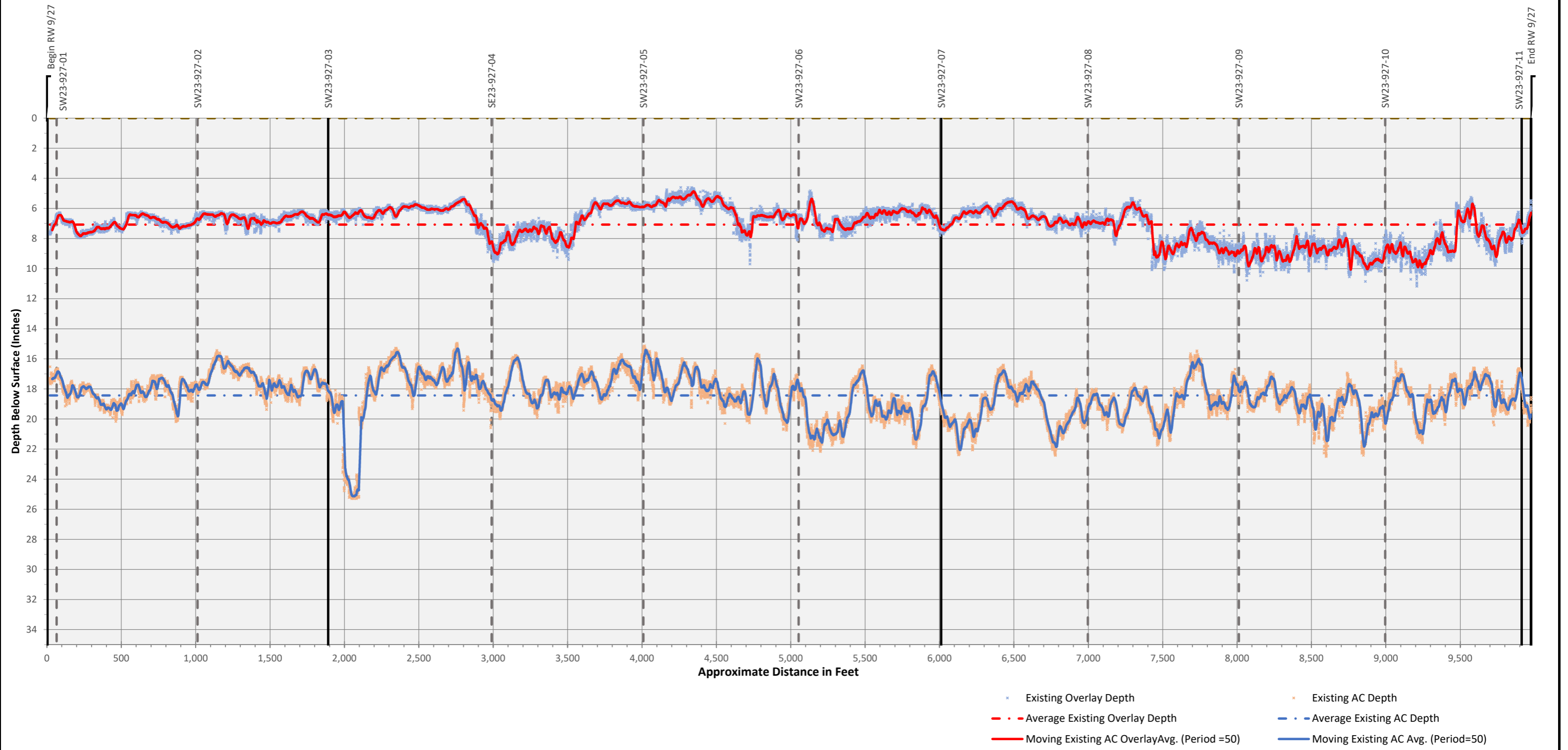
Total Number of Scans= 29863

# Existing Pavement Layer Depths

## RKS Master Plan Airfield Pavement Evaluation

### Runway 9-27 Track 2 (4' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



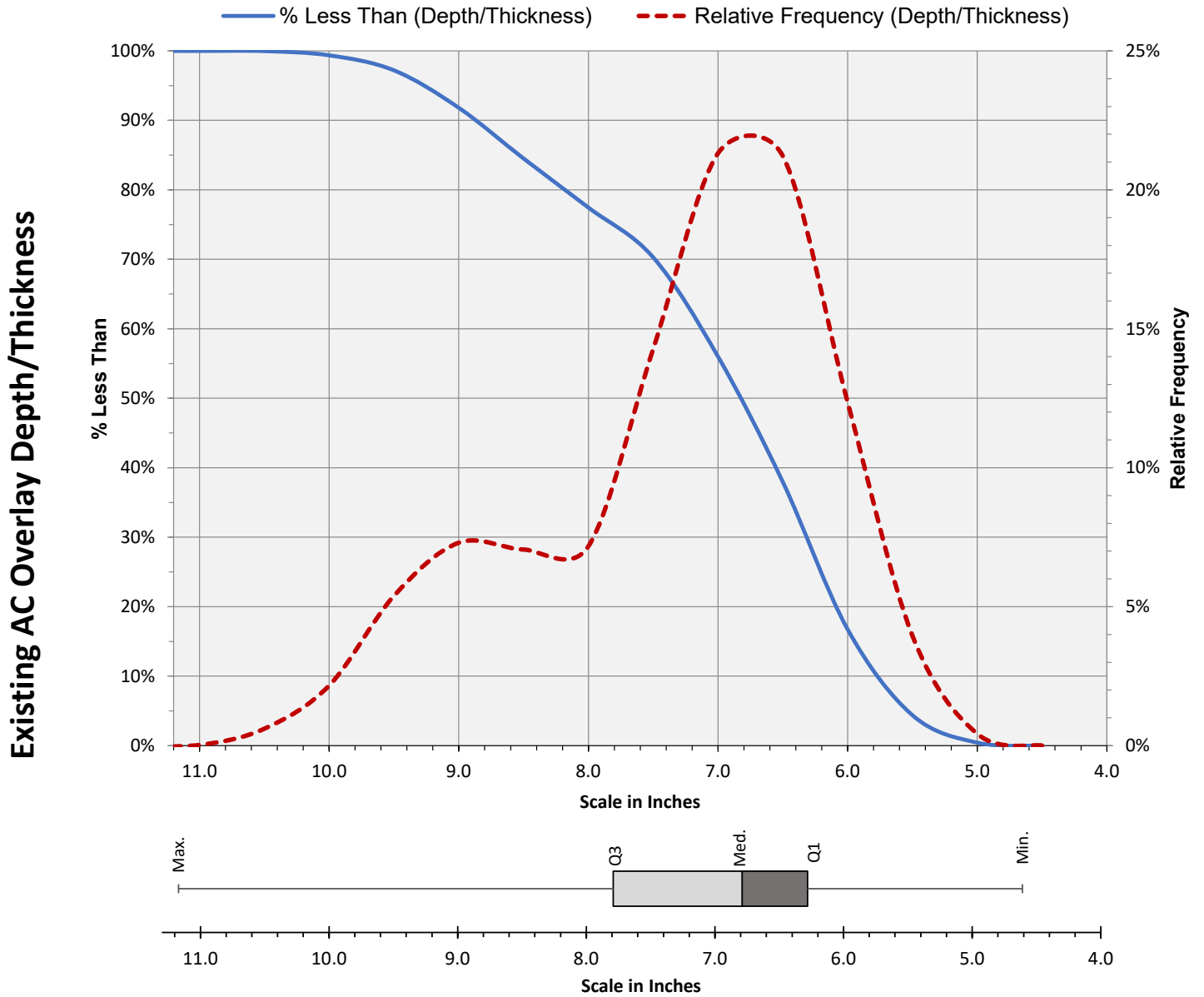
Note: GPR distance scale along the x-axis may not correspond exactly with project stationing.

## Existing Overlay Depth/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Runway 9-27 Track 2  
(4' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



### Existing Overlay Depth/Thickness Statistics

**Average**= 7.1 in. (0.59 ft.)  
**Max**= 11.2 in. (0.93 ft.)  
**Min**= 4.6 in. (0.38 ft.)  
**SD**= 1.1 in. (0.1 ft.)  
**Median**= 6.8 in. (0.57 ft.)  
**Q1**= 6.3 in. (0.52 ft.)  
**Q3**= 7.8 in. (0.65 ft.)

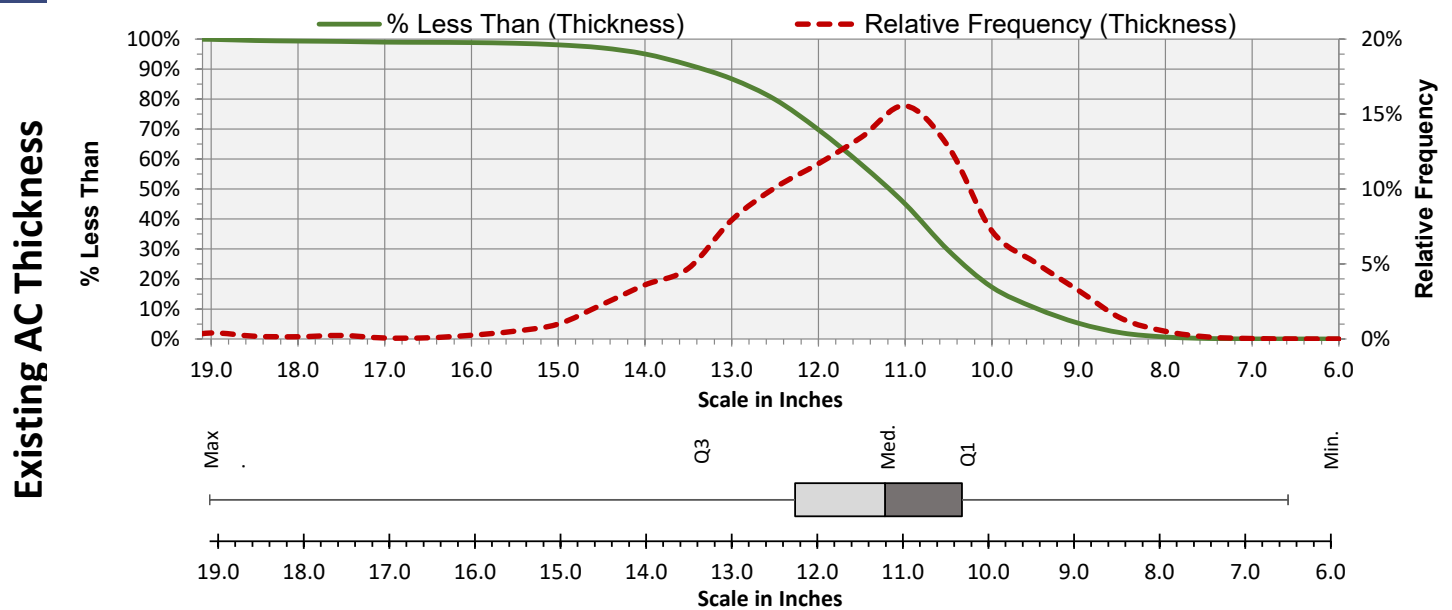
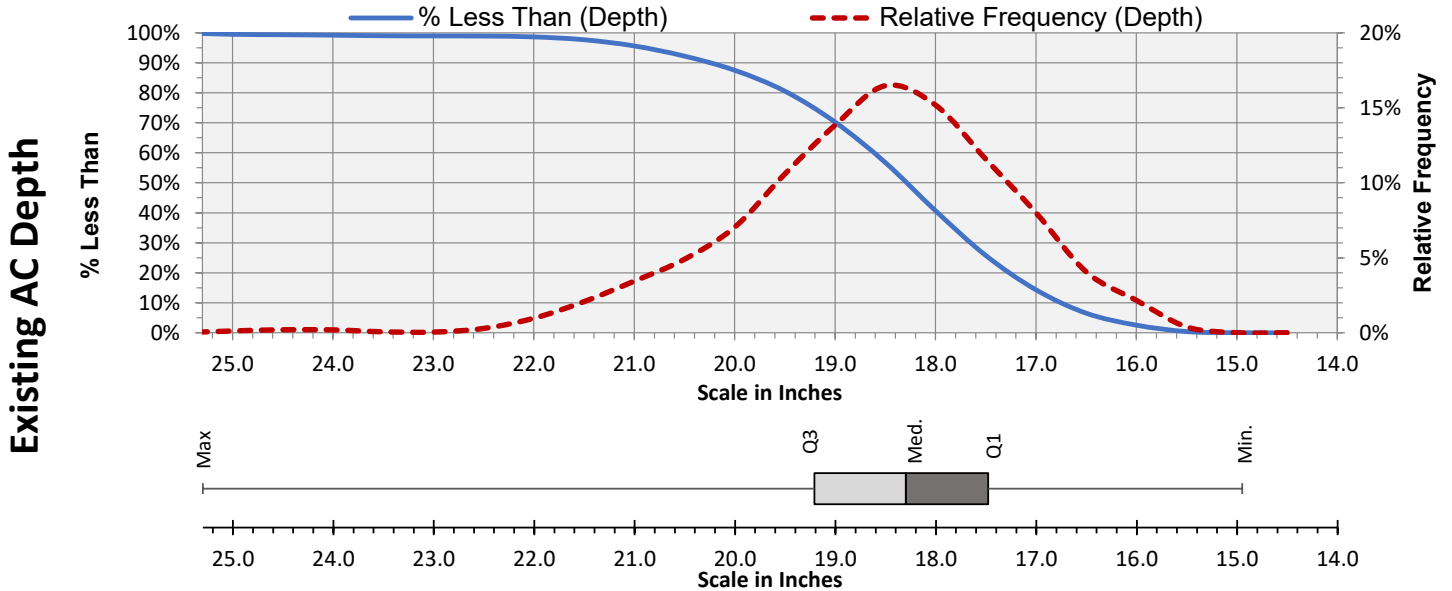
**Total Number of Scans**= 29870

## Existing Overlay Depth/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Runway 9-27 Track 2  
(4' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



**Existing AC Depth Statistics**

Average= 18.4 in. (1.54 ft.)  
 Max= 25.3 in. (2.11 ft.)  
 Min= 15 in. (1.25 ft.)  
 SD= 1.4 in. (0.12 ft.)  
 Median= 18.3 in. (1.53 ft.)  
 Q1= 17.5 in. (1.46 ft.)  
 Q3= 19.2 in. (1.6 ft.)

**Existing AC Thickness Statistics**

Average= 11.4 in. (0.95 ft.)  
 Max= 19.1 in. (1.59 ft.)  
 Min= 6.5 in. (0.54 ft.)  
 SD= 1.6 in. (0.13 ft.)  
 Median= 11.2 in. (0.93 ft.)  
 Q1= 10.3 in. (0.86 ft.)  
 Q3= 12.3 in. (1.02 ft.)

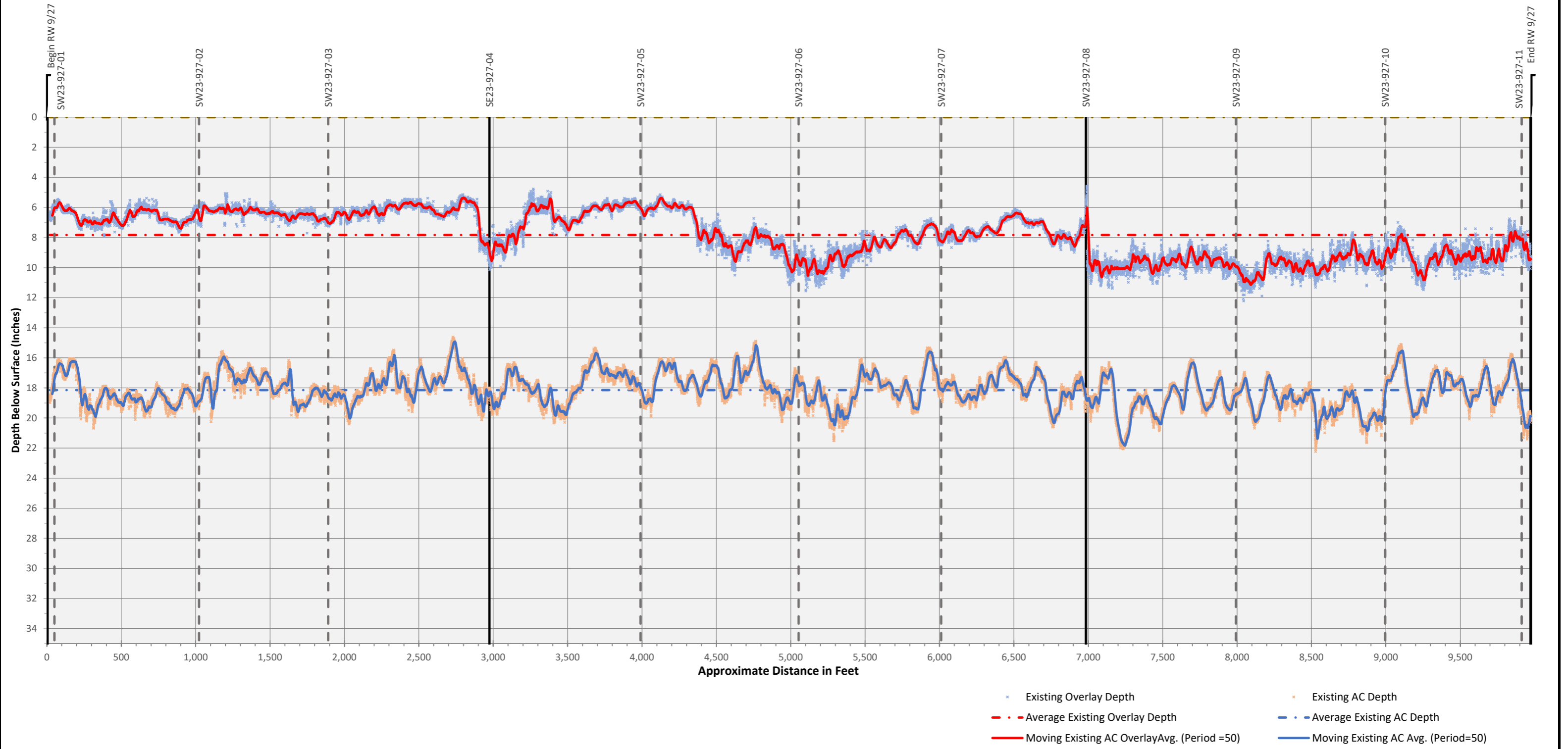
Total Number of Scans= 29870

# Existing Pavement Layer Depths

## RKS Master Plan Airfield Pavement Evaluation

### Runway 9-27 Track 3 (15' Right of Center)

File No: 110339  
Scan Date: 4/17/2023



Note: GPR distance scale along the x-axis may not correspond exactly with project stationing.

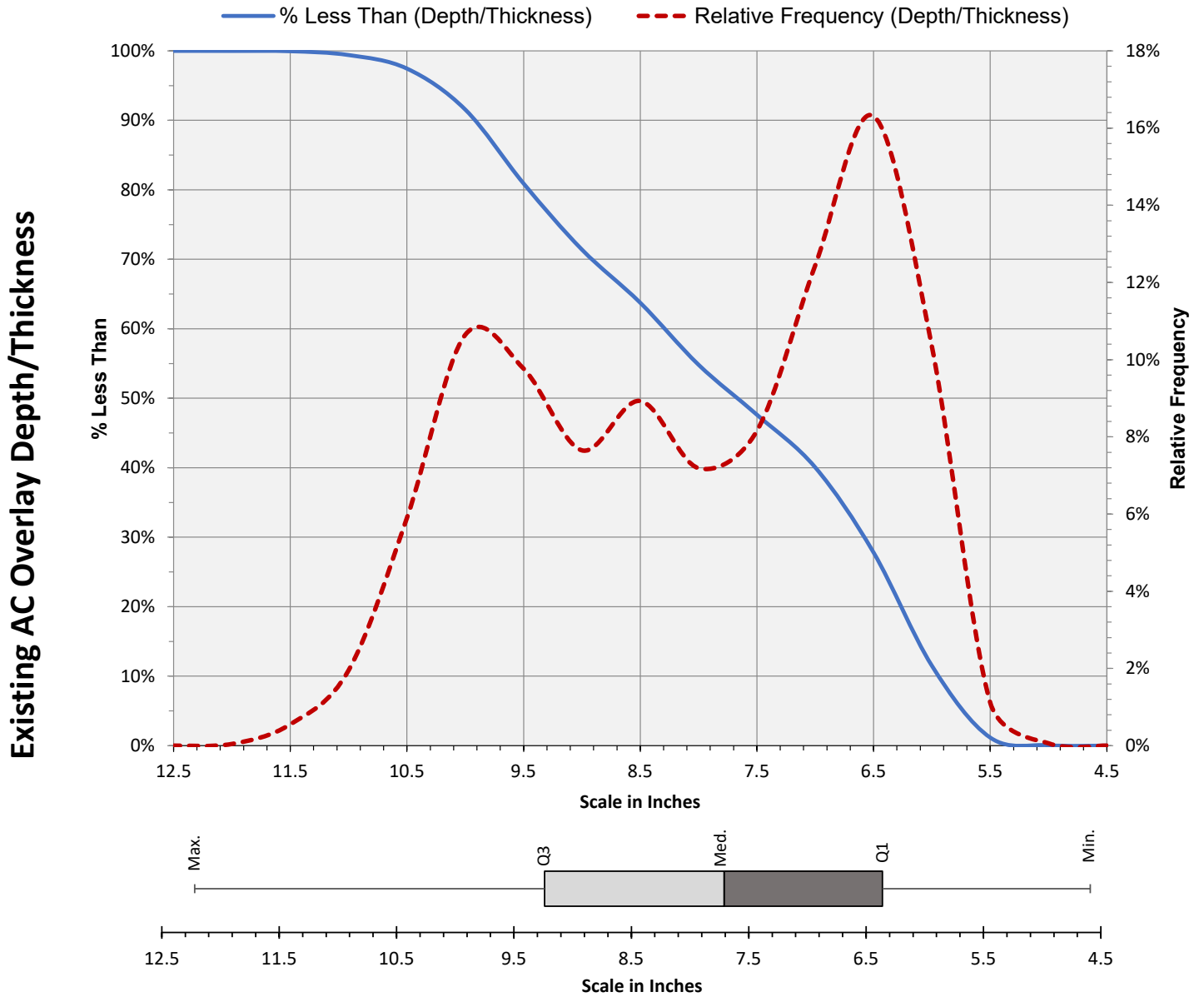


## Existing Overlay Depth/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Runway 9-27 Track 3  
(15' Right of Center)

File No: 110339  
Scan Date: 4/17/2023



### Existing Overlay Depth/Thickness Statistics

**Average=** 7.8 in. (0.65 ft.)  
**Max=** 12.2 in. (1.02 ft.)  
**Min=** 4.6 in. (0.38 ft.)  
**SD=** 1.5 in. (0.13 ft.)  
**Median=** 7.7 in. (0.64 ft.)  
**Q1=** 6.4 in. (0.53 ft.)  
**Q3=** 9.2 in. (0.77 ft.)

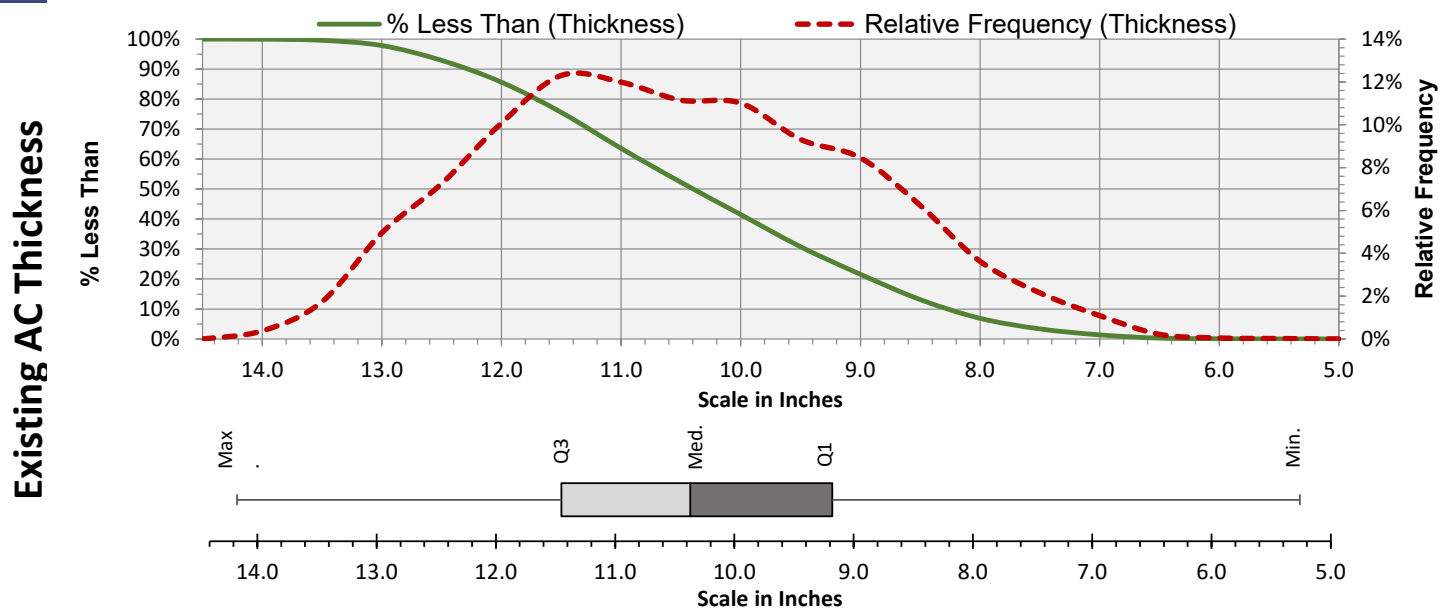
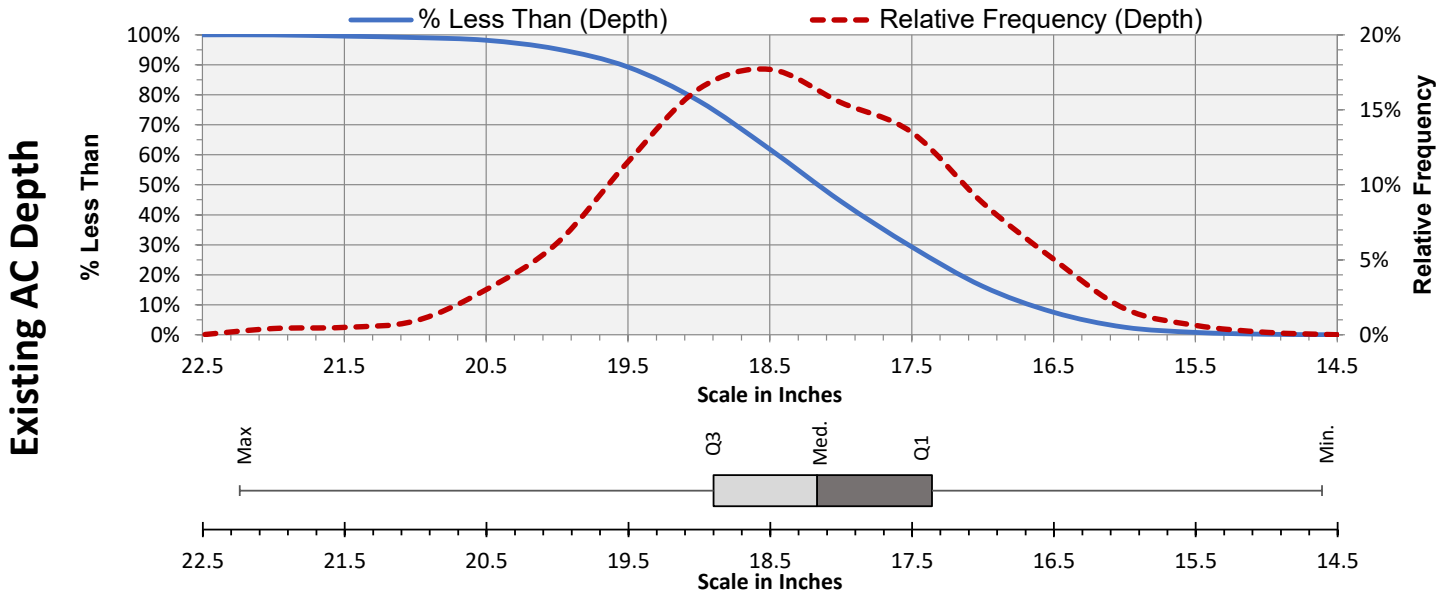
**Total Number of Scans=** 29867

## Existing Overlay Depth/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Runway 9-27 Track 3  
(15' Right of Center)

File No: 110339  
Scan Date: 4/17/2023



**Existing AC Depth Statistics**

Average= 18.1 in. (1.51 ft.)  
 Max= 22.2 in. (1.85 ft.)  
 Min= 14.6 in. (1.22 ft.)  
 SD= 1.1 in. (0.09 ft.)  
 Median= 18.2 in. (1.51 ft.)  
 Q1= 17.4 in. (1.45 ft.)  
 Q3= 18.9 in. (1.58 ft.)

**Existing AC Thickness Statistics**

Average= 10.3 in. (0.86 ft.)  
 Max= 14.2 in. (1.18 ft.)  
 Min= 5.3 in. (0.44 ft.)  
 SD= 1.5 in. (0.13 ft.)  
 Median= 10.4 in. (0.86 ft.)  
 Q1= 9.2 in. (0.77 ft.)  
 Q3= 11.5 in. (0.95 ft.)

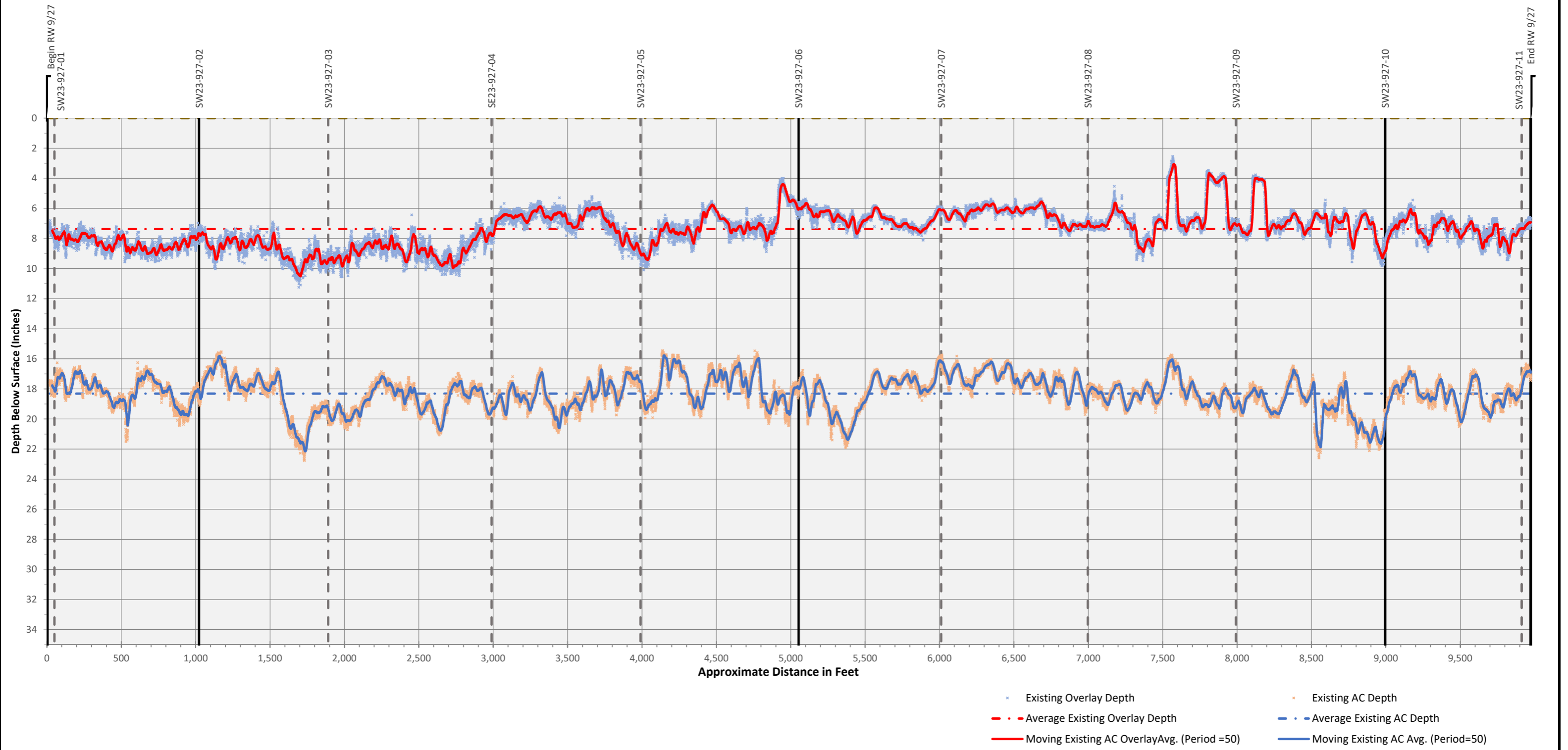
Total Number of Scans= 29867

# Existing Pavement Layer Depths

## RKS Master Plan Airfield Pavement Evaluation

### Runway 9-27 Track 4 (45' Right of Center)

File No: 110339  
Scan Date: 4/17/2023



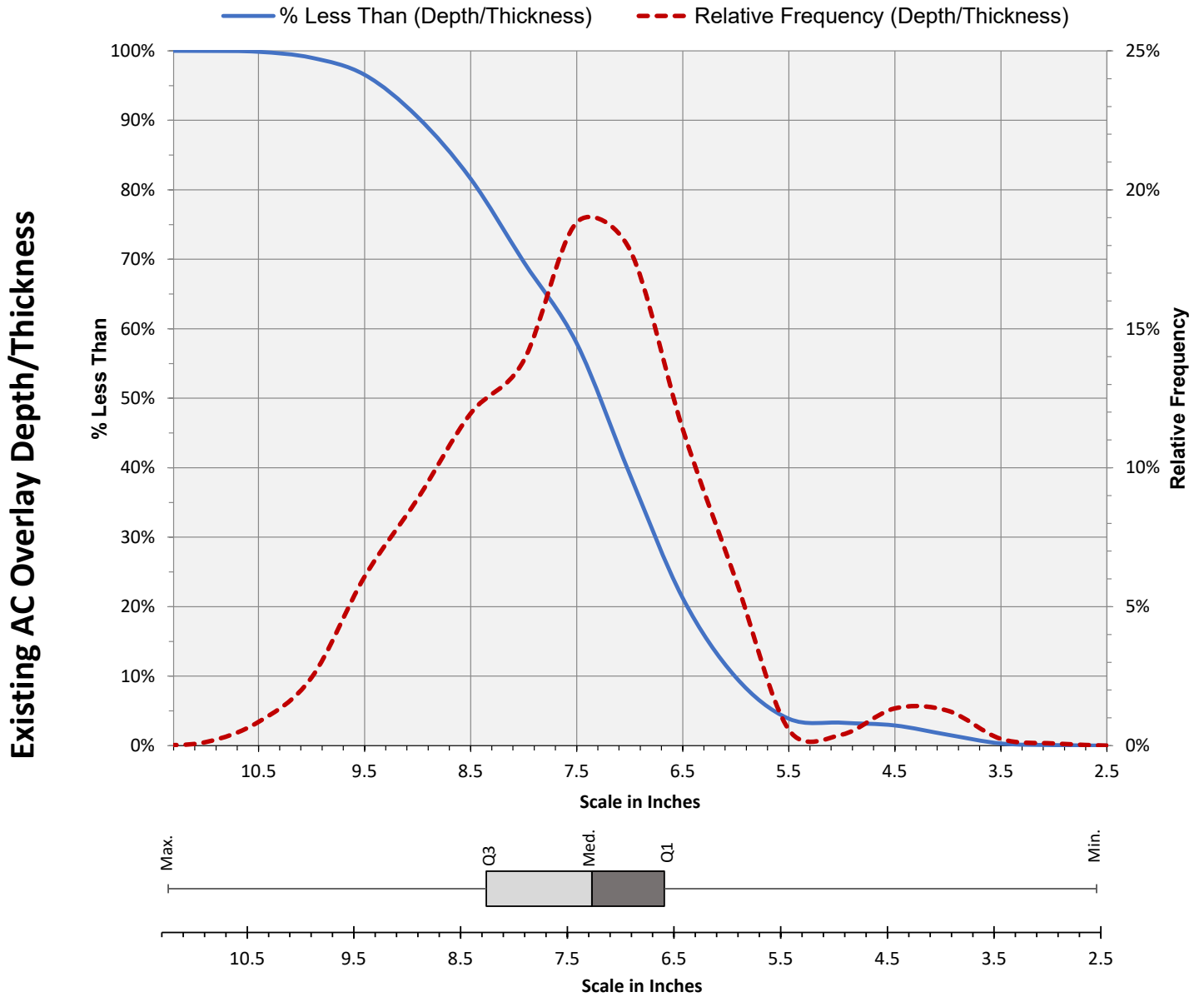
Note: GPR distance scale along the x-axis may not correspond exactly with project stationing.

## Existing Overlay Depth/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Runway 9-27 Track 4  
(45' Right of Center)

File No: 110339  
Scan Date: 4/17/2023



### Existing Overlay Depth/Thickness Statistics

**Average=** 7.4 in. (0.61 ft.)  
**Max=** 11.2 in. (0.94 ft.)  
**Min=** 2.5 in. (0.21 ft.)  
**SD=** 1.2 in. (0.1 ft.)  
**Median=** 7.3 in. (0.61 ft.)  
**Q1=** 6.6 in. (0.55 ft.)  
**Q3=** 8.3 in. (0.69 ft.)

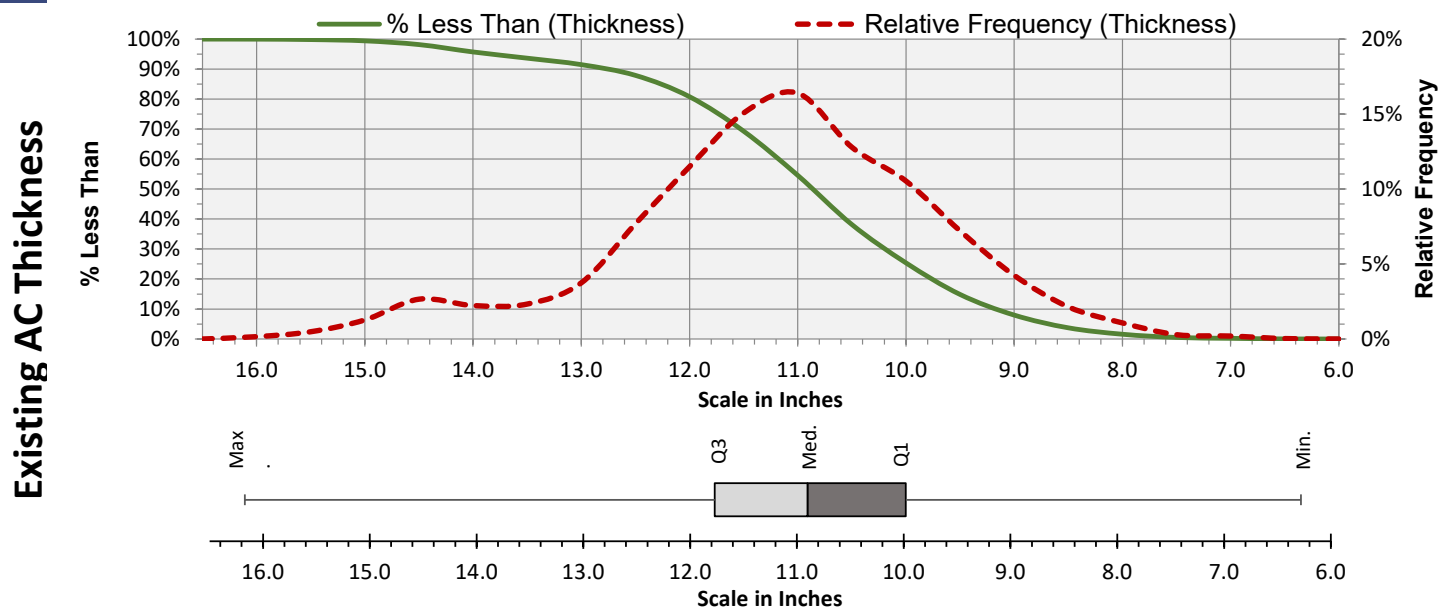
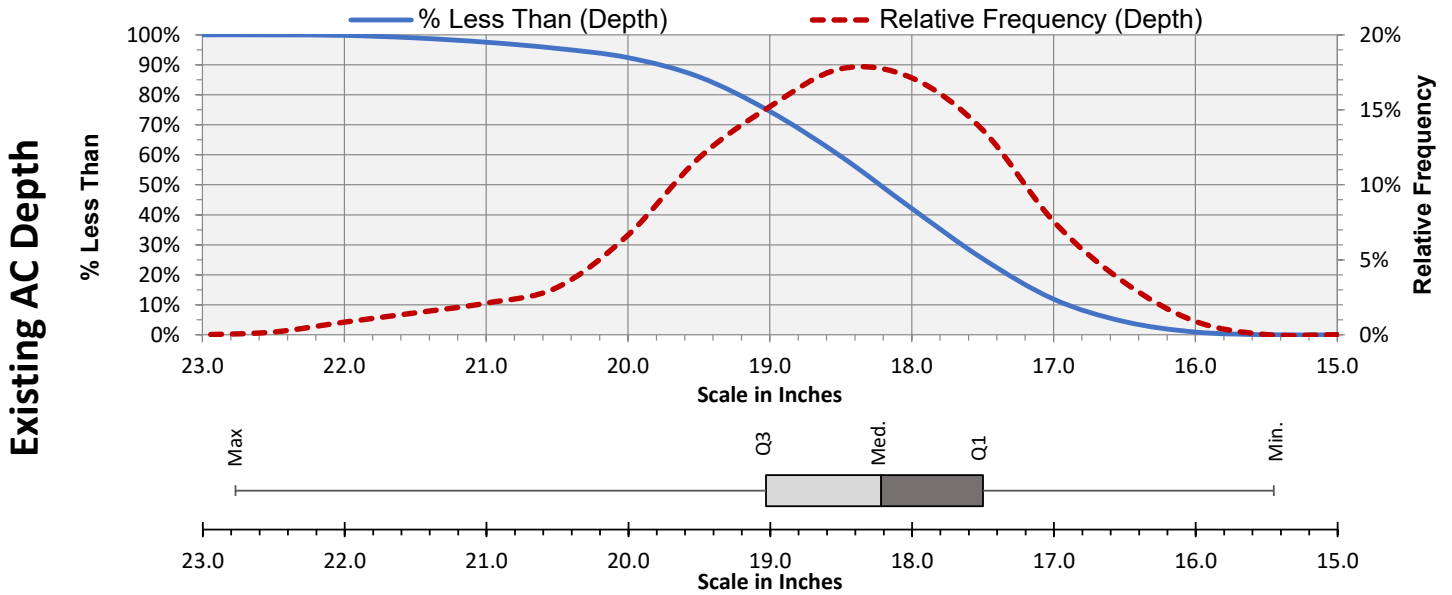
**Total Number of Scans=** 29876

## Existing Overlay Depth/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Runway 9-27 Track 4  
(45' Right of Center)

File No: 110339  
Scan Date: 4/17/2023



**Existing AC Depth Statistics**

Average= 18.3 in. (1.53 ft.)  
 Max= 22.8 in. (1.9 ft.)  
 Min= 15.5 in. (1.29 ft.)  
 SD= 1.2 in. (0.1 ft.)  
 Median= 18.2 in. (1.52 ft.)  
 Q1= 17.5 in. (1.46 ft.)  
 Q3= 19 in. (1.59 ft.)

**Existing AC Thickness Statistics**

Average= 10.9 in. (0.91 ft.)  
 Max= 16.2 in. (1.35 ft.)  
 Min= 6.3 in. (0.52 ft.)  
 SD= 1.5 in. (0.12 ft.)  
 Median= 10.9 in. (0.91 ft.)  
 Q1= 10 in. (0.83 ft.)  
 Q3= 11.8 in. (0.98 ft.)

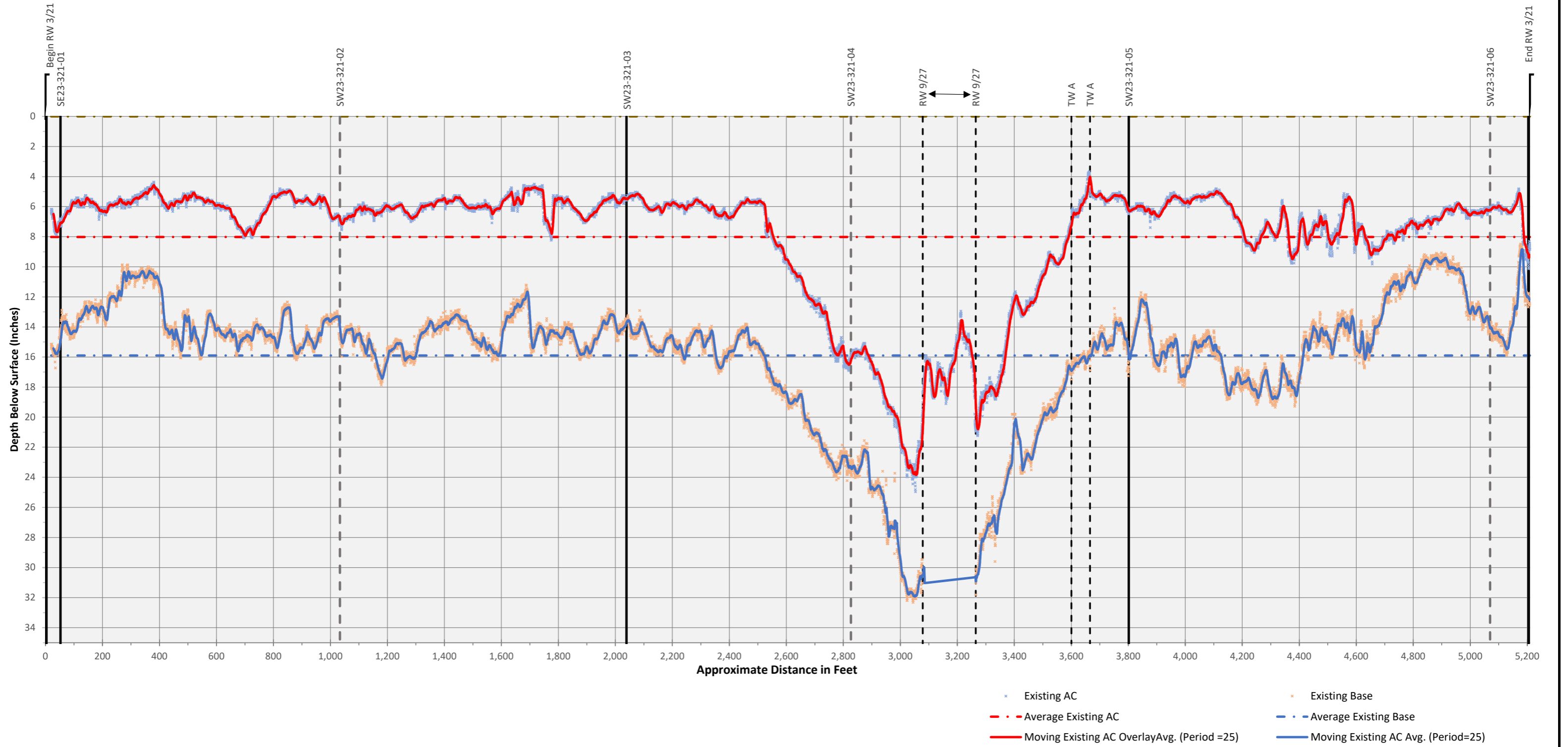
Total Number of Scans= 29876

# Existing Pavement Layer Depths

## RKS Master Plan Airfield Pavement Evaluation

### Runway 3/21 Track 1 (24' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



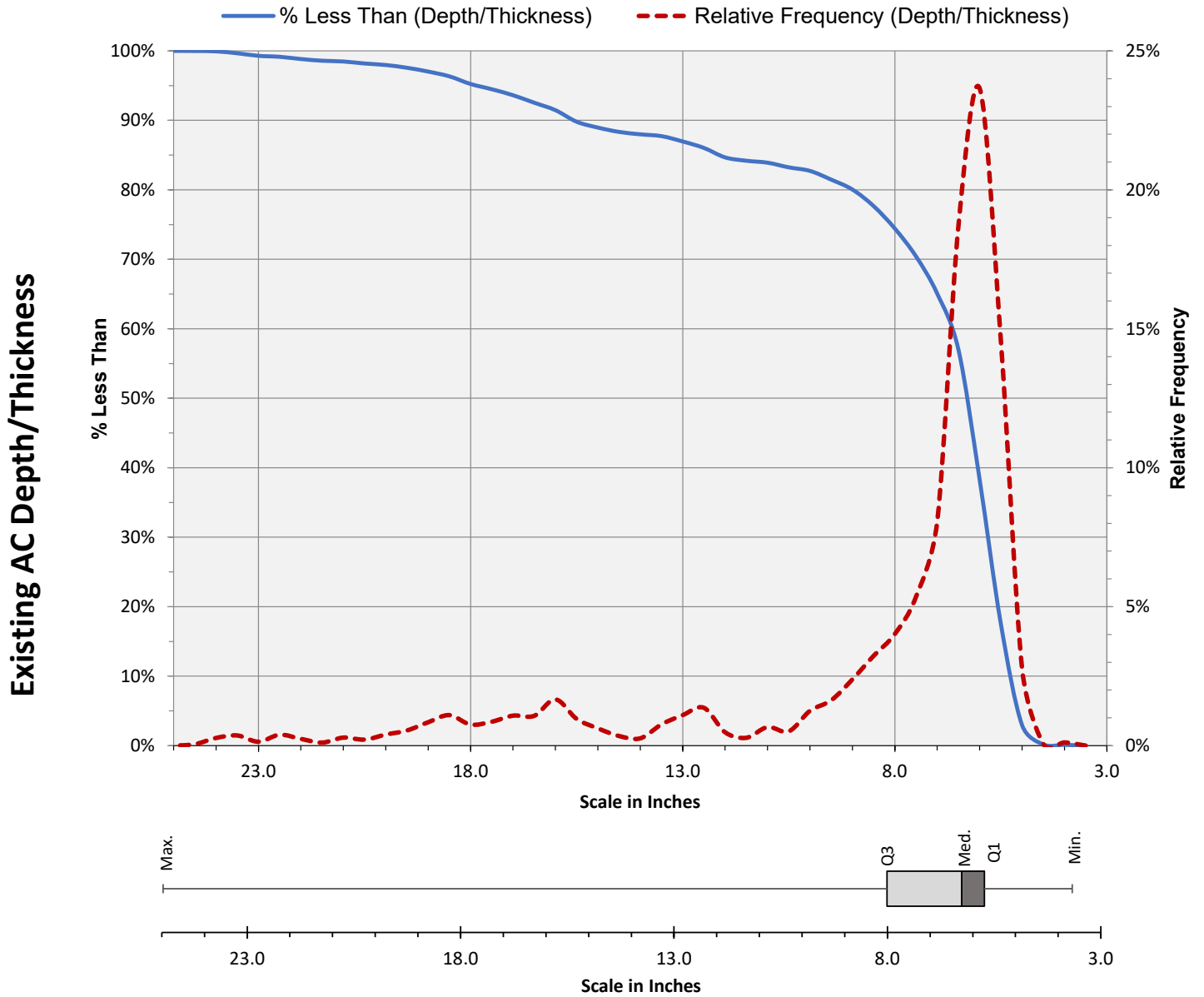
Note: GPR distance scale along the x-axis may not correspond exactly with project stationing.

### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Runway 3/21 Track 1  
(24' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



#### Existing AC/Thickness Statistics

**Average=** 8 in. (0.67 ft.)  
**Max=** 25 in. (2.08 ft.)  
**Min=** 3.7 in. (0.31 ft.)  
**SD=** 4 in. (0.34 ft.)  
**Median=** 6.3 in. (0.52 ft.)  
**Q1=** 5.7 in. (0.48 ft.)  
**Q3=** 8 in. (0.67 ft.)  
**Total Number of Scans=** 15569

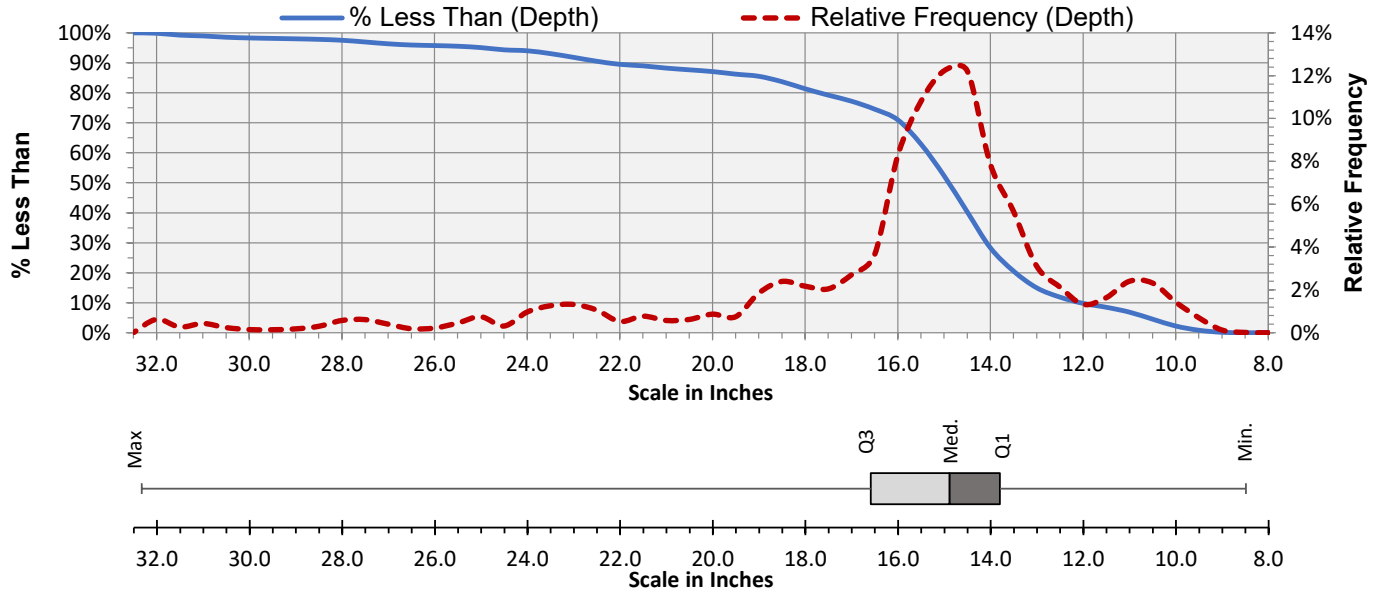
### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

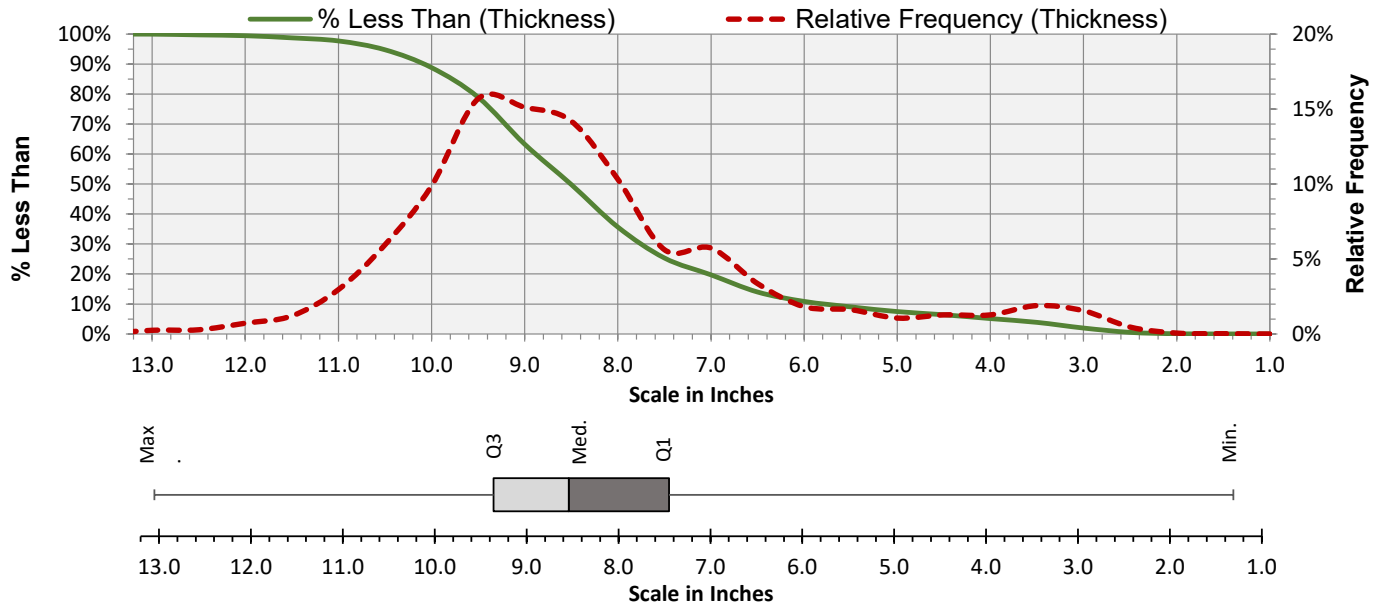
Runway 3/21 Track 1  
(24' Left of Center)

File No: 110339  
Scan Date: 4/17/2023

#### Existing Base Depth



#### Existing Base Thickness



#### Existing Base Depth Statistics

Average= 15.9 in. (1.32 ft.)  
 Max= 32.3 in. (2.69 ft.)  
 Min= 8.5 in. (0.71 ft.)  
 SD= 4.1 in. (0.35 ft.)  
 Median= 14.9 in. (1.24 ft.)  
 Q1= 13.8 in. (1.15 ft.)  
 Q3= 16.6 in. (1.38 ft.)

#### Existing Base Thickness Statistics

Average= 8.2 in. (0.68 ft.)  
 Max= 13.1 in. (1.09 ft.)  
 Min= 1.3 in. (0.11 ft.)  
 SD= 1.8 in. (0.15 ft.)  
 Median= 8.5 in. (0.71 ft.)  
 Q1= 7.5 in. (0.62 ft.)  
 Q3= 9.4 in. (0.78 ft.)

Total Number of Scans= 15569



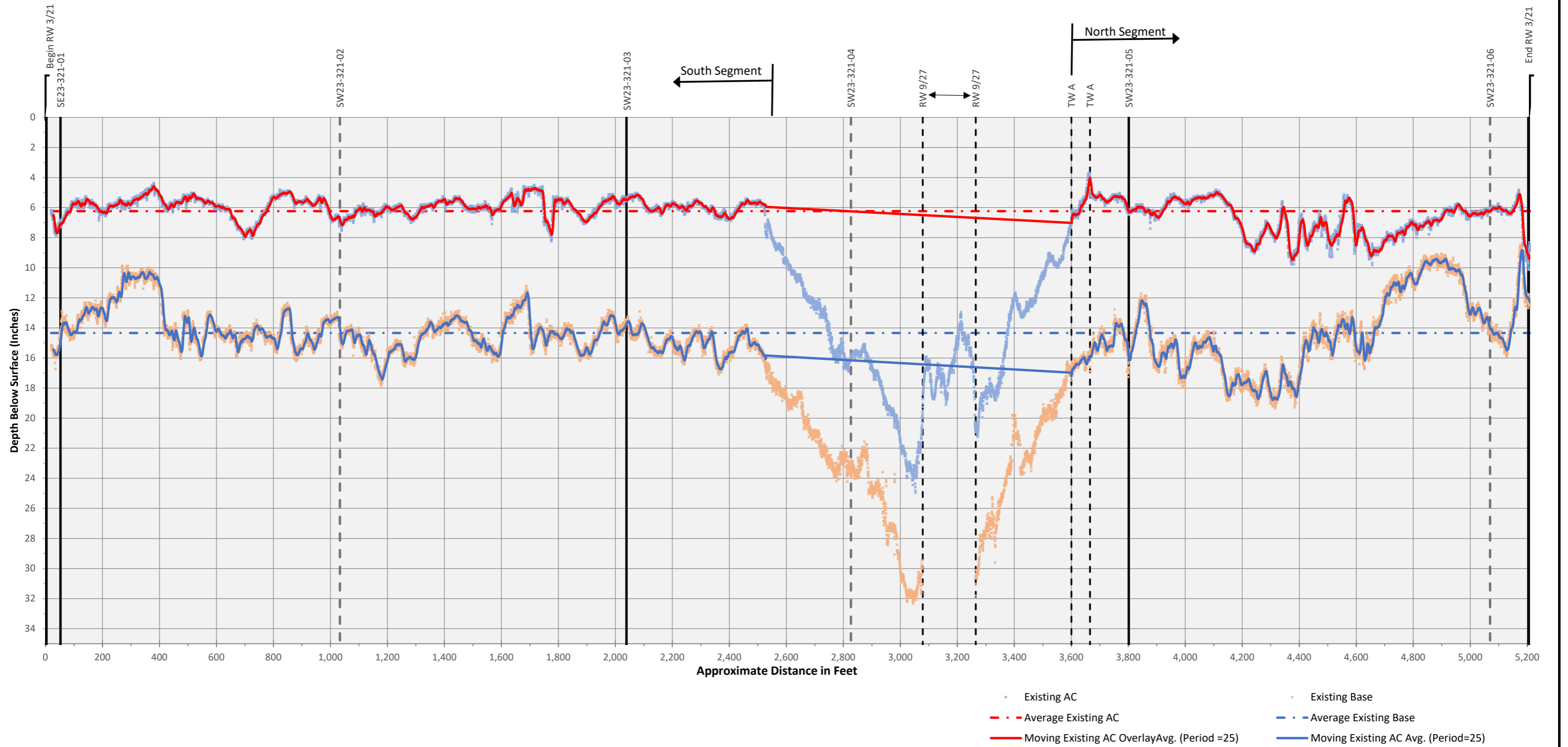
# Existing Pavement Layer Depths

## RKS Master Plan Airfield Pavement Evaluation

### Runway 3/21 Track 1 (N and S Segments only)

#### (24' Left of Center)

File No: 110339  
Scan Date: 4/17/2023

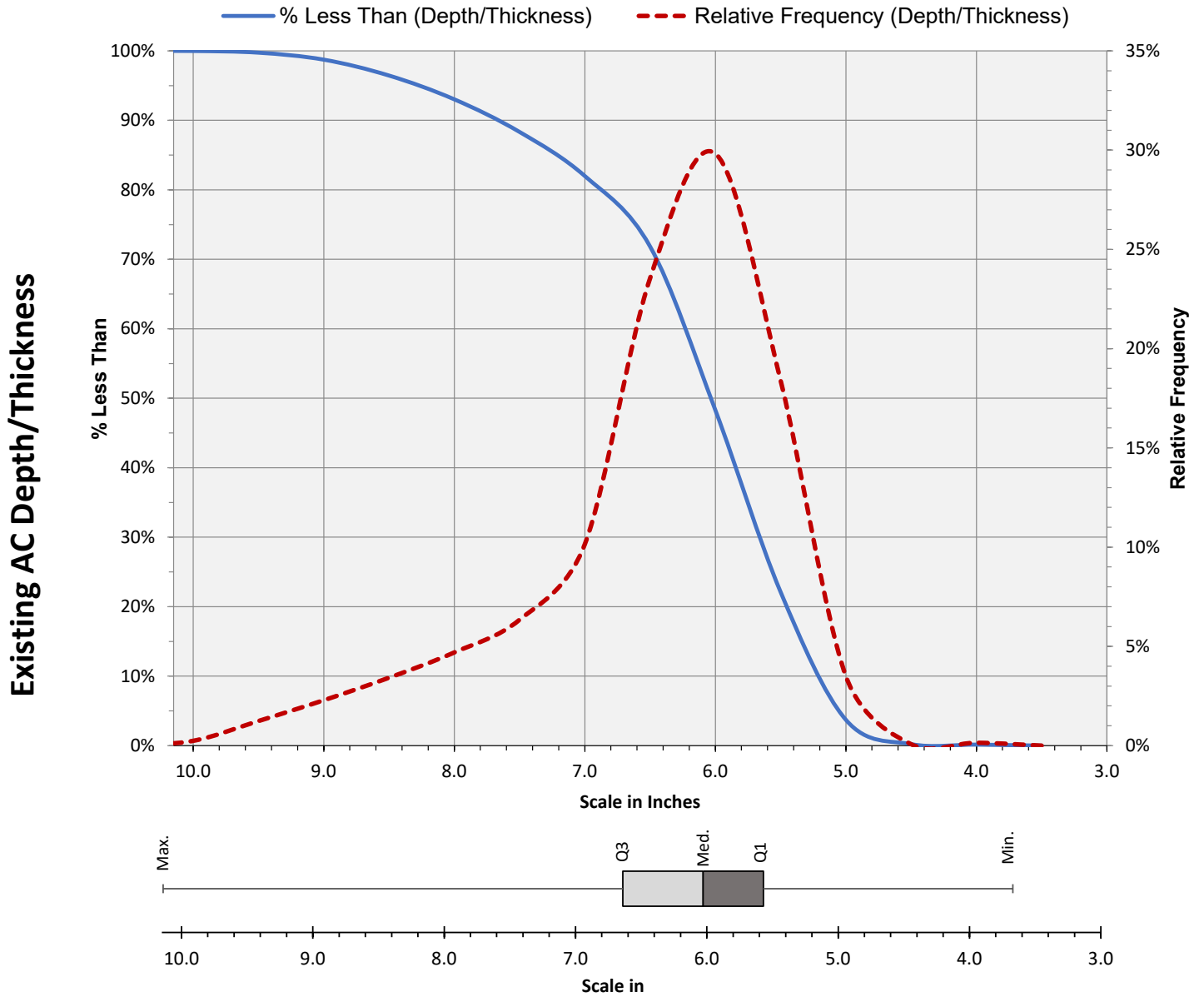


Note: GPR distance scale along the x-axis may not correspond exactly with project stationing.

### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation  
 Runway 3/21 Track 1 (N and S Segments only)  
 (24' Left of Center)

File No: 110339  
 Scan Date: 4/17/2023



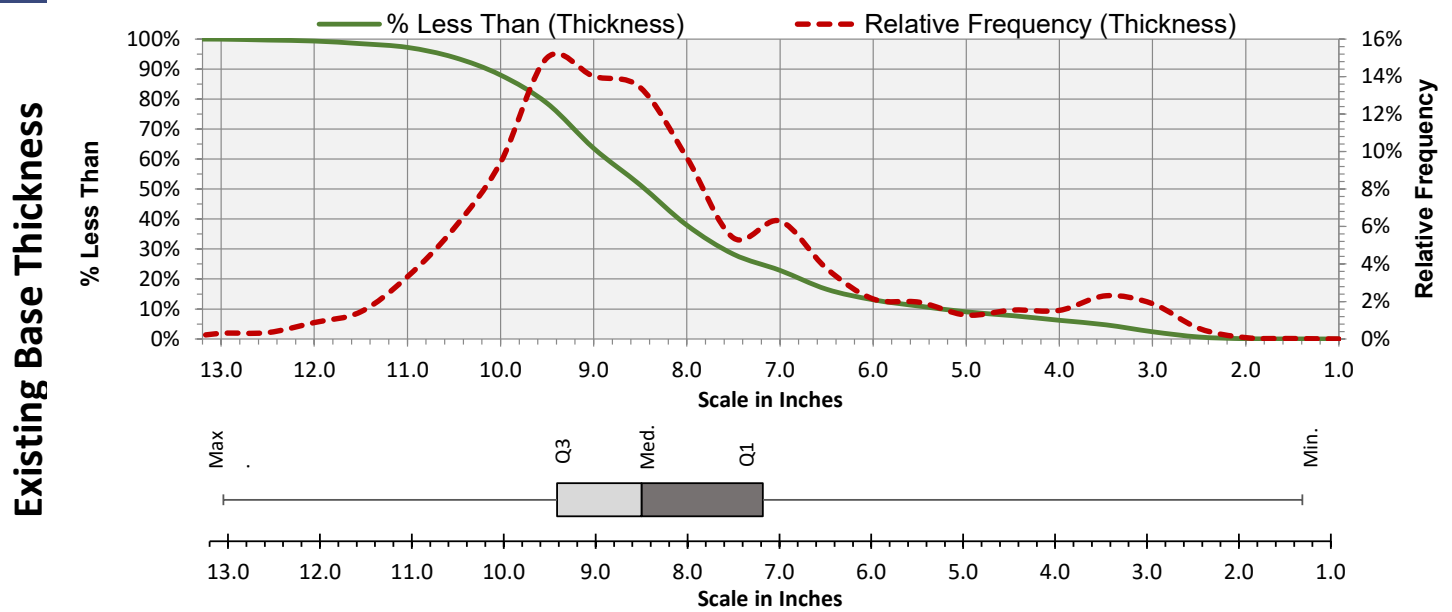
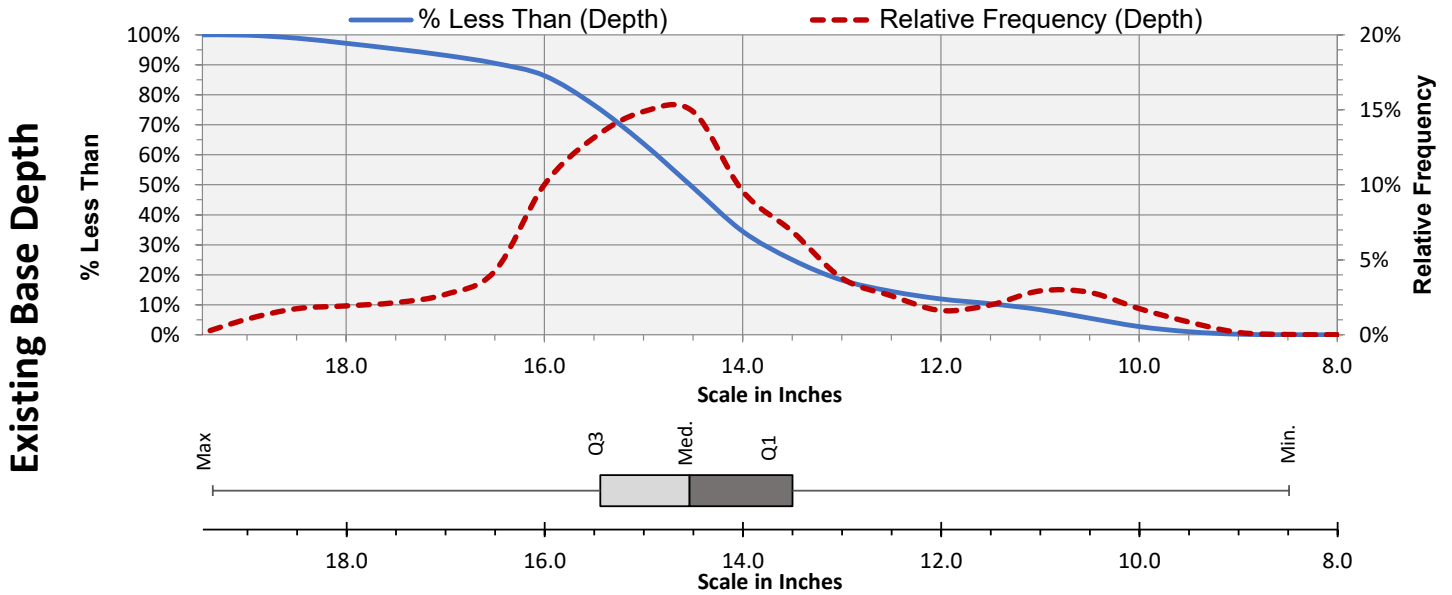
#### Existing AC/Thickness Statistics

**Average**= 6.2 in. (0.52 ft.)  
**Max**= 10.1 in. (0.85 ft.)  
**Min**= 3.7 in. (0.31 ft.)  
**SD**= 0.9 in. (0.08 ft.)  
**Median**= 6 in. (0.5 ft.)  
**Q1**= 5.6 in. (0.46 ft.)  
**Q3**= 6.6 in. (0.55 ft.)  
**Total Number of Scans**= 15569

### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation  
 Runway 3/21 Track 1 (N and S Segments only)  
 (24' Left of Center)

File No: 110339  
 Scan Date: 4/17/2023



**Existing Base Depth Statistics**

Average= 14.3 in. (1.19 ft.)  
 Max= 19.4 in. (1.61 ft.)  
 Min= 8.5 in. (0.71 ft.)  
 SD= 1.9 in. (0.16 ft.)  
 Median= 14.5 in. (1.21 ft.)  
 Q1= 13.5 in. (1.13 ft.)  
 Q3= 15.4 in. (1.29 ft.)

**Existing Base Thickness Statistics**

Average= 8.1 in. (0.68 ft.)  
 Max= 13.1 in. (1.09 ft.)  
 Min= 1.3 in. (0.11 ft.)  
 SD= 2 in. (0.16 ft.)  
 Median= 8.5 in. (0.71 ft.)  
 Q1= 7.2 in. (0.6 ft.)  
 Q3= 9.4 in. (0.79 ft.)

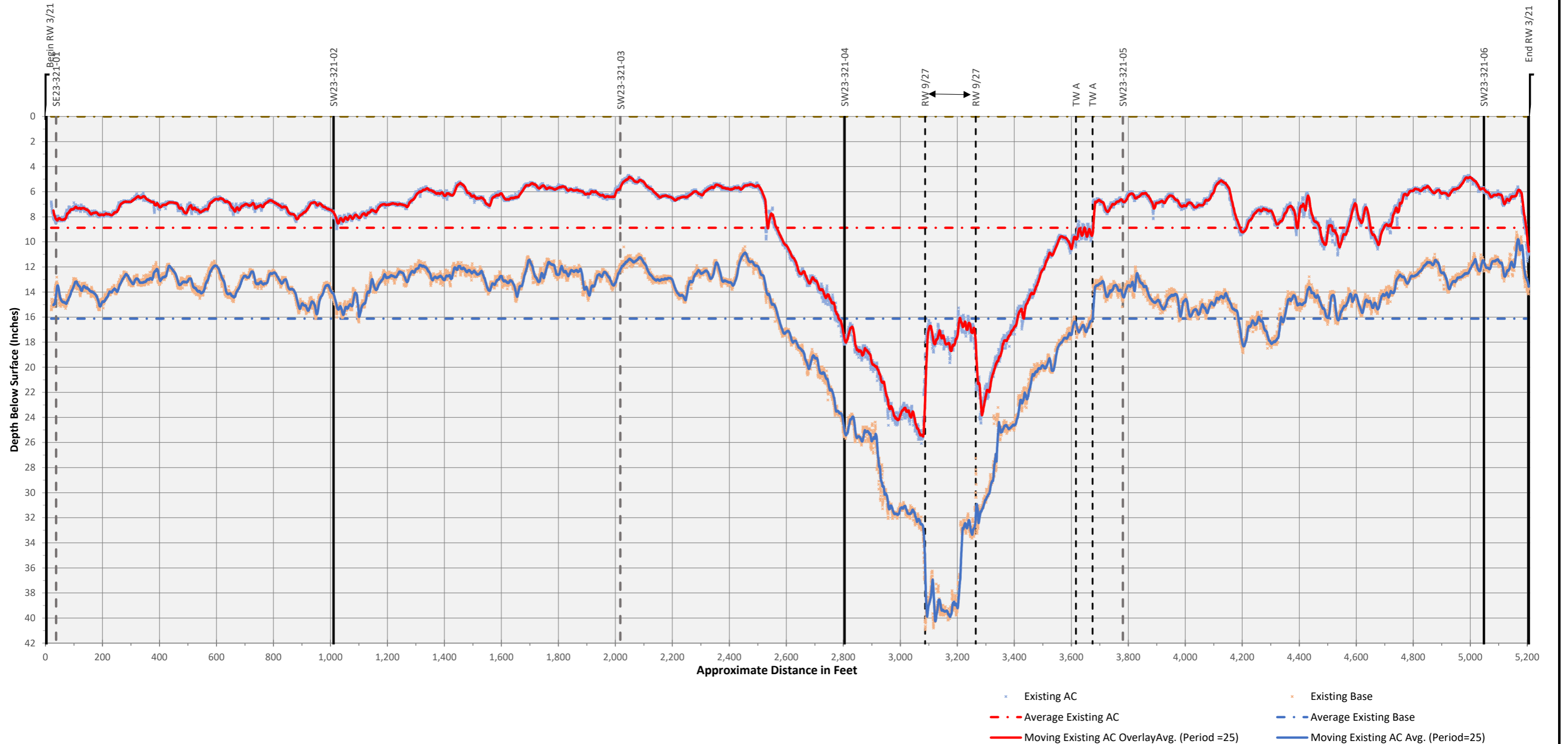
Total Number of Scans= 15569

# Existing Pavement Layer Depths

## RKS Master Plan Airfield Pavement Evaluation

### Runway 3/21 Track 2 (18' Right of Center)

File No: 110339  
Scan Date: 4/17/2023



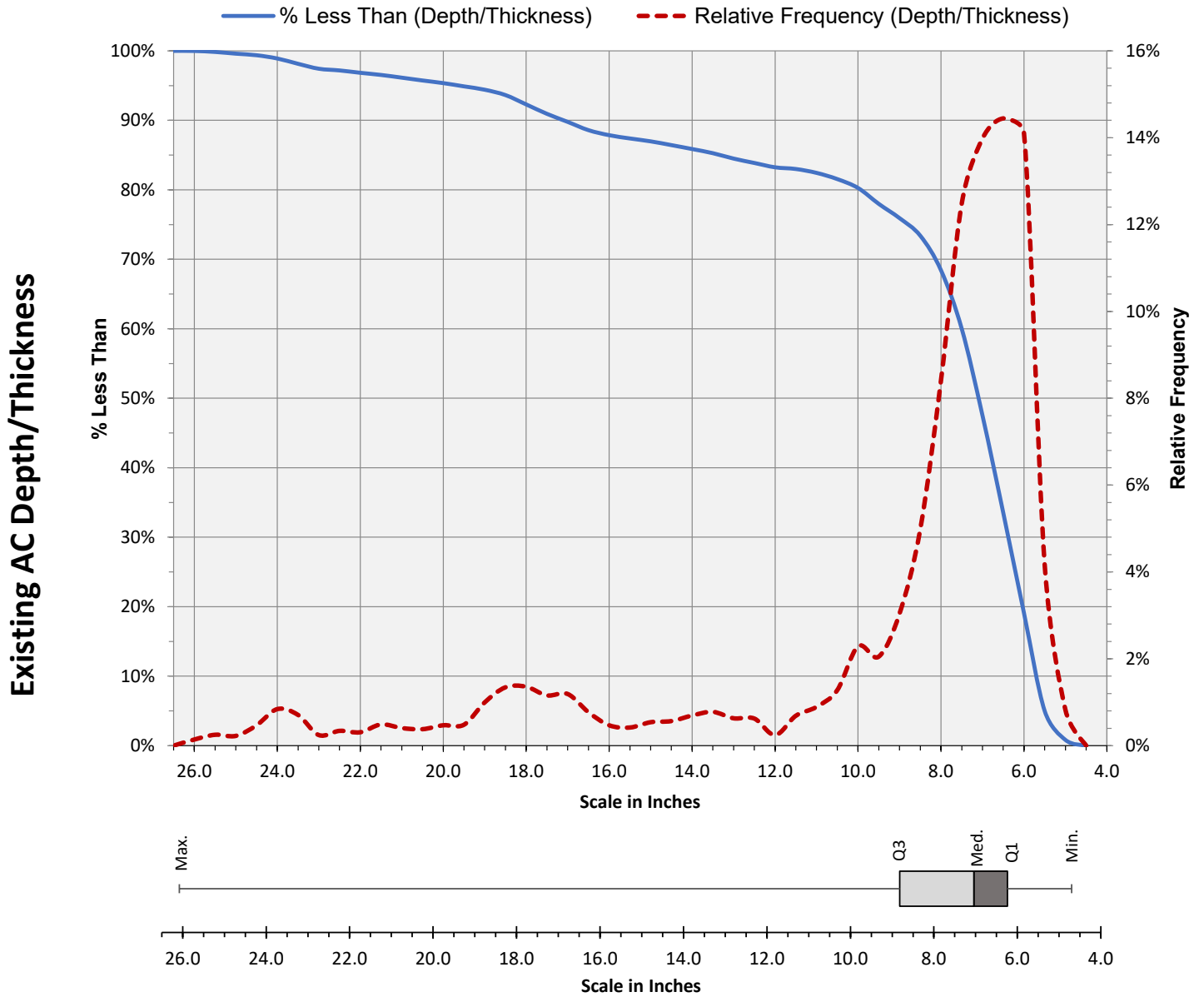
Note: GPR distance scale along the x-axis may not correspond exactly with project stationing.

### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Runway 3/21 Track 2  
(18' Right of Center)

File No: 110339  
Scan Date: 4/17/2023



#### Existing AC/Thickness Statistics

**Average=** 8.9 in. (0.74 ft.)  
**Max=** 26.1 in. (2.17 ft.)  
**Min=** 4.7 in. (0.39 ft.)  
**SD=** 4.5 in. (0.38 ft.)  
**Median=** 7 in. (0.59 ft.)  
**Q1=** 6.2 in. (0.52 ft.)  
**Q3=** 8.8 in. (0.74 ft.)

**Total Number of Scans=** 15558

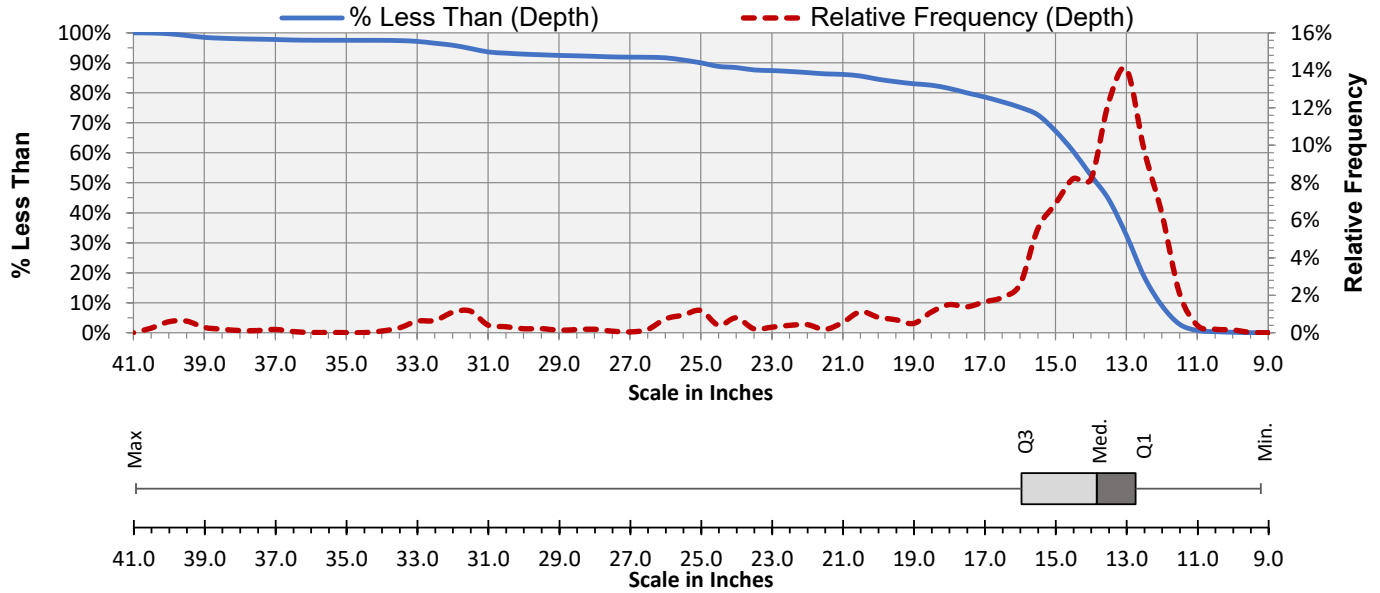
### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

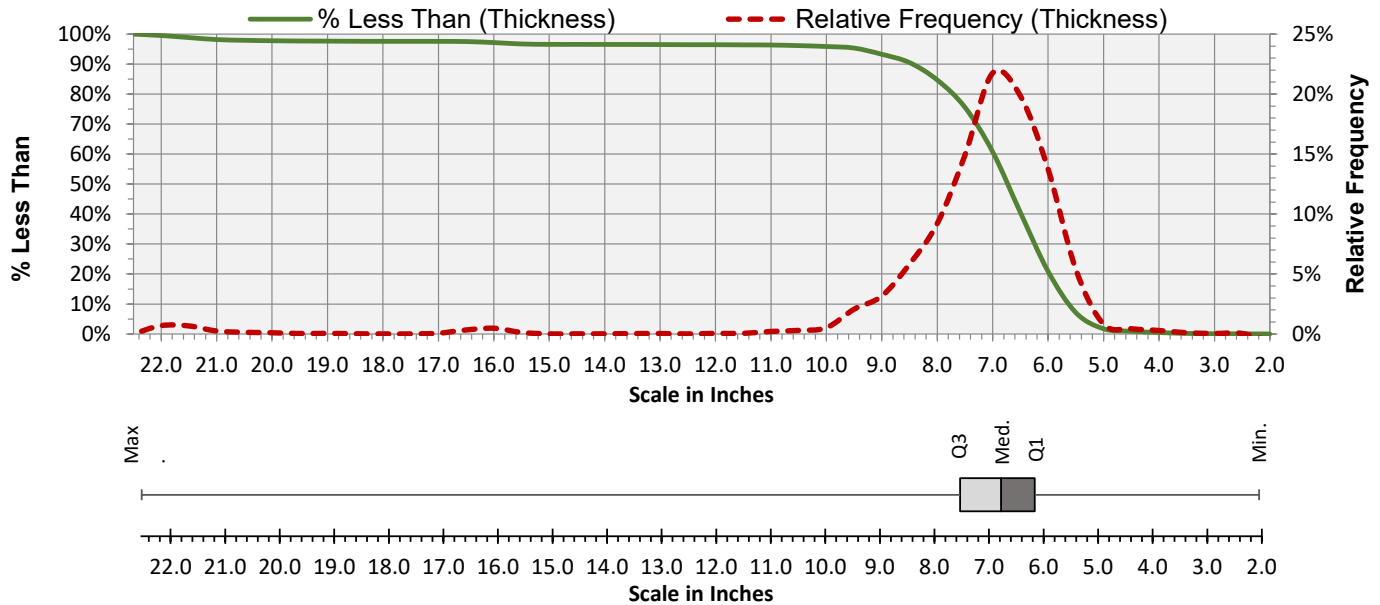
Runway 3/21 Track 2  
(18' Right of Center)

File No: 110339  
Scan Date: 4/17/2023

#### Existing Base Depth



#### Existing Base Thickness



#### Existing Base Depth Statistics

Average= 16.1 in. (1.34 ft.)  
 Max= 40.9 in. (3.41 ft.)  
 Min= 9.2 in. (0.77 ft.)  
 SD= 6.1 in. (0.51 ft.)  
 Median= 13.9 in. (1.15 ft.)  
 Q1= 12.8 in. (1.06 ft.)  
 Q3= 16 in. (1.33 ft.)

#### Existing Base Thickness Statistics

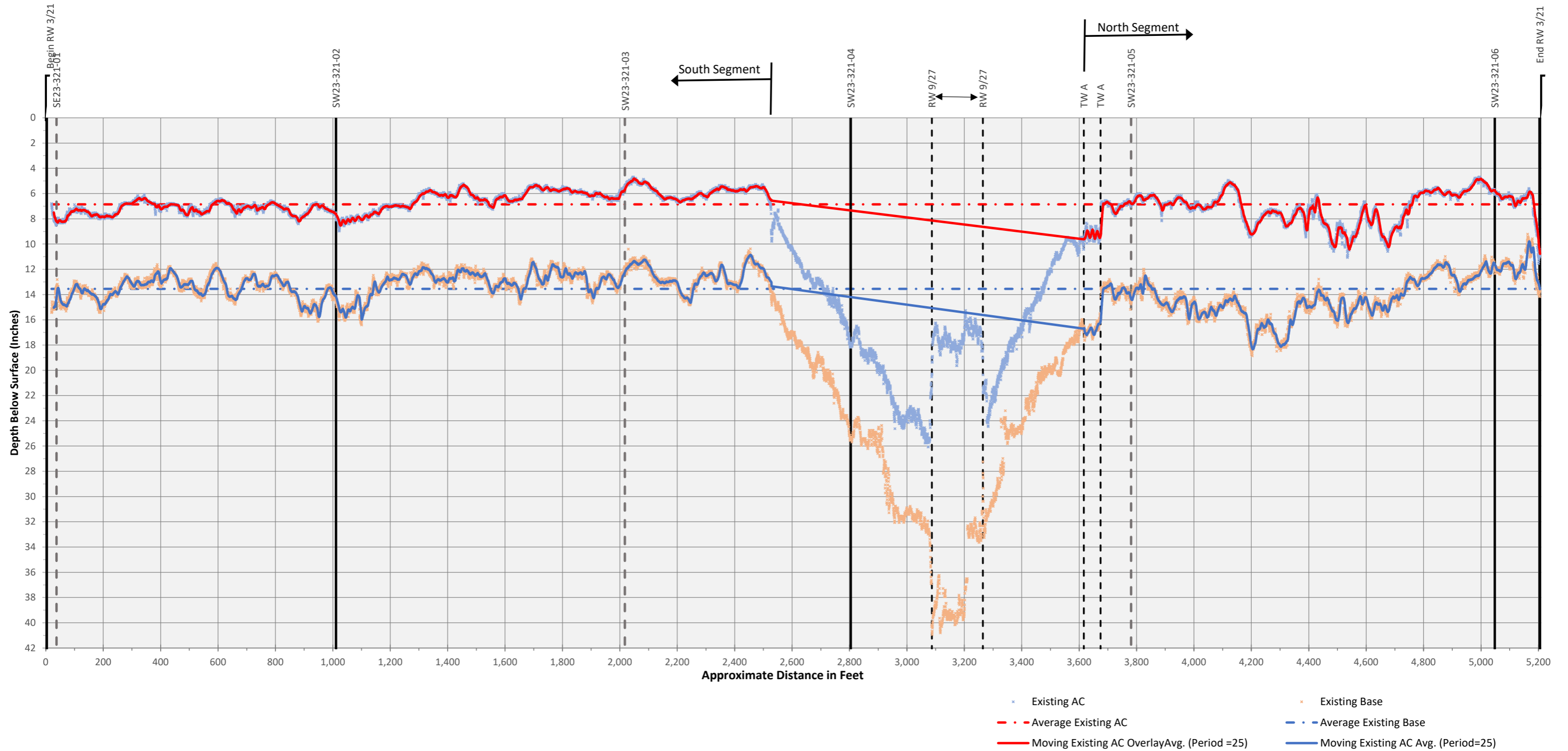
Average= 7.2 in. (0.6 ft.)  
 Max= 22.5 in. (1.87 ft.)  
 Min= 2 in. (0.17 ft.)  
 SD= 2.6 in. (0.22 ft.)  
 Median= 6.7 in. (0.56 ft.)  
 Q1= 6.1 in. (0.51 ft.)  
 Q3= 7.5 in. (0.62 ft.)

Total Number of Scans= 15558

# Existing Pavement Layer Depths

## RKS Master Plan Airfield Pavement Evaluation Runway 3/21 Track 2 (N and S Segments Only) (18' Right of Center)

File No: 110339  
Scan Date: 4/17/2023

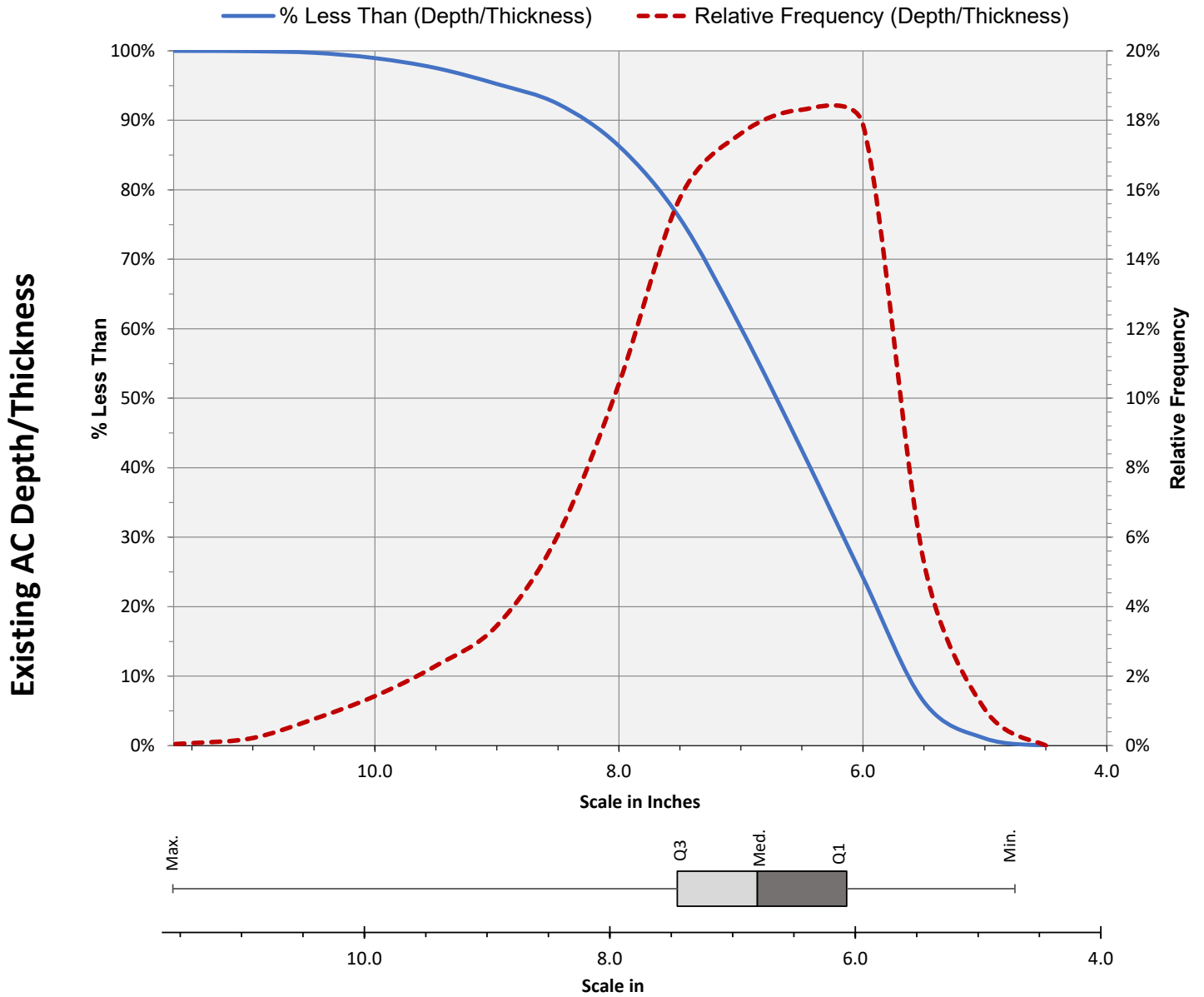


Note: GPR distance scale along the x-axis may not correspond exactly with project stationing.

### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation  
 Runway 3/21 Track 2 (N and S Segments Only)  
 (18' Right of Center)

File No: 110339  
 Scan Date: 4/17/2023



#### Existing AC/Thickness Statistics

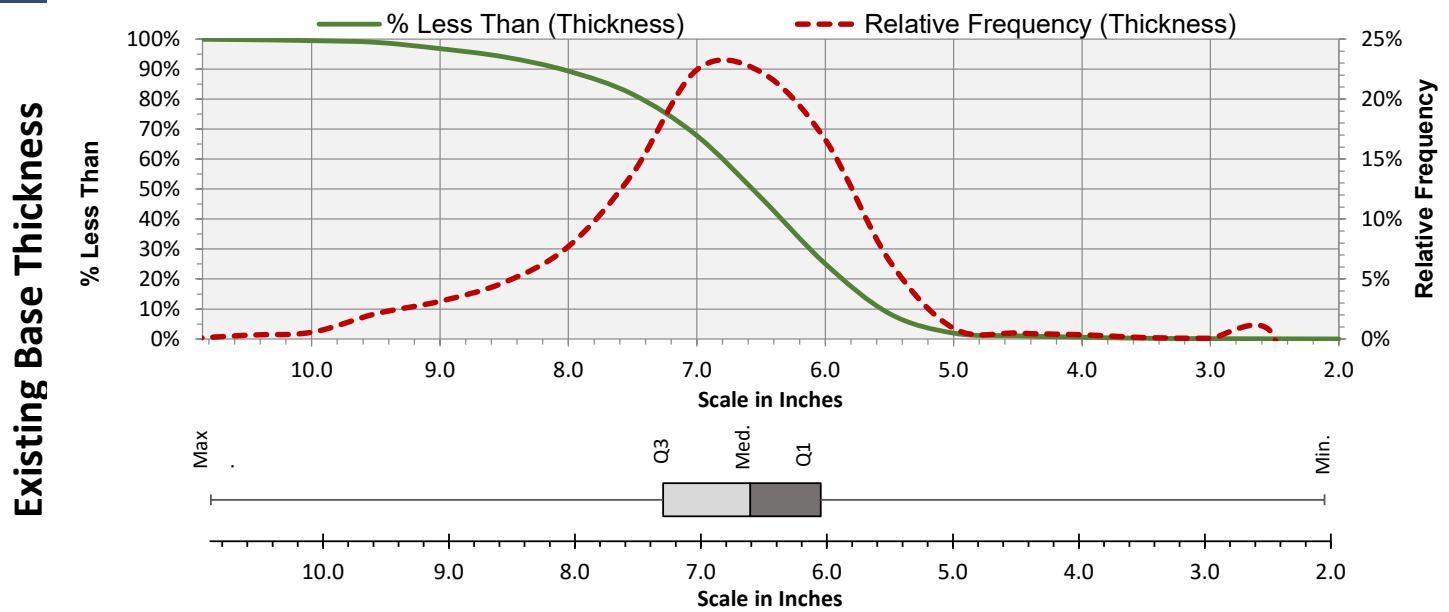
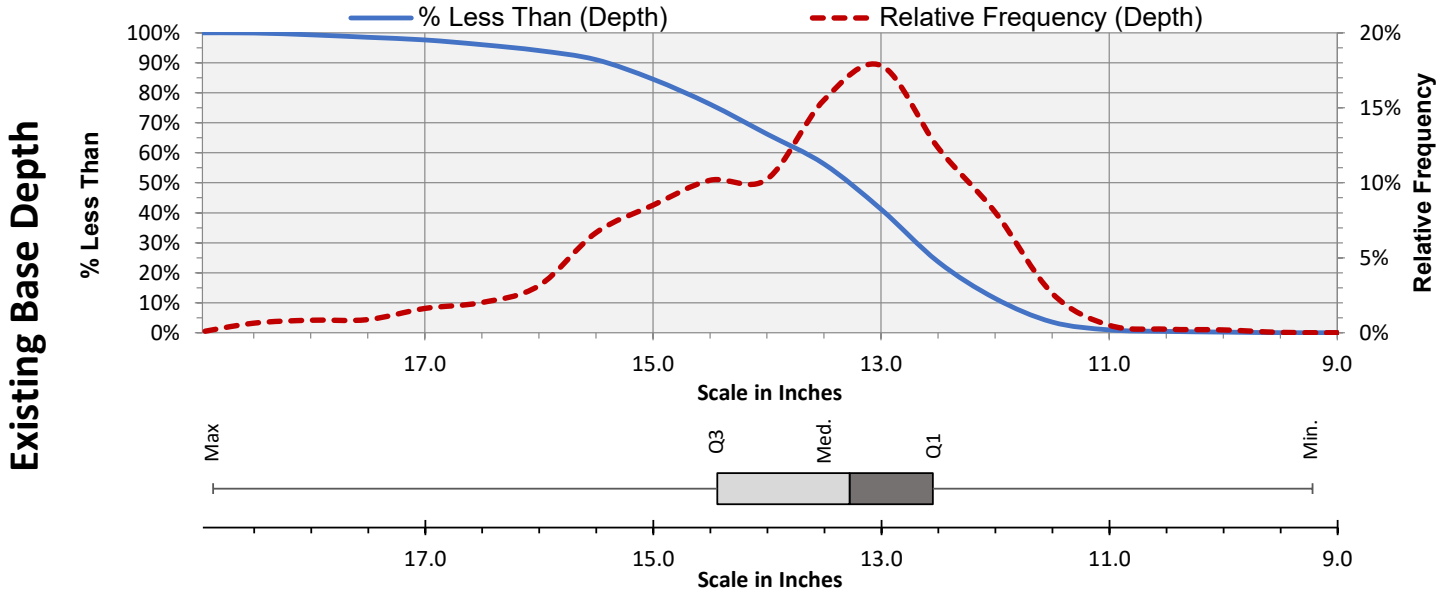
**Average**= 6.9 in. (0.57 ft.)  
**Max**= 11.6 in. (0.96 ft.)  
**Min**= 4.7 in. (0.39 ft.)  
**SD**= 1.1 in. (0.09 ft.)  
**Median**= 6.8 in. (0.57 ft.)  
**Q1**= 6.1 in. (0.51 ft.)  
**Q3**= 7.5 in. (0.62 ft.)  
**Total Number of Scans**= 15558



### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation  
 Runway 3/21 Track 2 (N and S Segments Only)  
 (18' Right of Center)

File No: 110339  
 Scan Date: 4/17/2023



**Existing Base Depth Statistics**

Average= 13.5 in. (1.13 ft.)  
 Max= 18.9 in. (1.57 ft.)  
 Min= 9.2 in. (0.77 ft.)  
 SD= 1.4 in. (0.12 ft.)  
 Median= 13.3 in. (1.11 ft.)  
 Q1= 12.6 in. (1.05 ft.)  
 Q3= 14.4 in. (1.2 ft.)

**Existing Base Thickness Statistics**

Average= 7.5 in. (0.56 ft.)  
 Max= 10.8 in. (0.9 ft.)  
 Min= 2 in. (0.17 ft.)  
 SD= 1 in. (0.09 ft.)  
 Median= 6.6 in. (0.55 ft.)  
 Q1= 6 in. (0.5 ft.)  
 Q3= 7.3 in. (0.6 ft.)

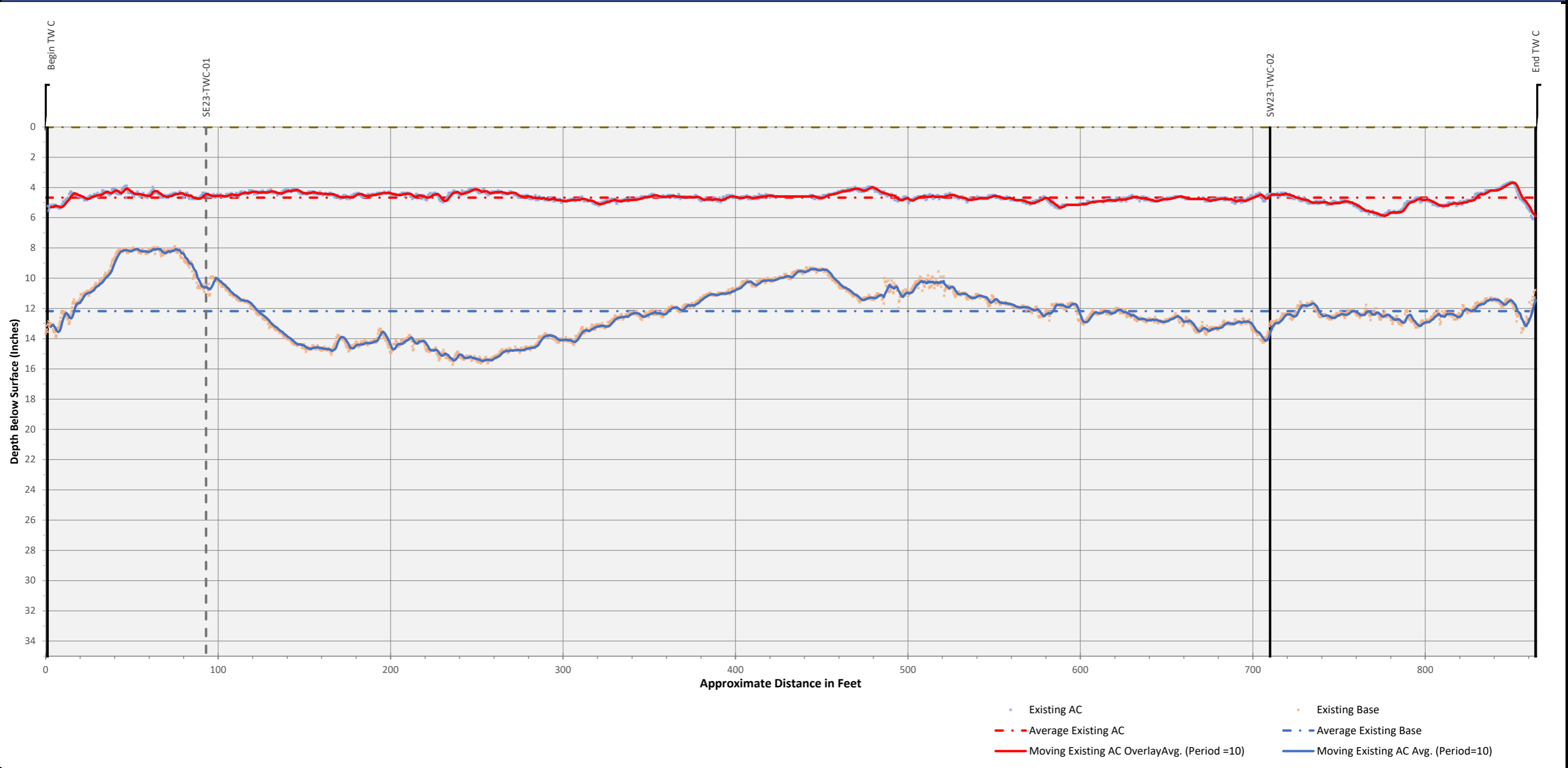
Total Number of Scans= 15558

# Existing Pavement Layer Depths

## RKS Master Plan Airfield Pavement Evaluation

### Tawiway C Track 1 (8' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



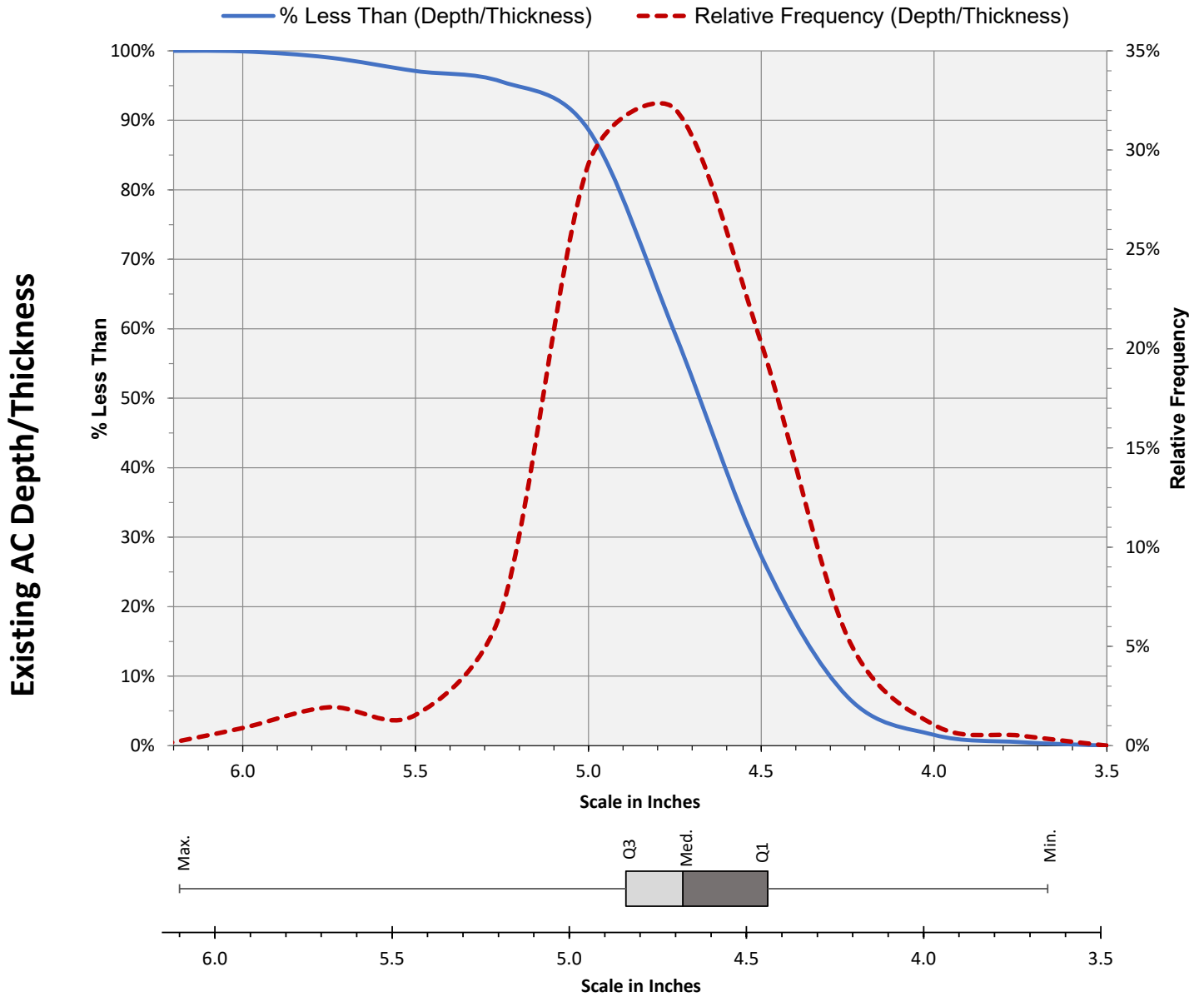
Note: GPR distance scale along the x-axis may not correspond exactly with project stationing.

### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Tawiway C Track 1  
(8' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



#### Existing AC/Thickness Statistics

**Average**= 4.7 in. (0.39 ft.)  
**Max**= 6.1 in. (0.51 ft.)  
**Min**= 3.7 in. (0.3 ft.)  
**SD**= 0.3 in. (0.03 ft.)  
**Median**= 4.7 in. (0.39 ft.)  
**Q1**= 4.4 in. (0.37 ft.)  
**Q3**= 4.8 in. (0.4 ft.)

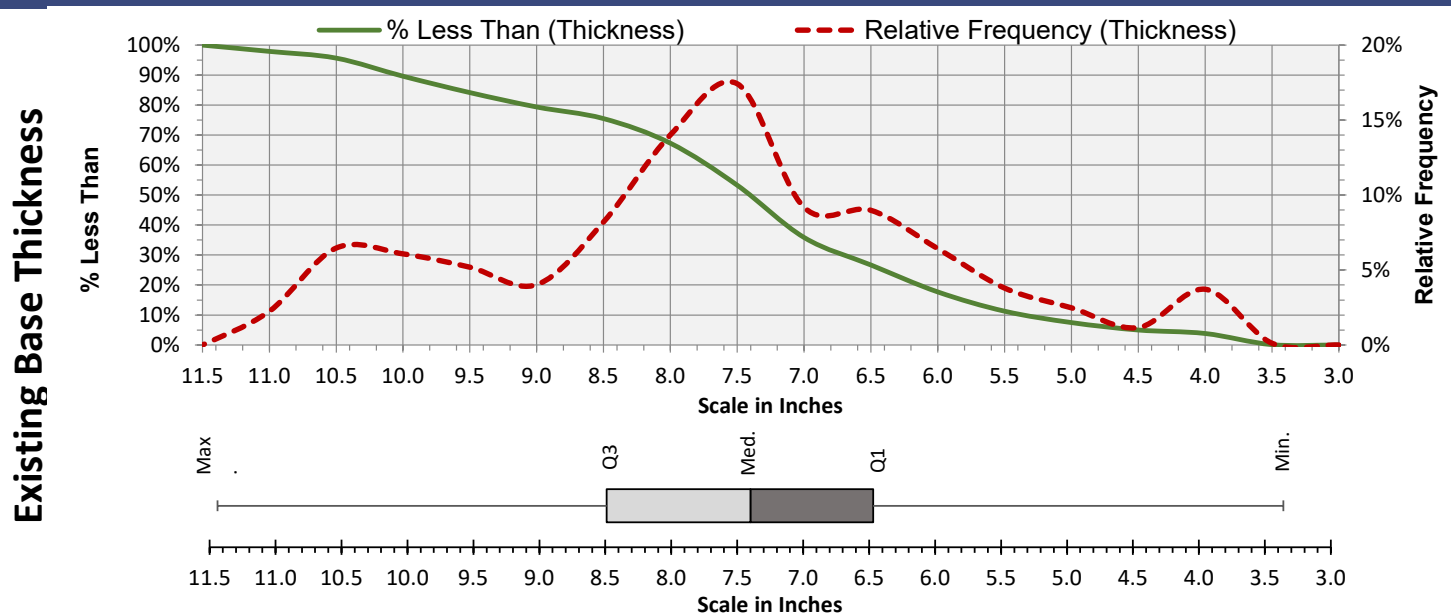
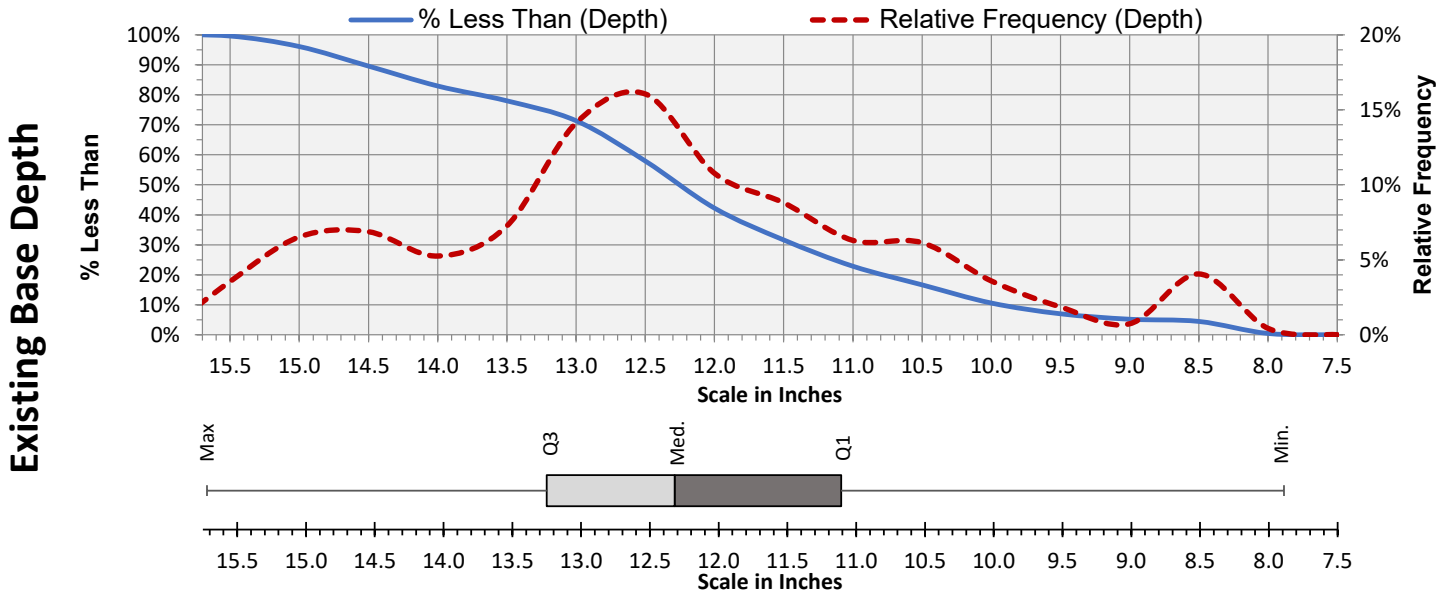
**Total Number of Scans**= 2593

### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Tawitway C Track 1  
(8' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



**Existing Base Depth Statistics**

Average= 12.2 in. (1.01 ft.)  
 Max= 15.7 in. (1.31 ft.)  
 Min= 7.9 in. (0.66 ft.)  
 SD= 1.7 in. (0.14 ft.)  
 Median= 12.3 in. (1.03 ft.)  
 Q1= 11.1 in. (0.93 ft.)  
 Q3= 13.3 in. (1.1 ft.)

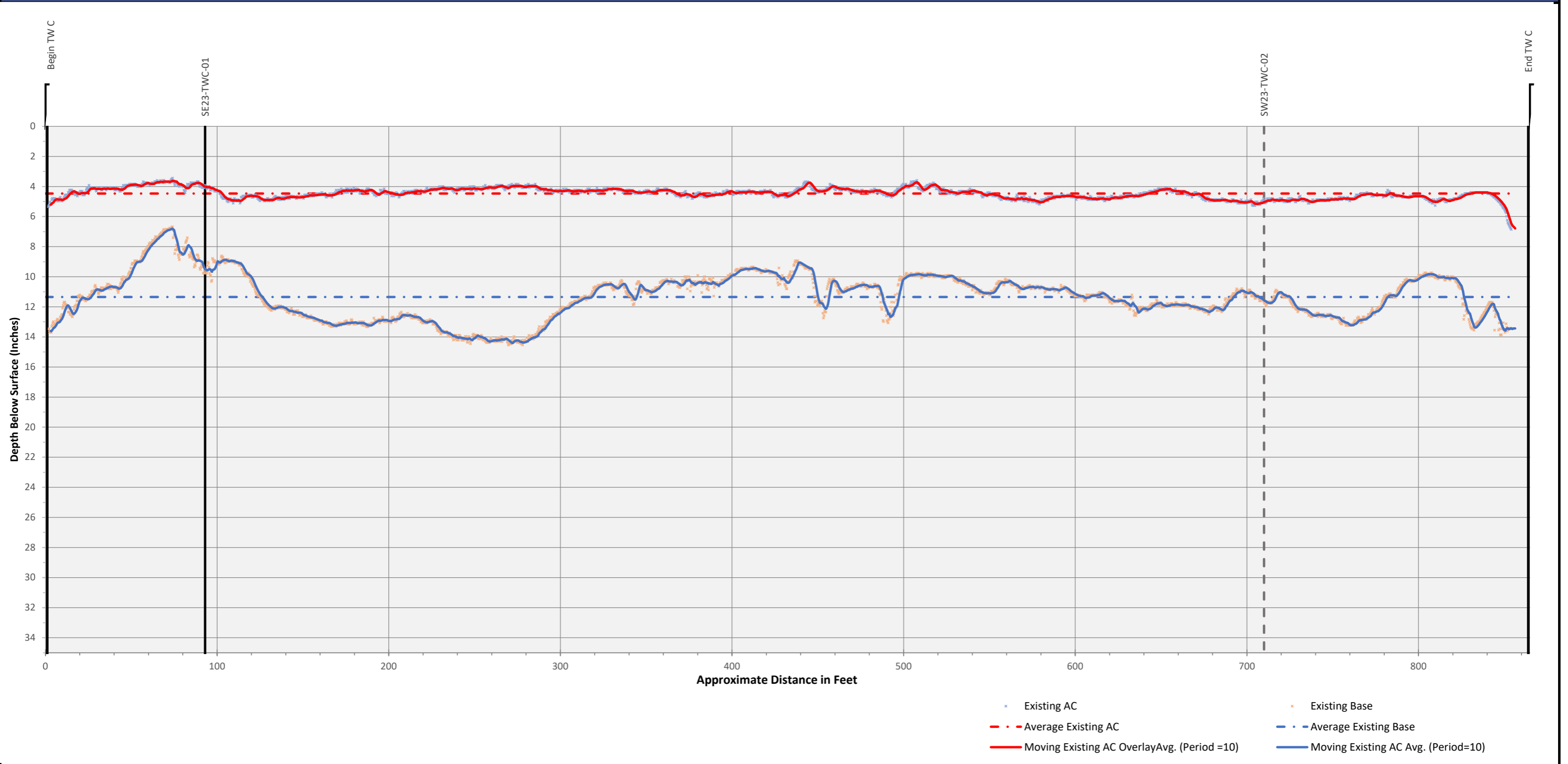
**Existing Base Thickness Statistics**

Average= 7.5 in. (0.63 ft.)  
 Max= 11.4 in. (0.95 ft.)  
 Min= 3.4 in. (0.28 ft.)  
 SD= 1.7 in. (0.14 ft.)  
 Median= 7.4 in. (0.62 ft.)  
 Q1= 6.5 in. (0.54 ft.)  
 Q3= 8.5 in. (0.71 ft.)

Total Number of Scans= 2593

**Existing Pavement Layer Depths**  
**RKS Master Plan Airfield Pavement Evaluation**  
**Tawiway C Track 2**  
**(8' Right of Center)**

File No: 110339  
 Scan Date: 4/17/2023



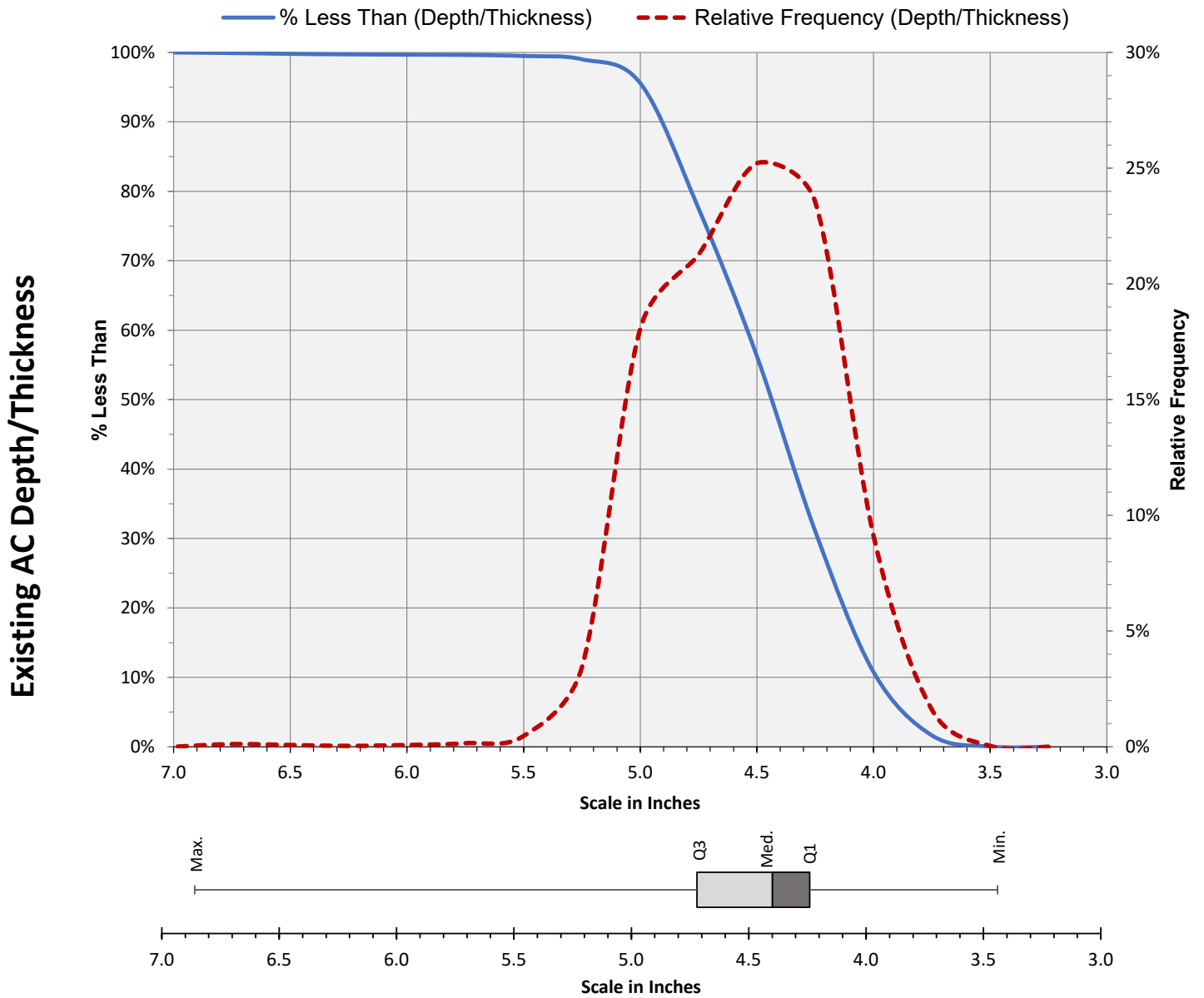
Note: GPR distance scale along the x-axis may not correspond exactly with project stationing.

### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Tawiway C Track 2  
(8' Right of Center)

File No: 110339  
Scan Date: 4/17/2023



#### Existing AC/Thickness Statistics

**Average**= 4.5 in. (0.37 ft.)  
**Max**= 6.9 in. (0.57 ft.)  
**Min**= 3.4 in. (0.29 ft.)  
**SD**= 0.4 in. (0.03 ft.)  
**Median**= 4.4 in. (0.37 ft.)  
**Q1**= 4.2 in. (0.35 ft.)  
**Q3**= 4.7 in. (0.39 ft.)

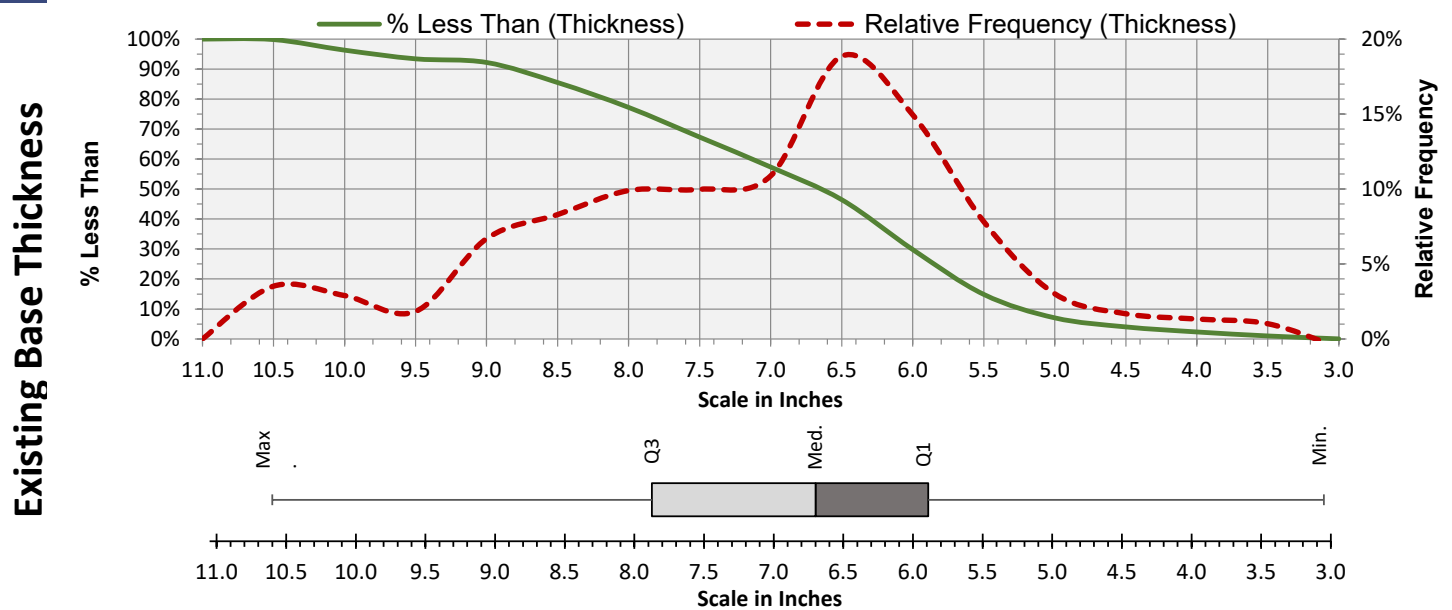
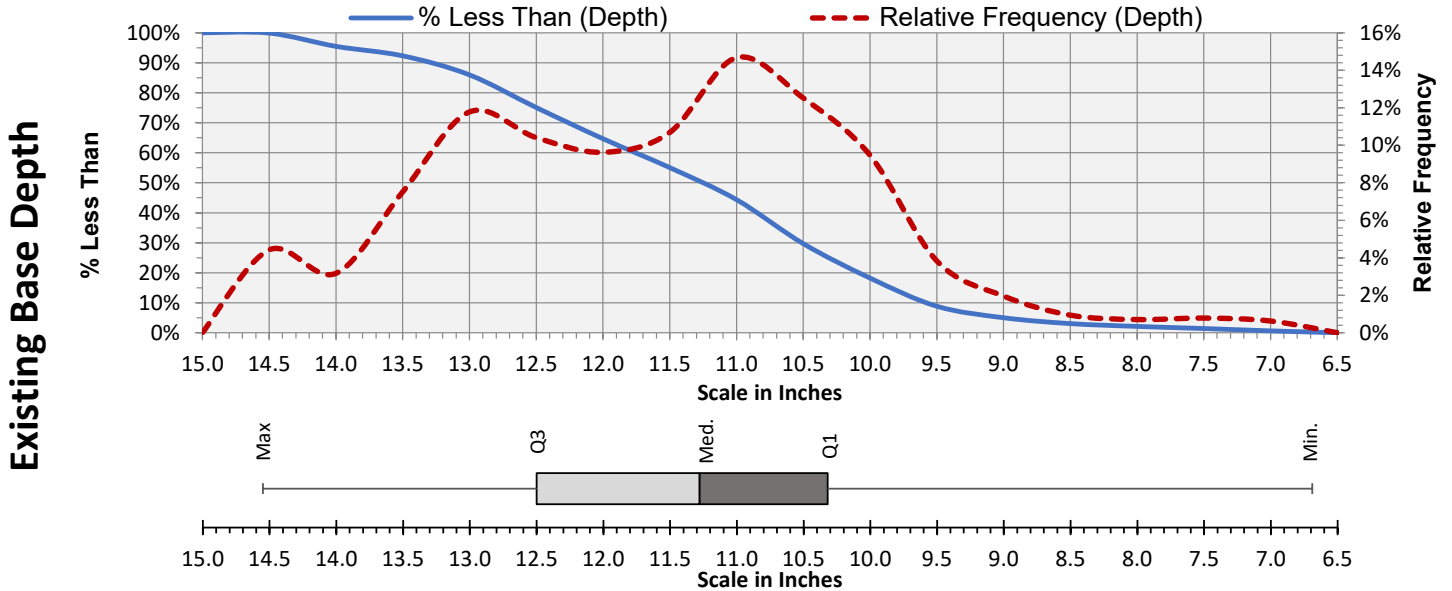
**Total Number of Scans**= 2570

### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Tawitway C Track 2  
(8' Right of Center)

File No: 110339  
Scan Date: 4/17/2023



**Existing Base Depth Statistics**

Average= 11.3 in. (0.95 ft.)  
 Max= 14.6 in. (1.21 ft.)  
 Min= 6.7 in. (0.56 ft.)  
 SD= 1.5 in. (0.13 ft.)  
 Median= 11.3 in. (0.94 ft.)  
 Q1= 10.3 in. (0.86 ft.)  
 Q3= 12.5 in. (1.04 ft.)

**Existing Base Thickness Statistics**

Average= 6.9 in. (0.57 ft.)  
 Max= 10.6 in. (0.88 ft.)  
 Min= 3 in. (0.25 ft.)  
 SD= 1.5 in. (0.12 ft.)  
 Median= 6.7 in. (0.55 ft.)  
 Q1= 5.8 in. (0.49 ft.)  
 Q3= 7.8 in. (0.65 ft.)

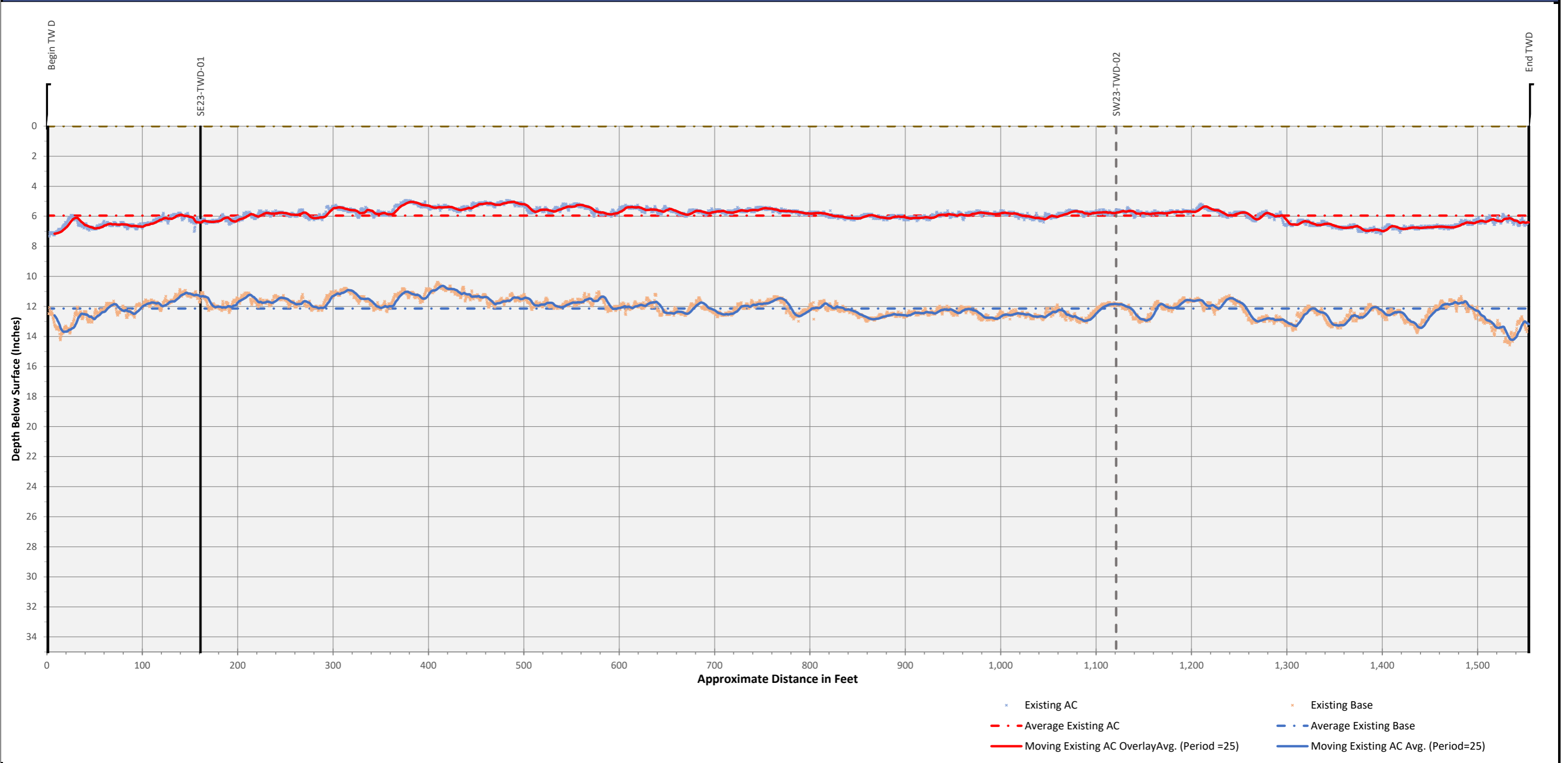
Total Number of Scans= 2570

# Existing Pavement Layer Depths

## RKS Master Plan Airfield Pavement Evaluation

### Tawiway D Track 1 (10' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



Note: GPR distance scale along the x-axis may not correspond exactly with project stationing.

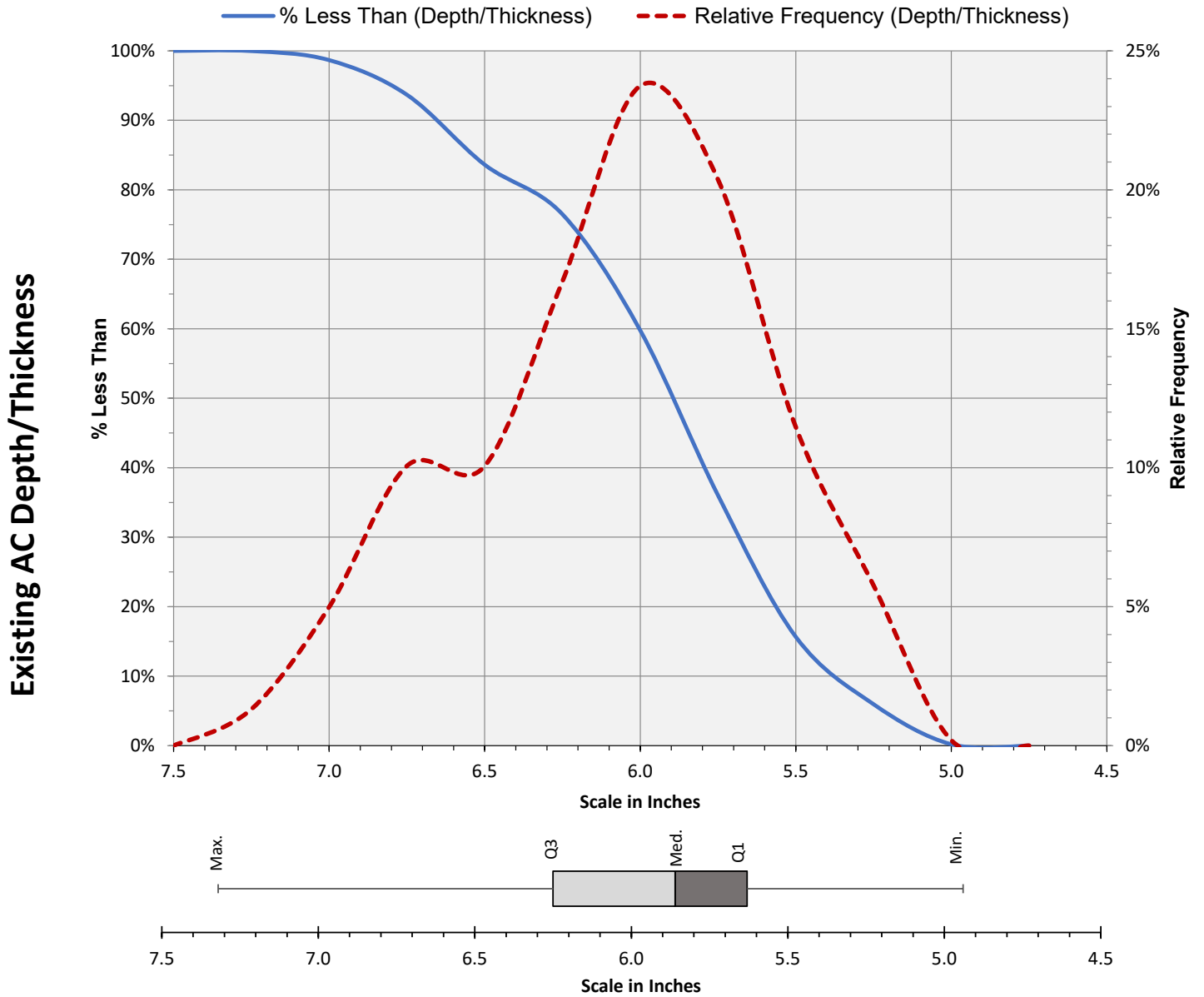


### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Tawiway D Track 1  
(10' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



#### Existing AC/Thickness Statistics

**Average**= 6 in. (0.5 ft.)  
**Max**= 7.3 in. (0.61 ft.)  
**Min**= 4.9 in. (0.41 ft.)  
**SD**= 0.5 in. (0.04 ft.)  
**Median**= 5.9 in. (0.49 ft.)  
**Q1**= 5.6 in. (0.47 ft.)  
**Q3**= 6.3 in. (0.52 ft.)

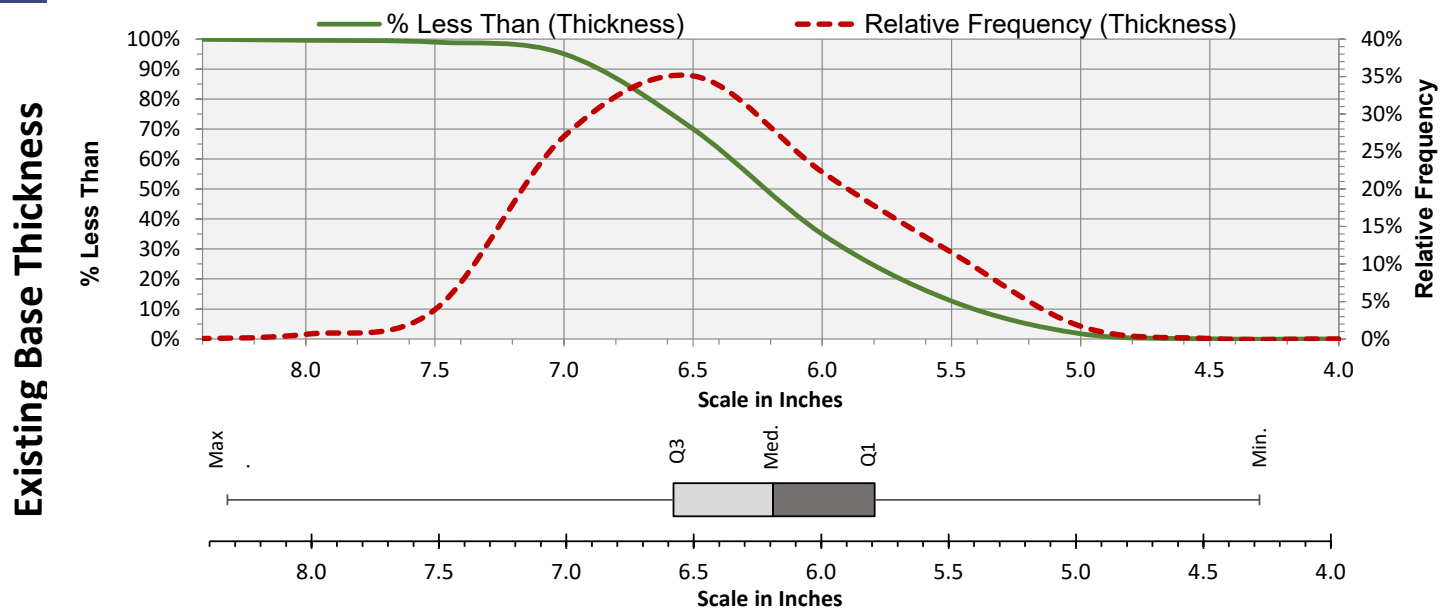
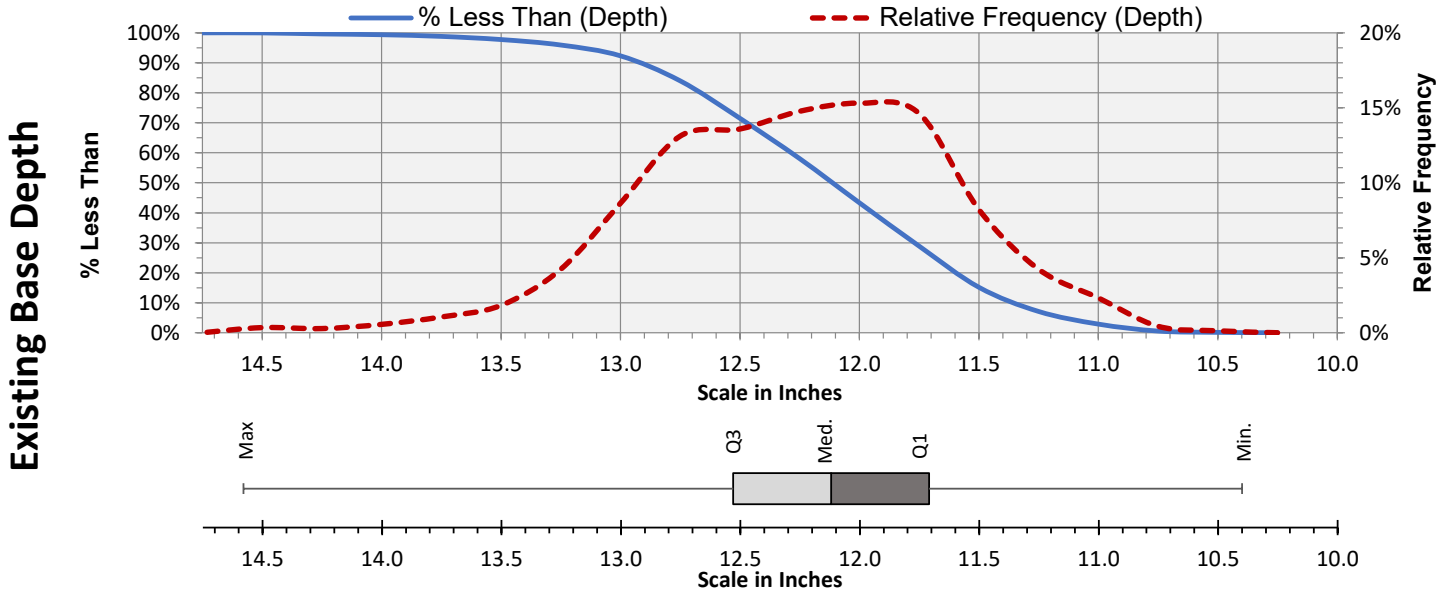
**Total Number of Scans**= 4662

### Existing AC/Thickness Statistics

#### RKS Master Plan Airfield Pavement Evaluation

Tawitway D Track 1  
(10' Left of Center)

File No: 110339  
Scan Date: 4/17/2023



**Existing Base Depth Statistics**

Average= 12.1 in. (1.01 ft.)  
 Max= 14.6 in. (1.22 ft.)  
 Min= 10.4 in. (0.87 ft.)  
 SD= 0.6 in. (0.05 ft.)  
 Median= 12.1 in. (1.01 ft.)  
 Q1= 11.7 in. (0.98 ft.)  
 Q3= 12.5 in. (1.04 ft.)

**Existing Base Thickness Statistics**

Average= 6.2 in. (0.52 ft.)  
 Max= 8.3 in. (0.69 ft.)  
 Min= 4.3 in. (0.36 ft.)  
 SD= 0.6 in. (0.05 ft.)  
 Median= 6.2 in. (0.52 ft.)  
 Q1= 5.8 in. (0.48 ft.)  
 Q3= 6.6 in. (0.55 ft.)

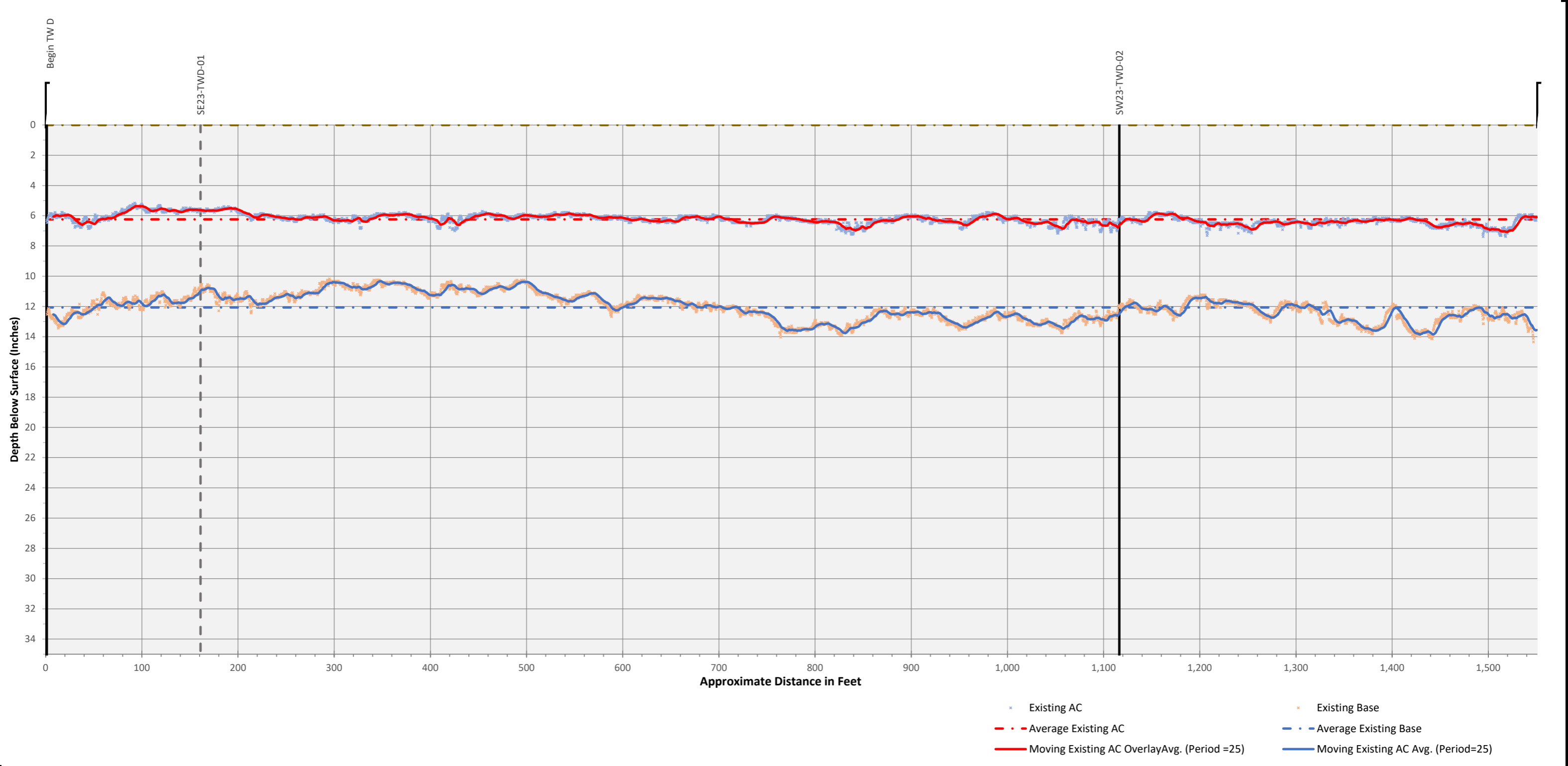
Total Number of Scans= 4662

# Existing Pavement Layer Depths

## RKS Master Plan Airfield Pavement Evaluation

### Tawiway D Track 2 (6' Right of Center)

File No: 110339  
Scan Date: 4/17/2023



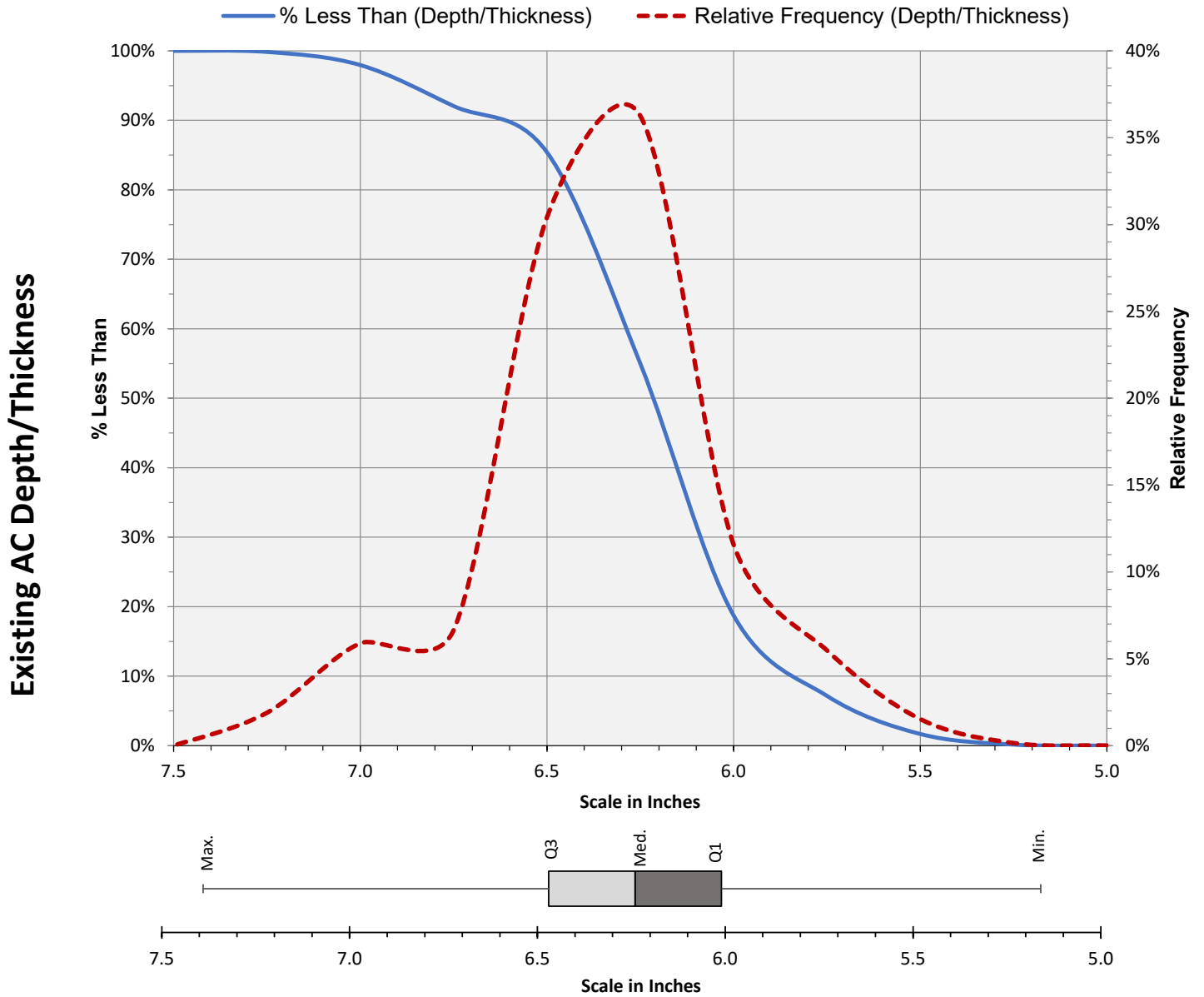
Note: GPR distance scale along the x-axis may not correspond exactly with project stationing.

### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Tawiway D Track 2  
(6' Right of Center)

File No: 110339  
Scan Date: 4/17/2023



#### Existing AC/Thickness Statistics

**Average**= 6.2 in. (0.52 ft.)  
**Max**= 7.4 in. (0.62 ft.)  
**Min**= 5.2 in. (0.43 ft.)  
**SD**= 0.3 in. (0.03 ft.)  
**Median**= 6.2 in. (0.52 ft.)  
**Q1**= 6 in. (0.5 ft.)  
**Q3**= 6.5 in. (0.54 ft.)

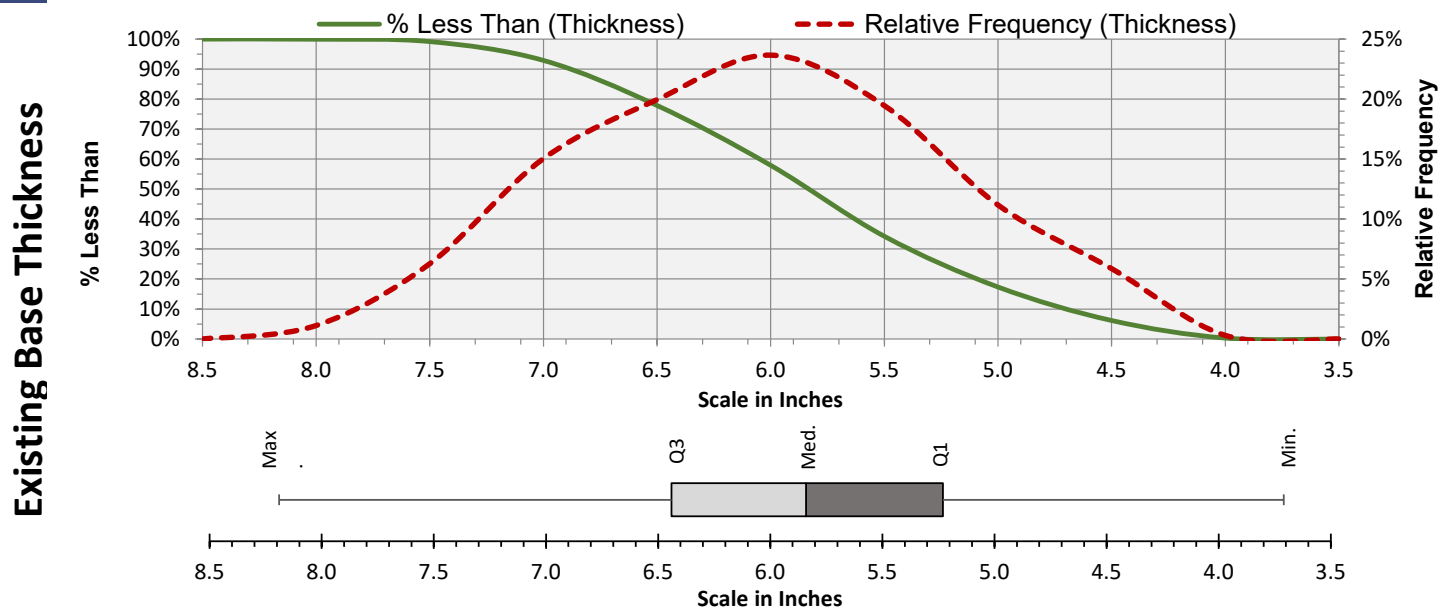
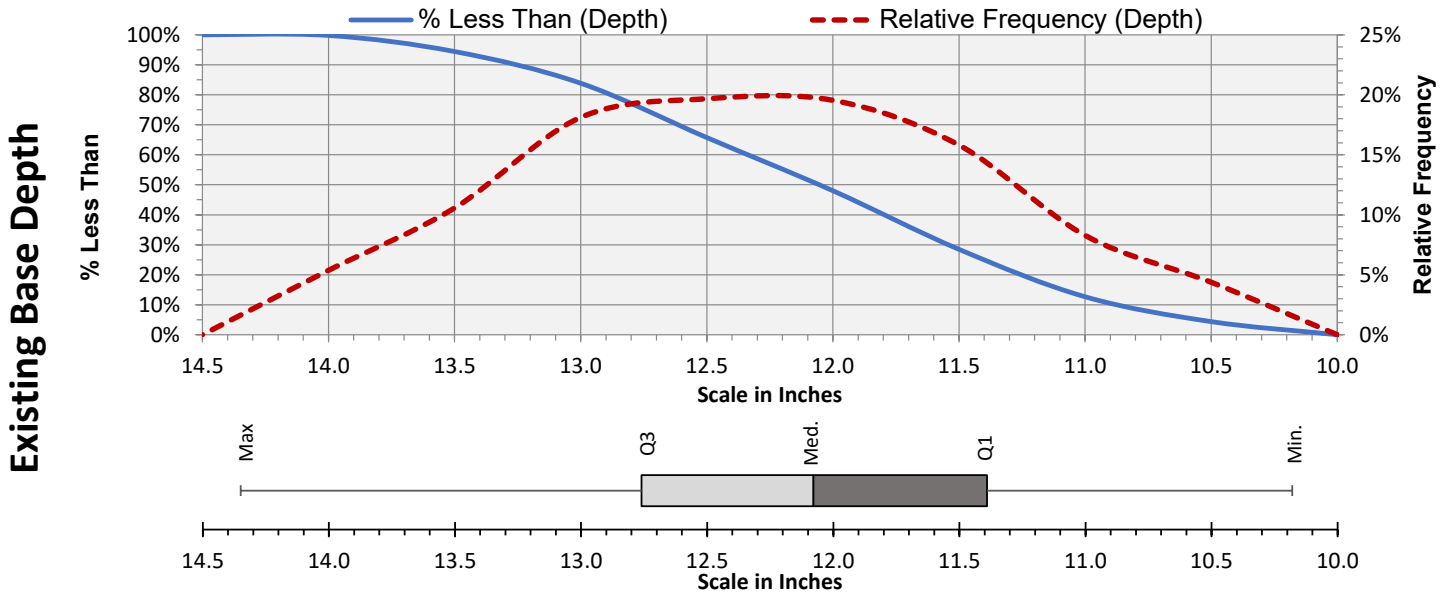
**Total Number of Scans**= 4652

### Existing AC/Thickness Statistics

RKS Master Plan Airfield Pavement Evaluation

Tawirway D Track 2  
(6' Right of Center)

File No: 110339  
Scan Date: 4/17/2023



**Existing Base Depth Statistics**

Average= 12.1 in. (1.01 ft.)  
 Max= 14.4 in. (1.2 ft.)  
 Min= 10.2 in. (0.85 ft.)  
 SD= 0.9 in. (0.07 ft.)  
 Median= 12.1 in. (1.01 ft.)  
 Q1= 11.4 in. (0.95 ft.)  
 Q3= 12.8 in. (1.06 ft.)

**Existing Base Thickness Statistics**

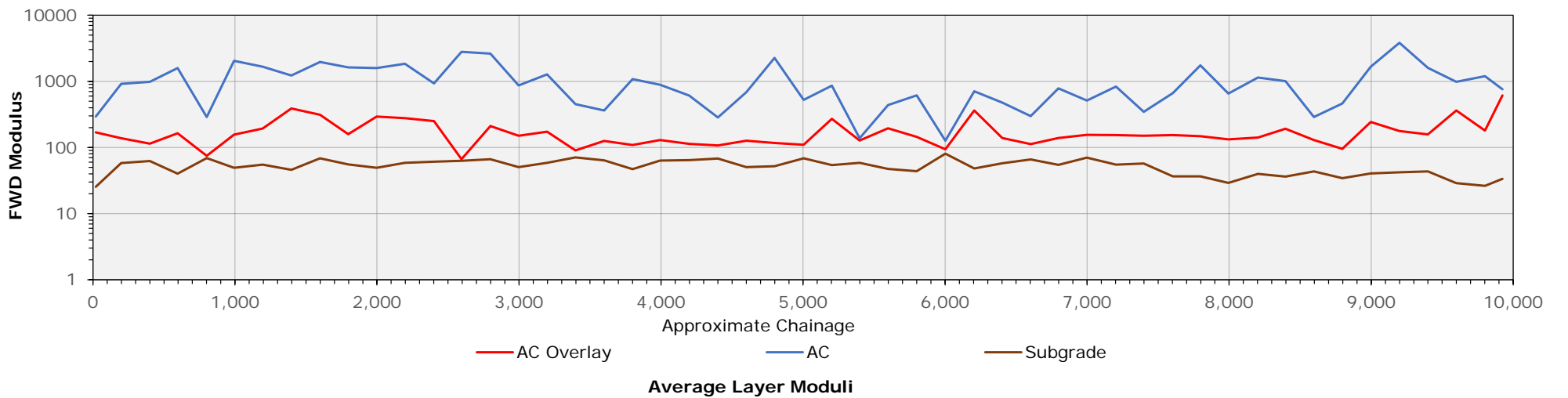
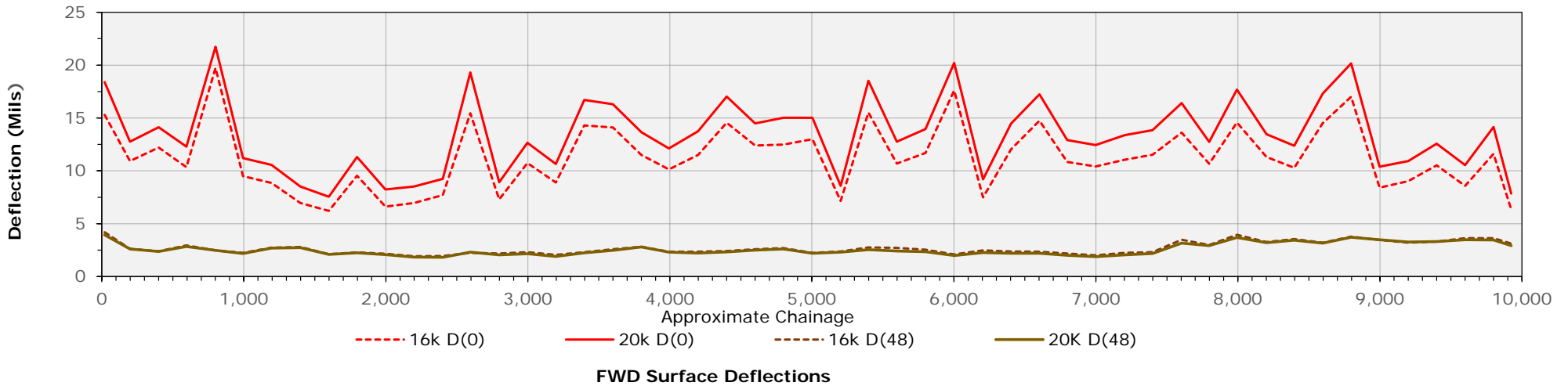
Average= 5.8 in. (0.49 ft.)  
 Max= 8.2 in. (0.68 ft.)  
 Min= 3.7 in. (0.31 ft.)  
 SD= 0.8 in. (0.07 ft.)  
 Median= 5.8 in. (0.49 ft.)  
 Q1= 5.2 in. (0.44 ft.)  
 Q3= 6.4 in. (0.54 ft.)

Total Number of Scans= 4652

**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Project Name: RKS Master Plan	Calc. Date: August 14, 2023
Segment: Runway 9/27, 34' Lt	Project No.: 110339
Direction: Southeast	

Summary of Input Data		Summary of Backcalculated Moduli				
Date of FWD Testing:	May 16, 2023	AC Overlay	AC	Subgrade	RMS (%)	
PDAT (BELLS):	52° F	Mean:	160.4	812.5	50.0	3.1
FWD Plate Radius:	5.905"	Standard Deviation:	56.7	431.1	12.4	



## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
20.0	1	16103	147.0	15.29	8.98	7.52	8.17	6.71	5.79	4.89	4.19	3.17	79.1	99.9	73.5	8.4	11.1	150.7	334.4	23.7	1.5
20.0	2	15961	145.7	14.89	8.88	7.44	8.06	6.64	5.73	4.82	4.16	3.13	79.1	99.9	73.5	8.4	11.1	160.5	323.3	23.7	1.2
20.0	3	20309	185.4	18.39	11.23	9.44	10.28	8.41	7.26	6.11	5.24	3.94	79.1	99.9	73.5	8.4	11.1	180.3	262.6	27.3	0.7
20.0	4	20277	185.1	18.25	11.25	9.47	10.32	8.44	7.27	6.14	5.27	3.96	79.1	99.9	73.5	8.4	11.1	185.4	257.4	27.1	0.5
199.3	1	16202	147.9	10.93	4.95	3.52	3.48	3.42	3.19	2.88	2.62	2.14	77.9	96.7	72.6	8.0	11.4	127.7	939.4	58.0	4.5
199.3	2	15774	144.0	10.44	4.81	3.44	3.39	3.33	3.13	2.80	2.55	2.07	77.9	96.7	72.6	8.0	11.4	130.7	925.7	58.0	4.3
199.3	3	20255	184.9	12.75	6.08	4.36	4.31	4.23	3.96	3.55	3.22	2.61	77.9	96.7	72.6	8.0	11.4	146.1	895.3	58.9	4.2
199.3	4	20244	184.8	12.61	6.09	4.37	4.35	4.24	3.96	3.56	3.23	2.62	77.9	96.7	72.6	8.0	11.4	148.1	918.3	58.7	4.3
400.7	1	16191	147.8	12.20	5.38	3.23	3.32	3.19	2.94	2.65	2.39	1.92	76.7	96.4	73.4	9.3	9.7	108.0	910.6	60.9	6.7
400.7	2	15895	145.1	11.78	5.27	3.20	3.28	3.14	2.91	2.60	2.35	1.89	76.7	96.4	73.4	9.3	9.7	112.2	812.9	66.5	6.3
400.7	3	20200	184.4	14.12	6.49	4.05	4.14	3.96	3.67	3.27	2.94	2.37	76.7	96.4	73.4	9.3	9.7	117.6	1125.7	57.8	6.5
400.7	4	20266	185.0	14.01	6.49	4.07	4.16	3.98	3.68	3.28	2.96	2.38	76.7	96.4	73.4	9.3	9.7	118.6	1087.0	64.9	6.2
595.7	1	16223	148.1	10.35	5.09	4.30	4.42	4.15	3.77	3.32	2.94	2.32	78.1	97.7	73.6	8.3	9.6	152.8	1740.5	37.8	1.1
595.7	2	15851	144.7	10.00	5.01	4.22	4.34	4.05	3.67	3.24	2.89	2.29	78.1	97.7	73.6	8.3	9.6	162.7	1177.3	50.9	0.7
595.7	3	20331	185.6	12.29	6.35	5.36	5.49	5.13	4.66	4.09	3.64	2.85	78.1	97.7	73.6	8.3	9.6	170.2	1736.5	36.2	1.2
595.7	4	20309	185.4	12.20	6.38	5.35	5.49	5.13	4.66	4.09	3.63	2.83	78.1	97.7	73.6	8.3	9.6	172.5	1691.2	36.1	1.3
800.7	1	16191	147.8	19.73	7.28	3.45	3.55	3.22	3.08	2.78	2.47	1.99	78.5	99.0	72.6	8.7	10.3	70.3	224.3	69.9	11.3
800.7	2	15895	145.1	18.61	6.95	3.42	3.53	3.20	3.03	2.74	2.43	1.95	78.5	99.0	72.6	8.7	10.3	71.9	258.8	69.7	10.5
800.7	3	20397	186.2	21.74	8.44	4.34	4.48	4.09	3.87	3.47	3.10	2.47	78.5	99.0	72.6	8.7	10.3	78.0	326.1	68.6	9.5
800.7	4	20309	185.4	21.17	8.28	4.35	4.50	4.09	3.86	3.46	3.08	2.46	78.5	99.0	72.6	8.7	10.3	79.2	349.5	68.7	9.3
994.0	1	16092	146.9	9.50	4.56	3.18	3.24	3.15	2.86	2.52	2.24	1.76	76.7	96.4	73.7	9.2	8.7	145.9	2198.7	47.1	4.4
994.0	2	15873	144.9	9.29	4.50	3.16	3.23	3.11	2.83	2.49	2.22	1.75	76.7	96.4	73.7	9.2	8.7	147.9	2129.7	49.8	4.1
994.0	3	20178	184.2	11.21	5.60	3.97	4.05	3.91	3.56	3.11	2.76	2.18	76.7	96.4	73.7	9.2	8.7	165.2	1686.2	55.0	3.6
994.0	4	20244	184.8	11.25	5.64	4.00	4.09	3.93	3.57	3.13	2.78	2.20	76.7	96.4	73.7	9.2	8.7	166.2	2162.7	44.7	4.5
1195.3	1	16147	147.4	8.85	4.59	3.94	4.01	3.78	3.44	3.05	2.73	2.19	76.6	94.9	73.6	8.4	8.7	178.0	1885.5	53.7	1.0
1195.3	2	15884	145.0	8.61	4.56	3.90	3.96	3.72	3.39	3.00	2.68	2.15	76.6	94.9	73.6	8.4	8.7	186.7	1688.2	54.4	0.9
1195.3	3	20277	185.1	10.56	5.73	4.91	4.99	4.67	4.26	3.77	3.37	2.69	76.6	94.9	73.6	8.4	8.7	202.8	1568.5	55.9	0.7
1195.3	4	20200	184.4	10.48	5.75	4.92	4.99	4.67	4.26	3.77	3.37	2.69	76.6	94.9	73.6	8.4	8.7	207.7	1512.5	55.7	0.9
1397.7	1	16147	147.4	6.96	4.54	4.24	4.36	3.93	3.56	3.15	2.80	2.21	78.2	97.6	74.1	8.2	9.9	387.5	1030.2	52.1	1.0
1397.7	2	15818	144.4	6.85	4.50	4.17	4.25	3.87	3.50	3.10	2.76	2.19	78.2	97.6	74.1	8.2	9.9	386.1	1012.1	51.9	1.0
1397.7	3	20309	185.4	8.51	5.65	5.22	5.30	4.83	4.40	3.89	3.46	2.74	78.2	97.6	74.1	8.2	9.9	390.6	1430.7	39.8	0.5
1397.7	4	20200	184.4	8.51	5.66	5.20	5.34	4.82	4.38	3.89	3.45	2.72	78.2	97.6	74.1	8.2	9.9	391.4	1415.4	39.7	0.4
1598.3	1	16070	146.7	6.21	3.37	3.13	3.29	2.93	2.65	2.35	2.11	1.72	78.4	98.3	73.9	8.3	9.8	299.9	2088.0	67.5	0.8
1598.3	2	15774	144.0	6.12	3.35	3.07	3.23	2.87	2.61	2.33	2.08	1.70	78.4	98.3	73.9	8.3	9.8	298.7	2082.1	67.0	0.7
1598.3	3	20189	184.3	7.55	4.22	3.85	4.04	3.59	3.26	2.89	2.60	2.09	78.4	98.3	73.9	8.3	9.8	320.5	1931.8	69.8	0.8
1598.3	4	20145	183.9	7.55	4.24	3.85	4.04	3.60	3.26	2.89	2.58	2.09	78.4	98.3	73.9	8.3	9.8	326.9	1750.2	70.7	0.8
1797.0	1	16092	146.9	9.53	4.29	3.35	3.49	3.26	2.95	2.59	2.28	1.82	76.7	96.0	73.3	9.0	9.2	151.2	1303.2	65.8	1.3
1797.0	2	15993	146.0	9.34	4.30	3.33	3.47	3.25	2.94	2.56	2.28	1.81	76.7	96.0	73.3	9.0	9.2	156.2	1259.4	65.8	1.2

### Summary of FWD Data and Backcalculation Results (ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
1797.0	3	20277	185.1	11.30	5.41	4.19	4.39	4.08	3.69	3.21	2.84	2.24	76.7	96.0	73.3	9.0	9.2	162.3	1999.3	46.2	2.5
1797.0	4	20255	184.9	11.25	5.45	4.21	4.39	4.10	3.69	3.21	2.86	2.24	76.7	96.0	73.3	9.0	9.2	167.6	1930.1	44.5	2.6
1997.7	1	15851	144.7	6.61	3.42	3.34	3.50	3.13	2.81	2.45	2.16	1.65	78.9	98.9	73.8	8.1	11.1	286.8	1628.3	50.0	2.8
1997.7	2	15917	145.3	6.67	3.46	3.37	3.52	3.15	2.81	2.46	2.18	1.66	78.9	98.9	73.8	8.1	11.1	284.3	1605.6	50.4	2.6
1997.7	3	20299	185.3	8.24	4.41	4.23	4.41	3.97	3.56	3.10	2.70	2.07	78.9	98.9	73.8	8.1	11.1	303.6	1569.0	48.4	2.3
1997.7	4	20266	185.0	8.26	4.43	4.23	4.41	3.97	3.57	3.09	2.69	2.06	78.9	98.9	73.8	8.1	11.1	302.4	1543.4	48.5	2.3
2197.0	1	16059	146.6	6.95	3.53	3.24	3.16	2.95	2.59	2.22	1.92	1.47	79.1	100.2	75.1	8.7	8.9	263.8	1936.7	58.5	1.3
2197.0	2	15840	144.6	6.86	3.54	3.22	3.14	2.93	2.57	2.20	1.89	1.46	79.1	100.2	75.1	8.7	8.9	261.5	2275.2	50.9	1.3
2197.0	3	20145	183.9	8.52	4.51	4.06	4.00	3.70	3.24	2.78	2.39	1.84	79.1	100.2	75.1	8.7	8.9	287.2	1598.6	62.9	0.8
2197.0	4	20309	185.4	8.54	4.57	4.11	4.04	3.75	3.27	2.80	2.40	1.85	79.1	100.2	75.1	8.7	8.9	293.8	1543.6	62.9	1.1
2401.3	1	16158	147.5	7.71	3.96	3.36	3.39	3.00	2.63	2.24	1.95	1.50	80.6	99.7	75.7	6.9	11.4	234.9	942.6	62.7	1.6
2401.3	2	15752	143.8	7.45	3.89	3.30	3.31	2.93	2.57	2.19	1.89	1.47	80.6	99.7	75.7	6.9	11.4	246.2	895.8	62.8	1.8
2401.3	3	20189	184.3	9.23	4.93	4.18	4.21	3.72	3.26	2.76	2.40	1.82	80.6	99.7	75.7	6.9	11.4	260.7	942.7	59.6	1.6
2401.3	4	20353	185.8	9.29	4.99	4.22	4.25	3.76	3.28	2.80	2.43	1.84	80.6	99.7	75.7	6.9	11.4	261.3	953.3	59.3	1.6
2595.3	1	15906	145.2	15.45	3.67	3.37	9.04	3.13	2.83	2.51	2.25	1.88	77.8	97.4	74.1	8.5	10.0	65.6	2827.0	61.7	2.7
2595.3	2	15895	145.1	15.30	3.69	3.39	8.96	3.13	2.84	2.52	2.26	1.88	77.8	97.4	74.1	8.5	10.0	67.2	2697.0	62.1	2.5
2595.3	3	20189	184.3	19.30	4.56	4.17	11.36	3.86	3.48	3.09	2.79	2.31	77.8	97.4	74.1	8.5	10.0	66.8	2803.7	64.1	2.6
2595.3	4	20255	184.9	19.37	4.57	4.20	11.40	3.88	3.50	3.11	2.82	2.34	77.8	97.4	74.1	8.5	10.0	66.6	2817.5	63.7	2.4
2798.0	1	15862	144.8	7.30	3.27	3.18	3.30	3.09	2.82	2.47	2.17	1.67	77.3	96.4	73.0	8.4	9.0	198.5	2866.6	65.7	4.1
2798.0	2	15851	144.7	7.25	3.31	3.17	3.27	3.08	2.81	2.46	2.16	1.64	77.3	96.4	73.0	8.4	9.0	200.6	2800.6	65.9	3.9
2798.0	3	20058	183.1	8.91	4.21	3.99	4.12	3.87	3.53	3.10	2.71	2.06	77.3	96.4	73.0	8.4	9.0	215.5	2671.0	66.3	3.8
2798.0	4	20200	184.4	8.92	4.28	4.03	4.16	3.90	3.56	3.11	2.72	2.08	77.3	96.4	73.0	8.4	9.0	229.5	2150.3	68.2	3.2
2997.7	1	15993	146.0	10.73	4.98	3.74	3.89	3.48	3.09	2.66	2.31	1.70	76.8	96.0	72.0	8.8	9.4	135.9	907.0	49.9	2.3
2997.7	2	15928	145.4	10.40	4.96	3.74	3.88	3.46	3.09	2.66	2.30	1.69	76.8	96.0	72.0	8.8	9.4	147.1	865.3	49.8	2.3
2997.7	3	20189	184.3	12.65	6.22	4.73	4.91	4.37	3.90	3.36	2.90	2.15	76.8	96.0	72.0	8.8	9.4	156.5	865.7	51.4	2.2
2997.7	4	20200	184.4	12.51	6.24	4.75	4.94	4.39	3.90	3.35	2.91	2.13	76.8	96.0	72.0	8.8	9.4	161.8	835.9	50.1	2.0
3198.0	1	15950	145.6	8.89	4.06	3.24	3.34	3.08	2.74	2.36	2.05	1.53	77.7	96.2	74.0	7.9	9.6	161.0	1290.6	59.6	1.1
3198.0	2	15982	145.9	8.76	4.07	3.24	3.35	3.09	2.73	2.35	2.04	1.53	77.7	96.2	74.0	7.9	9.6	168.1	1198.7	62.0	1.1
3198.0	3	20288	185.2	10.65	5.11	4.13	4.26	3.89	3.47	2.97	2.56	1.91	77.7	96.2	74.0	7.9	9.6	178.1	1361.2	56.1	1.1
3198.0	4	20331	185.6	10.62	5.15	4.15	4.27	3.92	3.48	2.99	2.57	1.91	77.7	96.2	74.0	7.9	9.6	184.9	1257.5	56.4	1.0
3397.7	1	15895	145.1	14.30	5.40	3.30	3.64	3.14	2.91	2.60	2.31	1.80	78.4	96.0	75.1	7.0	11.6	84.8	413.8	71.5	7.0
3397.7	2	15982	145.9	14.02	5.45	3.35	3.63	3.17	2.94	2.62	2.31	1.80	78.4	96.0	75.1	7.0	11.6	85.1	484.1	70.2	6.9
3397.7	3	20266	185.0	16.70	6.79	4.24	4.60	4.00	3.70	3.28	2.89	2.24	78.4	96.0	75.1	7.0	11.6	95.5	456.8	71.1	6.3
3397.7	4	20211	184.5	16.44	6.79	4.26	4.59	3.99	3.70	3.28	2.88	2.23	78.4	96.0	75.1	7.0	11.6	96.8	454.3	71.0	6.3
3599.7	1	15939	145.5	14.11	6.67	4.05	4.28	3.69	3.40	2.97	2.59	2.01	80.7	99.1	74.6	6.5	10.1	117.0	312.7	64.2	7.2
3599.7	2	15928	145.4	13.66	6.61	4.06	4.31	3.70	3.39	2.97	2.59	2.00	80.7	99.1	74.6	6.5	10.1	122.9	343.2	63.4	7.0
3599.7	3	20178	184.2	16.31	8.16	5.11	5.41	4.65	4.26	3.72	3.24	2.48	80.7	99.1	74.6	6.5	10.1	136.4	344.6	64.1	6.4



## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
3599.7	4	20309	185.4	16.17	8.21	5.17	5.45	4.70	4.30	3.75	3.26	2.49	80.7	99.1	74.6	6.5	10.1	126.3	445.4	63.5	6.5
3799.3	1	15840	144.6	11.50	5.00	3.72	3.91	3.69	3.46	3.11	2.82	2.26	80.5	97.1	74.0	5.7	12.4	101.4	1054.4	47.5	4.5
3799.3	2	15873	144.9	11.35	5.04	3.76	3.92	3.70	3.48	3.13	2.82	2.27	80.5	97.1	74.0	5.7	12.4	105.1	1040.0	47.5	4.6
3799.3	3	20134	183.8	13.65	6.22	4.69	4.89	4.59	4.31	3.89	3.49	2.80	80.5	97.1	74.0	5.7	12.4	113.2	1143.5	46.5	4.5
3799.3	4	20288	185.2	13.61	6.29	4.73	4.95	4.63	4.35	3.91	3.52	2.81	80.5	97.1	74.0	5.7	12.4	115.5	1096.4	46.5	4.5
3992.7	1	15993	146.0	10.14	4.76	3.67	3.68	3.50	3.13	2.73	2.34	1.88	79.4	94.4	72.7	5.3	10.9	118.1	928.1	62.9	3.1
3992.7	2	15939	145.5	9.99	4.78	3.67	3.67	3.51	3.12	2.72	2.37	1.89	79.4	94.4	72.7	5.3	10.9	119.2	1070.3	55.1	3.7
3992.7	3	20200	184.4	12.13	5.97	4.59	4.59	4.38	3.89	3.36	2.96	2.30	79.4	94.4	72.7	5.3	10.9	138.1	775.4	67.5	2.6
3992.7	4	20167	184.1	12.02	5.99	4.61	4.62	4.38	3.90	3.37	2.95	2.30	79.4	94.4	72.7	5.3	10.9	143.7	765.7	67.4	2.6
4197.7	1	15950	145.6	11.51	5.14	3.65	3.68	3.39	3.07	2.67	2.35	1.81	79.4	94.7	73.5	5.4	11.5	106.9	550.4	68.8	4.3
4197.7	2	15884	145.0	11.28	5.16	3.65	3.68	3.38	3.07	2.66	2.33	1.80	79.4	94.7	73.5	5.4	11.5	99.0	868.7	49.0	6.3
4197.7	3	20211	184.5	13.75	6.46	4.62	4.64	4.26	3.87	3.35	2.92	2.23	79.4	94.7	73.5	5.4	11.5	122.9	508.4	69.8	4.1
4197.7	4	20233	184.7	13.64	6.50	4.63	4.65	4.28	3.87	3.35	2.92	2.25	79.4	94.7	73.5	5.4	11.5	125.4	508.7	69.9	4.1
4399.7	1	15906	145.2	14.56	6.22	3.84	3.98	3.61	3.23	2.78	2.41	1.85	78.6	94.9	73.9	6.2	10.7	95.6	279.3	67.8	5.3
4399.7	2	15884	145.0	14.13	6.19	3.85	4.01	3.61	3.22	2.79	2.41	1.86	78.6	94.9	73.9	6.2	10.7	98.2	301.3	67.6	5.4
4399.7	3	20277	185.1	17.02	7.74	4.89	5.09	4.58	4.09	3.53	3.04	2.32	78.6	94.9	73.9	6.2	10.7	116.5	278.7	68.3	4.8
4399.7	4	20244	184.8	16.72	7.71	4.91	5.11	4.58	4.08	3.53	3.03	2.31	78.6	94.9	73.9	6.2	10.7	118.9	280.5	68.3	4.8
4601.0	1	15895	145.1	12.39	5.85	4.28	4.32	3.85	3.35	2.92	2.58	1.99	78.6	97.3	73.4	7.5	10.3	113.5	727.9	47.7	4.8
4601.0	2	15895	145.1	12.04	5.86	4.29	4.34	3.86	3.36	2.92	2.58	2.00	78.6	97.3	73.4	7.5	10.3	121.4	691.3	47.7	4.8
4601.0	3	20244	184.8	14.49	7.30	5.39	5.45	4.86	4.22	3.66	3.22	2.50	78.6	97.3	73.4	7.5	10.3	132.6	662.9	53.8	4.3
4601.0	4	20189	184.3	14.25	7.28	5.39	5.46	4.85	4.22	3.66	3.22	2.48	78.6	97.3	73.4	7.5	10.3	136.8	662.5	52.1	4.3
4798.3	1	15851	144.7	12.49	5.85	4.54	4.59	4.22	3.65	3.11	2.70	2.10	77.4	95.9	74.4	8.0	5.9	106.3	2790.1	48.4	2.6
4798.3	2	15895	145.1	12.33	5.93	4.58	4.66	4.25	3.66	3.12	2.71	2.10	77.4	95.9	74.4	8.0	5.9	110.5	3029.5	42.9	3.3
4798.3	3	20189	184.3	15.03	7.46	5.77	5.87	5.33	4.60	3.90	3.38	2.61	77.4	95.9	74.4	8.0	5.9	125.0	1645.0	58.6	1.7
4798.3	4	20200	184.4	14.94	7.52	5.79	5.90	5.35	4.62	3.90	3.40	2.63	77.4	95.9	74.4	8.0	5.9	126.5	1595.9	58.5	2.2
5003.3	1	16015	146.2	12.99	5.84	3.52	3.61	3.11	2.86	2.53	2.24	1.81	77.7	95.8	73.8	7.7	10.4	99.3	465.7	72.7	8.5
5003.3	2	15763	143.9	12.53	5.73	3.46	3.56	3.11	2.81	2.48	2.27	1.78	77.7	95.8	73.8	7.7	10.4	98.6	741.7	54.6	9.9
5003.3	3	20211	184.5	15.02	7.07	4.40	4.52	3.90	3.54	3.14	2.81	2.20	77.7	95.8	73.8	7.7	10.4	118.8	451.6	73.5	7.6
5003.3	4	20211	184.5	14.81	7.09	4.41	4.51	3.91	3.56	3.14	2.81	2.23	77.7	95.8	73.8	7.7	10.4	121.3	442.5	73.5	7.7
5202.7	1	15928	145.4	7.15	4.10	3.54	3.56	3.32	3.00	2.66	2.37	1.89	77.3	93.5	74.0	6.7	12.8	266.3	716.3	62.3	0.5
5202.7	2	15917	145.3	7.11	4.13	3.54	3.57	3.31	3.01	2.68	2.38	1.89	77.3	93.5	74.0	6.7	12.8	270.7	716.7	61.9	0.5
5202.7	3	20123	183.7	8.58	5.08	4.37	4.40	4.09	3.71	3.30	2.93	2.31	77.3	93.5	74.0	6.7	12.8	271.5	1022.9	45.9	1.4
5202.7	4	20222	184.6	8.59	5.13	4.41	4.43	4.12	3.74	3.31	2.95	2.33	77.3	93.5	74.0	6.7	12.8	279.4	988.1	47.3	1.4
5398.3	1	15851	144.7	15.52	7.96	4.99	5.01	4.50	3.82	3.23	2.76	2.03	76.1	91.9	74.0	7.0	10.6	117.3	135.2	58.6	2.8
5398.3	2	15917	145.3	15.29	7.97	5.04	5.13	4.53	3.83	3.25	2.80	2.03	76.1	91.9	74.0	7.0	10.6	120.2	139.6	58.6	3.1
5398.3	3	20266	185.0	18.52	9.94	6.43	6.44	5.76	4.89	4.12	3.51	2.55	76.1	91.9	74.0	7.0	10.6	135.7	140.2	58.4	2.6
5398.3	4	20211	184.5	18.29	9.95	6.44	6.48	5.75	4.87	4.12	3.52	2.54	76.1	91.9	74.0	7.0	10.6	138.6	137.7	58.9	2.7

### Summary of FWD Data and Backcalculation Results (ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
5597.7	1	15873	144.9	10.69	5.79	4.96	4.94	4.43	3.80	3.19	2.72	1.96	77.1	93.7	74.0	7.0	10.2	174.9	395.2	53.2	2.1
5597.7	2	15895	145.1	10.44	5.85	4.99	4.95	4.44	3.81	3.20	2.68	1.95	77.1	93.7	74.0	7.0	10.2	183.0	481.4	44.0	0.8
5597.7	3	20211	184.5	12.76	7.37	6.29	6.24	5.59	4.81	4.01	3.35	2.41	77.1	93.7	74.0	7.0	10.2	202.8	486.2	42.2	1.0
5597.7	4	20244	184.8	12.68	7.39	6.31	6.28	5.61	4.81	4.03	3.41	2.46	77.1	93.7	74.0	7.0	10.2	216.8	392.4	49.9	1.6
5800.0	1	15851	144.7	11.69	6.12	4.36	4.44	3.96	3.47	2.95	2.54	1.87	76.8	94.5	74.0	7.9	9.3	132.7	598.4	45.0	4.1
5800.0	2	15928	145.4	11.54	6.13	4.39	4.47	3.99	3.50	2.96	2.54	1.89	76.8	94.5	74.0	7.9	9.3	140.2	575.1	45.1	3.8
5800.0	3	20101	183.5	13.96	7.62	5.52	5.62	5.00	4.39	3.73	3.19	2.34	76.8	94.5	74.0	7.9	9.3	151.0	583.2	45.4	3.7
5800.0	4	20266	185.0	13.91	7.69	5.59	5.69	5.05	4.42	3.76	3.22	2.36	76.8	94.5	74.0	7.9	9.3	154.2	691.3	39.4	4.1
6002.0	1	15993	146.0	17.60	7.76	3.60	4.16	3.09	2.80	2.43	2.10	1.59	77.1	93.6	74.0	6.9	11.4	83.0	122.0	81.2	9.6
6002.0	2	15829	144.5	16.98	7.60	3.60	4.15	3.09	2.78	2.41	2.09	1.57	77.1	93.6	74.0	6.9	11.4	88.8	120.8	80.9	9.0
6002.0	3	20266	185.0	20.20	9.32	4.60	5.25	3.96	3.57	3.08	2.65	1.98	77.1	93.6	74.0	6.9	11.4	101.7	129.9	80.3	8.1
6002.0	4	20222	184.6	19.88	9.26	4.63	5.25	3.97	3.57	3.08	2.64	1.98	77.1	93.6	74.0	6.9	11.4	102.9	134.0	80.2	8.0
6205.3	1	15840	144.6	7.48	4.88	4.24	4.26	3.84	3.34	2.83	2.47	1.85	78.0	95.4	74.0	7.0	10.0	348.1	688.0	49.2	0.4
6205.3	2	15862	144.8	7.47	4.91	4.26	4.28	3.85	3.33	2.84	2.48	1.85	78.0	95.4	74.0	7.0	10.0	355.8	656.4	50.8	0.5
6205.3	3	20123	183.7	9.19	6.10	5.32	5.32	4.80	4.16	3.52	3.07	2.27	78.0	95.4	74.0	7.0	10.0	369.5	752.2	46.7	0.8
6205.3	4	20288	185.2	9.22	6.18	5.36	5.35	4.84	4.22	3.58	3.09	2.30	78.0	95.4	74.0	7.0	10.0	380.3	742.3	46.5	0.7
6403.0	1	15731	143.6	12.03	5.59	3.98	4.10	3.75	3.28	2.77	2.37	1.75	78.4	96.7	74.0	7.4	10.1	119.3	613.9	49.5	2.8
6403.0	2	15851	144.7	11.94	5.65	4.02	4.14	3.78	3.29	2.79	2.38	1.76	78.4	96.7	74.0	7.4	10.1	124.8	612.6	47.8	3.0
6403.0	3	20178	184.2	14.46	7.11	5.09	5.22	4.78	4.19	3.52	2.98	2.21	78.4	96.7	74.0	7.4	10.1	154.2	347.0	67.3	1.7
6403.0	4	20112	183.6	14.31	7.13	5.11	5.24	4.77	4.17	3.52	2.99	2.20	78.4	96.7	74.0	7.4	10.1	159.1	340.4	66.9	1.7
6602.0	1	15873	144.9	14.74	6.67	4.13	4.26	3.74	3.26	2.76	2.35	1.74	77.4	96.7	74.0	8.5	8.7	97.9	337.9	64.5	4.3
6602.0	2	15906	145.2	14.39	6.67	4.17	4.30	3.76	3.28	2.77	2.37	1.75	77.4	96.7	74.0	8.5	8.7	103.6	347.7	61.4	4.4
6602.0	3	20200	184.4	17.24	8.28	5.26	5.43	4.75	4.14	3.49	2.98	2.19	77.4	96.7	74.0	8.5	8.7	120.1	267.0	68.7	3.3
6602.0	4	20309	185.4	17.11	8.33	5.32	5.50	4.80	4.19	3.53	3.01	2.20	77.4	96.7	74.0	8.5	8.7	129.2	236.5	69.1	3.2
6798.3	1	15884	145.0	10.85	5.09	3.74	3.82	3.39	2.97	2.53	2.17	1.64	76.8	94.9	74.0	8.1	9.3	127.4	819.1	54.2	3.3
6798.3	2	15895	145.1	10.68	5.15	3.77	3.84	3.41	2.98	2.54	2.17	1.63	76.8	94.9	74.0	8.1	9.3	130.5	875.1	51.8	3.8
6798.3	3	20068	183.2	12.91	6.42	4.72	4.81	4.27	3.74	3.18	2.71	2.01	76.8	94.9	74.0	8.1	9.3	142.5	826.6	52.8	3.4
6798.3	4	20211	184.5	12.85	6.49	4.77	4.87	4.31	3.77	3.20	2.74	2.04	76.8	94.9	74.0	8.1	9.3	156.7	616.3	58.9	2.8
6998.3	1	15796	144.2	10.41	4.94	3.45	3.53	3.20	2.78	2.36	2.01	1.50	77.1	94.4	74.0	7.4	9.6	135.7	593.1	65.8	3.1
6998.3	2	15928	145.4	10.34	4.99	3.50	3.59	3.24	2.81	2.38	2.04	1.51	77.1	94.4	74.0	7.4	9.6	147.2	521.5	68.2	2.9
6998.3	3	20189	184.3	12.43	6.22	4.42	4.52	4.07	3.53	3.00	2.55	1.88	77.1	94.4	74.0	7.4	9.6	159.0	538.9	68.9	2.7
6998.3	4	20255	184.9	12.39	6.27	4.46	4.56	4.10	3.56	3.01	2.56	1.90	77.1	94.4	74.0	7.4	9.6	176.9	389.0	78.8	1.8
7204.0	1	15752	143.8	11.06	5.39	4.04	4.18	3.71	3.19	2.65	2.24	1.62	77.9	96.7	74.0	8.0	7.5	145.3	687.3	61.2	1.4
7204.0	2	15906	145.2	10.98	5.45	4.08	4.24	3.74	3.23	2.68	2.26	1.63	77.9	96.7	74.0	8.0	7.5	151.0	710.2	60.2	1.6
7204.0	3	20167	184.1	13.37	6.87	5.18	5.38	4.74	4.08	3.39	2.83	2.04	77.9	96.7	74.0	8.0	7.5	158.1	955.5	49.1	1.8
7204.0	4	20277	185.1	13.33	6.94	5.24	5.44	4.78	4.11	3.42	2.85	2.06	77.9	96.7	74.0	8.0	7.5	160.2	972.9	49.0	2.0
7399.0	1	15785	144.1	11.53	5.95	3.91	3.94	3.56	3.16	2.68	2.31	1.72	76.5	94.8	74.0	8.4	10.6	133.8	398.5	53.1	4.6

### Summary of FWD Data and Backcalculation Results (ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
7399.0	2	15895	145.1	11.44	5.99	3.96	3.99	3.59	3.18	2.70	2.33	1.74	76.5	94.8	74.0	8.4	10.6	140.6	381.3	53.0	4.6
7399.0	3	20101	183.5	13.84	7.40	4.97	5.01	4.51	3.99	3.39	2.92	2.18	76.5	94.8	74.0	8.4	10.6	167.9	250.7	68.6	2.9
7399.0	4	20167	184.1	13.80	7.43	5.02	5.07	4.54	4.02	3.40	2.93	2.17	76.5	94.8	74.0	8.4	10.6	158.9	352.1	55.3	3.8
7604.0	1	15720	143.5	13.61	7.79	6.17	6.30	5.66	4.89	4.09	3.48	2.56	78.2	96.7	74.0	7.6	7.3	133.8	842.6	32.4	1.9
7604.0	2	15884	145.0	13.57	7.88	6.25	6.37	5.71	4.94	4.13	3.52	2.58	78.2	96.7	74.0	7.6	7.3	137.5	847.3	32.4	1.9
7604.0	3	20058	183.1	16.41	9.78	7.79	7.93	7.12	6.14	5.13	4.34	3.16	78.2	96.7	74.0	7.6	7.3	168.3	497.4	40.9	1.1
7604.0	4	20222	184.6	16.44	9.90	7.88	8.04	7.19	6.19	5.16	4.37	3.18	78.2	96.7	74.0	7.6	7.3	175.7	464.9	41.1	1.3
7798.0	1	15731	143.6	10.67	5.39	4.22	4.33	4.11	3.74	3.34	2.99	2.40	77.1	96.8	74.0	9.0	9.1	139.7	1681.9	36.3	2.6
7798.0	2	15873	144.9	10.66	5.46	4.26	4.37	4.14	3.77	3.35	3.00	2.41	77.1	96.8	74.0	9.0	9.1	142.2	1662.9	36.5	2.7
7798.0	3	20112	183.6	12.74	6.68	5.23	5.35	5.07	4.60	4.09	3.65	2.92	77.1	96.8	74.0	9.0	9.1	153.4	1852.7	36.5	2.9
7798.0	4	20233	184.7	12.76	6.75	5.28	5.40	5.11	4.64	4.10	3.66	2.93	77.1	96.8	74.0	9.0	9.1	155.5	1805.8	36.6	2.8
7994.0	1	15709	143.4	14.57	8.60	6.69	6.84	6.14	5.38	4.59	3.94	3.02	76.2	97.0	74.0	8.2	7.7	123.4	658.9	29.4	3.0
7994.0	2	15851	144.7	14.52	8.67	6.76	6.90	6.19	5.42	4.63	3.99	3.03	76.2	97.0	74.0	8.2	7.7	130.7	642.7	28.3	2.8
7994.0	3	20189	184.3	17.69	10.76	8.48	8.66	7.73	6.74	5.74	4.92	3.70	76.2	97.0	74.0	8.2	7.7	137.9	659.7	29.2	2.7
7994.0	4	20364	185.9	17.75	10.90	8.58	8.76	7.82	6.82	5.80	4.97	3.74	76.2	97.0	74.0	8.2	7.7	139.9	658.1	29.2	2.6
8202.0	1	15917	145.3	11.31	5.94	4.69	4.92	4.48	4.07	3.63	3.27	2.66	76.1	97.4	74.0	8.5	9.6	133.8	1003.1	44.9	2.9
8202.0	2	15884	145.0	11.17	5.94	4.68	4.88	4.47	4.07	3.61	3.26	2.63	76.1	97.4	74.0	8.5	9.6	136.3	978.9	45.0	2.8
8202.0	3	20222	184.6	13.46	7.34	5.79	6.05	5.51	5.01	4.43	3.99	3.20	76.1	97.4	74.0	8.5	9.6	147.1	1302.0	35.0	3.1
8202.0	4	20211	184.5	13.39	7.36	5.81	6.07	5.53	5.01	4.44	3.99	3.20	76.1	97.4	74.0	8.5	9.6	149.1	1291.9	34.9	3.0
8397.0	1	15774	144.0	10.28	5.90	5.16	5.10	4.92	4.46	3.93	3.54	2.82	77.2	98.7	74.0	8.1	10.0	182.1	897.5	40.6	0.7
8397.0	2	15851	144.7	10.24	5.94	5.20	5.16	4.93	4.47	3.94	3.52	2.81	77.2	98.7	74.0	8.1	10.0	190.4	811.3	41.3	0.5
8397.0	3	20178	184.2	12.38	7.31	6.40	6.35	6.06	5.50	4.84	4.30	3.43	77.2	98.7	74.0	8.1	10.0	197.9	1168.5	32.0	1.3
8397.0	4	20244	184.8	12.43	7.38	6.44	6.41	6.11	5.54	4.86	4.35	3.45	77.2	98.7	74.0	8.1	10.0	199.0	1145.0	31.8	1.0
8597.0	1	15785	144.1	14.50	8.11	5.89	6.10	4.94	4.24	3.64	3.20	2.57	77.7	99.8	74.0	8.2	10.7	119.1	272.6	46.0	5.1
8597.0	2	15895	145.1	14.35	8.15	5.92	6.11	4.98	4.27	3.67	3.24	2.59	77.7	99.8	74.0	8.2	10.7	124.6	277.8	44.0	5.3
8597.0	3	20178	184.2	17.30	10.02	7.36	7.60	6.17	5.26	4.50	3.95	3.15	77.7	99.8	74.0	8.2	10.7	135.7	288.8	43.5	5.1
8597.0	4	20331	185.6	17.26	10.12	7.43	7.68	6.23	5.33	4.55	3.97	3.18	77.7	99.8	74.0	8.2	10.7	138.0	315.2	40.1	5.7
8797.3	1	15763	143.9	17.01	8.89	6.62	6.91	5.75	4.97	4.30	3.78	3.02	76.8	98.1	74.0	8.2	9.3	89.8	379.9	37.3	4.7
8797.3	2	15884	145.0	16.72	8.93	6.65	6.94	5.79	4.99	4.32	3.81	3.04	76.8	98.1	74.0	8.2	9.3	91.6	397.0	38.9	4.7
8797.3	3	20222	184.6	20.16	11.06	8.28	8.63	7.17	6.19	5.34	4.69	3.72	76.8	98.1	74.0	8.2	9.3	99.4	532.2	30.4	5.7
8797.3	4	20299	185.3	20.02	11.12	8.34	8.69	7.22	6.22	5.37	4.71	3.74	76.8	98.1	74.0	8.2	9.3	101.2	539.1	30.4	5.8
8997.7	1	15599	142.4	8.41	4.94	4.86	4.88	4.67	4.26	3.82	3.45	2.81	77.5	98.1	74.0	7.5	9.6	233.8	1676.7	39.7	2.0
8997.7	2	15840	144.6	8.50	5.03	4.92	4.93	4.72	4.31	3.86	3.48	2.85	77.5	98.1	74.0	7.5	9.6	235.1	1656.3	39.9	1.9
8997.7	3	20156	184.0	10.39	6.24	6.06	6.08	5.81	5.31	4.75	4.27	3.48	77.5	98.1	74.0	7.5	9.6	249.2	1670.1	41.3	1.6
8997.7	4	20222	184.6	10.43	6.30	6.10	6.11	5.84	5.33	4.77	4.28	3.49	77.5	98.1	74.0	7.5	9.6	250.2	1651.7	41.3	1.6
9199.7	1	15873	144.9	9.02	4.46	4.24	4.29	4.22	3.92	3.53	3.20	2.67	76.1	97.7	74.0	8.7	8.2	166.8	4424.7	40.2	2.4
9199.7	2	15752	143.8	8.89	4.46	4.24	4.29	4.19	3.88	3.51	3.19	2.65	76.1	97.7	74.0	8.7	8.2	168.9	4373.8	40.0	1.9

## Summary of FWD Data and Backcalculation Results

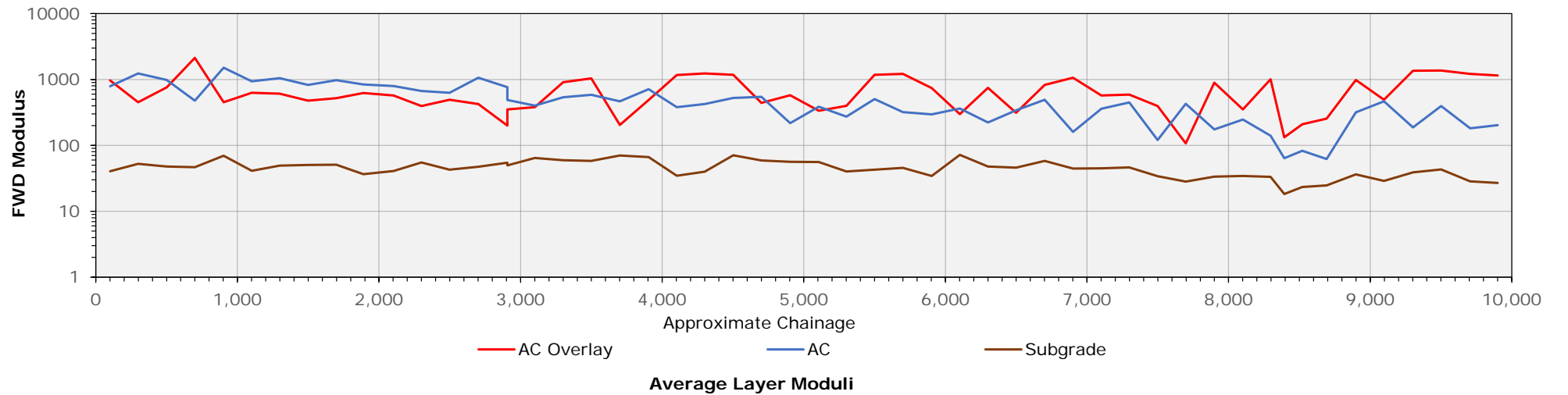
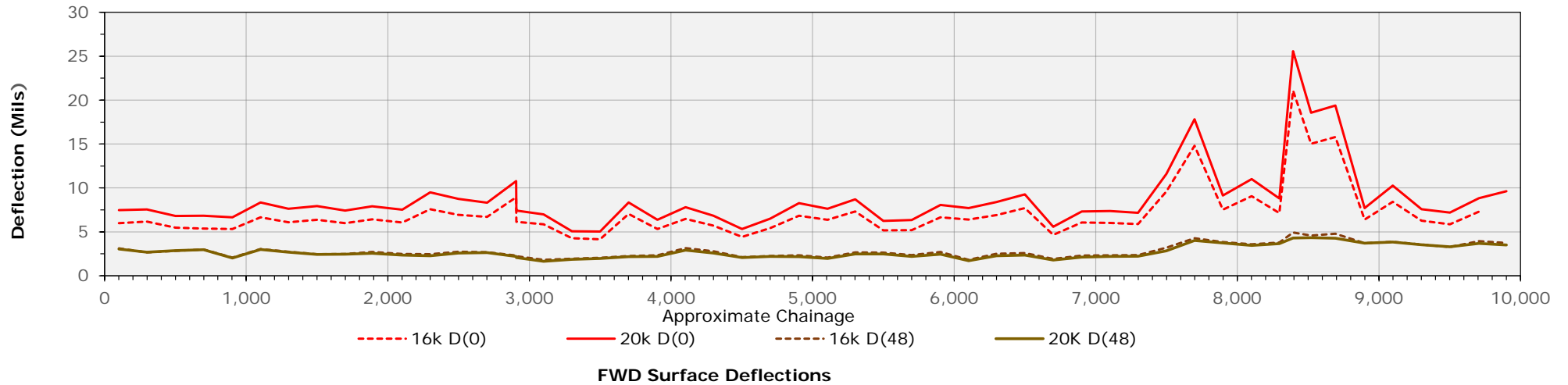
(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, $E_{FWD}$ (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
9199.7	3	20167	184.1	10.93	5.59	5.25	5.33	5.20	4.80	4.35	3.94	3.26	76.1	97.7	74.0	8.7	8.2	186.5	3285.6	43.9	1.9
9199.7	4	20222	184.6	10.94	5.65	5.28	5.36	5.22	4.82	4.35	3.94	3.26	76.1	97.7	74.0	8.7	8.2	188.2	3209.3	44.0	1.9
9399.7	1	15752	143.8	10.53	5.58	4.65	4.63	4.44	4.10	3.66	3.31	2.73	76.5	98.1	74.0	8.5	8.8	142.6	1717.2	42.3	2.0
9399.7	2	15840	144.6	10.38	5.63	4.68	4.69	4.46	4.11	3.67	3.31	2.74	76.5	98.1	74.0	8.5	8.8	151.9	1649.6	42.5	2.3
9399.7	3	20222	184.6	12.56	6.91	5.78	5.80	5.53	5.05	4.51	4.12	3.31	76.5	98.1	74.0	8.5	8.8	165.8	1480.8	45.0	1.7
9399.7	4	20244	184.8	12.45	6.93	5.81	5.81	5.52	5.07	4.54	4.09	3.35	76.5	98.1	74.0	8.5	8.8	168.2	1575.1	44.5	1.9
9600.0	1	15741	143.7	8.58	6.07	5.78	5.91	5.32	4.73	4.12	3.63	2.84	76.7	97.5	74.0	8.0	8.9	348.4	975.6	29.7	1.1
9600.0	2	15928	145.4	8.66	6.17	5.83	5.94	5.35	4.76	4.15	3.65	2.79	76.7	97.5	74.0	8.0	8.9	353.2	989.3	28.2	0.8
9600.0	3	20068	183.2	10.54	7.58	7.13	7.27	6.54	5.83	5.06	4.45	3.47	76.7	97.5	74.0	8.0	8.9	371.9	1008.9	29.0	0.8
9600.0	4	20178	184.2	10.64	7.67	7.18	7.33	6.59	5.85	5.11	4.46	3.44	76.7	97.5	74.0	8.0	8.9	381.4	951.0	28.4	0.7
9800.7	1	15632	142.7	11.61	7.10	5.87	5.99	5.47	4.83	4.19	3.63	2.80	76.5	99.3	74.0	9.2	7.6	169.9	1086.8	28.3	1.9
9800.7	2	15873	144.9	11.61	7.19	5.95	6.06	5.53	4.89	4.23	3.68	2.84	76.5	99.3	74.0	9.2	7.6	172.4	1324.9	24.9	2.2
9800.7	3	20167	184.1	14.15	8.90	7.39	7.53	6.83	6.04	5.22	4.53	3.45	76.5	99.3	74.0	9.2	7.6	191.5	1211.6	25.7	2.1
9800.7	4	20244	184.8	14.18	8.99	7.46	7.59	6.89	6.07	5.26	4.56	3.47	76.5	99.3	74.0	9.2	7.6	188.8	1164.3	26.6	2.1
9924.3	1	15906	145.2	6.37	5.26	4.90	4.98	4.52	4.04	3.54	3.11	2.39	66.2	76.6	74.0	7.2	8.2	615.0	693.4	34.3	0.4
9924.3	2	15895	145.1	6.38	5.25	4.90	4.98	4.51	4.04	3.54	3.11	2.39	66.2	76.6	74.0	7.2	8.2	599.5	711.0	34.3	0.4
9924.3	3	20189	184.3	7.86	6.48	6.05	6.16	5.57	4.99	4.37	3.83	2.93	66.2	76.6	74.0	7.2	8.2	603.8	853.2	32.0	0.4
9924.3	4	20277	185.1	7.90	6.53	6.09	6.20	5.60	5.02	4.39	3.86	2.96	66.2	76.6	74.0	7.2	8.2	629.7	765.7	33.2	0.4

**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Project Name: RKS Master Plan	Calc. Date: August 14, 2023
Segment: Runway 9/27, 4' Lt	Project No.: 110339
Direction: Southeast	

Summary of Input Data		Summary of Backcalculated Moduli				
Date of FWD Testing:	May 16, 2023	AC Overlay	AC	Subgrade	RMS (%)	
PDAT (BELLS):	52° F	Mean:	575.0	396.9	43.4	1.3
FWD Plate Radius:	5.905"	Standard Deviation:	269.4	207.1	11.7	



**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in MILS (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
101.0	1	15939	145.5	5.99	4.74	4.69	4.67	4.39	3.97	3.53	3.13	2.47	77.8	97.2	75.3	6.8	10.9	985.9	695.9	44.9	2.7
101.0	2	15818	144.4	5.98	4.71	4.65	4.65	4.35	3.92	3.49	3.09	2.45	77.8	97.2	75.3	6.8	10.9	935.5	705.9	45.1	2.8
101.0	3	20167	184.1	7.47	5.93	5.81	5.78	5.43	4.91	4.37	3.88	3.05	77.8	97.2	75.3	6.8	10.9	995.2	879.6	35.8	2.0
101.0	4	20266	185.0	7.56	5.99	5.86	5.80	5.47	4.96	4.40	3.90	3.06	77.8	97.2	75.3	6.8	10.9	948.6	874.2	36.1	2.0
299.3	1	15873	144.9	6.16	4.02	3.93	3.96	3.69	3.37	3.00	2.67	2.19	78.2	99.5	76.2	7.5	10.8	434.1	1268.4	51.8	1.6
299.3	2	15961	145.7	6.20	4.07	3.96	4.01	3.71	3.39	3.02	2.69	2.20	78.2	99.5	76.2	7.5	10.8	437.1	1260.4	51.7	1.6
299.3	3	20145	183.9	7.55	5.05	4.87	4.91	4.56	4.18	3.72	3.34	2.70	78.2	99.5	76.2	7.5	10.8	463.4	1225.7	53.5	1.6
299.3	4	20266	185.0	7.63	5.10	4.87	4.83	4.58	4.22	3.74	3.33	2.71	78.2	99.5	76.2	7.5	10.8	465.9	1187.5	53.7	1.9
500.0	1	15840	144.6	5.49	4.04	4.04	4.10	3.82	3.50	3.13	2.84	2.31	78.3	99.5	75.3	7.4	11.9	749.3	1002.6	47.2	2.6
500.0	2	15873	144.9	5.56	4.08	4.04	4.05	3.82	3.50	3.13	2.83	2.32	78.3	99.5	75.3	7.4	11.9	753.0	974.7	47.4	2.5
500.0	3	20112	183.6	6.81	5.08	4.99	5.02	4.72	4.33	3.87	3.50	2.86	78.3	99.5	75.3	7.4	11.9	774.0	985.8	48.6	2.1
500.0	4	20244	184.8	6.90	5.12	5.02	5.06	4.76	4.35	3.89	3.51	2.87	78.3	99.5	75.3	7.4	11.9	752.6	977.6	48.7	2.0
698.7	1	15741	143.7	5.38	4.60	4.57	4.57	4.25	3.85	3.39	3.00	2.39	78.6	98.4	76.1	6.6	10.9	2398.7	430.0	45.6	3.1
698.7	2	15873	144.9	5.44	4.64	4.59	4.64	4.28	3.85	3.40	3.02	2.40	78.6	98.4	76.1	6.6	10.9	2327.7	439.0	45.8	3.0
698.7	3	20145	183.9	6.83	5.77	5.68	5.74	5.29	4.78	4.22	3.74	2.96	78.6	98.4	76.1	6.6	10.9	1870.5	523.2	47.4	2.9
698.7	4	20266	185.0	6.93	5.83	5.72	5.76	5.31	4.83	4.25	3.75	2.99	78.6	98.4	76.1	6.6	10.9	1919.8	510.2	47.5	2.9
902.7	1	15840	144.6	5.33	3.37	3.32	3.40	3.04	2.65	2.34	2.08	1.69	78.6	99.6	77.0	7.2	10.2	428.1	1682.5	68.0	1.8
902.7	2	15939	145.5	5.37	3.43	3.33	3.40	3.04	2.69	2.35	2.08	1.71	78.6	99.6	77.0	7.2	10.2	440.6	1573.3	68.3	1.6
902.7	3	20123	183.7	6.65	4.28	4.12	4.20	3.77	3.32	2.91	2.56	2.03	78.6	99.6	77.0	7.2	10.2	469.3	1386.7	71.6	1.5
902.7	4	20299	185.3	6.74	4.35	4.17	4.26	3.81	3.37	2.93	2.57	2.09	78.6	99.6	77.0	7.2	10.2	472.2	1394.0	70.9	1.7
1101.3	1	15698	143.3	6.65	5.06	4.83	4.88	4.44	3.94	3.43	3.05	2.41	79.2	99.0	76.7	6.4	10.4	634.9	775.2	47.1	1.5
1101.3	2	15796	144.2	6.76	5.11	4.85	4.91	4.45	3.96	3.44	3.06	2.44	79.2	99.0	76.7	6.4	10.4	616.5	769.6	47.3	1.6
1101.3	3	20068	183.2	8.34	6.37	6.02	6.10	5.54	4.93	4.28	3.81	2.99	79.2	99.0	76.7	6.4	10.4	625.2	1097.4	34.9	0.9
1101.3	4	20299	185.3	8.43	6.46	6.10	6.19	5.59	4.99	4.33	3.85	3.03	79.2	99.0	76.7	6.4	10.4	628.1	1098.0	34.9	1.0
1299.0	1	15752	143.8	6.09	4.51	4.31	4.37	3.94	3.51	3.09	2.73	2.20	79.0	99.5	76.4	6.8	10.1	609.6	985.8	52.0	1.1
1299.0	2	15785	144.1	6.16	4.56	4.35	4.38	3.97	3.52	3.09	2.74	2.20	79.0	99.5	76.4	6.8	10.1	608.5	953.5	52.0	1.1
1299.0	3	20090	183.4	7.64	5.69	5.39	5.42	4.93	4.37	3.85	3.41	2.69	79.0	99.5	76.4	6.8	10.1	593.3	1347.6	39.0	0.8
1299.0	4	20233	184.7	7.76	5.76	5.45	5.48	4.98	4.42	3.88	3.44	2.76	79.0	99.5	76.4	6.8	10.1	632.0	899.5	53.8	1.1
1499.3	1	15741	143.7	6.37	4.33	4.18	4.18	3.70	3.24	2.81	2.46	1.98	78.7	99.4	77.6	7.0	11.2	476.9	678.7	58.8	1.6
1499.3	2	15917	145.3	6.48	4.41	4.20	4.21	3.73	3.29	2.83	2.49	2.00	78.7	99.4	77.6	7.0	11.2	485.9	650.5	58.9	1.5
1499.3	3	20134	183.8	7.93	5.48	5.18	5.22	4.62	4.06	3.50	3.07	2.43	78.7	99.4	77.6	7.0	11.2	472.6	1012.9	41.9	1.2
1499.3	4	20233	184.7	7.98	5.52	5.22	5.24	4.65	4.09	3.53	3.09	2.44	78.7	99.4	77.6	7.0	11.2	477.5	964.9	42.2	1.0
1698.7	1	15807	144.3	6.00	4.13	3.83	3.81	3.54	3.18	2.80	2.49	2.01	80.1	100.3	76.0	6.3	12.4	535.0	823.9	57.4	1.0
1698.7	2	15862	144.8	6.05	4.18	3.85	3.86	3.55	3.19	2.81	2.52	1.99	80.1	100.3	76.0	6.3	12.4	536.0	821.6	57.2	1.1
1698.7	3	20134	183.8	7.43	5.16	4.73	4.75	4.37	3.93	3.46	3.08	2.46	80.1	100.3	76.0	6.3	12.4	504.7	1134.7	44.3	0.8
1698.7	4	20266	185.0	7.48	5.22	4.78	4.78	4.40	3.97	3.50	3.11	2.48	80.1	100.3	76.0	6.3	12.4	509.4	1132.9	44.1	0.8
1889.0	1	15884	145.0	6.44	4.72	4.37	4.38	4.01	3.57	3.11	2.72	2.07	79.4	99.4	77.1	6.4	11.8	586.7	853.6	36.6	0.8
1889.0	2	15818	144.4	6.43	4.75	4.38	4.41	4.00	3.57	3.11	2.72	2.07	79.4	99.4	77.1	6.4	11.8	599.1	840.1	36.5	0.7

**Summary of FWD Data and Backcalculation Results**

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
1889.0	3	20036	182.9	7.91	5.87	5.40	5.43	4.97	4.43	3.86	3.37	2.55	79.4	99.4	77.1	6.4	11.8	643.1	844.5	36.4	0.8
1889.0	4	20211	184.5	7.98	5.95	5.47	5.52	5.02	4.46	3.90	3.40	2.59	79.4	99.4	77.1	6.4	11.8	662.3	831.1	36.3	0.7
2102.0	1	15676	143.1	6.06	4.18	3.89	4.06	3.61	3.22	2.83	2.48	1.90	80.0	99.8	76.3	6.1	13.7	539.9	760.3	43.4	1.6
2102.0	2	15895	145.1	6.13	4.27	3.97	4.13	3.66	3.28	2.87	2.51	1.93	80.0	99.8	76.3	6.1	13.7	562.2	743.0	43.3	1.6
2102.0	3	20047	183.0	7.54	5.28	4.89	5.04	4.52	4.05	3.54	3.10	2.36	80.0	99.8	76.3	6.1	13.7	582.5	893.6	36.8	0.8
2102.0	4	20266	185.0	7.63	5.36	4.95	5.08	4.57	4.09	3.59	3.14	2.39	80.0	99.8	76.3	6.1	13.7	595.8	796.3	39.3	1.1
2299.7	1	15676	143.1	7.57	4.88	4.57	4.62	4.08	3.48	2.91	2.47	1.81	81.0	100.9	77.2	5.9	10.2	359.3	846.6	45.3	1.6
2299.7	2	15873	144.9	7.65	4.96	4.61	4.66	4.11	3.50	2.94	2.49	1.82	81.0	100.9	77.2	5.9	10.2	374.3	611.5	61.7	3.3
2299.7	3	20145	183.9	9.50	6.26	5.80	5.87	5.17	4.42	3.70	3.13	2.27	81.0	100.9	77.2	5.9	10.2	418.2	595.6	57.8	3.0
2299.7	4	20156	184.0	9.54	6.30	5.81	5.88	5.19	4.44	3.72	3.13	2.27	81.0	100.9	77.2	5.9	10.2	424.7	617.5	55.6	2.8
2498.0	1	15610	142.5	6.93	5.10	4.60	4.65	4.19	3.67	3.15	2.74	2.07	75.8	91.7	76.9	5.8	10.7	480.4	636.9	43.0	0.8
2498.0	2	15884	145.0	7.07	5.20	4.67	4.74	4.25	3.72	3.20	2.77	2.10	75.8	91.7	76.9	5.8	10.7	481.0	606.5	43.6	0.7
2498.0	3	20123	183.7	8.76	6.50	5.83	5.89	5.28	4.64	3.98	3.46	2.60	75.8	91.7	76.9	5.8	10.7	503.4	639.1	42.6	0.4
2498.0	4	20211	184.5	8.83	6.55	5.86	5.93	5.31	4.66	4.00	3.46	2.60	75.8	91.7	76.9	5.8	10.7	511.0	622.8	42.7	0.5
2701.0	1	15665	143.0	6.70	4.56	4.27	4.38	3.91	3.50	3.06	2.69	2.12	80.1	99.6	76.0	6.0	11.2	393.2	1267.8	39.8	0.7
2701.0	2	15895	145.1	6.80	4.62	4.30	4.43	3.97	3.51	3.07	2.75	2.11	80.1	99.6	76.0	6.0	11.2	386.9	1255.6	39.1	0.8
2701.0	3	20112	183.6	8.33	5.74	5.34	5.48	4.87	4.36	3.84	3.33	2.63	80.1	99.6	76.0	6.0	11.2	451.8	903.8	55.2	1.3
2701.0	4	20266	185.0	8.45	5.82	5.37	5.53	4.92	4.41	3.86	3.38	2.66	80.1	99.6	76.0	6.0	11.2	465.5	836.6	55.8	1.1
2906.3	1	15785	144.1	8.95	4.64	4.01	4.08	3.51	3.07	2.64	2.30	1.79	78.8	99.4	76.0	6.9	11.1	194.6	613.1	63.7	0.9
2906.3	2	15840	144.6	8.86	4.69	4.04	4.12	3.53	3.08	2.65	2.33	1.79	78.8	99.4	76.0	6.9	11.1	190.2	799.9	51.8	1.9
2906.3	3	20047	183.0	10.77	5.84	5.00	5.13	4.38	3.83	3.28	2.87	2.21	78.8	99.4	76.0	6.9	11.1	205.0	832.7	51.0	2.1
2906.3	4	20266	185.0	10.82	5.94	5.07	5.20	4.44	3.89	3.34	2.91	2.23	78.8	99.4	76.0	6.9	11.1	210.4	808.2	51.3	2.1
2907.3	1	16848	153.8	6.14	4.65	3.74	3.88	3.30	2.89	2.52	2.23	1.76	64.9	65.5	59.0	7.0	10.9	337.3	520.2	46.8	4.4
2907.3	2	16826	153.6	6.10	4.61	3.74	3.90	3.28	2.90	2.52	2.20	1.75	64.9	65.5	59.0	7.0	10.9	368.9	440.5	53.6	3.8
2907.3	3	20320	185.5	7.42	5.52	4.51	4.65	3.96	3.48	3.03	2.67	2.08	64.9	65.5	59.0	7.0	10.9	342.5	507.7	48.7	3.9
2907.3	4	20123	183.7	7.31	5.46	4.45	4.62	3.93	3.45	3.01	2.62	2.05	64.9	65.5	59.0	7.0	10.9	356.0	490.4	48.9	3.6
3100.3	1	16815	153.5	5.86	4.02	3.38	3.57	2.93	2.52	2.13	1.82	1.36	66.2	67.7	58.5	7.8	9.9	374.0	397.5	65.5	1.1
3100.3	2	16760	153.0	5.83	4.00	3.37	3.56	2.92	2.51	2.12	1.82	1.35	66.2	67.7	58.5	7.8	9.9	370.6	409.3	65.5	1.3
3100.3	3	20309	185.4	7.00	4.85	4.10	4.32	3.56	3.06	2.58	2.22	1.65	66.2	67.7	58.5	7.8	9.9	393.4	382.2	65.4	0.8
3100.3	4	20222	184.6	6.98	4.85	4.09	4.31	3.55	3.06	2.58	2.21	1.64	66.2	67.7	58.5	7.8	9.9	383.3	418.0	60.9	1.3
3300.0	1	16903	154.3	4.28	3.40	3.07	3.19	2.80	2.50	2.21	1.96	1.56	67.1	69.2	57.8	7.8	11.4	890.5	544.2	60.3	0.5
3300.0	2	16968	154.9	4.28	3.41	3.08	3.20	2.81	2.51	2.21	1.96	1.57	67.1	69.2	57.8	7.8	11.4	909.8	528.0	60.4	0.7
3300.0	3	20156	184.0	5.06	4.05	3.66	3.78	3.33	2.98	2.63	2.33	1.87	67.1	69.2	57.8	7.8	11.4	921.2	550.3	58.5	0.8
3300.0	4	20178	184.2	5.08	4.07	3.68	3.77	3.34	2.99	2.64	2.35	1.85	67.1	69.2	57.8	7.8	11.4	923.6	522.4	58.8	0.5
3499.7	1	16771	153.1	4.16	3.50	3.17	3.29	2.87	2.56	2.28	2.04	1.65	66.5	68.2	57.7	8.5	9.3	1140.4	494.5	60.0	1.4
3499.7	2	16684	152.3	4.16	3.50	3.16	3.26	2.87	2.55	2.28	2.05	1.65	66.5	68.2	57.7	8.5	9.3	1077.8	536.7	59.6	1.5
3499.7	3	20200	184.4	5.04	4.19	3.79	3.90	3.43	3.07	2.73	2.44	1.98	66.5	68.2	57.7	8.5	9.3	969.0	663.6	56.2	1.7

## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
3499.7	4	20189	184.3	5.04	4.20	3.79	3.92	3.44	3.07	2.74	2.44	1.97	66.5	68.2	57.7	8.5	9.3	981.4	652.0	56.1	1.5
3701.7	1	16749	152.9	7.04	4.30	3.48	3.55	3.21	2.88	2.54	2.26	1.80	66.0	67.2	58.3	5.9	12.1	204.1	432.3	71.9	2.4
3701.7	2	16749	152.9	6.98	4.30	3.48	3.54	3.20	2.87	2.53	2.26	1.81	66.0	67.2	58.3	5.9	12.1	210.1	443.5	71.2	2.5
3701.7	3	20233	184.7	8.36	5.19	4.23	4.32	3.87	3.47	3.07	2.73	2.17	66.0	67.2	58.3	5.9	12.1	196.4	512.0	67.8	2.6
3701.7	4	20266	185.0	8.32	5.20	4.24	4.33	3.89	3.49	3.08	2.73	2.18	66.0	67.2	58.3	5.9	12.1	204.4	482.8	70.6	2.1
3904.3	1	16673	152.2	5.32	3.97	3.60	3.71	3.33	2.98	2.63	2.33	1.85	67.3	69.0	57.6	5.5	11.0	476.4	713.3	66.1	0.0
3904.3	2	16684	152.3	5.28	3.94	3.60	3.71	3.32	2.96	2.60	2.32	1.85	67.3	69.0	57.6	5.5	11.0	480.7	715.2	66.7	0.5
3904.3	3	20222	184.6	6.37	4.78	4.35	4.49	4.02	3.59	3.16	2.80	2.21	67.3	69.0	57.6	5.5	11.0	496.5	706.5	66.8	0.4
3904.3	4	20200	184.4	6.37	4.79	4.35	4.49	4.02	3.59	3.16	2.80	2.21	67.3	69.0	57.6	5.5	11.0	495.9	705.7	66.7	0.4
4103.0	1	16585	151.4	6.47	5.55	5.07	5.17	4.61	4.09	3.56	3.16	2.42	66.3	67.6	57.1	5.4	10.9	1232.3	360.1	35.2	0.5
4103.0	2	16552	151.1	6.44	5.54	5.07	5.16	4.60	4.09	3.57	3.16	2.44	66.3	67.6	57.1	5.4	10.9	1045.4	381.9	36.5	0.8
4103.0	3	20244	184.8	7.80	6.72	6.16	6.26	5.58	4.95	4.31	3.82	2.92	66.3	67.6	57.1	5.4	10.9	1077.7	417.0	33.5	0.4
4103.0	4	20353	185.8	7.85	6.76	6.20	6.31	5.61	4.99	4.34	3.85	2.93	66.3	67.6	57.1	5.4	10.9	1313.5	366.6	33.5	0.7
4300.3	1	16629	151.8	5.72	4.88	4.44	4.56	4.06	3.60	3.15	2.79	2.18	66.3	67.5	57.1	5.2	11.7	1161.6	431.6	40.8	0.7
4300.3	2	16475	150.4	5.68	4.85	4.40	4.49	4.02	3.58	3.13	2.76	2.16	66.3	67.5	57.1	5.2	11.7	1166.6	427.1	40.8	0.5
4300.3	3	20167	184.1	6.83	5.84	5.32	5.46	4.86	4.33	3.79	3.33	2.60	66.3	67.5	57.1	5.2	11.7	1309.6	420.9	39.1	0.4
4300.3	4	20320	185.5	6.88	5.89	5.36	5.49	4.89	4.36	3.81	3.36	2.61	66.3	67.5	57.1	5.2	11.7	1314.0	423.8	39.1	0.4
4501.3	1	16541	151.0	4.44	3.63	3.29	3.39	2.99	2.69	2.39	2.12	1.74	68.0	70.0	57.4	5.2	12.7	1075.2	551.8	69.6	0.8
4501.3	2	16574	151.3	4.45	3.63	3.29	3.39	2.99	2.69	2.39	2.13	1.74	68.0	70.0	57.4	5.2	12.7	1098.0	550.3	69.6	0.7
4501.3	3	20266	185.0	5.34	4.38	3.96	4.02	3.60	3.24	2.87	2.56	2.07	68.0	70.0	57.4	5.2	12.7	1261.7	500.5	71.7	0.5
4501.3	4	20233	184.7	5.35	4.39	3.98	4.03	3.61	3.25	2.87	2.56	2.08	68.0	70.0	57.4	5.2	12.7	1266.4	494.1	71.6	0.7
4700.0	1	16629	151.8	5.43	3.94	3.44	3.54	3.13	2.81	2.50	2.26	1.85	66.8	68.7	57.3	7.8	11.7	451.5	449.2	67.1	1.1
4700.0	2	16454	150.2	5.38	3.91	3.42	3.52	3.11	2.79	2.48	2.23	1.83	66.8	68.7	57.3	7.8	11.7	456.0	439.1	67.1	1.1
4700.0	3	20255	184.9	6.50	4.71	4.14	4.25	3.74	3.37	3.01	2.70	2.21	66.8	68.7	57.3	7.8	11.7	423.9	652.2	51.0	2.2
4700.0	4	20222	184.6	6.47	4.72	4.14	4.26	3.75	3.37	3.00	2.70	2.21	66.8	68.7	57.3	7.8	11.7	434.9	634.0	51.0	2.2
4903.7	1	16716	152.6	6.85	5.32	4.42	4.46	3.71	3.15	2.66	2.33	1.82	68.1	70.5	57.5	6.1	11.9	555.8	215.2	58.9	1.9
4903.7	2	16618	151.7	6.83	5.30	4.41	4.47	3.69	3.11	2.64	2.32	1.82	68.1	70.5	57.5	6.1	11.9	557.7	206.8	61.2	2.0
4903.7	3	20200	184.4	8.26	6.41	5.34	5.39	4.48	3.78	3.21	2.81	2.19	68.1	70.5	57.5	6.1	11.9	579.2	240.5	50.9	3.0
4903.7	4	20288	185.2	8.30	6.46	5.37	5.40	4.52	3.84	3.24	2.82	2.19	68.1	70.5	57.5	6.1	11.9	621.2	211.3	54.6	2.1
5106.3	1	16508	150.7	6.39	4.26	3.53	3.59	3.10	2.73	2.37	2.07	1.65	68.7	71.5	57.2	6.5	13.9	319.3	378.7	57.4	2.2
5106.3	2	16464	150.3	6.36	4.24	3.52	3.57	3.11	2.72	2.37	2.09	1.65	68.7	71.5	57.2	6.5	13.9	328.8	379.5	55.3	2.3
5106.3	3	20156	184.0	7.62	5.13	4.28	4.34	3.76	3.30	2.87	2.52	1.97	68.7	71.5	57.2	6.5	13.9	361.4	350.8	59.9	1.6
5106.3	4	20342	185.7	7.66	5.17	4.31	4.39	3.80	3.35	2.89	2.54	1.98	68.7	71.5	57.2	6.5	13.9	326.2	435.9	50.5	2.6
5300.7	1	16454	150.2	7.33	5.27	4.52	4.59	3.98	3.50	3.06	2.66	2.06	68.6	71.5	57.2	6.7	14.4	397.0	248.2	44.3	0.7
5300.7	2	16443	150.1	7.29	5.25	4.50	4.58	3.96	3.50	3.04	2.65	2.06	68.6	71.5	57.2	6.7	14.4	381.4	273.1	40.3	1.1
5300.7	3	20134	183.8	8.71	6.34	5.45	5.56	4.81	4.24	3.69	3.23	2.48	68.6	71.5	57.2	6.7	14.4	406.3	285.9	38.3	1.1
5300.7	4	20277	185.1	8.76	6.39	5.50	5.56	4.85	4.29	3.73	3.24	2.49	68.6	71.5	57.2	6.7	14.4	409.9	284.2	38.3	0.7



### Summary of FWD Data and Backcalculation Results (ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
5500.3	1	16421	149.9	5.17	4.38	4.07	4.16	3.72	3.34	2.96	2.63	2.09	68.1	70.5	57.2	6.3	11.3	1175.7	502.9	43.4	0.7
5500.3	2	16410	149.8	5.17	4.37	4.07	4.16	3.72	3.35	2.95	2.63	2.07	68.1	70.5	57.2	6.3	11.3	1140.2	515.6	42.3	0.7
5500.3	3	20090	183.4	6.24	5.30	4.93	5.02	4.51	4.03	3.57	3.16	2.49	68.1	70.5	57.2	6.3	11.3	1207.3	493.3	43.1	0.4
5500.3	4	20266	185.0	6.30	5.35	4.96	5.06	4.54	4.07	3.60	3.19	2.52	68.1	70.5	57.2	6.3	11.3	1180.0	502.2	43.0	0.4
5700.3	1	16311	148.9	5.20	4.35	3.89	3.97	3.50	3.09	2.69	2.36	1.83	69.0	71.8	57.2	6.2	13.2	1220.0	308.7	47.2	0.8
5700.3	2	16300	148.8	5.20	4.35	3.89	3.97	3.50	3.09	2.69	2.36	1.83	69.0	71.8	57.2	6.2	13.2	1174.6	316.3	47.1	0.9
5700.3	3	20222	184.6	6.36	5.33	4.78	4.84	4.30	3.81	3.30	2.89	2.21	69.0	71.8	57.2	6.2	13.2	1285.3	320.0	43.7	0.8
5700.3	4	20309	185.4	6.41	5.36	4.81	4.87	4.31	3.82	3.32	2.91	2.23	69.0	71.8	57.2	6.2	13.2	1194.9	331.3	44.9	0.8
5904.0	1	16333	149.1	6.67	5.28	4.66	4.82	4.28	3.68	3.10	2.71	2.03	69.2	72.2	57.2	6.4	12.5	727.5	280.4	36.9	1.3
5904.0	2	16289	148.7	6.63	5.27	4.65	4.81	4.25	3.67	3.10	2.70	2.01	69.2	72.2	57.2	6.4	12.5	705.3	282.5	36.2	1.1
5904.0	3	20167	184.1	8.06	6.44	5.70	5.89	5.23	4.52	3.82	3.32	2.47	69.2	72.2	57.2	6.4	12.5	766.0	309.6	32.4	1.1
5904.0	4	20211	184.5	8.09	6.46	5.72	5.91	5.25	4.54	3.83	3.33	2.47	69.2	72.2	57.2	6.4	12.5	756.4	312.0	32.3	1.0
6102.7	1	16355	149.3	6.41	3.90	3.20	3.27	2.81	2.46	2.10	1.82	1.43	69.5	72.8	57.2	6.6	13.5	280.3	386.9	67.3	2.0
6102.7	2	16256	148.4	6.35	3.89	3.19	3.26	2.80	2.45	2.09	1.82	1.42	69.5	72.8	57.2	6.6	13.5	282.9	388.4	67.1	1.6
6102.7	3	20211	184.5	7.70	4.77	3.92	4.02	3.44	3.01	2.56	2.22	1.72	69.5	72.8	57.2	6.6	13.5	313.3	334.7	76.7	0.8
6102.7	4	20211	184.5	7.69	4.78	3.94	4.04	3.46	3.02	2.58	2.24	1.73	69.5	72.8	57.2	6.6	13.5	315.9	340.6	76.1	0.8
6300.0	1	16300	148.8	6.91	5.42	4.62	4.74	4.01	3.43	2.92	2.52	1.90	70.6	74.2	57.2	5.9	12.7	730.8	218.0	49.0	0.4
6300.0	2	16311	148.9	6.90	5.40	4.61	4.72	4.00	3.44	2.91	2.51	1.89	70.6	74.2	57.2	5.9	12.7	730.7	218.1	49.2	0.5
6300.0	3	20222	184.6	8.41	6.62	5.67	5.79	4.91	4.20	3.57	3.07	2.28	70.6	74.2	57.2	5.9	12.7	773.0	225.1	46.7	0.0
6300.0	4	20222	184.6	8.46	6.64	5.67	5.80	4.92	4.22	3.58	3.09	2.30	70.6	74.2	57.2	5.9	12.7	745.5	228.6	46.5	0.4
6500.0	1	16399	149.7	7.72	5.27	4.54	4.76	4.08	3.58	3.02	2.59	1.95	69.0	71.7	57.2	5.7	12.5	299.8	344.8	46.0	0.7
6500.0	2	16454	150.2	7.68	5.26	4.53	4.76	4.08	3.57	3.00	2.59	1.96	69.0	71.7	57.2	5.7	12.5	313.2	332.1	47.9	0.7
6500.0	3	20036	182.9	9.26	6.39	5.52	5.80	4.96	4.35	3.66	3.15	2.35	69.0	71.7	57.2	5.7	12.5	316.7	345.3	45.1	0.8
6500.0	4	20244	184.8	9.33	6.48	5.58	5.88	5.03	4.39	3.70	3.19	2.38	69.0	71.7	57.2	5.7	12.5	324.0	342.0	45.0	0.5
6700.3	1	16355	149.3	4.65	3.59	3.20	3.23	2.85	2.50	2.17	1.91	1.51	69.4	72.7	57.2	6.5	12.7	805.1	473.3	59.3	1.3
6700.3	2	16377	149.5	4.63	3.59	3.19	3.22	2.85	2.50	2.17	1.91	1.50	69.4	72.7	57.2	6.5	12.7	822.4	473.0	59.4	0.8
6700.3	3	20123	183.7	5.59	4.34	3.87	3.91	3.45	3.02	2.63	2.30	1.80	69.4	72.7	57.2	6.5	12.7	833.6	507.4	58.1	0.8
6700.3	4	20189	184.3	5.61	4.36	3.90	3.93	3.47	3.06	2.64	2.31	1.82	69.4	72.7	57.2	6.5	12.7	849.0	509.2	56.3	1.0
6901.7	1	16344	149.2	6.06	5.51	4.33	4.28	3.61	3.12	2.67	2.31	1.76	69.3	72.6	57.2	7.0	12.4	1060.6	141.5	48.8	3.4
6901.7	2	16234	148.2	6.02	5.48	4.30	4.27	3.59	3.10	2.65	2.31	1.75	69.3	72.6	57.2	7.0	12.4	1011.6	147.6	48.7	3.5
6901.7	3	20178	184.2	7.33	6.71	5.31	5.22	4.42	3.83	3.26	2.83	2.13	69.3	72.6	57.2	7.0	12.4	1097.4	173.9	40.7	4.0
6901.7	4	20211	184.5	7.37	6.75	5.33	5.24	4.44	3.84	3.27	2.83	2.14	69.3	72.6	57.2	7.0	12.4	1093.4	176.4	39.5	4.3
7102.3	1	16234	148.2	6.01	4.48	3.95	3.98	3.57	3.15	2.70	2.34	1.79	69.9	73.5	57.2	7.1	12.7	585.8	326.0	48.1	1.1
7102.3	2	16191	147.8	6.02	4.47	3.97	4.00	3.57	3.15	2.69	2.35	1.78	69.9	73.5	57.2	7.1	12.7	573.3	329.8	48.0	1.1
7102.3	3	20266	185.0	7.38	5.53	4.88	4.94	4.41	3.92	3.35	2.90	2.21	69.9	73.5	57.2	7.1	12.7	570.2	391.4	42.4	0.7
7102.3	4	20222	184.6	7.37	5.52	4.93	4.98	4.43	3.90	3.34	2.91	2.19	69.9	73.5	57.2	7.1	12.7	563.0	388.4	41.5	0.7
7299.0	1	16311	148.9	5.88	4.48	3.99	3.99	3.57	3.16	2.72	2.37	1.81	68.7	71.2	57.2	5.7	12.4	568.7	444.7	46.7	0.5

## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
7299.0	2	16278	148.6	5.87	4.48	4.01	4.02	3.57	3.14	2.71	2.39	1.80	68.7	71.2	57.2	5.7	12.4	571.2	451.8	45.2	0.7
7299.0	3	20178	184.2	7.17	5.50	4.90	4.89	4.40	3.87	3.35	2.93	2.22	68.7	71.2	57.2	5.7	12.4	607.0	449.8	46.7	0.4
7299.0	4	20299	185.3	7.22	5.56	4.96	4.94	4.43	3.90	3.37	2.96	2.23	68.7	71.2	57.2	5.7	12.4	612.9	445.2	46.6	0.4
7498.7	1	16245	148.3	9.61	7.20	6.18	6.45	5.31	4.48	3.74	3.20	2.33	69.6	73.7	57.2	8.5	11.9	357.8	133.7	30.5	0.4
7498.7	2	16191	147.8	9.52	7.15	6.13	6.43	5.27	4.45	3.72	3.19	2.33	69.6	73.7	57.2	8.5	11.9	360.0	137.3	29.7	0.5
7498.7	3	20266	185.0	11.60	8.78	7.54	7.93	6.50	5.49	4.62	3.92	2.85	69.6	73.7	57.2	8.5	11.9	483.4	66.2	47.4	2.0
7498.7	4	20112	183.6	11.54	8.74	7.53	7.90	6.47	5.48	4.58	3.92	2.85	69.6	73.7	57.2	8.5	11.9	375.0	146.8	28.3	0.5
7698.0	1	16059	146.6	14.79	8.71	7.56	10.00	6.70	5.82	4.96	4.28	3.28	69.8	73.7	57.2	7.7	8.8	103.9	396.1	29.5	0.9
7698.0	2	15895	145.1	14.55	8.57	7.45	9.85	6.62	5.74	4.89	4.23	3.24	69.8	73.7	57.2	7.7	8.8	105.2	395.9	29.6	0.9
7698.0	3	20123	183.7	17.81	10.82	9.40	12.13	8.32	7.21	6.14	5.30	4.01	69.8	73.7	57.2	7.7	8.8	109.7	456.8	26.8	1.3
7698.0	4	20266	185.0	17.95	10.89	9.47	12.24	8.38	7.26	6.19	5.35	4.05	69.8	73.7	57.2	7.7	8.8	110.7	459.8	26.7	1.3
7898.7	1	16070	146.7	7.53	6.50	5.93	6.11	5.39	4.84	4.30	3.85	3.12	70.3	74.9	57.2	8.9	9.9	878.2	149.8	36.9	0.5
7898.7	2	15818	144.4	7.42	6.41	5.86	6.01	5.32	4.78	4.25	3.80	3.07	70.3	74.9	57.2	8.9	9.9	883.8	148.7	36.8	0.7
7898.7	3	20189	184.3	9.15	7.91	7.23	7.42	6.56	5.89	5.22	4.65	3.74	70.3	74.9	57.2	8.9	9.9	910.8	197.7	30.1	0.7
7898.7	4	20244	184.8	9.19	7.94	7.26	7.43	6.58	5.92	5.24	4.68	3.76	70.3	74.9	57.2	8.9	9.9	901.5	200.7	30.1	0.7
8101.3	1	16092	146.9	9.07	6.95	5.90	5.88	5.24	4.65	4.06	3.59	2.86	70.4	75.3	57.2	9.2	10.0	330.4	279.9	31.1	2.4
8101.3	2	15895	145.1	8.95	6.86	5.84	5.82	5.18	4.60	4.01	3.57	2.84	70.4	75.3	57.2	9.2	10.0	363.7	173.2	41.8	1.0
8101.3	3	20266	185.0	11.00	8.47	7.21	7.17	6.39	5.64	4.92	4.35	3.45	70.4	75.3	57.2	9.2	10.0	358.4	266.2	32.3	2.1
8101.3	4	20288	185.2	11.01	8.49	7.23	7.18	6.40	5.66	4.93	4.37	3.46	70.4	75.3	57.2	9.2	10.0	358.4	268.0	32.3	2.1
8296.7	1	15982	145.9	7.14	6.22	5.77	5.96	5.31	4.78	4.24	3.78	3.02	69.7	74.2	57.2	9.6	9.2	1000.0	113.9	37.3	1.0
8296.7	2	15928	145.4	7.10	6.20	5.75	5.91	5.29	4.77	4.22	3.76	3.00	69.7	74.2	57.2	9.6	9.2	1001.0	105.0	37.9	1.1
8296.7	3	20266	185.0	8.80	7.68	7.12	7.33	6.53	5.91	5.22	4.63	3.67	69.7	74.2	57.2	9.6	9.2	1020.5	169.1	29.2	0.7
8296.7	4	20244	184.8	8.82	7.69	7.13	7.33	6.53	5.90	5.22	4.62	3.67	69.7	74.2	57.2	9.6	9.2	1005.5	172.7	29.2	0.7
8393.0	1	15939	145.5	21.08	14.35	11.52	5.90	9.37	7.47	5.96	4.93	3.47	70.6	75.0	57.2	7.8	11.3	120.7	71.6	16.7	1.6
8393.0	2	15796	144.2	20.75	14.18	11.30	5.78	9.27	7.39	5.92	4.92	3.44	70.6	75.0	57.2	7.8	11.3	131.8	58.9	19.1	0.8
8393.0	3	20299	185.3	25.57	17.60	14.17	7.50	11.59	9.28	7.41	6.14	4.30	70.6	75.0	57.2	7.8	11.3	140.2	64.7	18.4	1.0
8393.0	4	20277	185.1	25.62	17.64	14.25	7.47	11.60	9.30	7.40	6.09	4.28	70.6	75.0	57.2	7.8	11.3	140.1	60.7	19.0	0.7
8521.0	1	15950	145.6	15.02	10.91	9.17	4.54	7.71	6.41	5.33	4.59	3.52	70.7	75.0	57.2	8.6	12.5	213.1	64.3	27.4	0.9
8521.0	2	15895	145.1	14.89	10.87	9.12	4.46	7.67	6.41	5.31	4.57	3.51	70.7	75.0	57.2	8.6	12.5	218.1	63.1	27.5	0.9
8521.0	3	20277	185.1	18.56	13.59	11.44	5.61	9.62	8.00	6.63	5.70	4.34	70.7	75.0	57.2	8.6	12.5	203.8	102.5	19.3	2.6
8521.0	4	20244	184.8	18.61	13.64	11.47	5.60	9.66	8.02	6.64	5.70	4.34	70.7	75.0	57.2	8.6	12.5	204.1	100.7	19.2	2.6
8692.7	1	15961	145.7	15.80	11.83	10.08	5.20	8.44	6.93	5.70	4.78	3.50	71.6	76.4	57.2	8.4	10.2	253.0	56.3	25.7	0.8
8692.7	2	15939	145.5	15.67	11.73	10.02	5.16	8.37	6.91	5.64	4.74	3.46	71.6	76.4	57.2	8.4	10.2	255.1	56.4	25.9	1.0
8692.7	3	20112	183.6	19.38	14.56	12.44	6.60	10.40	8.57	7.02	5.89	4.27	71.6	76.4	57.2	8.4	10.2	248.3	76.0	21.6	0.7
8692.7	4	20331	185.6	19.64	14.74	12.61	6.65	10.54	8.69	7.12	5.96	4.35	71.6	76.4	57.2	8.4	10.2	260.7	59.6	25.3	0.8
8899.3	1	16081	146.8	6.40	5.51	5.17	5.23	4.85	4.46	4.06	3.71	3.14	71.2	76.2	57.2	9.7	10.0	954.2	329.6	35.3	0.7
8899.3	2	15906	145.2	6.35	5.46	5.11	5.17	4.80	4.43	4.02	3.67	3.09	71.2	76.2	57.2	9.7	10.0	959.5	303.1	35.8	0.7

## Summary of FWD Data and Backcalculation Results

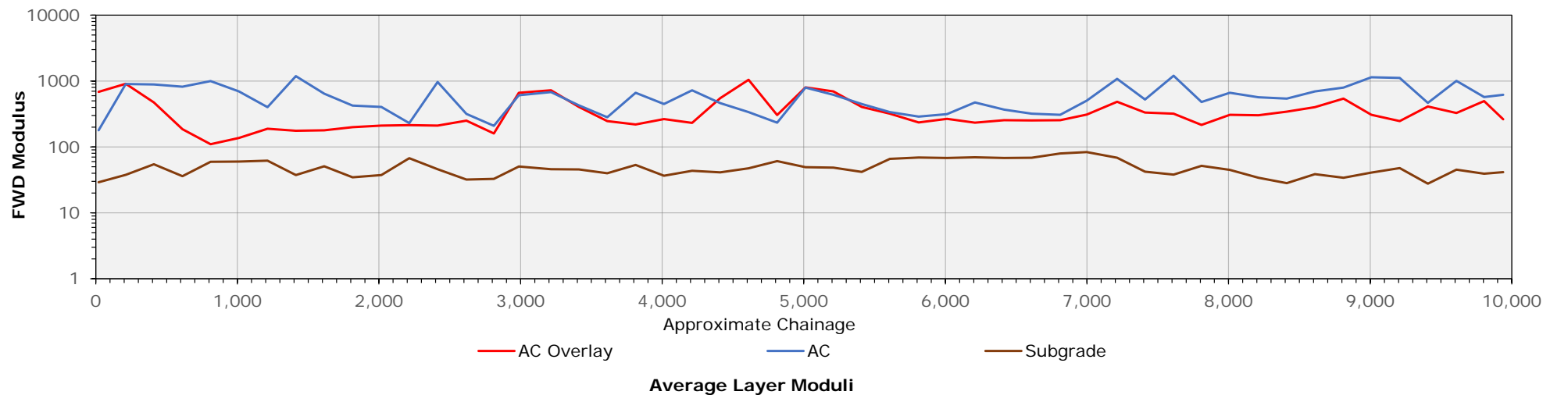
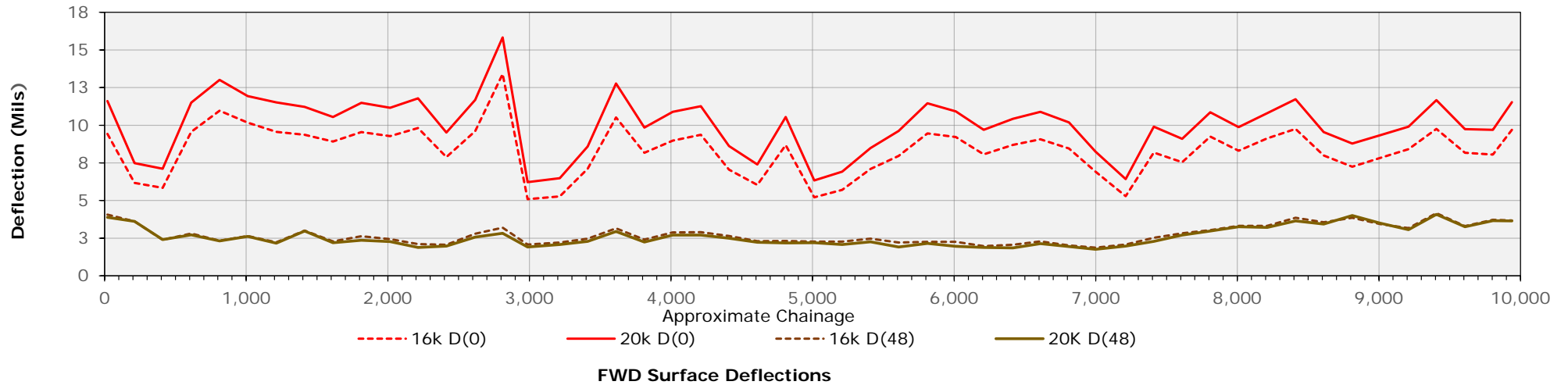
(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
8899.3	3	20167	184.1	7.70	6.63	6.22	6.27	5.85	5.39	4.89	4.45	3.72	71.2	76.2	57.2	9.7	10.0	1001.8	322.5	37.2	0.8
8899.3	4	20244	184.8	7.75	6.67	6.26	6.32	5.88	5.41	4.92	4.47	3.76	71.2	76.2	57.2	9.7	10.0	1003.1	317.6	37.2	0.7
9097.7	1	16004	146.1	8.42	7.05	6.18	6.31	5.46	4.84	4.29	3.86	3.17	71.1	75.7	57.2	8.5	8.6	502.1	425.1	28.6	3.5
9097.7	2	15906	145.2	8.35	7.01	6.14	6.28	5.43	4.81	4.27	3.84	3.14	71.1	75.7	57.2	8.5	8.6	507.9	422.9	28.6	3.2
9097.7	3	20266	185.0	10.28	8.64	7.58	7.77	6.72	5.94	5.26	4.73	3.85	71.1	75.7	57.2	8.5	8.6	476.9	506.0	29.3	3.3
9097.7	4	20299	185.3	10.32	8.67	7.62	7.81	6.75	5.98	5.29	4.75	3.87	71.1	75.7	57.2	8.5	8.6	476.6	505.0	29.2	3.3
9301.7	1	16092	146.9	6.27	5.55	5.18	5.14	4.81	4.38	3.96	3.56	2.92	71.4	76.3	57.2	9.2	10.0	1285.7	195.1	38.3	0.8
9301.7	2	15862	144.8	6.20	5.49	5.12	5.09	4.76	4.34	3.92	3.52	2.89	71.4	76.3	57.2	9.2	10.0	1336.3	180.8	38.1	0.8
9301.7	3	20222	184.6	7.59	6.75	6.30	6.25	5.86	5.33	4.81	4.33	3.54	71.4	76.3	57.2	9.2	10.0	1413.3	184.0	39.6	1.0
9301.7	4	20266	185.0	7.62	6.78	6.33	6.26	5.88	5.35	4.85	4.35	3.56	71.4	76.3	57.2	9.2	10.0	1401.2	187.4	39.4	1.0
9501.7	1	16070	146.7	5.87	5.08	4.76	4.80	4.39	4.00	3.61	3.29	2.72	71.8	76.1	57.2	6.9	11.2	1341.2	405.8	42.0	0.5
9501.7	2	15840	144.6	5.80	5.02	4.70	4.74	4.34	3.95	3.57	3.26	2.69	71.8	76.1	57.2	6.9	11.2	1324.8	410.1	41.8	0.5
9501.7	3	20320	185.5	7.20	6.22	5.80	5.81	5.37	4.90	4.41	3.98	3.30	71.8	76.1	57.2	6.9	11.2	1350.0	396.4	44.2	0.8
9501.7	4	20266	185.0	7.19	6.22	5.79	5.79	5.36	4.90	4.41	3.96	3.29	71.8	76.1	57.2	6.9	11.2	1432.8	373.7	44.2	0.8
9705.7	1	16147	147.4	7.30	6.51	6.05	6.15	5.57	4.99	4.44	3.94	3.06	71.6	76.7	57.2	8.9	9.0	1237.7	171.1	27.9	1.0
9705.7	2	15785	144.1	7.15	6.39	5.93	6.02	5.46	4.89	4.35	3.85	3.00	71.6	76.7	57.2	8.9	9.0	1243.3	166.3	27.9	0.8
9705.7	3	20211	184.5	8.83	7.89	7.33	7.43	6.75	6.03	5.36	4.74	3.68	71.6	76.7	57.2	8.9	9.0	1182.0	198.3	29.0	0.8
9705.7	4	20309	185.4	8.89	7.94	7.37	7.47	6.78	6.07	5.39	4.78	3.70	71.6	76.7	57.2	8.9	9.0	1217.3	189.8	28.9	0.9

**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Project Name: RKS Master Plan	Calc. Date: August 14, 2023
Segment: Runway 9/27, 15' Rt	Project No.: 110339
Direction: Southeast	

Summary of Input Data		Summary of Backcalculated Moduli				
Date of FWD Testing:	May 16, 2023	AC Overlay	AC	Subgrade	RMS (%)	
PDAT (BELLS):	52° F	Mean:	313.7	528.3	46.6	2.5
FWD Plate Radius:	5.905"	Standard Deviation:	123.1	208.8	11.6	



**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
20.0	1	16037	146.4	9.42	7.86	6.99	7.42	6.19	5.38	4.62	4.07	3.14	72.2	76.9	62.9	7.2	10.4	669.6	182.4	27.8	0.8
20.0	2	15917	145.3	9.33	7.80	6.93	7.35	6.14	5.32	4.60	4.05	3.13	72.2	76.9	62.9	7.2	10.4	672.7	182.1	28.6	0.9
20.0	3	20167	184.1	11.61	9.70	8.66	9.23	7.66	6.64	5.71	5.09	3.88	72.2	76.9	62.9	7.2	10.4	706.1	174.8	30.0	0.8
20.0	4	20375	186.0	11.74	9.82	8.75	9.33	7.75	6.71	5.78	5.12	3.93	72.2	76.9	62.9	7.2	10.4	691.7	177.5	30.0	0.5
211.0	1	16213	148.0	6.17	5.16	4.99	5.05	4.75	4.39	3.99	3.61	3.00	72.1	77.1	62.6	8.0	8.9	837.3	967.3	37.3	1.1
211.0	2	15774	144.0	6.00	5.07	4.89	4.91	4.65	4.31	3.88	3.52	2.93	72.1	77.1	62.6	8.0	8.9	877.6	899.9	37.3	1.3
211.0	3	20244	184.8	7.48	6.34	6.10	6.05	5.76	5.35	4.83	4.46	3.62	72.1	77.1	62.6	8.0	8.9	987.1	826.8	38.6	1.1
211.0	4	20299	185.3	7.52	6.37	6.15	6.09	5.80	5.41	4.87	4.50	3.71	72.1	77.1	62.6	8.0	8.9	941.5	919.6	37.8	0.8
410.3	1	16202	147.9	5.84	4.27	3.69	3.84	3.31	2.95	2.64	2.39	1.97	73.5	79.8	62.4	8.5	9.8	502.2	641.5	62.6	2.4
410.3	2	15709	143.4	5.69	4.13	3.59	3.82	3.20	2.85	2.56	2.32	1.92	73.5	79.8	62.4	8.5	9.8	456.5	744.3	61.8	2.5
410.3	3	20364	185.9	7.11	5.23	4.53	4.63	4.09	3.64	3.26	2.93	2.41	73.5	79.8	62.4	8.5	9.8	478.4	1059.2	47.1	3.3
410.3	4	20167	184.1	7.07	5.19	4.50	4.66	4.03	3.58	3.21	2.92	2.40	73.5	79.8	62.4	8.5	9.8	464.4	1102.2	47.2	3.5
612.0	1	16213	148.0	9.56	6.46	4.79	5.78	4.16	3.63	3.17	2.81	2.22	72.4	77.6	61.6	8.1	9.0	189.6	579.8	42.5	6.3
612.0	2	15906	145.2	9.30	6.33	4.70	5.65	4.09	3.58	3.11	2.76	2.19	72.4	77.6	61.6	8.1	9.0	178.1	850.8	35.7	7.0
612.0	3	20288	185.2	11.50	7.87	5.91	7.05	5.12	4.50	3.90	3.45	2.72	72.4	77.6	61.6	8.1	9.0	187.8	918.2	33.1	6.9
612.0	4	20408	186.3	11.51	7.88	5.93	7.09	5.14	4.50	3.92	3.48	2.72	72.4	77.6	61.6	8.1	9.0	186.4	934.9	32.5	6.9
811.3	1	16147	147.4	10.97	5.64	3.67	3.83	3.15	2.90	2.60	2.33	1.87	72.9	78.7	61.6	8.5	9.2	104.6	819.9	62.7	8.7
811.3	2	15785	144.1	10.59	5.49	3.58	3.76	3.09	2.82	2.55	2.28	1.85	72.9	78.7	61.6	8.5	9.2	106.1	848.6	67.6	8.7
811.3	3	20375	186.0	13.01	6.88	4.54	4.73	3.92	3.59	3.22	2.89	2.31	72.9	78.7	61.6	8.5	9.2	114.8	1146.6	53.5	9.0
811.3	4	20222	184.6	12.87	6.82	4.52	4.72	3.88	3.55	3.19	2.87	2.29	72.9	78.7	61.6	8.5	9.2	114.9	1166.0	53.6	9.3
1010.7	1	16191	147.8	10.17	5.44	3.89	4.18	3.53	3.25	2.92	2.65	2.16	72.9	78.3	62.2	7.7	10.2	136.0	588.4	59.9	6.2
1010.7	2	15763	143.9	9.75	5.31	3.78	4.24	3.46	3.17	2.85	2.56	2.11	72.9	78.3	62.2	7.7	10.2	126.2	783.2	58.8	6.4
1010.7	3	20233	184.7	11.94	6.55	4.73	4.98	4.32	4.00	3.54	3.21	2.62	72.9	78.3	62.2	7.7	10.2	140.2	747.5	60.5	5.7
1010.7	4	20178	184.2	11.81	6.54	4.73	5.04	4.30	3.97	3.54	3.19	2.57	72.9	78.3	62.2	7.7	10.2	146.9	662.6	61.2	5.5
1212.3	1	16278	148.6	9.56	5.57	4.20	4.33	3.56	3.04	2.59	2.23	1.78	71.9	76.9	64.0	8.0	9.1	164.1	557.5	51.4	5.6
1212.3	2	16070	146.7	9.39	5.54	4.16	4.29	3.54	3.02	2.56	2.25	1.75	71.9	76.9	64.0	8.0	9.1	163.6	547.0	50.9	5.4
1212.3	3	20430	186.5	11.52	6.92	5.20	5.33	4.49	3.84	3.22	2.80	2.17	71.9	76.9	64.0	8.0	9.1	215.8	240.4	72.9	2.1
1212.3	4	20145	183.9	11.35	6.85	5.17	5.28	4.43	3.76	3.19	2.74	2.18	71.9	76.9	64.0	8.0	9.1	210.5	257.6	72.3	2.6
1413.0	1	16202	147.9	9.36	5.89	4.67	4.72	4.25	3.80	3.37	3.01	2.43	72.7	78.0	63.6	7.8	9.2	164.3	1171.4	37.5	4.9
1413.0	2	15774	144.0	9.06	5.72	4.57	4.63	4.13	3.71	3.29	2.94	2.37	72.7	78.0	63.6	7.8	9.2	165.3	1297.4	36.8	5.0
1413.0	3	20244	184.8	11.21	7.17	5.75	5.84	5.22	4.68	4.15	3.71	2.98	72.7	78.0	63.6	7.8	9.2	184.5	1139.4	38.1	4.6
1413.0	4	20364	185.9	11.20	7.21	5.78	5.76	5.26	4.71	4.17	3.73	2.98	72.7	78.0	63.6	7.8	9.2	188.3	1126.6	38.1	4.4
1613.0	1	16234	148.2	8.91	5.12	3.55	3.66	3.21	2.85	2.51	2.28	1.80	72.6	78.6	62.8	9.2	10.8	162.6	666.2	50.6	6.4
1613.0	2	16169	147.6	8.71	5.08	3.52	3.60	3.19	2.85	2.50	2.22	1.80	72.6	78.6	62.8	9.2	10.8	176.3	622.9	51.1	6.3
1613.0	3	20331	185.6	10.54	6.20	4.36	4.48	3.95	3.52	3.09	2.75	2.19	72.6	78.6	62.8	9.2	10.8	191.3	538.3	55.8	5.5
1613.0	4	20277	185.1	10.46	6.17	4.37	4.49	3.94	3.52	3.07	2.74	2.19	72.6	78.6	62.8	9.2	10.8	182.5	737.6	45.8	6.1
1813.7	1	16180	147.7	9.54	5.73	4.55	4.73	4.08	3.59	3.05	2.63	1.91	71.8	76.9	63.5	8.8	10.9	196.9	381.5	37.3	1.6
1813.7	2	15807	144.3	9.26	5.62	4.43	4.52	3.99	3.51	2.98	2.54	1.89	71.8	76.9	63.5	8.8	10.9	184.8	512.9	30.4	2.8

**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
1813.7	3	20222	184.6	11.48	7.06	5.65	5.65	5.06	4.47	3.80	3.22	2.36	71.8	76.9	63.5	8.8	10.9	210.6	387.9	36.7	1.4
1813.7	4	20342	185.7	11.51	7.10	5.69	5.69	5.09	4.48	3.81	3.27	2.37	71.8	76.9	63.5	8.8	10.9	208.7	419.9	34.5	1.9
2016.0	1	16213	148.0	9.27	5.67	4.25	4.38	3.76	3.30	2.83	2.43	1.78	72.3	78.0	62.7	9.2	10.8	197.8	408.2	37.0	3.8
2016.0	2	15785	144.1	8.99	5.55	4.12	4.27	3.69	3.30	2.77	2.39	1.70	72.3	78.0	62.7	9.2	10.8	210.6	369.1	36.7	2.8
2016.0	3	20277	185.1	11.15	6.94	5.19	5.43	4.68	4.14	3.50	3.00	2.27	72.3	78.0	62.7	9.2	10.8	227.6	385.7	39.1	3.3
2016.0	4	20189	184.3	11.09	6.94	5.19	5.43	4.66	4.14	3.49	2.99	2.27	72.3	78.0	62.7	9.2	10.8	204.8	459.6	36.6	3.7
2213.7	1	16114	147.1	9.81	5.65	4.12	4.39	3.56	3.00	2.51	2.11	1.56	73.7	80.0	61.9	8.3	9.2	204.0	214.1	70.2	1.3
2213.7	2	15796	144.2	9.52	5.53	4.04	4.21	3.49	2.99	2.47	2.10	1.57	73.7	80.0	61.9	8.3	9.2	210.7	207.4	74.3	1.3
2213.7	3	20244	184.8	11.78	6.98	5.18	5.30	4.46	3.75	3.15	2.63	1.89	73.7	80.0	61.9	8.3	9.2	219.7	258.4	61.3	1.9
2213.7	4	20309	185.4	11.78	7.02	5.20	5.28	4.48	3.82	3.18	2.65	1.93	73.7	80.0	61.9	8.3	9.2	224.0	236.4	65.1	1.8
2414.0	1	16114	147.1	7.89	4.66	3.55	3.61	3.15	2.77	2.35	2.06	1.61	72.6	78.7	62.2	9.5	9.0	203.9	934.6	47.9	4.8
2414.0	2	15895	145.1	7.74	4.58	3.52	3.58	3.11	2.76	2.34	2.01	1.57	72.6	78.7	62.2	9.5	9.0	206.0	934.4	48.0	4.0
2414.0	3	20244	184.8	9.52	5.76	4.43	4.54	3.92	3.41	2.93	2.54	1.97	72.6	78.7	62.2	9.5	9.0	218.9	1008.0	44.4	4.6
2414.0	4	20277	185.1	9.56	5.77	4.43	4.54	3.94	3.44	2.95	2.55	1.94	72.6	78.7	62.2	9.5	9.0	215.7	1007.4	43.3	4.1
2617.0	1	16081	146.8	9.61	6.35	5.02	5.23	4.38	3.83	3.24	2.80	2.07	73.0	79.3	62.9	9.3	10.9	224.2	400.2	28.2	3.3
2617.0	2	15807	144.3	9.40	6.25	4.95	5.15	4.32	3.78	3.19	2.74	2.06	73.0	79.3	62.9	9.3	10.9	249.7	310.5	31.5	2.9
2617.0	3	20222	184.6	11.68	7.83	6.26	6.50	5.44	4.78	4.04	3.46	2.57	73.0	79.3	62.9	9.3	10.9	259.4	303.2	33.0	2.5
2617.0	4	20233	184.7	11.68	7.86	6.28	6.52	5.47	4.78	4.04	3.50	2.55	73.0	79.3	62.9	9.3	10.9	270.7	259.9	35.2	1.8
2811.3	1	16037	146.4	13.40	7.98	5.94	6.15	5.29	4.58	3.80	3.19	2.25	72.3	78.0	62.1	9.0	9.6	147.4	191.2	34.8	1.7
2811.3	2	15818	144.4	12.94	7.83	5.87	6.08	5.22	4.51	3.75	3.15	2.21	72.3	78.0	62.1	9.0	9.6	152.4	208.2	32.8	1.9
2811.3	3	20288	185.2	15.83	9.85	7.47	7.73	6.66	5.75	4.80	4.02	2.82	72.3	78.0	62.1	9.0	9.6	170.3	205.3	32.9	1.5
2811.3	4	20277	185.1	15.64	9.83	7.48	7.73	6.66	5.75	4.80	4.02	2.81	72.3	78.0	62.1	9.0	9.6	171.1	232.8	30.5	1.9
2987.7	1	16169	147.6	5.09	3.78	3.33	3.55	3.04	2.71	2.35	2.07	1.61	72.4	77.5	63.2	7.9	11.3	659.0	554.8	54.3	0.7
2987.7	2	15774	144.0	4.98	3.70	3.26	3.45	2.97	2.65	2.30	2.02	1.56	72.4	77.5	63.2	7.9	11.3	648.2	598.8	50.8	0.5
2987.7	3	20222	184.6	6.22	4.65	4.11	4.30	3.74	3.36	2.91	2.61	1.92	72.4	77.5	63.2	7.9	11.3	675.3	640.1	48.4	1.1
2987.7	4	20233	184.7	6.25	4.69	4.13	4.26	3.76	3.36	2.93	2.63	1.96	72.4	77.5	63.2	7.9	11.3	672.2	641.0	48.1	0.9
3214.7	1	16147	147.4	5.28	3.96	3.60	3.69	3.28	2.93	2.54	2.21	1.65	74.6	80.6	62.9	6.9	12.0	694.1	693.6	43.6	1.1
3214.7	2	15785	144.1	5.20	3.90	3.53	3.61	3.22	2.85	2.45	2.22	1.62	74.6	80.6	62.9	6.9	12.0	742.8	563.6	50.8	1.7
3214.7	3	20320	185.5	6.49	4.89	4.47	4.63	4.07	3.61	3.12	2.78	2.08	74.6	80.6	62.9	6.9	12.0	743.4	703.3	45.1	0.9
3214.7	4	20090	183.4	6.43	4.84	4.41	4.53	4.02	3.59	3.09	2.75	2.08	74.6	80.6	62.9	6.9	12.0	708.6	749.8	44.7	0.8
3411.3	1	16169	147.6	7.11	4.81	4.06	4.17	3.66	3.20	2.79	2.46	1.87	74.8	80.6	62.9	6.3	13.8	384.0	425.7	46.3	0.8
3411.3	2	15818	144.4	6.94	4.72	3.98	4.05	3.58	3.14	2.73	2.41	1.82	74.8	80.6	62.9	6.3	13.8	395.7	415.9	46.4	0.9
3411.3	3	20200	184.4	8.59	5.91	4.98	5.02	4.51	4.00	3.46	3.02	2.28	74.8	80.6	62.9	6.3	13.8	408.0	470.2	41.4	1.0
3411.3	4	20178	184.2	8.59	5.91	4.98	5.07	4.50	3.95	3.44	3.03	2.28	74.8	80.6	62.9	6.3	13.8	431.0	393.0	49.0	0.5
3612.7	1	16015	146.2	10.52	6.91	5.61	5.64	4.95	4.33	3.76	3.15	2.41	74.8	80.5	63.2	6.1	12.2	231.9	278.2	40.7	1.5
3612.7	2	15961	145.7	10.41	6.85	5.59	5.61	4.92	4.29	3.69	3.10	2.37	74.8	80.5	63.2	6.1	12.2	235.2	280.9	39.8	1.4
3612.7	3	20189	184.3	12.77	8.51	6.98	7.00	6.16	5.32	4.57	3.92	2.95	74.8	80.5	63.2	6.1	12.2	254.2	296.3	37.9	1.6

**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
3612.7	4	20288	185.2	12.80	8.55	7.04	7.06	6.20	5.37	4.63	3.94	2.98	74.8	80.5	63.2	6.1	12.2	262.3	273.1	41.5	1.0
3812.7	1	16114	147.1	8.17	4.79	3.82	3.85	3.50	3.11	2.65	2.40	1.85	73.7	79.7	63.8	7.7	10.6	199.6	786.5	47.6	3.2
3812.7	2	15807	144.3	8.02	4.71	3.76	3.79	3.43	3.09	2.64	2.31	1.77	73.7	79.7	63.8	7.7	10.6	218.4	582.7	54.0	2.0
3812.7	3	20200	184.4	9.84	5.87	4.71	4.86	4.27	3.84	3.30	2.88	2.24	73.7	79.7	63.8	7.7	10.6	213.7	829.9	46.0	3.3
3812.7	4	20397	186.2	9.90	5.93	4.75	4.83	4.33	3.85	3.30	2.90	2.23	73.7	79.7	63.8	7.7	10.6	248.5	451.2	65.3	1.5
4012.7	1	16191	147.8	8.98	5.94	4.93	5.12	4.39	3.85	3.28	2.88	2.28	73.3	79.8	63.9	9.4	9.8	259.6	416.1	39.2	2.4
4012.7	2	15785	144.1	8.75	5.81	4.80	5.00	4.27	3.70	3.17	2.79	2.16	73.3	79.8	63.9	9.4	9.8	254.1	450.2	36.2	2.6
4012.7	3	20222	184.6	10.89	7.28	6.05	6.29	5.36	4.68	4.01	3.53	2.70	73.3	79.8	63.9	9.4	9.8	271.7	512.4	33.2	2.8
4012.7	4	20266	185.0	10.90	7.33	6.07	6.29	5.40	4.71	4.00	3.49	2.73	73.3	79.8	63.9	9.4	9.8	274.0	411.3	38.0	2.4
4210.7	1	16213	148.0	9.36	6.22	4.96	4.93	4.41	3.80	3.26	2.90	2.17	74.7	81.4	63.0	7.7	8.2	228.0	754.0	40.6	3.6
4210.7	2	15698	143.3	9.09	6.04	4.82	4.80	4.28	3.65	3.15	2.81	2.09	74.7	81.4	63.0	7.7	8.2	217.0	780.4	40.7	3.9
4210.7	3	20244	184.8	11.26	7.60	6.13	6.07	5.43	4.72	4.04	3.50	2.71	74.7	81.4	63.0	7.7	8.2	248.0	692.2	45.2	3.2
4210.7	4	20233	184.7	11.28	7.60	6.15	6.11	5.43	4.72	4.05	3.50	2.72	74.7	81.4	63.0	7.7	8.2	237.4	669.9	47.9	2.8
4410.3	1	16048	146.5	7.05	5.10	4.65	4.79	4.10	3.57	3.05	2.64	2.06	76.3	82.8	64.2	6.1	12.7	526.2	460.1	41.9	1.0
4410.3	2	15895	145.1	6.98	5.07	4.62	4.78	4.05	3.52	3.02	2.63	1.96	76.3	82.8	64.2	6.1	12.7	514.9	473.5	39.7	0.7
4410.3	3	20189	184.3	8.62	6.33	5.72	5.83	5.10	4.44	3.80	3.24	2.50	76.3	82.8	64.2	6.1	12.7	598.1	439.4	41.5	1.0
4410.3	4	20156	184.0	8.63	6.33	5.74	5.91	5.10	4.44	3.81	3.34	2.51	76.3	82.8	64.2	6.1	12.7	555.2	473.5	40.9	0.7
4610.0	1	16421	149.9	6.03	4.91	4.30	4.24	3.77	3.15	2.66	2.30	1.83	74.3	80.3	63.5	7.3	9.3	1002.1	311.1	53.2	2.3
4610.0	2	16454	150.2	6.04	4.97	4.30	4.19	3.78	3.22	2.63	2.35	1.74	74.3	80.3	63.5	7.3	9.3	1020.9	318.0	48.4	1.6
4610.0	3	20277	185.1	7.40	6.14	5.33	5.28	4.64	4.05	3.29	2.88	2.22	74.3	80.3	63.5	7.3	9.3	1140.4	298.5	47.9	2.1
4610.0	4	20233	184.7	7.38	6.15	5.32	5.22	4.61	4.05	3.28	2.85	2.22	74.3	80.3	63.5	7.3	9.3	1017.3	420.6	40.7	2.9
4811.0	1	16169	147.6	8.68	5.50	4.50	4.61	3.81	3.17	2.66	2.31	1.78	74.5	80.8	62.3	7.4	11.6	295.0	215.9	66.0	0.9
4811.0	2	15741	143.7	8.46	5.39	4.40	4.51	3.75	3.13	2.62	2.26	1.75	74.5	80.8	62.3	7.4	11.6	281.3	290.2	49.1	2.6
4811.0	3	20255	184.9	10.55	6.81	5.58	5.73	4.75	3.96	3.31	2.86	2.18	74.5	80.8	62.3	7.4	11.6	326.0	207.3	65.9	0.5
4811.0	4	20211	184.5	10.51	6.81	5.58	5.74	4.74	3.96	3.31	2.86	2.19	74.5	80.8	62.3	7.4	11.6	322.6	220.2	63.1	0.5
5012.3	1	16267	148.5	5.21	4.03	3.63	3.67	3.29	2.91	2.56	2.27	1.80	75.2	80.9	62.9	5.4	12.6	759.5	817.1	49.0	1.3
5012.3	2	16202	147.9	5.20	4.01	3.61	3.65	3.29	2.92	2.57	2.27	1.78	75.2	80.9	62.9	5.4	12.6	763.2	787.1	49.3	0.8
5012.3	3	20244	184.8	6.33	4.93	4.45	4.48	4.06	3.61	3.17	2.79	2.20	75.2	80.9	62.9	5.4	12.6	874.2	739.5	51.6	0.7
5012.3	4	20233	184.7	6.34	4.95	4.47	4.48	4.06	3.62	3.17	2.80	2.20	75.2	80.9	62.9	5.4	12.6	814.2	839.3	46.6	1.0
5209.3	1	16289	148.7	5.71	4.32	3.84	3.93	3.45	3.03	2.61	2.27	1.76	74.7	80.7	63.8	6.2	11.8	619.7	704.7	43.8	1.3
5209.3	2	16234	148.2	5.67	4.27	3.81	3.93	3.43	3.04	2.59	2.30	1.80	74.7	80.7	63.8	6.2	11.8	629.4	672.2	49.0	1.5
5209.3	3	20101	183.5	6.92	5.25	4.69	4.85	4.21	3.70	3.18	2.79	2.08	74.7	80.7	63.8	6.2	11.8	770.8	510.0	53.5	0.8
5209.3	4	20211	184.5	6.98	5.31	4.71	4.87	4.26	3.79	3.21	2.79	2.11	74.7	80.7	63.8	6.2	11.8	754.4	583.6	47.3	0.7
5409.3	1	16278	148.6	7.10	4.79	4.00	3.92	3.67	3.27	2.81	2.46	1.84	75.2	81.8	63.8	6.6	14.1	395.7	428.6	42.2	0.7
5409.3	2	16289	148.7	7.09	4.80	4.01	3.93	3.65	3.22	2.79	2.45	1.87	75.2	81.8	63.8	6.6	14.1	382.3	460.9	40.9	1.1
5409.3	3	20047	183.0	8.48	5.78	4.88	4.77	4.44	3.89	3.39	2.95	2.25	75.2	81.8	63.8	6.6	14.1	403.9	462.5	41.7	0.8
5409.3	4	20331	185.6	8.58	5.92	4.94	4.85	4.51	3.98	3.42	3.03	2.29	75.2	81.8	63.8	6.6	14.1	433.1	435.0	42.7	0.9

## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in MILS (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, $E_{FWD}$ (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
5608.7	1	16256	148.4	7.96	5.07	3.98	4.10	3.43	2.97	2.49	2.21	1.72	75.1	81.7	63.8	6.7	11.1	322.9	284.9	73.4	2.1
5608.7	2	16191	147.8	7.88	5.04	3.96	4.06	3.42	2.97	2.48	2.10	1.69	75.1	81.7	63.8	6.7	11.1	324.3	287.7	73.5	2.0
5608.7	3	20211	184.5	9.62	6.22	4.91	4.99	4.23	3.69	3.06	2.68	1.91	75.1	81.7	63.8	6.7	11.1	287.2	492.9	47.9	3.0
5608.7	4	20244	184.8	9.64	6.28	4.93	5.04	4.24	3.66	3.07	2.66	1.96	75.1	81.7	63.8	6.7	11.1	349.7	287.1	69.5	1.6
5812.0	1	16256	148.4	9.45	5.74	4.14	4.21	3.56	3.10	2.60	2.26	1.71	75.2	82.3	63.8	7.3	10.0	239.5	229.8	72.7	2.6
5812.0	2	16191	147.8	9.36	5.72	4.14	4.27	3.59	3.12	2.63	2.25	1.81	75.2	82.3	63.8	7.3	10.0	193.3	432.1	59.6	5.1
5812.0	3	20309	185.4	11.46	7.04	5.14	5.28	4.44	3.87	3.24	2.80	2.15	75.2	82.3	63.8	7.3	10.0	253.2	248.4	72.3	2.4
5812.0	4	20200	184.4	11.39	7.01	5.14	5.30	4.44	3.85	3.23	2.80	2.19	75.2	82.3	63.8	7.3	10.0	257.4	245.7	71.9	2.7
6012.0	1	16289	148.7	9.21	5.60	4.20	4.49	3.63	3.13	2.59	2.26	1.66	76.1	82.9	63.8	6.1	10.1	263.1	273.1	73.3	2.0
6012.0	2	16048	146.5	9.04	5.55	4.17	4.47	3.60	3.05	2.57	2.20	1.65	76.1	82.9	63.8	6.1	10.1	272.5	266.2	73.4	1.5
6012.0	3	20068	183.2	10.92	6.79	5.12	5.26	4.43	3.87	3.17	2.71	1.96	76.1	82.9	63.8	6.1	10.1	240.5	419.8	57.1	2.8
6012.0	4	20299	185.3	11.00	6.91	5.18	5.34	4.49	3.90	3.20	2.79	2.02	76.1	82.9	63.8	6.1	10.1	287.8	302.2	67.5	2.4
6208.3	1	16202	147.9	8.07	4.57	3.50	3.56	3.09	2.70	2.30	1.98	1.52	75.5	81.9	63.8	6.1	11.8	195.3	591.8	58.1	3.8
6208.3	2	15895	145.1	7.84	4.48	3.42	3.49	3.02	2.63	2.25	1.94	1.50	75.5	81.9	63.8	6.1	11.8	207.8	570.8	58.3	4.0
6208.3	3	20375	186.0	9.70	5.63	4.35	4.44	3.84	3.31	2.85	2.47	1.89	75.5	81.9	63.8	6.1	11.8	256.6	375.8	81.6	1.5
6208.3	4	20211	184.5	9.58	5.61	4.33	4.41	3.81	3.31	2.83	2.44	1.87	75.5	81.9	63.8	6.1	11.8	271.2	359.6	81.3	1.6
6414.7	1	16267	148.5	8.70	5.22	3.89	3.77	3.27	3.00	2.43	2.06	1.52	76.2	83.0	63.8	6.1	10.8	256.5	300.5	73.8	3.2
6414.7	2	16180	147.7	8.55	5.15	3.84	3.80	3.25	2.91	2.38	2.04	1.53	76.2	83.0	63.8	6.1	10.8	225.5	416.6	65.8	3.6
6414.7	3	20299	185.3	10.42	6.32	4.80	4.85	4.17	3.54	2.93	2.49	1.85	76.2	83.0	63.8	6.1	10.8	234.9	469.9	57.8	3.0
6414.7	4	20244	184.8	10.35	6.33	4.80	4.85	4.18	3.48	2.91	2.47	1.85	76.2	83.0	63.8	6.1	10.8	298.8	289.3	75.1	0.9
6608.3	1	16202	147.9	9.07	5.48	4.18	4.22	3.59	3.06	2.62	2.28	1.75	75.7	82.1	63.8	6.0	11.1	196.4	436.5	60.2	3.8
6608.3	2	15928	145.4	8.90	5.41	4.14	4.17	3.54	3.00	2.58	2.24	1.73	75.7	82.1	63.8	6.0	11.1	252.5	281.1	71.3	2.3
6608.3	3	20211	184.5	10.89	6.75	5.16	5.16	4.43	3.83	3.25	2.81	2.13	75.7	82.1	63.8	6.0	11.1	282.1	277.9	71.8	1.9
6608.3	4	20255	184.9	10.89	6.78	5.22	5.28	4.46	3.80	3.25	2.83	2.17	75.7	82.1	63.8	6.0	11.1	280.9	280.9	71.6	2.1
6811.3	1	16245	148.3	8.45	4.96	3.69	3.82	3.16	2.78	2.35	2.02	1.54	75.0	82.0	63.8	7.4	10.2	239.2	318.1	79.9	2.5
6811.3	2	16158	147.5	8.36	4.94	3.68	3.73	3.16	2.76	2.34	2.01	1.54	75.0	82.0	63.8	7.4	10.2	254.3	291.3	79.8	2.2
6811.3	3	20178	184.2	10.19	6.10	4.57	4.75	3.93	3.44	2.88	2.53	1.94	75.0	82.0	63.8	7.4	10.2	257.3	317.3	80.0	2.8
6811.3	4	20255	184.9	10.18	6.09	4.58	4.78	3.96	3.41	2.89	2.56	1.91	75.0	82.0	63.8	7.4	10.2	270.7	304.0	80.1	2.2
6997.7	1	16311	148.9	6.92	4.14	3.10	3.26	2.79	2.47	2.14	1.87	1.44	76.1	83.4	63.8	6.9	11.3	286.7	521.8	82.5	2.9
6997.7	2	16213	148.0	6.80	4.09	3.07	3.23	2.78	2.46	2.12	1.84	1.44	76.1	83.4	63.8	6.9	11.3	309.4	464.1	86.1	2.1
6997.7	3	20320	185.5	8.24	5.02	3.82	3.97	3.44	3.06	2.62	2.28	1.76	76.1	83.4	63.8	6.9	11.3	336.4	463.4	87.3	2.0
6997.7	4	20167	184.1	8.18	5.00	3.80	3.96	3.41	3.03	2.60	2.27	1.74	76.1	83.4	63.8	6.9	11.3	310.9	565.1	78.6	2.8
7212.0	1	16267	148.5	5.29	3.54	3.18	3.22	2.95	2.65	2.32	2.08	1.63	76.6	83.7	63.8	6.2	11.6	422.5	1412.5	53.9	1.3
7212.0	2	16180	147.7	5.23	3.53	3.17	3.18	2.93	2.64	2.32	2.06	1.63	76.6	83.7	63.8	6.2	11.6	494.7	959.3	72.7	0.4
7212.0	3	20200	184.4	6.42	4.33	3.90	3.91	3.61	3.25	2.86	2.54	1.98	76.6	83.7	63.8	6.2	11.6	510.3	974.4	73.6	0.8
7212.0	4	20474	186.9	6.49	4.39	3.95	3.98	3.65	3.29	2.89	2.57	2.01	76.6	83.7	63.8	6.2	11.6	511.9	976.2	73.8	0.5
7409.7	1	16213	148.0	8.18	5.35	4.52	4.56	4.00	3.43	2.93	2.53	1.86	75.9	84.0	63.8	8.2	9.7	304.8	575.0	40.2	1.5



## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, $E_{FWD}$ (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
7409.7	2	15818	144.4	7.93	5.23	4.43	4.52	3.91	3.37	2.85	2.46	1.83	75.9	84.0	63.8	8.2	9.7	319.3	545.6	41.2	1.6
7409.7	3	20386	186.1	9.90	6.58	5.55	5.58	4.96	4.30	3.62	3.14	2.28	75.9	84.0	63.8	8.2	9.7	350.3	489.4	43.7	0.7
7409.7	4	20200	184.4	9.79	6.56	5.54	5.65	4.91	4.25	3.59	3.10	2.27	75.9	84.0	63.8	8.2	9.7	351.7	482.8	43.8	0.8
7611.0	1	16169	147.6	7.54	4.96	4.44	4.46	4.14	3.70	3.24	2.83	2.20	76.5	84.4	63.8	7.2	10.0	306.0	1206.0	37.0	0.8
7611.0	2	15906	145.2	7.37	4.89	4.37	4.36	4.09	3.63	3.18	2.80	2.19	76.5	84.4	63.8	7.2	10.0	312.8	1167.9	38.0	0.8
7611.0	3	20331	185.6	9.09	6.05	5.43	5.52	5.06	4.55	3.95	3.48	2.70	76.5	84.4	63.8	7.2	10.0	330.5	1153.7	39.4	0.7
7611.0	4	20353	185.8	9.06	6.06	5.44	5.50	5.07	4.56	3.96	3.48	2.73	76.5	84.4	63.8	7.2	10.0	329.0	1287.7	37.5	1.0
7809.0	1	16245	148.3	9.24	5.74	4.53	4.71	4.14	3.74	3.37	3.04	2.50	79.6	85.5	63.8	3.7	15.4	213.1	454.0	50.9	4.0
7809.0	2	16158	147.5	9.11	5.72	4.54	4.70	4.13	3.74	3.36	3.04	2.50	79.6	85.5	63.8	3.7	15.4	186.8	489.0	50.7	4.0
7809.0	3	20266	185.0	10.86	6.91	5.49	5.69	4.98	4.50	4.04	3.65	2.97	79.6	85.5	63.8	3.7	15.4	214.7	505.7	52.7	3.6
7809.0	4	20309	185.4	10.80	6.94	5.52	5.70	4.99	4.48	4.08	3.76	2.98	79.6	85.5	63.8	3.7	15.4	245.8	482.0	52.3	4.1
8009.3	1	16202	147.9	8.31	5.51	4.83	4.88	4.51	4.09	3.67	3.32	2.71	76.6	84.3	63.8	7.0	11.9	290.6	671.3	44.0	1.1
8009.3	2	15796	144.2	8.10	5.39	4.72	4.74	4.42	4.02	3.61	3.24	2.67	76.6	84.3	63.8	7.0	11.9	298.1	657.5	43.8	1.1
8009.3	3	20200	184.4	9.87	6.64	5.82	5.89	5.43	4.93	4.42	3.96	3.25	76.6	84.3	63.8	7.0	11.9	317.9	668.4	45.7	0.9
8009.3	4	20233	184.7	9.87	6.67	5.85	5.91	5.46	4.94	4.43	3.98	3.26	76.6	84.3	63.8	7.0	11.9	323.2	659.6	45.6	0.9
8211.3	1	16213	148.0	9.12	6.11	5.19	5.24	4.78	4.28	3.77	3.31	2.67	77.1	85.7	63.8	7.6	11.8	285.2	561.0	33.6	1.9
8211.3	2	15818	144.4	8.85	5.99	5.09	5.12	4.68	4.21	3.69	3.24	2.61	77.1	85.7	63.8	7.6	11.8	291.0	567.7	33.2	2.1
8211.3	3	20244	184.8	10.80	7.36	6.29	6.35	5.78	5.16	4.53	3.99	3.21	77.1	85.7	63.8	7.6	11.8	310.8	580.8	34.6	2.1
8211.3	4	20211	184.5	10.77	7.37	6.31	6.38	5.80	5.16	4.52	4.00	3.22	77.1	85.7	63.8	7.6	11.8	324.1	568.9	34.5	1.9
8411.0	1	16114	147.1	9.75	7.20	6.22	7.33	5.65	4.99	4.35	3.85	3.04	76.8	84.6	63.8	7.0	10.7	330.1	526.6	29.0	1.8
8411.0	2	15895	145.1	9.62	7.13	6.14	7.23	5.58	4.91	4.30	3.81	3.01	76.8	84.6	63.8	7.0	10.7	347.0	501.9	29.0	2.1
8411.0	3	20123	183.7	11.72	8.73	7.56	8.94	6.84	6.14	5.28	4.64	3.65	76.8	84.6	63.8	7.0	10.7	365.5	529.0	28.1	1.8
8411.0	4	20320	185.5	11.83	8.82	7.63	9.06	6.92	6.08	5.31	4.71	3.68	76.8	84.6	63.8	7.0	10.7	329.5	612.3	26.5	2.5
8609.7	1	16158	147.5	7.99	5.62	5.03	5.20	4.74	4.35	3.90	3.55	3.13	77.2	85.9	63.8	7.6	11.8	338.1	879.4	37.9	2.5
8609.7	2	15840	144.6	7.79	5.53	4.94	5.06	4.65	4.26	3.84	3.49	2.57	77.2	85.9	63.8	7.6	11.8	415.5	655.8	32.0	2.0
8609.7	3	20244	184.8	9.54	6.76	6.07	6.28	5.69	5.23	4.70	4.25	3.43	77.2	85.9	63.8	7.6	11.8	424.6	624.5	42.4	0.4
8609.7	4	20211	184.5	9.53	6.76	6.09	6.29	5.72	5.24	4.70	4.27	3.44	77.2	85.9	63.8	7.6	11.8	423.3	624.9	42.2	0.5
8811.3	1	16092	146.9	7.25	5.37	5.15	5.11	4.93	4.57	4.19	3.85	3.23	77.7	86.3	63.8	7.1	13.7	533.4	755.4	33.8	1.2
8811.3	2	15741	143.7	7.10	5.27	5.06	5.07	4.83	4.51	4.13	3.78	3.13	77.7	86.3	63.8	7.1	13.7	519.6	764.4	33.6	1.5
8811.3	3	20375	186.0	8.78	6.53	6.27	6.32	5.98	5.64	5.07	4.69	4.01	77.7	86.3	63.8	7.1	13.7	541.2	863.3	34.3	1.3
8811.3	4	20101	183.5	8.66	6.48	6.18	6.20	5.93	5.59	5.01	4.61	3.92	77.7	86.3	63.8	7.1	13.7	567.7	798.8	34.7	1.6
9008.7	1	16092	146.9	7.82	5.18	4.61	4.61	4.40	4.08	3.69	3.43	2.89	76.5	84.9	63.8	7.9	11.1	291.2	1173.2	40.0	1.4
9008.7	2	15763	143.9	7.65	5.10	4.56	4.59	4.34	4.02	3.64	3.34	2.83	76.5	84.9	63.8	7.9	11.1	296.7	1133.2	39.9	1.3
9008.7	3	20222	184.6	9.34	6.29	5.65	5.63	5.35	5.00	4.50	4.10	3.50	76.5	84.9	63.8	7.9	11.1	320.8	1142.9	41.6	1.6
9008.7	4	20277	185.1	9.33	6.30	5.66	5.68	5.37	5.01	4.52	4.11	3.53	76.5	84.9	63.8	7.9	11.1	325.9	1134.4	41.5	1.6
9209.0	1	16267	148.5	8.41	5.37	4.28	4.37	4.00	3.70	3.45	3.17	2.62	76.3	84.7	63.8	8.1	10.3	230.2	1183.0	46.0	4.4
9209.0	2	16213	148.0	8.28	5.37	4.27	4.40	4.01	3.74	3.39	3.06	2.65	76.3	84.7	63.8	8.1	10.3	254.7	976.4	47.1	4.2

## Summary of FWD Data and Backcalculation Results

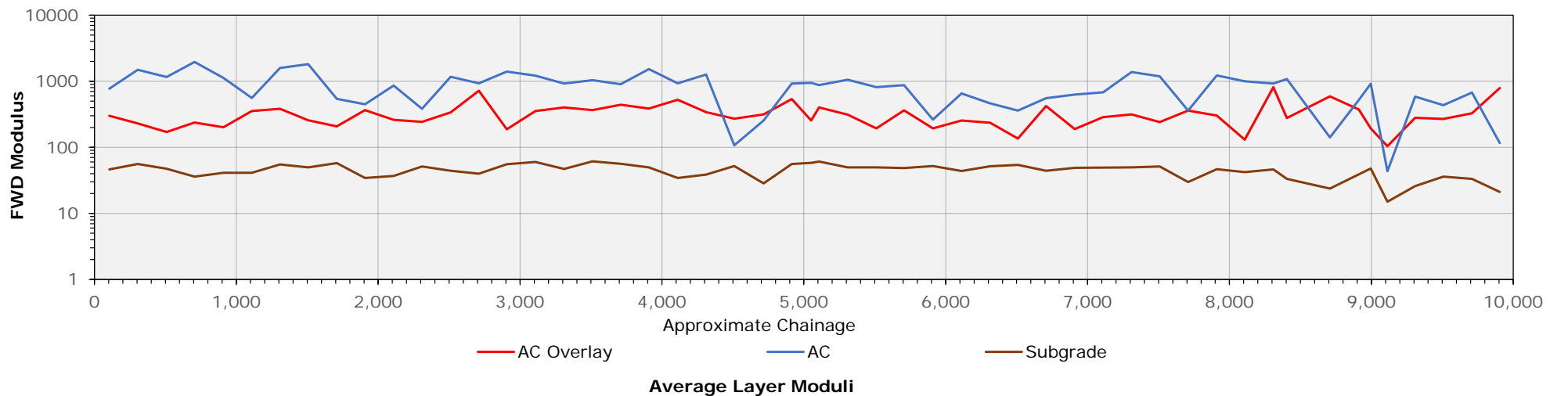
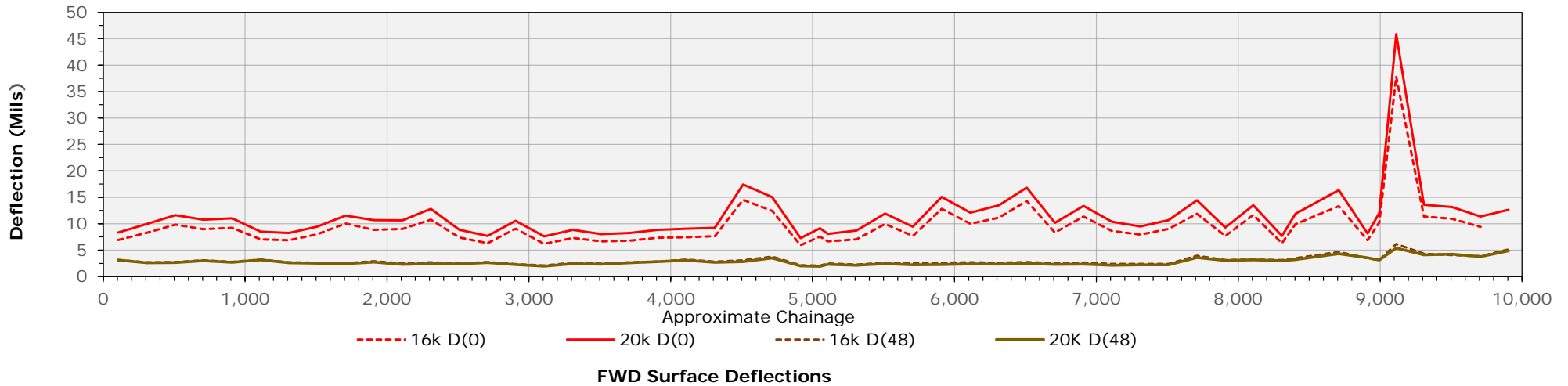
(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
9209.0	3	20233	184.7	9.90	6.42	5.19	5.32	4.80	4.48	4.09	3.78	3.07	76.3	84.7	63.8	8.1	10.3	246.2	1155.7	48.8	3.8
9209.0	4	20507	187.2	9.98	6.47	5.28	5.38	4.86	4.53	4.11	3.81	3.17	76.3	84.7	63.8	8.1	10.3	252.5	1137.9	48.5	4.0
9406.7	1	16191	147.8	9.76	7.13	6.38	6.15	6.03	5.61	5.06	4.16	3.45	77.5	86.2	63.8	7.5	11.5	370.8	423.8	33.4	2.9
9406.7	2	15807	144.3	9.47	6.93	6.22	6.03	5.90	5.59	5.02	4.06	3.34	77.5	86.2	63.8	7.5	11.5	400.1	478.7	26.2	3.2
9406.7	3	20211	184.5	11.66	8.70	7.68	7.30	7.30	6.95	6.17	4.98	4.08	77.5	86.2	63.8	7.5	11.5	455.6	462.7	25.7	3.2
9406.7	4	20485	187.0	11.78	8.78	7.81	7.44	7.41	7.06	6.28	5.07	4.13	77.5	86.2	63.8	7.5	11.5	421.1	503.4	25.6	3.1
9608.3	1	16059	146.6	8.17	5.60	4.88	5.06	4.53	4.09	3.66	3.30	2.70	78.1	87.2	63.8	7.4	9.7	310.3	1004.5	44.3	2.0
9608.3	2	15829	144.5	8.04	5.52	4.83	5.05	4.49	4.06	3.61	3.28	2.68	78.1	87.2	63.8	7.4	9.7	316.5	988.9	44.1	1.9
9608.3	3	20101	183.5	9.74	6.75	5.91	6.09	5.46	4.96	4.41	3.95	3.25	78.1	87.2	63.8	7.4	9.7	337.0	1020.3	46.2	1.7
9608.3	4	20266	185.0	9.79	6.82	5.97	6.12	5.53	4.98	4.44	4.04	3.28	78.1	87.2	63.8	7.4	9.7	343.9	1016.1	45.9	1.9
9804.3	1	16136	147.3	8.05	6.01	5.59	5.74	5.17	4.65	4.12	3.72	3.02	76.6	85.4	63.8	8.2	10.1	469.2	580.4	38.6	0.7
9804.3	2	15796	144.2	7.90	5.93	5.51	5.64	5.09	4.57	4.07	3.66	2.97	76.6	85.4	63.8	8.2	10.1	478.6	568.1	38.3	0.7
9804.3	3	20244	184.8	9.69	7.31	6.80	6.96	6.28	5.64	4.99	4.51	3.66	76.6	85.4	63.8	8.2	10.1	512.5	578.6	39.9	0.9
9804.3	4	20266	185.0	9.70	7.35	6.83	6.98	6.31	5.66	5.02	4.52	3.67	76.6	85.4	63.8	8.2	10.1	519.8	568.9	39.8	0.9
9939.3	1	16048	146.5	9.70	6.74	5.76	5.87	5.19	4.70	4.06	3.67	3.02	75.4	82.5	63.8	7.1	9.7	253.5	593.0	40.8	2.7
9939.3	2	15785	144.1	9.48	6.62	5.66	5.93	5.11	4.55	4.02	3.63	2.99	75.4	82.5	63.8	7.1	9.7	257.9	602.7	40.6	2.9
9939.3	3	20167	184.1	11.53	8.09	6.97	7.07	6.26	5.57	4.93	4.42	3.64	75.4	82.5	63.8	7.1	9.7	275.9	620.8	42.4	2.8
9939.3	4	20255	184.9	11.55	8.11	6.99	7.17	6.29	5.57	4.94	4.49	3.66	75.4	82.5	63.8	7.1	9.7	264.3	662.0	42.3	2.6

**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Project Name: RKS Master Plan	Calc. Date: August 14, 2023
Segment: Runway 9/27, 45' Rt	Project No.: 110339
Direction: Southeast	

Summary of Input Data		Summary of Backcalculated Moduli				
Date of FWD Testing:	May 16, 2023	AC Overlay	AC	Subgrade	RMS (%)	
PDAT (BELLS):	52° F	Mean:	298.3	689.0	43.1	1.5
FWD Plate Radius:	5.905"	Standard Deviation:	102.9	365.6	10.9	



### Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in MILS (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
105.0	1	16136	147.3	6.92	4.98	4.46	4.51	4.19	3.84	3.44	3.13	2.57	65.8	66.6	66.3	7.5	9.7	283.4	779.1	46.0	1.1
105.0	2	15917	145.3	6.80	4.93	4.41	4.45	4.15	3.80	3.42	3.10	2.52	65.8	66.6	66.3	7.5	9.7	290.5	779.5	45.7	1.0
105.0	3	20101	183.5	8.33	6.08	5.48	5.54	5.14	4.71	4.23	3.82	3.13	65.8	66.6	66.3	7.5	9.7	311.2	762.3	46.8	0.9
105.0	4	20266	185.0	8.36	6.13	5.51	5.54	5.17	4.74	4.26	3.85	3.15	65.8	66.6	66.3	7.5	9.7	315.5	766.9	46.8	1.1
306.0	1	16213	148.0	8.30	4.50	3.89	4.03	3.72	3.40	2.98	2.68	2.15	78.9	88.9	66.6	7.8	9.7	218.5	1554.6	55.0	1.2
306.0	2	15851	144.7	8.04	4.38	3.81	3.89	3.63	3.33	2.91	2.59	2.10	78.9	88.9	66.6	7.8	9.7	223.2	1517.9	55.4	0.8
306.0	3	20255	184.9	9.94	5.54	4.82	4.85	4.57	4.16	3.65	3.31	2.61	78.9	88.9	66.6	7.8	9.7	237.2	1464.3	56.6	0.8
306.0	4	20331	185.6	9.94	5.57	4.85	4.87	4.58	4.15	3.66	3.27	2.63	78.9	88.9	66.6	7.8	9.7	240.3	1406.3	57.1	0.8
508.0	1	16158	147.5	9.83	5.10	3.90	4.05	3.67	3.35	3.00	2.73	2.17	78.8	88.6	66.5	7.7	11.0	162.7	915.4	56.2	3.5
508.0	2	15741	143.7	9.48	5.01	3.83	4.00	3.62	3.33	2.94	2.69	2.16	78.8	88.6	66.5	7.7	11.0	171.4	889.5	55.0	3.6
508.0	3	20211	184.5	11.61	6.27	4.84	5.00	4.55	4.17	3.70	3.36	2.67	78.8	88.6	66.5	7.7	11.0	170.4	1425.0	39.3	4.4
508.0	4	20386	186.1	11.61	6.31	4.87	5.06	4.58	4.19	3.74	3.39	2.68	78.8	88.6	66.5	7.7	11.0	176.4	1422.8	39.3	4.3
706.0	1	16202	147.9	8.97	5.34	4.48	4.52	4.23	3.85	3.40	3.08	2.41	78.8	89.6	65.9	8.7	8.6	224.6	1967.8	36.5	2.0
706.0	2	15895	145.1	8.77	5.25	4.42	4.46	4.17	3.76	3.34	3.06	2.41	78.8	89.6	65.9	8.7	8.6	232.8	1885.2	36.3	2.1
706.0	3	20277	185.1	10.76	6.57	5.54	5.52	5.22	4.73	4.20	3.76	3.00	78.8	89.6	65.9	8.7	8.6	241.7	2030.9	36.9	2.3
706.0	4	20233	184.7	10.74	6.59	5.54	5.58	5.23	4.77	4.20	3.81	2.96	78.8	89.6	65.9	8.7	8.6	249.7	1950.4	34.8	2.1
909.0	1	16278	148.6	9.21	5.05	3.92	4.04	3.73	3.42	3.06	2.76	2.22	78.7	88.8	64.5	8.1	11.4	197.8	1105.5	40.8	3.6
909.0	2	16180	147.7	9.10	5.04	3.91	4.05	3.71	3.39	3.04	2.76	2.20	78.7	88.8	64.5	8.1	11.4	194.6	1121.2	40.7	3.7
909.0	3	20309	185.4	11.00	6.17	4.82	5.00	4.57	4.17	3.74	3.41	2.70	78.7	88.8	64.5	8.1	11.4	205.5	1138.4	41.5	3.5
909.0	4	20222	184.6	10.94	6.17	4.81	5.01	4.57	4.17	3.74	3.40	2.70	78.7	88.8	64.5	8.1	11.4	205.9	1124.5	41.4	3.6
1109.3	1	16092	146.9	7.04	5.48	4.73	4.81	4.33	3.94	3.50	3.19	2.56	64.4	64.2	65.3	8.5	8.7	335.8	494.1	46.2	1.9
1109.3	2	15917	145.3	6.93	5.41	4.67	4.78	4.30	3.85	3.45	3.15	2.39	64.4	64.2	65.3	8.5	8.7	348.6	562.9	36.0	2.0
1109.3	3	20266	185.0	8.50	6.68	5.79	5.80	5.33	4.87	4.31	3.89	3.17	64.4	64.2	65.3	8.5	8.7	355.0	720.8	35.5	2.6
1109.3	4	20211	184.5	8.50	6.72	5.78	5.78	5.31	4.89	4.31	3.89	3.26	64.4	64.2	65.3	8.5	8.7	373.9	461.5	47.3	2.5
1307.3	1	16180	147.7	6.89	4.28	3.96	4.04	3.65	3.31	2.96	2.70	2.15	81.3	93.2	66.7	8.0	9.9	367.2	1600.5	54.2	0.7
1307.3	2	15884	145.0	6.74	4.20	3.89	3.96	3.60	3.26	2.89	2.65	2.12	81.3	93.2	66.7	8.0	9.9	372.5	1564.0	54.4	0.8
1307.3	3	20211	184.5	8.23	5.20	4.81	4.89	4.43	4.02	3.57	3.22	2.61	81.3	93.2	66.7	8.0	9.9	400.5	1548.4	56.5	0.4
1307.3	4	20309	185.4	8.26	5.25	4.83	4.88	4.47	4.01	3.59	3.22	2.66	81.3	93.2	66.7	8.0	9.9	397.7	1613.5	55.9	0.9
1507.0	1	16169	147.6	7.98	4.35	3.98	3.98	3.70	3.30	2.91	2.60	2.07	79.5	90.1	66.4	8.1	9.4	243.9	1531.6	57.1	0.5
1507.0	2	15895	145.1	7.73	4.30	3.92	3.94	3.64	3.24	2.86	2.53	2.04	79.5	90.1	66.4	8.1	9.4	253.7	1456.7	57.4	0.7
1507.0	3	20288	185.2	9.45	5.38	4.90	4.92	4.55	4.06	3.56	3.18	2.53	79.5	90.1	66.4	8.1	9.4	262.4	2146.9	42.3	1.2
1507.0	4	20211	184.5	9.38	5.39	4.89	4.91	4.55	4.04	3.56	3.17	2.52	79.5	90.1	66.4	8.1	9.4	266.5	2124.4	42.2	1.3
1707.7	1	16202	147.9	10.02	5.23	3.65	3.78	3.48	3.17	2.81	2.51	1.97	78.5	90.2	66.2	10.1	11.4	176.6	769.0	45.0	3.9
1707.7	2	15884	145.0	9.57	5.10	3.59	3.72	3.42	3.11	2.77	2.47	1.94	78.5	90.2	66.2	10.1	11.4	200.0	467.2	61.1	2.8
1707.7	3	20309	185.4	11.54	6.31	4.52	4.70	4.30	3.90	3.50	3.11	2.44	78.5	90.2	66.2	10.1	11.4	224.1	469.4	62.0	2.3
1707.7	4	20255	184.9	11.41	6.30	4.53	4.69	4.30	3.90	3.49	3.11	2.44	78.5	90.2	66.2	10.1	11.4	227.2	460.4	61.9	2.3
1907.0	1	16202	147.9	8.84	5.91	4.98	5.09	4.44	3.85	3.31	2.91	2.18	79.2	90.7	66.7	9.3	10.8	356.7	426.6	34.7	1.3
1907.0	2	15851	144.7	8.63	5.80	4.87	4.97	4.36	3.80	3.25	2.84	2.17	79.2	90.7	66.7	9.3	10.8	355.1	406.5	36.7	1.3

Summary of FWD Data and Backcalculation Results
(ELMOD 6 version 6.1.86)

Table with columns: Approx. Chainage (ft), FWD Drop No., FWD Plate Load (lbs), Stress (psi), Pavement Deflections in Mills (inches from load plate) [D(0), D(8), D(12), D(18), D(24), D(30), D(36), D(48), D(60)], Temperatures (Deg. F) [Asphalt BELLS, Asphalt Surface, Air], Layer Thicknesses (inches) [AC Overlay, AC], Backcalculated Elastic Modulus, E\_FWD (ksi) [AC Overlay, AC, Subgrade], RMS (%).

## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)										Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade		
3709.0	4	20277	185.1	8.29	5.67	5.10	5.20	4.68	4.19	3.70	3.30	2.65	80.7	91.0	69.1	5.9	11.7	455.2	888.3	57.0	0.5	
3908.0	1	16147	147.4	7.33	4.76	4.28	4.38	4.00	3.58	3.18	2.82	2.29	80.6	93.5	70.4	8.1	8.8	368.9	1406.7	52.3	0.8	
3908.0	2	15851	144.7	7.18	4.69	4.21	4.25	3.93	3.50	3.13	2.77	2.23	80.6	93.5	70.4	8.1	8.8	371.7	1407.2	52.3	0.7	
3908.0	3	20266	185.0	8.84	5.88	5.25	5.30	4.90	4.40	3.89	3.47	2.82	80.6	93.5	70.4	8.1	8.8	415.8	1251.8	54.2	0.8	
3908.0	4	20222	184.6	8.84	5.92	5.27	5.29	4.92	4.44	3.91	3.47	2.81	80.6	93.5	70.4	8.1	8.8	384.5	2061.2	39.3	1.6	
4111.7	1	16114	147.1	7.41	5.33	5.01	5.06	4.61	4.11	3.59	3.20	2.49	80.8	93.1	70.2	7.4	10.7	521.7	888.8	34.7	0.8	
4111.7	2	15884	145.0	7.33	5.27	4.95	5.01	4.54	4.04	3.54	3.15	2.45	80.8	93.1	70.2	7.4	10.7	509.5	898.0	34.8	0.8	
4111.7	3	20277	185.1	9.07	6.58	6.18	6.26	5.66	5.04	4.41	3.94	3.06	80.8	93.1	70.2	7.4	10.7	530.6	971.9	34.2	0.5	
4111.7	4	20211	184.5	9.08	6.60	6.18	6.26	5.66	5.04	4.40	3.93	3.05	80.8	93.1	70.2	7.4	10.7	534.3	949.6	34.1	0.5	
4310.7	1	16125	147.2	7.66	4.70	4.37	4.49	4.09	3.62	3.17	2.81	2.21	81.0	93.3	67.9	7.4	10.8	320.6	1285.7	39.4	1.0	
4310.7	2	15796	144.2	7.52	4.65	4.31	4.43	4.03	3.55	3.12	2.76	2.17	81.0	93.3	67.9	7.4	10.8	327.2	1235.2	39.3	1.1	
4310.7	3	20178	184.2	9.21	5.83	5.42	5.57	5.04	4.44	3.91	3.45	2.70	81.0	93.3	67.9	7.4	10.8	355.9	1283.4	37.8	0.8	
4310.7	4	20299	185.3	9.26	5.90	5.44	5.61	5.09	4.48	3.94	3.48	2.72	81.0	93.3	67.9	7.4	10.8	360.2	1267.0	37.6	0.8	
4510.3	1	16202	147.9	14.53	9.58	6.65	7.02	5.25	4.34	3.60	3.07	2.30	80.9	92.3	67.9	6.6	10.7	259.2	103.4	53.0	2.4	
4510.3	2	15829	144.5	14.02	9.32	6.54	6.88	5.13	4.24	3.52	2.99	2.23	80.9	92.3	67.9	6.6	10.7	272.0	102.3	53.1	2.3	
4510.3	3	20244	184.8	17.41	11.73	8.28	8.73	6.52	5.39	4.45	3.78	2.80	80.9	92.3	67.9	6.6	10.7	283.4	105.0	53.8	2.1	
4510.3	4	20266	185.0	17.39	11.78	8.30	8.73	6.56	5.41	4.48	3.81	2.80	80.9	92.3	67.9	6.6	10.7	270.4	120.1	48.7	2.8	
4715.7	1	16114	147.1	12.44	8.82	6.57	6.64	6.02	5.25	4.41	3.77	2.80	80.8	93.3	67.9	7.6	11.0	287.3	286.5	25.8	2.7	
4715.7	2	15829	144.5	12.09	8.59	6.43	6.53	5.91	5.15	4.33	3.74	2.76	80.8	93.3	67.9	7.6	11.0	289.5	285.4	26.5	2.6	
4715.7	3	20277	185.1	15.02	10.77	8.18	8.20	7.49	6.51	5.49	4.73	3.49	80.8	93.3	67.9	7.6	11.0	335.3	227.4	30.7	1.5	
4715.7	4	20156	184.0	14.87	10.74	8.20	8.38	7.49	6.50	5.49	4.76	3.49	80.8	93.3	67.9	7.6	11.0	349.7	223.0	30.5	1.6	
4915.3	1	16278	148.6	5.94	3.86	3.55	3.54	3.21	2.82	2.43	2.12	1.62	83.0	94.0	67.3	5.5	13.3	521.4	942.1	53.9	0.8	
4915.3	2	16169	147.6	5.93	3.86	3.52	3.52	3.19	2.80	2.43	2.11	1.63	83.0	94.0	67.3	5.5	13.3	502.9	985.5	53.1	0.8	
4915.3	3	20277	185.1	7.27	4.77	4.35	4.36	3.95	3.46	2.98	2.59	2.00	83.0	94.0	67.3	5.5	13.3	556.7	890.2	58.3	1.0	
4915.3	4	20266	185.0	7.28	4.80	4.37	4.37	3.95	3.47	2.98	2.59	1.99	83.0	94.0	67.3	5.5	13.3	569.5	871.1	58.2	0.9	
5051.0	1	16103	147.0	7.54	3.96	3.46	3.55	3.18	2.80	2.36	2.06	1.48	82.1	93.3	68.3	5.9	12.3	249.1	904.7	56.8	1.4	
5051.0	2	15862	144.8	7.42	3.93	3.42	3.50	3.13	2.76	2.34	2.02	1.52	82.1	93.3	68.3	5.9	12.3	248.4	931.5	59.4	0.8	
5051.0	3	20200	184.4	9.15	4.95	4.30	4.43	3.93	3.44	2.92	2.53	1.93	82.1	93.3	68.3	5.9	12.3	261.1	981.4	58.1	0.8	
5051.0	4	20277	185.1	9.19	5.01	4.33	4.46	3.96	3.45	2.93	2.55	1.96	82.1	93.3	68.3	5.9	12.3	262.5	973.8	58.0	1.2	
5107.3	1	16114	147.1	6.66	4.03	3.91	4.06	3.61	3.20	2.78	2.46	1.91	82.3	93.5	67.8	5.8	13.1	377.7	895.4	60.5	2.4	
5107.3	2	15840	144.6	6.56	4.00	3.85	4.00	3.55	3.15	2.74	2.42	1.88	82.3	93.5	67.8	5.8	13.1	392.5	875.3	60.4	2.4	
5107.3	3	20222	184.6	8.08	5.03	4.81	5.03	4.44	3.94	3.43	3.02	2.32	82.3	93.5	67.8	5.8	13.1	402.5	890.5	61.7	2.7	
5107.3	4	20288	185.2	8.10	5.08	4.83	5.05	4.46	3.96	3.43	3.02	2.34	82.3	93.5	67.8	5.8	13.1	438.1	834.9	61.9	2.5	
5309.3	1	16103	147.0	7.06	3.88	3.58	3.77	3.29	2.93	2.56	2.27	1.74	82.7	94.8	67.8	6.3	13.4	291.9	1143.2	47.7	0.8	
5309.3	2	15884	145.0	6.97	3.85	3.51	3.71	3.25	2.94	2.56	2.22	1.70	82.7	94.8	67.8	6.3	13.4	296.6	1180.6	44.7	0.8	
5309.3	3	20331	185.6	8.70	4.91	4.48	4.69	4.11	3.67	3.21	2.83	2.14	82.7	94.8	67.8	6.3	13.4	328.4	947.5	54.2	1.1	
5309.3	4	20309	185.4	8.67	4.96	4.48	4.69	4.12	3.67	3.21	2.83	2.13	82.7	94.8	67.8	6.3	13.4	332.9	949.9	52.3	0.9	

## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, $E_{FWD}$ (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
5511.3	1	16147	147.4	9.93	4.91	4.19	4.17	3.88	3.48	2.99	2.59	1.96	82.4	94.6	67.8	6.6	11.8	185.4	771.6	53.0	1.0
5511.3	2	15873	144.9	9.69	4.87	4.12	4.10	3.81	3.39	2.93	2.55	1.94	82.4	94.6	67.8	6.6	11.8	190.1	748.5	53.0	0.4
5511.3	3	20167	184.1	11.93	6.15	5.20	5.20	4.81	4.27	3.68	3.20	2.42	82.4	94.6	67.8	6.6	11.8	194.8	888.6	46.1	0.9
5511.3	4	20331	185.6	11.91	6.24	5.25	5.24	4.85	4.31	3.70	3.22	2.42	82.4	94.6	67.8	6.6	11.8	202.1	858.2	46.2	0.9
5706.7	1	16147	147.4	7.67	4.73	4.22	4.32	3.82	3.36	2.83	2.46	1.84	81.7	94.4	67.8	7.2	10.3	353.3	861.4	49.8	1.0
5706.7	2	15840	144.6	7.53	4.65	4.17	4.30	3.76	3.27	2.79	2.40	1.80	81.7	94.4	67.8	7.2	10.3	353.7	862.2	49.9	0.8
5706.7	3	20266	185.0	9.45	5.90	5.25	5.42	4.76	4.16	3.53	3.03	2.24	81.7	94.4	67.8	7.2	10.3	364.4	898.4	47.3	0.8
5706.7	4	20309	185.4	9.43	5.94	5.28	5.46	4.79	4.17	3.54	3.04	2.27	81.7	94.4	67.8	7.2	10.3	377.2	864.1	47.2	0.7
5910.0	1	16180	147.7	12.81	6.80	4.64	4.81	4.18	3.65	3.04	2.59	1.83	81.5	94.0	67.8	7.2	11.0	180.5	265.0	52.7	2.9
5910.0	2	15851	144.7	12.35	6.65	4.56	4.72	4.10	3.57	2.98	2.53	1.79	81.5	94.0	67.8	7.2	11.0	186.0	250.9	54.9	2.6
5910.0	3	20156	184.0	15.07	8.35	5.81	6.01	5.22	4.54	3.78	3.20	2.25	81.5	94.0	67.8	7.2	11.0	204.4	265.5	50.4	2.6
5910.0	4	20299	185.3	15.02	8.40	5.87	6.06	5.26	4.59	3.82	3.23	2.28	81.5	94.0	67.8	7.2	11.0	205.4	270.5	50.7	2.7
6111.3	1	16114	147.1	9.98	5.79	4.84	4.98	4.40	3.82	3.17	2.68	1.93	82.8	94.8	67.8	6.2	10.3	246.6	565.7	49.8	1.7
6111.3	2	15731	143.6	9.72	5.75	4.75	4.85	4.32	3.73	3.09	2.69	1.91	82.8	94.8	67.8	6.2	10.3	234.1	738.8	40.9	1.4
6111.3	3	20189	184.3	12.09	7.30	6.07	6.26	5.52	4.81	3.99	3.37	2.39	82.8	94.8	67.8	6.2	10.3	263.9	679.5	41.5	1.0
6111.3	4	20288	185.2	12.11	7.37	6.12	6.30	5.55	4.83	4.01	3.38	2.42	82.8	94.8	67.8	6.2	10.3	276.9	631.9	42.8	1.1
6313.0	1	16147	147.4	11.16	6.22	4.71	4.88	4.31	3.70	3.08	2.61	1.86	84.8	97.3	67.8	5.8	10.6	218.5	464.7	52.5	1.7
6313.0	2	15873	144.9	10.92	6.16	4.67	4.81	4.27	3.69	3.04	2.57	1.88	84.8	97.3	67.8	5.8	10.6	233.6	421.6	55.8	1.3
6313.0	3	20299	185.3	13.49	7.80	5.98	6.24	5.43	4.68	3.87	3.27	2.33	84.8	97.3	67.8	5.8	10.6	249.7	451.8	51.2	1.6
6313.0	4	20211	184.5	13.41	7.78	5.98	6.20	5.43	4.64	3.86	3.24	2.29	84.8	97.3	67.8	5.8	10.6	237.6	519.3	46.5	1.5
6509.0	1	16136	147.3	14.31	6.62	4.67	4.80	4.35	3.80	3.20	2.73	2.00	83.5	95.3	67.8	5.8	11.6	126.8	326.5	59.4	2.1
6509.0	2	15895	145.1	13.89	6.54	4.61	4.73	4.28	3.74	3.16	2.69	1.94	83.5	95.3	67.8	5.8	11.6	127.7	366.3	52.8	2.4
6509.0	3	20233	184.7	16.81	8.23	5.88	6.02	5.45	4.77	4.01	3.40	2.46	83.5	95.3	67.8	5.8	11.6	141.1	373.1	52.0	2.2
6509.0	4	20288	185.2	16.73	8.25	5.91	6.07	5.48	4.78	4.02	3.43	2.47	83.5	95.3	67.8	5.8	11.6	146.6	370.3	52.5	2.3
6707.7	1	16092	146.9	8.32	5.43	4.73	4.73	4.14	3.52	2.94	2.51	1.88	82.8	95.0	67.8	6.3	11.2	399.3	546.9	45.5	0.8
6707.7	2	15884	145.0	8.19	5.38	4.68	4.68	4.08	3.46	2.90	2.47	1.85	82.8	95.0	67.8	6.3	11.2	408.4	538.0	45.6	0.8
6707.7	3	20244	184.8	10.17	6.81	5.93	5.91	5.17	4.37	3.67	3.11	2.31	82.8	95.0	67.8	6.3	11.2	435.1	568.0	43.0	0.7
6707.7	4	20189	184.3	10.15	6.81	5.91	5.90	5.15	4.38	3.66	3.11	2.30	82.8	95.0	67.8	6.3	11.2	442.7	558.6	42.9	0.7
6909.0	1	16103	147.0	11.35	5.85	4.56	4.74	4.20	3.68	3.11	2.64	1.93	81.7	94.3	67.8	7.1	9.8	167.2	747.9	43.8	1.8
6909.0	2	15840	144.6	10.96	5.76	4.49	4.68	4.14	3.62	3.06	2.59	1.90	81.7	94.3	67.8	7.1	9.8	174.0	725.4	43.9	1.5
6909.0	3	20178	184.2	13.34	7.24	5.69	5.90	5.24	4.58	3.87	3.27	2.37	81.7	94.3	67.8	7.1	9.8	208.4	519.1	54.1	1.6
6909.0	4	20288	185.2	13.27	7.28	5.74	5.95	5.26	4.61	3.89	3.28	2.38	81.7	94.3	67.8	7.1	9.8	209.2	522.9	53.9	1.6
7109.0	1	15972	145.8	8.61	4.87	3.92	4.16	3.59	3.16	2.72	2.38	1.77	82.5	95.6	67.8	7.2	11.6	272.5	643.5	52.1	1.4
7109.0	2	15895	145.1	8.46	4.87	3.90	4.04	3.56	3.17	2.69	2.35	1.78	82.5	95.6	67.8	7.2	11.6	282.8	666.7	49.8	2.0
7109.0	3	20167	184.1	10.39	6.07	4.89	4.90	4.48	4.00	3.39	2.98	2.12	82.5	95.6	67.8	7.2	11.6	294.7	704.6	46.2	1.7
7109.0	4	20277	185.1	10.41	6.13	4.92	4.92	4.49	4.03	3.42	2.96	2.25	82.5	95.6	67.8	7.2	11.6	296.1	704.4	48.6	1.9
7310.3	1	16147	147.4	7.93	4.21	3.74	3.73	3.56	3.17	2.75	2.40	1.83	86.0	101.2	67.8	7.0	11.3	292.1	1362.6	52.3	1.0

## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
7310.3	2	15884	145.0	7.72	4.17	3.68	3.65	3.49	3.12	2.69	2.36	1.81	86.0	101.2	67.8	7.0	11.3	293.3	1609.4	44.0	0.7
7310.3	3	20244	184.8	9.47	5.25	4.64	4.61	4.39	3.92	3.39	2.96	2.24	86.0	101.2	67.8	7.0	11.3	333.0	1289.0	51.7	1.3
7310.3	4	20167	184.1	9.40	5.26	4.65	4.60	4.38	3.91	3.38	2.95	2.24	86.0	101.2	67.8	7.0	11.3	336.9	1268.9	51.6	0.9
7509.0	1	16158	147.5	9.02	4.59	3.84	3.96	3.61	3.22	2.77	2.41	1.84	83.7	97.8	67.8	7.3	10.3	221.1	1267.6	51.0	0.7
7509.0	2	15807	144.3	8.78	4.55	3.79	3.91	3.57	3.17	2.73	2.37	1.81	83.7	97.8	67.8	7.3	10.3	234.3	1045.6	56.7	0.5
7509.0	3	20112	183.6	10.69	5.73	4.77	4.89	4.48	3.98	3.41	2.96	2.22	83.7	97.8	67.8	7.3	10.3	250.5	1211.5	48.4	1.0
7509.0	4	20320	185.5	10.71	5.81	4.82	4.94	4.53	4.02	3.44	2.98	2.26	83.7	97.8	67.8	7.3	10.3	254.7	1207.6	49.7	1.0
7708.3	1	15982	145.9	11.87	8.08	7.05	7.27	6.21	5.37	4.55	3.91	2.94	84.4	98.5	67.8	6.9	11.4	336.6	362.0	29.8	0.5
7708.3	2	16004	146.1	11.75	8.06	7.02	7.24	6.19	5.34	4.53	3.89	2.94	84.4	98.5	67.8	6.9	11.4	350.0	356.6	30.0	0.5
7708.3	3	20211	184.5	14.41	10.02	8.69	9.00	7.68	6.63	5.61	4.79	3.60	84.4	98.5	67.8	6.9	11.4	371.1	361.7	29.7	0.7
7708.3	4	20342	185.7	14.46	10.12	8.74	9.07	7.73	6.66	5.64	4.82	3.62	84.4	98.5	67.8	6.9	11.4	383.6	355.1	29.7	0.5
7909.7	1	16103	147.0	7.67	4.83	4.49	4.59	4.31	3.92	3.47	3.14	2.55	87.0	97.1	67.8	3.9	14.2	284.0	1259.7	45.6	0.8
7909.7	2	15862	144.8	7.55	4.81	4.44	4.55	4.26	3.87	3.43	3.11	2.51	87.0	97.1	67.8	3.9	14.2	286.2	1243.1	45.4	0.7
7909.7	3	20167	184.1	9.25	5.95	5.51	5.61	5.25	4.76	4.20	3.81	3.04	87.0	97.1	67.8	3.9	14.2	315.4	1206.7	47.8	0.8
7909.7	4	20222	184.6	9.26	6.00	5.54	5.65	5.27	4.77	4.21	3.82	3.05	87.0	97.1	67.8	3.9	14.2	324.4	1186.4	47.8	0.8
8106.7	1	16070	146.7	11.64	5.74	4.64	4.66	4.46	4.05	3.61	3.22	2.60	87.3	97.9	67.8	4.1	13.8	115.8	1004.1	41.3	3.2
8106.7	2	15851	144.7	11.17	5.67	4.57	4.61	4.39	3.98	3.54	3.18	2.57	87.3	97.9	67.8	4.1	13.8	123.4	962.2	43.4	3.3
8106.7	3	20342	185.7	13.50	7.05	5.71	5.74	5.46	4.96	4.40	3.93	3.18	87.3	97.9	67.8	4.1	13.8	138.4	1025.5	41.5	3.4
8106.7	4	20178	184.2	13.23	7.02	5.71	5.75	5.44	4.95	4.38	3.91	3.13	87.3	97.9	67.8	4.1	13.8	144.8	990.4	42.9	3.1
8308.7	1	16169	147.6	6.33	4.62	4.58	4.64	4.30	3.89	3.44	3.10	2.50	83.1	96.9	67.8	7.3	11.5	793.5	972.5	45.2	2.6
8308.7	2	15709	143.4	6.19	4.53	4.49	4.55	4.20	3.78	3.35	2.99	2.46	83.1	96.9	67.8	7.3	11.5	821.1	865.6	45.9	2.7
8308.7	3	20222	184.6	7.70	5.66	5.56	5.66	5.22	4.73	4.19	3.76	3.01	83.1	96.9	67.8	7.3	11.5	828.4	915.1	47.1	2.3
8308.7	4	20255	184.9	7.74	5.70	5.59	5.69	5.22	4.74	4.20	3.76	3.04	83.1	96.9	67.8	7.3	11.5	805.0	928.2	47.1	2.3
8404.0	1	16125	147.2	9.92	6.14	5.36	5.34	5.02	4.48	3.92	3.44	2.66	84.0	97.4	67.8	6.7	10.5	253.0	1229.3	30.6	1.3
8404.0	2	15796	144.2	9.67	6.06	5.27	5.23	4.94	4.41	3.87	3.39	2.61	84.0	97.4	67.8	6.7	10.5	258.4	1203.0	30.5	1.3
8404.0	3	20058	183.1	11.86	7.56	6.60	6.53	6.15	5.50	4.80	4.19	3.20	84.0	97.4	67.8	6.7	10.5	298.7	943.1	36.1	0.5
8404.0	4	20222	184.6	11.91	7.64	6.66	6.60	6.21	5.54	4.83	4.22	3.23	84.0	97.4	67.8	6.7	10.5	304.2	931.1	36.2	0.5
8708.0	1	16004	146.1	13.30	10.56	9.15	10.06	7.76	6.42	5.39	4.65	3.54	82.9	96.0	67.8	6.9	12.1	567.7	142.0	23.5	1.5
8708.0	2	15851	144.7	13.12	10.45	9.05	9.93	7.67	6.37	5.34	4.59	3.50	82.9	96.0	67.8	6.9	12.1	532.0	163.2	22.0	1.6
8708.0	3	20134	183.8	16.35	13.08	11.30	12.49	9.57	7.94	6.64	5.70	4.31	82.9	96.0	67.8	6.9	12.1	631.4	129.7	24.9	1.0
8708.0	4	20342	185.7	16.54	13.24	11.43	12.61	9.69	8.04	6.72	5.77	4.37	82.9	96.0	67.8	6.9	12.1	632.6	129.2	24.8	1.1
8911.3	1	16059	146.6	6.86	5.12	4.50	4.59	4.28	3.99	3.71	3.45	2.92	67.1	69.6	67.8	7.0	13.9	345.3	512.9	38.7	1.6
8911.3	2	15906	145.2	6.72	5.11	4.45	4.49	4.28	4.06	3.69	3.40	2.93	67.1	69.6	67.8	7.0	13.9	386.4	481.6	38.2	1.6
8911.3	3	20178	184.2	8.14	6.19	5.45	5.58	5.17	4.83	4.50	4.18	3.55	67.1	69.6	67.8	7.0	13.9	376.3	553.3	39.6	1.6
8911.3	4	20222	184.6	8.15	6.20	5.47	5.60	5.20	4.85	4.50	4.17	3.53	67.1	69.6	67.8	7.0	13.9	385.9	539.4	39.7	1.3
8995.0	1	16103	147.0	10.24	5.56	4.61	4.64	4.21	3.85	3.43	3.10	2.59	79.4	92.1	67.8	8.8	10.8	181.0	934.6	46.8	2.5
8995.0	2	15796	144.2	9.97	5.47	4.54	4.57	4.13	3.77	3.37	3.09	2.57	79.4	92.1	67.8	8.8	10.8	184.1	944.7	46.4	3.2



## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC Overlay	AC	AC Overlay	AC	Subgrade	
8995.0	3	20145	183.9	12.02	6.76	5.59	5.63	5.10	4.61	4.15	3.76	3.11	79.4	92.1	67.8	8.8	10.8	204.7	850.3	48.9	2.9
8995.0	4	20233	184.7	12.03	6.79	5.62	5.67	5.12	4.65	4.15	3.77	3.13	79.4	92.1	67.8	8.8	10.8	201.5	931.1	48.5	2.9
9113.7	1	15763	143.9	37.82	23.48	17.09	11.60	13.01	9.96	7.66	6.16	4.29	81.4	93.1	67.8	6.7	10.8	92.7	43.4	14.8	0.8
9113.7	2	15873	144.9	36.76	23.15	16.91	11.55	12.91	9.91	7.62	6.16	4.27	81.4	93.1	67.8	6.7	10.8	99.7	44.1	15.1	0.7
9113.7	3	20397	186.2	45.88	29.54	21.76	14.88	16.62	12.76	9.86	7.87	5.39	81.4	93.1	67.8	6.7	10.8	109.8	42.9	15.1	0.7
9113.7	4	20309	185.4	45.12	29.32	21.67	14.79	16.54	12.71	9.86	7.87	5.38	81.4	93.1	67.8	6.7	10.8	113.8	43.3	15.0	0.7
9309.0	1	16114	147.1	11.35	7.63	6.73	6.85	6.20	5.51	4.84	4.32	3.37	80.5	92.4	67.8	7.3	11.2	262.5	572.2	26.1	1.1
9309.0	2	15829	144.5	11.04	7.50	6.61	6.72	6.08	5.42	4.74	4.22	3.31	80.5	92.4	67.8	7.3	11.2	265.7	590.4	26.0	1.4
9309.0	3	20178	184.2	13.57	9.37	8.26	8.41	7.60	6.75	5.94	5.31	4.09	80.5	92.4	67.8	7.3	11.2	290.6	607.8	25.6	1.1
9309.0	4	20255	184.9	13.54	9.42	8.30	8.45	7.62	6.76	5.96	5.34	4.10	80.5	92.4	67.8	7.3	11.2	298.9	580.5	25.8	0.9
9507.0	1	16004	146.1	10.94	7.11	5.90	5.91	5.58	5.12	4.53	4.07	3.27	80.0	92.2	67.8	7.9	12.3	255.0	420.8	35.7	0.9
9507.0	2	15829	144.5	10.74	7.05	5.84	5.94	5.50	5.02	4.48	4.02	3.30	80.0	92.2	67.8	7.9	12.3	264.3	415.5	35.8	1.4
9507.0	3	20178	184.2	13.13	8.72	7.26	7.30	6.83	6.27	5.55	4.98	4.21	80.0	92.2	67.8	7.9	12.3	267.6	476.2	35.9	2.1
9507.0	4	20408	186.3	13.18	8.78	7.33	7.47	6.89	6.32	5.59	5.05	4.10	80.0	92.2	67.8	7.9	12.3	285.1	422.4	36.8	1.2
9708.3	1	16059	146.6	9.41	6.19	5.72	5.89	5.38	4.81	4.31	3.84	3.06	79.8	91.7	67.8	7.7	11.6	309.8	619.1	37.4	1.2
9708.3	2	15862	144.8	9.28	6.16	5.69	5.80	5.33	4.78	4.26	3.81	3.04	79.8	91.7	67.8	7.7	11.6	317.5	599.1	37.3	1.0
9708.3	3	20222	184.6	11.36	7.68	7.09	7.18	6.63	5.96	5.31	4.72	3.75	79.8	91.7	67.8	7.7	11.6	340.3	744.3	29.1	0.7
9708.3	4	20266	185.0	11.36	7.72	7.11	7.21	6.65	5.97	5.31	4.74	3.76	79.8	91.7	67.8	7.7	11.6	344.1	738.6	29.1	0.7

**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Project Name: RKS Master Plan  
 Segment: Runway 3/21, 24' Lt  
 Direction: Southeast

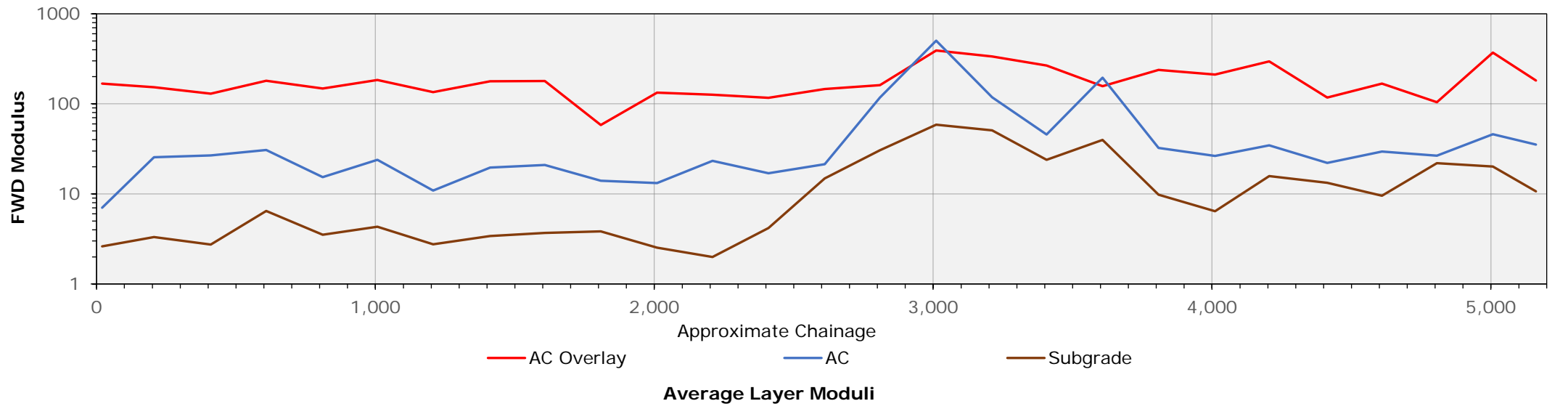
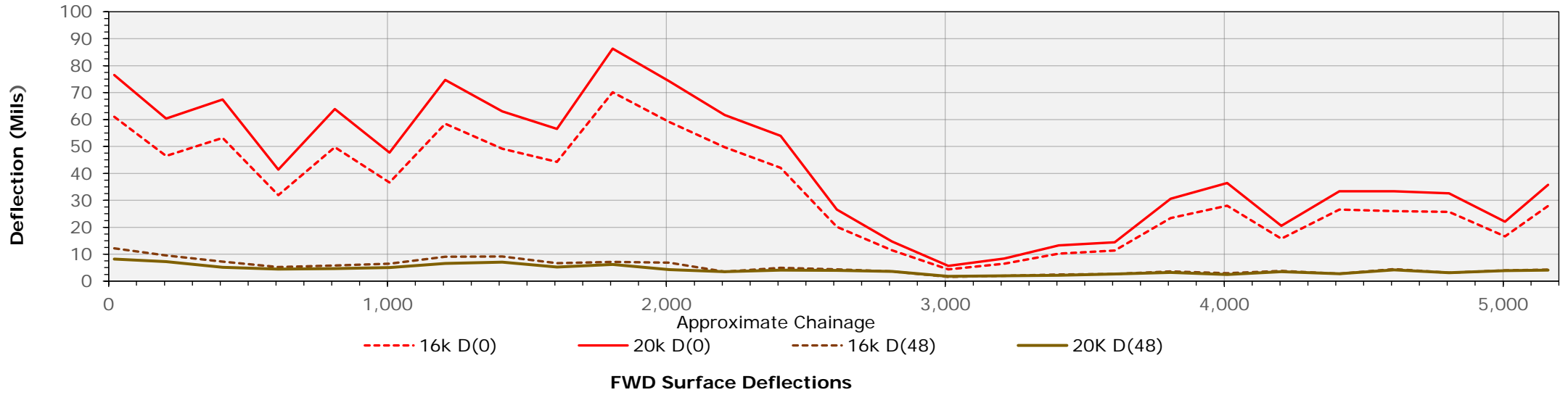
Calc. Date: August 14, 2023  
 Project No.: 110339

**Summary of Input Data**

Date of FWD Testing: May 16, 2023  
 PDAT (BELLS): 52° F  
 FWD Plate Radius: 5.905"

**Summary of Backcalculated Moduli**

	AC	Base	Subgrade	RMS (%)
Mean:	171.1	30.8	8.2	2.2
Standard Deviation:	58.4	18.3	5.2	



### Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC	Base	AC	Base	Subgrade	
20.0	1	11875	108.4	61.05	51.93	42.63	46.19	33.25	24.27	17.02	12.18	6.28	72.1	76.6	65.0	6.3	8.9	159.2	6.5	2.7	2.2
20.0	2	14964	136.6	75.52	64.27	52.81	57.29	41.35	30.36	21.41	15.41	8.04	72.1	76.6	65.0	6.3	8.9	158.3	7.5	2.7	1.9
20.0	3	15270	139.4	76.53	65.13	53.54	58.07	41.95	30.83	21.78	15.69	8.20	72.1	76.6	65.0	6.3	8.9	155.9	7.7	2.7	1.9
20.0	4	19433	177.4	96.81	82.33	67.72	73.56	53.16	39.16	27.73	20.00	10.46	72.1	76.6	65.0	6.3	8.9	197.6	6.4	2.4	1.9
206.0	1	11896	108.6	46.46	38.19	31.32	32.47	24.44	18.13	13.11	9.54	5.31	75.0	81.2	65.1	6.3	7.0	152.3	20.7	3.7	2.0
206.0	2	15479	141.3	60.64	50.03	41.18	42.77	32.32	24.02	17.57	12.86	7.12	75.0	81.2	65.1	6.3	7.0	156.7	24.1	3.3	1.4
206.0	3	15501	141.5	60.38	49.87	41.09	42.65	32.30	24.13	17.65	12.93	7.22	75.0	81.2	65.1	6.3	7.0	158.8	25.6	3.2	1.4
206.0	4	19948	182.1	77.90	64.54	53.33	55.32	42.07	31.43	23.09	16.98	9.33	75.0	81.2	65.1	6.3	7.0	145.1	31.7	3.0	1.3
409.0	1	12006	109.6	53.14	41.78	32.57	34.45	23.52	16.07	10.60	7.25	3.76	75.5	81.6	65.3	5.7	6.9	143.0	20.2	2.9	1.9
409.0	2	15183	138.6	66.75	52.63	41.12	43.59	29.93	20.69	13.69	9.43	4.99	75.5	81.6	65.3	5.7	6.9	130.3	25.3	2.8	1.9
409.0	3	15522	141.7	67.43	53.27	41.63	44.04	30.39	21.09	14.02	9.70	5.12	75.5	81.6	65.3	5.7	6.9	125.4	27.7	2.8	1.7
409.0	4	19849	181.2	86.41	68.46	53.72	57.02	39.22	27.42	18.28	12.63	6.58	75.5	81.6	65.3	5.7	6.9	121.3	34.1	2.5	1.5
608.3	1	12116	110.6	31.93	25.05	19.10	20.50	13.79	9.86	6.98	5.22	3.26	75.6	81.9	64.1	5.9	8.3	169.1	30.5	6.5	1.3
608.3	2	15621	142.6	41.24	32.59	25.06	26.77	18.27	13.17	9.38	7.03	4.42	75.6	81.9	64.1	5.9	8.3	176.7	33.9	6.0	1.6
608.3	3	15796	144.2	41.41	32.78	25.25	26.84	18.47	13.43	9.54	7.16	4.47	75.6	81.9	64.1	5.9	8.3	177.0	35.1	6.0	1.6
608.3	4	20342	185.7	53.84	42.82	33.11	35.28	24.31	17.64	12.65	9.46	5.89	75.6	81.9	64.1	5.9	8.3	197.7	23.8	7.3	1.5
810.7	1	12028	109.8	49.68	38.10	28.45	30.67	19.25	12.54	8.21	5.79	3.41	76.2	82.4	64.5	5.3	10.1	145.2	13.9	3.8	1.6
810.7	2	15336	140.0	63.39	49.02	36.89	39.59	25.24	16.69	10.94	7.71	4.56	76.2	82.4	64.5	5.3	10.1	146.9	15.2	3.5	1.7
810.7	3	15676	143.1	63.91	49.56	37.39	40.09	25.71	17.06	11.24	7.93	4.70	76.2	82.4	64.5	5.3	10.1	146.9	15.7	3.6	1.6
810.7	4	19970	182.3	82.47	64.41	48.93	52.19	33.88	22.60	14.87	10.44	6.01	76.2	82.4	64.5	5.3	10.1	152.4	16.4	3.2	1.7
1007.3	1	12061	110.1	36.62	30.12	23.89	24.88	17.98	12.68	8.95	6.46	3.77	75.9	83.1	65.3	6.8	6.6	178.6	21.4	4.7	1.5
1007.3	2	15577	142.2	47.58	39.33	31.34	32.59	23.78	17.11	11.88	8.58	5.00	75.9	83.1	65.3	6.8	6.6	188.7	22.4	4.3	1.8
1007.3	3	15709	143.4	47.70	39.43	31.49	32.78	23.93	17.21	12.06	8.76	5.00	75.9	83.1	65.3	6.8	6.6	183.7	23.8	4.4	1.9
1007.3	4	20320	185.5	62.40	51.78	41.50	43.13	31.68	22.85	16.10	11.63	6.68	75.9	83.1	65.3	6.8	6.6	185.9	28.2	3.8	1.8
1207.0	1	11940	109.0	58.41	46.84	36.75	39.17	27.18	19.00	12.92	9.08	4.93	76.0	82.7	64.8	6.1	9.5	128.7	10.6	2.9	2.2
1207.0	2	15117	138.0	74.07	59.67	47.08	50.09	35.09	24.74	16.94	11.92	6.47	76.0	82.7	64.8	6.1	9.5	138.9	10.4	2.8	2.0
1207.0	3	15336	140.0	74.70	60.26	47.57	50.67	35.52	25.10	17.22	12.15	6.62	76.0	82.7	64.8	6.1	9.5	140.9	10.4	2.8	2.0
1207.0	4	19521	178.2	94.74	76.66	60.71	64.59	45.49	32.25	22.15	15.59	8.38	76.0	82.7	64.8	6.1	9.5	133.1	12.2	2.6	1.8
1411.0	1	12039	109.9	49.15	39.84	32.14	33.48	24.25	17.69	12.44	9.16	5.25	76.5	83.1	65.2	5.6	8.3	181.2	16.6	3.7	1.6
1411.0	2	15336	140.0	62.52	50.91	41.26	43.02	31.29	23.00	16.22	11.95	6.88	76.5	83.1	65.2	5.6	8.3	178.7	18.8	3.5	1.7
1411.0	3	15490	141.4	62.98	51.35	41.68	43.45	31.66	23.32	16.49	12.17	7.01	76.5	83.1	65.2	5.6	8.3	177.6	19.1	3.5	1.8
1411.0	4	19860	181.3	81.17	66.47	54.05	56.22	41.24	30.46	21.51	15.84	9.04	76.5	83.1	65.2	5.6	8.3	174.6	23.9	3.0	1.3
1607.7	1	12050	110.0	44.28	35.26	27.40	28.39	20.11	13.87	9.35	6.72	3.82	76.2	82.6	66.2	5.6	8.4	174.5	18.6	4.0	2.0
1607.7	2	15292	139.6	56.22	45.04	35.26	36.50	26.09	18.22	12.39	8.91	5.12	76.2	82.6	66.2	5.6	8.4	185.2	20.0	3.7	2.0
1607.7	3	15522	141.7	56.50	45.30	35.51	36.80	26.33	18.45	12.58	9.07	5.20	76.2	82.6	66.2	5.6	8.4	187.5	19.7	3.8	2.1
1607.7	4	20079	183.3	73.63	59.33	46.74	48.29	34.85	24.59	16.79	12.09	6.73	76.2	82.6	66.2	5.6	8.4	169.5	25.3	3.4	2.1
1807.7	1	11929	108.9	70.11	50.26	33.44	37.11	21.87	14.17	9.56	7.17	4.67	76.6	83.0	65.2	5.4	9.3	58.7	10.3	4.5	2.4
1807.7	2	14799	135.1	85.08	61.65	41.49	45.84	27.52	18.17	12.29	9.22	5.99	76.6	83.0	65.2	5.4	9.3	58.6	15.7	3.2	3.9
1807.7	3	15238	139.1	86.31	62.76	42.37	46.76	28.23	18.74	12.72	9.54	6.21	76.6	83.0	65.2	5.4	9.3	46.9	18.8	3.2	4.0

### Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC	Base	AC	Base	Subgrade	
1807.7	4	19269	175.9	107.39	79.18	53.79	59.06	36.26	24.24	16.43	12.26	7.92	76.6	83.0	65.2	5.4	9.3	68.8	11.0	4.5	2.4
2010.0	1	12039	109.9	59.07	46.74	34.64	36.22	24.07	15.76	10.13	6.85	3.27	77.0	83.9	64.1	5.8	8.7	125.7	12.5	2.6	1.9
2010.0	2	15062	137.5	73.45	58.44	43.69	45.61	30.77	20.41	13.18	8.87	4.19	77.0	83.9	64.1	5.8	8.7	137.7	12.3	2.6	1.9
2010.0	3	15391	140.5	74.26	59.14	44.31	46.31	31.22	20.80	13.48	9.07	4.31	77.0	83.9	64.1	5.8	8.7	135.6	13.1	2.6	2.0
2010.0	4	19554	178.5	94.31	75.43	56.80	59.21	40.37	27.05	17.54	11.73	5.37	77.0	83.9	64.1	5.8	8.7	132.7	15.1	2.3	2.1
2208.7	1	12192	111.3	49.68	37.54	27.13	28.71	18.07	11.37	6.06	3.48	2.63	76.7	83.6	65.4	5.8	9.5	156.9	16.0	2.1	4.5
2208.7	2	15205	138.8	61.48	46.84	34.20	36.17	23.02	14.65	7.89	4.55	3.39	76.7	83.6	65.4	5.8	9.5	92.6	28.7	1.9	4.8
2208.7	3	15533	141.8	61.67	47.13	34.51	36.52	23.34	14.93	8.11	4.70	3.48	76.7	83.6	65.4	5.8	9.5	80.5	31.9	2.0	5.1
2208.7	4	20036	182.9	80.06	61.93	45.69	48.02	31.14	20.06	10.91	6.28	4.56	76.7	83.6	65.4	5.8	9.5	174.6	16.5	2.0	4.2
2409.3	1	11984	109.4	42.06	32.17	23.89	25.19	16.21	10.58	6.95	4.95	3.01	76.1	83.3	65.0	6.7	8.9	112.2	15.5	4.6	1.8
2409.3	2	15347	140.1	53.90	41.59	31.13	32.65	21.40	14.17	9.35	6.65	4.01	76.1	83.3	65.0	6.7	8.9	116.1	17.0	4.2	2.0
2409.3	3	15522	141.7	53.89	41.63	31.25	32.87	21.55	14.31	9.47	6.75	4.07	76.1	83.3	65.0	6.7	8.9	118.8	17.0	4.2	1.8
2409.3	4	20145	183.9	70.73	55.11	41.60	43.54	28.91	19.37	12.80	9.07	5.39	76.1	83.3	65.0	6.7	8.9	120.7	18.5	3.7	2.0
2611.0	1	12017	109.7	20.17	16.07	12.25	12.90	9.21	7.04	5.40	4.34	2.95	75.6	84.8	66.4	9.9	9.2	144.4	23.7	13.5	3.4
2611.0	2	15840	144.6	26.51	21.29	16.33	17.22	12.35	9.47	7.30	5.89	3.91	75.6	84.8	66.4	9.9	9.2	145.7	19.2	16.8	3.0
2611.0	3	15906	145.2	26.60	21.40	16.43	17.29	12.40	9.50	7.33	5.89	3.98	75.6	84.8	66.4	9.9	9.2	148.2	20.0	15.5	3.0
2611.0	4	20211	184.5	34.02	27.54	21.16	22.17	15.93	12.17	9.43	7.56	5.13	75.6	84.8	66.4	9.9	9.2	146.0	22.7	13.8	3.4
2809.3	1	12039	109.9	11.48	7.07	5.94	5.93	5.38	4.78	4.12	3.57	2.69	73.5	83.9	65.7	16.4	6.4	148.4	135.1	30.7	2.0
2809.3	2	16026	146.3	14.96	9.42	7.94	7.96	7.21	6.42	5.54	4.82	3.61	73.5	83.9	65.7	16.4	6.4	158.5	128.2	30.0	1.6
2809.3	3	15928	145.4	14.69	9.34	7.91	7.92	7.16	6.37	5.51	4.78	3.59	73.5	83.9	65.7	16.4	6.4	162.5	108.7	30.4	1.6
2809.3	4	20189	184.3	18.00	11.68	9.92	9.93	8.98	8.00	6.93	6.00	4.47	73.5	83.9	65.7	16.4	6.4	174.4	99.1	30.7	1.6
3011.0	1	12028	109.8	4.37	2.50	2.20	2.27	2.05	1.88	1.72	1.59	1.34	73.0	85.2	66.1	22.1	8.6	375.7	475.8	58.9	2.2
3011.0	2	16037	146.4	5.73	3.31	2.92	3.01	2.72	2.52	2.30	2.12	1.79	73.0	85.2	66.1	22.1	8.6	378.2	687.7	56.3	1.9
3011.0	3	16004	146.1	5.67	3.31	2.93	3.01	2.72	2.52	2.30	2.11	1.79	73.0	85.2	66.1	22.1	8.6	395.7	446.7	58.6	2.4
3011.0	4	20375	186.0	6.92	4.10	3.62	3.73	3.38	3.11	2.85	2.62	2.20	73.0	85.2	66.1	22.1	8.6	415.6	401.9	61.1	2.1
3211.7	1	11962	109.2	6.44	4.43	3.67	3.81	3.23	2.71	2.31	1.99	1.50	74.2	83.9	66.5	13.4	8.8	318.4	104.9	57.5	1.6
3211.7	2	16300	148.8	8.63	6.02	5.02	5.14	4.41	3.73	3.15	2.70	2.01	74.2	83.9	66.5	13.4	8.8	332.9	98.9	57.2	1.5
3211.7	3	15763	143.9	8.35	5.83	4.87	5.01	4.27	3.61	3.04	2.61	1.96	74.2	83.9	66.5	13.4	8.8	334.1	157.5	39.9	1.2
3211.7	4	20277	185.1	10.46	7.41	6.21	6.37	5.45	4.61	3.88	3.32	2.47	74.2	83.9	66.5	13.4	8.8	356.5	110.3	48.2	1.5
3406.7	1	12170	111.1	10.21	7.26	6.02	6.29	5.03	3.89	3.02	2.44	1.64	75.1	84.9	66.0	12.0	8.9	254.3	48.4	25.6	1.6
3406.7	2	16147	147.4	13.53	9.78	8.12	8.46	6.81	5.35	4.11	3.27	2.19	75.1	84.9	66.0	12.0	8.9	271.0	42.9	23.8	1.9
3406.7	3	15851	144.7	13.28	9.61	7.96	8.31	6.68	5.22	4.02	3.22	2.16	75.1	84.9	66.0	12.0	8.9	259.5	46.1	24.5	1.6
3406.7	4	20288	185.2	16.80	12.32	10.24	10.69	8.60	6.76	5.22	4.15	2.76	75.1	84.9	66.0	12.0	8.9	283.8	45.4	21.8	1.7
3607.3	1	12137	110.8	11.39	7.33	5.31	5.49	4.34	3.72	3.12	2.70	2.06	76.0	83.1	65.2	6.5	10.2	145.5	214.8	34.5	5.3
3607.3	2	16147	147.4	14.75	9.66	7.08	7.33	5.82	4.97	4.18	3.63	2.72	76.0	83.1	65.2	6.5	10.2	151.8	194.6	41.1	4.4
3607.3	3	15785	144.1	14.43	9.49	6.97	7.19	5.72	4.89	4.11	3.56	2.67	76.0	83.1	65.2	6.5	10.2	146.4	219.9	37.6	4.8
3607.3	4	20364	185.9	18.06	12.03	8.93	9.20	7.34	6.27	5.27	4.56	3.41	76.0	83.1	65.2	6.5	10.2	183.6	151.5	45.8	3.6

Summary of FWD Data and Backcalculation Results  
(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, $E_{FWD}$ (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC	Base	AC	Base	Subgrade	
3808.0	1	12072	110.2	23.37	17.94	13.58	14.44	9.78	6.80	4.77	3.63	2.41	78.4	86.5	66.5	6.2	9.4	229.8	32.8	9.8	1.6
3808.0	2	15895	145.1	30.84	23.86	18.24	19.36	13.26	9.33	6.59	5.00	3.29	78.4	86.5	66.5	6.2	9.4	228.4	35.2	9.3	1.7
3808.0	3	15862	144.8	30.61	23.71	18.15	19.25	13.22	9.31	6.57	4.99	3.27	78.4	86.5	66.5	6.2	9.4	234.0	34.1	9.5	1.6
3808.0	4	20309	185.4	39.31	30.61	23.55	24.96	17.24	12.22	8.64	6.57	4.27	78.4	86.5	66.5	6.2	9.4	262.9	27.5	10.6	1.8
4011.0	1	11918	108.8	27.99	21.03	15.10	16.02	10.13	6.44	4.12	2.91	1.78	78.9	86.9	66.4	5.8	10.9	203.0	23.7	7.1	2.1
4011.0	2	15895	145.1	36.96	27.96	20.38	21.49	13.83	8.91	5.78	4.02	2.43	78.9	86.9	66.4	5.8	10.9	215.5	25.1	6.5	1.8
4011.0	3	15862	144.8	36.43	27.63	20.20	21.31	13.74	8.91	5.78	3.99	2.45	78.9	86.9	66.4	5.8	10.9	215.0	26.3	6.4	1.8
4011.0	4	20299	185.3	46.56	35.59	26.14	27.28	17.88	11.72	7.61	5.26	3.22	78.9	86.9	66.4	5.8	10.9	212.2	30.3	5.6	2.3
4205.3	1	12072	110.2	15.76	12.81	10.31	11.06	8.02	6.16	4.71	3.76	2.61	76.6	85.2	65.3	8.1	9.6	285.5	34.1	15.8	1.6
4205.3	2	16114	147.1	21.01	17.15	13.88	14.89	10.89	8.42	6.46	5.17	3.57	76.6	85.2	65.3	8.1	9.6	287.6	38.3	14.7	1.6
4205.3	3	15851	144.7	20.57	16.81	13.63	14.61	10.70	8.27	6.36	5.07	3.52	76.6	85.2	65.3	8.1	9.6	298.9	36.9	14.6	1.5
4205.3	4	20255	184.9	26.07	21.39	17.41	18.62	13.71	10.63	8.19	6.55	4.49	76.6	85.2	65.3	8.1	9.6	316.7	28.8	17.9	1.2
4413.0	1	12083	110.3	26.58	18.71	12.71	13.57	7.95	5.05	3.44	2.71	2.04	75.9	83.4	66.7	7.2	8.2	108.0	22.4	13.0	3.6
4413.0	2	15862	144.8	33.93	24.25	16.76	17.83	10.65	6.84	4.66	3.63	2.71	75.9	83.4	66.7	7.2	8.2	116.3	21.3	13.6	3.0
4413.0	3	15862	144.8	33.32	23.93	16.62	17.72	10.61	6.84	4.68	3.65	2.72	75.9	83.4	66.7	7.2	8.2	121.8	20.4	14.3	2.8
4413.0	4	20463	186.8	42.74	31.09	21.83	23.12	14.06	9.13	6.20	4.76	3.46	75.9	83.4	66.7	7.2	8.2	122.3	24.3	12.2	2.8
4609.0	1	12061	110.1	26.04	20.13	15.10	14.94	11.02	7.91	5.76	4.52	3.12	78.5	88.0	67.0	7.5	8.2	154.3	27.9	9.9	2.2
4609.0	2	15763	143.9	33.56	26.12	19.80	19.60	14.57	10.57	7.74	6.03	4.15	78.5	88.0	67.0	7.5	8.2	166.4	32.5	8.7	2.4
4609.0	3	15961	145.7	33.36	26.11	19.86	19.69	14.65	10.65	7.81	6.09	4.20	78.5	88.0	67.0	7.5	8.2	169.4	33.2	8.7	2.4
4609.0	4	20375	186.0	42.15	33.24	25.46	25.11	18.88	13.78	10.09	7.85	5.32	78.5	88.0	67.0	7.5	8.2	183.1	24.4	10.8	1.9
4806.3	1	12017	109.7	25.75	17.19	11.00	12.31	7.16	4.90	3.75	3.10	2.28	77.7	86.3	65.8	7.2	4.0	96.7	20.0	24.5	3.6
4806.3	2	15873	144.9	32.90	22.37	14.61	16.19	9.63	6.65	5.04	4.13	3.12	77.7	86.3	65.8	7.2	4.0	101.6	32.1	20.0	3.7
4806.3	3	15917	145.3	32.60	22.23	14.57	16.15	9.64	6.67	5.05	4.14	3.09	77.7	86.3	65.8	7.2	4.0	104.4	33.0	20.1	3.7
4806.3	4	20375	186.0	41.17	28.40	18.85	20.84	12.58	8.72	6.58	5.37	3.97	77.7	86.3	65.8	7.2	4.0	115.6	21.2	23.4	2.7
5006.7	1	12028	109.8	16.61	13.40	10.68	10.95	8.20	6.26	4.88	4.01	2.89	78.7	87.2	67.4	6.4	6.3	361.2	44.0	21.4	1.0
5006.7	2	16070	146.7	22.32	18.09	14.49	14.84	11.17	8.56	6.64	5.44	3.90	78.7	87.2	67.4	6.4	6.3	378.4	43.0	20.4	1.3
5006.7	3	15884	145.0	22.05	17.88	14.32	14.70	11.05	8.47	6.59	5.43	3.88	78.7	87.2	67.4	6.4	6.3	373.5	45.0	20.1	1.3
5006.7	4	20397	186.2	28.24	22.94	18.40	18.90	14.20	10.89	8.43	6.87	4.87	78.7	87.2	67.4	6.4	6.3	367.7	51.4	18.5	1.3
5161.3	1	12039	109.9	27.87	20.89	15.35	16.42	10.85	7.57	5.48	4.30	3.07	75.9	82.2	66.4	5.6	7.0	168.1	37.8	10.1	2.0
5161.3	2	15807	144.3	36.05	27.25	20.21	21.55	14.39	10.12	7.32	5.74	4.06	75.9	82.2	66.4	5.6	7.0	186.4	32.9	10.9	1.5
5161.3	3	15818	144.4	35.78	27.11	20.17	21.48	14.41	10.15	7.36	5.76	4.06	75.9	82.2	66.4	5.6	7.0	190.2	33.4	10.9	1.3
5161.3	4	20299	185.3	45.12	34.43	25.74	27.34	18.44	13.04	9.45	7.37	5.14	75.9	82.2	66.4	5.6	7.0	184.4	37.1	10.8	1.7

**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Project Name: RKS Master Plan  
Segment: Runway 3/21, 18' Rt  
Direction: Northeast

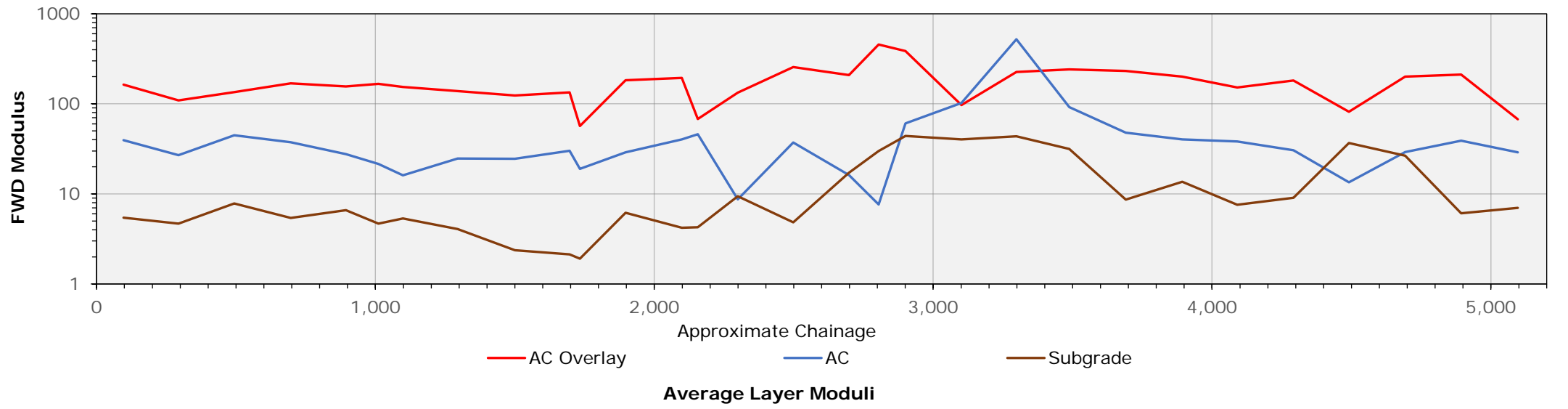
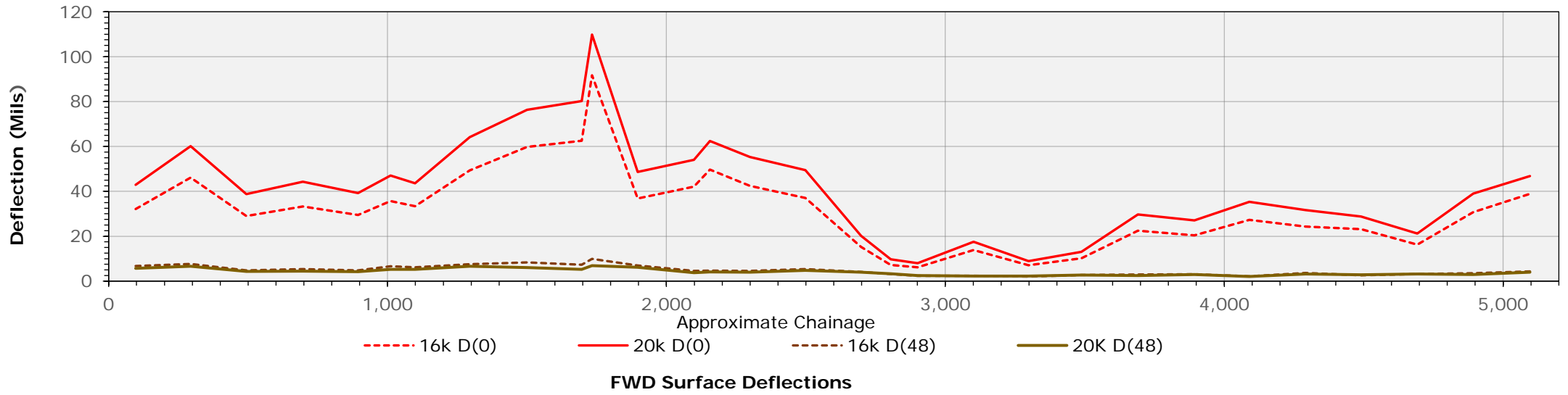
Calc. Date: August 14, 2023  
Project No.: 110339

**Summary of Input Data**

Date of FWD Testing: May 16, 2023  
PDAT (BELLS): 52° F  
FWD Plate Radius: 5.905"

**Summary of Backcalculated Moduli**

	AC	Base	Subgrade	RMS (%)
Mean:	158.3	32.4	8.7	2.3
Standard Deviation:	59.4	17.4	5.2	



**Summary of FWD Data and Backcalculation Results****(ELMOD 6 version 6.1.86)**

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, $E_{FWD}$ (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC	Base	AC	Base	Subgrade	
96.7	1	11875	108.4	32.08	25.94	20.70	20.89	16.28	12.17	9.08	6.74	4.15	76.8	86.1	67.9	7.3	6.1	151.6	37.6	6.0	1.6
96.7	2	15577	142.2	42.50	34.59	28.00	28.11	22.01	16.59	12.34	9.25	5.61	76.8	86.1	67.9	7.3	6.1	165.8	37.2	5.5	1.4
96.7	3	15752	143.8	42.91	35.00	28.26	28.39	22.30	16.83	12.54	9.39	5.69	76.8	86.1	67.9	7.3	6.1	164.9	38.3	5.5	1.7
96.7	4	20244	184.8	54.91	45.03	36.58	36.68	28.90	21.94	16.28	12.28	7.26	76.8	86.1	67.9	7.3	6.1	170.9	45.0	4.9	1.4
294.0	1	11886	108.5	46.17	35.63	27.28	29.02	19.84	14.11	10.17	7.72	4.88	79.2	89.7	67.2	6.8	6.3	106.4	25.8	4.7	1.6
294.0	2	15347	140.1	59.56	46.49	35.81	38.07	26.27	18.80	13.59	10.27	6.45	79.2	89.7	67.2	6.8	6.3	109.7	25.6	4.7	1.6
294.0	3	15588	142.3	60.11	47.10	36.22	38.68	26.68	19.13	13.89	10.56	6.59	79.2	89.7	67.2	6.8	6.3	104.3	34.6	4.2	2.2
294.0	4	20189	184.3	78.03	61.48	47.52	50.64	34.93	25.32	18.33	13.88	8.58	79.2	89.7	67.2	6.8	6.3	115.7	21.6	5.1	1.5
493.7	1	11962	109.2	29.02	21.81	16.64	17.39	12.11	8.65	6.22	4.81	3.21	78.6	89.5	67.6	7.6	5.7	133.7	39.8	8.3	1.8
493.7	2	15752	143.8	38.57	29.31	22.58	23.50	16.57	11.92	8.59	6.61	4.39	78.6	89.5	67.6	7.6	5.7	128.3	53.2	7.3	2.1
493.7	3	15862	144.8	38.72	29.46	22.72	23.70	16.69	12.02	8.67	6.65	4.34	78.6	89.5	67.6	7.6	5.7	128.9	54.3	7.2	2.1
493.7	4	20244	184.8	49.61	38.06	29.50	30.70	21.78	15.74	11.34	8.70	5.60	78.6	89.5	67.6	7.6	5.7	148.4	31.9	8.4	1.3
696.7	1	11907	108.7	33.25	26.35	20.23	20.89	14.90	10.16	7.26	5.33	3.15	79.3	90.1	66.9	7.0	5.7	162.1	34.4	5.8	1.7
696.7	2	15588	142.3	43.84	35.04	27.13	27.91	20.13	14.01	9.96	7.31	4.34	79.3	90.1	66.9	7.0	5.7	166.5	42.1	5.1	1.9
696.7	3	15785	144.1	44.25	35.43	27.44	28.24	20.41	14.20	10.13	7.45	4.43	79.3	90.1	66.9	7.0	5.7	172.8	40.3	5.1	1.9
696.7	4	20277	185.1	57.30	46.11	35.87	36.87	26.80	18.76	13.36	9.82	5.80	79.3	90.1	66.9	7.0	5.7	173.5	32.8	5.6	1.6
894.3	1	11940	109.0	29.50	23.19	17.60	18.00	12.72	8.97	6.37	4.80	3.01	78.9	90.3	67.4	7.8	7.2	151.6	24.0	7.4	1.9
894.3	2	15676	143.1	38.98	30.83	23.57	24.08	17.24	12.30	8.74	6.53	4.13	78.9	90.3	67.4	7.8	7.2	153.2	27.1	6.7	1.9
894.3	3	15840	144.6	39.28	31.13	23.82	24.33	17.46	12.47	8.87	6.63	4.21	78.9	90.3	67.4	7.8	7.2	163.0	25.5	6.6	2.1
894.3	4	20090	183.4	50.05	39.86	30.64	31.28	22.55	16.16	11.50	8.56	5.37	78.9	90.3	67.4	7.8	7.2	154.9	33.9	5.7	2.2
1010.7	1	11907	108.7	35.69	29.19	23.07	23.10	17.50	12.62	9.05	6.60	3.77	78.9	90.3	67.4	7.8	6.6	170.0	18.0	5.0	1.6
1010.7	2	15522	141.7	46.87	38.63	30.74	30.62	23.48	17.23	12.34	9.05	5.17	78.9	90.3	67.4	7.8	6.6	164.5	21.1	4.7	1.7
1010.7	3	15676	143.1	47.04	38.78	30.91	30.81	23.63	17.42	12.45	9.15	5.23	78.9	90.3	67.4	7.8	6.6	159.7	23.0	4.7	1.8
1010.7	4	20244	184.8	61.24	50.73	40.65	40.51	31.26	23.08	16.67	12.27	7.02	78.9	90.3	67.4	7.8	6.6	172.5	24.0	4.3	1.5
1098.7	1	11886	108.5	33.41	27.42	21.82	22.93	16.35	11.74	8.36	6.19	3.72	76.5	86.3	68.4	8.1	7.9	149.6	13.8	5.7	1.7
1098.7	2	15555	142.0	43.54	36.30	28.89	30.19	21.95	16.09	11.58	8.57	4.96	76.5	86.3	68.4	8.1	7.9	151.3	16.1	5.3	1.9
1098.7	3	15796	144.2	43.59	36.27	28.92	30.37	22.06	16.30	11.68	8.84	5.25	76.5	86.3	68.4	8.1	7.9	149.5	17.1	5.5	2.1
1098.7	4	20463	186.8	56.67	47.42	38.08	39.82	29.26	21.79	15.80	11.86	7.06	76.5	86.3	68.4	8.1	7.9	165.2	17.5	4.9	1.5
1294.7	1	11820	107.9	49.35	39.30	29.58	31.00	20.87	14.32	10.03	7.59	4.92	82.3	94.3	67.2	6.4	5.9	123.0	28.9	4.0	2.2
1294.7	2	15128	138.1	63.46	50.84	38.69	40.64	27.60	19.03	13.38	10.19	6.52	82.3	94.3	67.2	6.4	5.9	142.0	25.3	3.9	2.3
1294.7	3	15347	140.1	64.15	51.50	39.27	41.23	28.08	19.44	13.66	10.36	6.65	82.3	94.3	67.2	6.4	5.9	142.7	26.3	3.8	2.3
1294.7	4	19871	181.4	82.76	66.78	51.19	53.80	36.83	25.36	17.93	13.60	8.63	82.3	94.3	67.2	6.4	5.9	147.9	18.6	4.5	1.7
1500.0	1	11831	108.0	59.74	48.28	36.99	38.00	26.57	18.22	12.12	8.37	4.45	79.9	90.2	69.6	6.3	6.0	127.9	20.6	2.5	1.7
1500.0	2	14898	136.0	75.24	61.13	47.09	48.35	34.13	23.64	15.82	11.00	5.86	79.9	90.2	69.6	6.3	6.0	124.1	23.5	2.4	1.7
1500.0	3	15238	139.1	76.35	62.20	47.97	49.25	34.85	24.16	16.23	11.29	6.08	79.9	90.2	69.6	6.3	6.0	124.0	23.6	2.4	1.7
1500.0	4	19532	178.3	96.88	79.17	61.28	63.07	44.76	31.15	20.97	14.58	7.80	79.9	90.2	69.6	6.3	6.0	121.1	30.6	2.2	2.0
1696.3	1	11798	107.7	62.56	49.13	37.09	38.67	25.83	16.87	10.81	7.29	3.88	80.9	90.8	69.1	5.5	6.1	135.0	25.8	2.3	1.7
1696.3	2	14865	135.7	79.23	62.53	47.55	49.33	33.39	22.20	14.23	9.57	5.14	80.9	90.8	69.1	5.5	6.1	137.8	28.2	2.1	1.7
1696.3	3	15117	138.0	80.21	63.43	48.30	50.02	33.74	22.74	14.54	9.79	5.27	80.9	90.8	69.1	5.5	6.1	120.2	35.4	2.1	1.6

### Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC	Base	AC	Base	Subgrade	
1696.3	4	19313	176.3	102.60	81.85	62.53	64.80	43.78	29.57	19.04	12.75	6.74	80.9	90.8	69.1	5.5	6.1	144.2	31.5	2.0	1.7
1733.0	1	11809	107.8	91.69	65.71	48.40	26.10	33.58	21.84	14.39	9.92	5.32	79.3	88.5	68.5	5.7	7.4	48.5	18.2	1.9	1.5
1733.0	2	14646	133.7	110.37	80.33	59.63	35.70	41.44	27.51	18.17	12.63	6.63	79.3	88.5	68.5	5.7	7.4	49.0	21.0	1.9	1.9
1733.0	3	14876	135.8	109.82	80.39	59.77	36.90	41.49	27.59	18.36	12.78	6.91	79.3	88.5	68.5	5.7	7.4	53.8	18.4	2.0	1.3
1733.0	4	18699	170.7	129.00	100.33	74.88	48.48	51.94	34.90	23.06	16.14	8.67	79.3	88.5	68.5	5.7	7.4	75.8	18.1	1.8	1.9
1897.3	1	11962	109.2	36.78	29.43	22.67	23.33	16.82	12.28	9.01	6.93	4.72	81.3	92.4	68.4	6.2	7.6	179.5	30.3	6.0	1.7
1897.3	2	15413	140.7	47.69	38.36	29.74	30.40	22.28	16.19	12.02	9.38	5.94	81.3	92.4	68.4	6.2	7.6	178.3	30.7	6.1	1.6
1897.3	3	15698	143.3	48.60	39.16	30.43	31.04	22.78	16.62	12.30	9.61	6.19	81.3	92.4	68.4	6.2	7.6	177.0	31.2	5.9	1.8
1897.3	4	20320	185.5	63.11	51.01	39.77	40.92	29.89	21.98	16.18	12.47	8.11	81.3	92.4	68.4	6.2	7.6	199.3	23.7	6.6	1.3
2098.3	1	11929	108.9	42.08	31.76	23.09	24.11	15.46	9.93	6.37	4.52	2.74	83.4	94.3	69.9	5.3	6.5	198.6	31.2	4.6	1.6
2098.3	2	15446	141.0	54.26	41.33	30.34	31.73	20.48	13.29	8.59	6.15	3.70	83.4	94.3	69.9	5.3	6.5	180.4	46.5	3.9	2.1
2098.3	3	15566	142.1	54.10	41.22	30.36	31.64	20.63	13.43	8.72	6.30	3.81	83.4	94.3	69.9	5.3	6.5	185.6	45.7	4.1	2.3
2098.3	4	20222	184.6	70.30	53.95	39.96	41.46	27.36	17.96	11.66	8.23	5.01	83.4	94.3	69.9	5.3	6.5	211.4	37.5	4.2	1.8
2155.7	1	11984	109.4	49.64	33.61	23.10	18.71	15.29	10.11	6.64	4.65	3.11	81.0	92.1	68.6	6.4	6.6	64.6	37.7	4.6	2.6
2155.7	2	15369	140.3	62.35	42.90	29.83	25.57	19.94	13.32	8.79	6.16	4.12	81.0	92.1	68.6	6.4	6.6	62.0	56.8	3.8	3.2
2155.7	3	15566	142.1	62.38	43.22	30.06	26.12	20.07	13.53	8.88	6.27	4.08	81.0	92.1	68.6	6.4	6.6	65.3	58.5	3.8	3.6
2155.7	4	20134	183.8	80.55	56.39	39.45	35.11	26.53	17.83	11.72	8.31	5.29	81.0	92.1	68.6	6.4	6.6	79.4	31.2	4.9	1.9
2299.3	1	11864	108.3	42.44	33.19	23.61	23.54	14.64	7.78	5.86	4.59	3.13	81.5	92.8	68.8	6.3	6.3	127.9	7.7	10.0	6.0
2299.3	2	15380	140.4	54.94	43.19	31.11	30.99	19.60	10.57	8.04	6.30	3.93	81.5	92.8	68.8	6.3	6.3	133.1	8.6	9.7	5.7
2299.3	3	15533	141.8	55.34	43.65	31.50	31.22	19.94	10.83	8.18	6.37	4.02	81.5	92.8	68.8	6.3	6.3	131.4	8.2	10.0	5.3
2299.3	4	20156	184.0	71.60	56.59	41.09	41.11	26.21	14.44	10.85	8.49	5.58	81.5	92.8	68.8	6.3	6.3	139.8	10.5	7.9	5.8
2498.3	1	11918	108.8	37.07	29.39	22.47	23.15	16.07	10.90	7.57	5.41	3.30	83.0	94.1	68.5	5.5	6.5	245.8	40.8	4.8	1.2
2498.3	2	15369	140.3	48.68	38.83	29.88	30.80	21.53	14.76	10.22	7.52	4.70	83.0	94.1	68.5	5.5	6.5	239.5	40.7	4.8	1.5
2498.3	3	15643	142.8	49.48	39.51	30.44	31.32	21.93	15.07	10.45	7.65	4.78	83.0	94.1	68.5	5.5	6.5	256.3	38.8	4.6	1.4
2498.3	4	20309	185.4	65.09	52.15	40.32	41.52	29.21	20.15	13.95	10.15	6.18	83.0	94.1	68.5	5.5	6.5	282.0	28.1	5.2	1.4
2698.3	1	11984	109.4	15.20	11.27	9.71	9.75	8.06	6.53	5.18	4.11	2.93	77.9	93.2	69.2	13.1	6.2	202.4	15.7	18.2	1.0
2698.3	2	15873	144.9	20.20	15.15	13.06	13.29	10.88	8.79	7.01	5.65	3.93	77.9	93.2	69.2	13.1	6.2	207.6	14.3	18.2	0.7
2698.3	3	15862	144.8	20.22	15.22	13.08	13.34	10.94	8.82	7.05	5.70	3.96	77.9	93.2	69.2	13.1	6.2	207.4	17.3	16.8	0.8
2698.3	4	20255	184.9	25.43	19.38	16.71	16.98	13.97	11.32	9.02	7.26	5.00	77.9	93.2	69.2	13.1	6.2	219.0	17.6	15.7	0.8
2804.3	1	12028	109.8	7.26	5.44	5.03	5.26	4.75	4.15	3.63	3.17	2.41	76.8	94.6	69.6	18.0	7.4	442.7	12.9	28.9	1.7
2804.3	2	15928	145.4	9.70	7.36	6.82	6.95	6.33	5.65	4.91	4.36	3.27	76.8	94.6	69.6	18.0	7.4	445.8	6.3	31.5	0.9
2804.3	3	15895	145.1	9.72	7.36	6.83	6.95	6.35	5.66	4.89	4.35	3.28	76.8	94.6	69.6	18.0	7.4	444.0	6.2	31.5	1.1
2804.3	4	20134	183.8	12.00	9.14	8.50	8.63	7.86	7.05	6.12	5.44	4.08	76.8	94.6	69.6	18.0	7.4	491.3	5.2	27.6	1.2
2900.7	1	11995	109.5	6.17	3.98	3.73	3.94	3.41	3.04	2.69	2.41	1.90	75.7	93.1	69.3	19.7	5.8	369.1	73.6	43.7	2.2
2900.7	2	15982	145.9	8.08	5.38	4.99	5.27	4.59	4.13	3.63	3.22	2.56	75.7	93.1	69.3	19.7	5.8	381.6	61.2	43.6	1.7
2900.7	3	15895	145.1	8.00	5.35	4.95	5.22	4.56	4.12	3.60	3.17	2.50	75.7	93.1	69.3	19.7	5.8	384.2	61.6	43.5	1.8
2900.7	4	20255	184.9	9.78	6.64	6.17	6.47	5.67	5.11	4.48	4.01	3.11	75.7	93.1	69.3	19.7	5.8	412.9	46.3	45.2	1.6



## Summary of FWD Data and Backcalculation Results (ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mills (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC	Base	AC	Base	Subgrade	
3101.3	1	11907	108.7	13.89	5.91	4.02	6.63	3.83	3.24	2.72	2.33	1.74	75.5	90.7	70.0	16.7	21.9	86.4	118.9	40.3	6.0
3101.3	2	16092	146.9	18.02	8.11	5.65	9.06	5.29	4.52	3.81	3.22	2.35	75.5	90.7	70.0	16.7	21.9	98.6	93.2	41.1	5.7
3101.3	3	15840	144.6	17.54	7.97	5.58	8.98	5.24	4.55	3.75	3.17	2.32	75.5	90.7	70.0	16.7	21.9	99.2	100.8	39.9	6.0
3101.3	4	20353	185.8	22.02	10.31	7.27	11.24	6.77	5.87	4.84	4.10	2.98	75.5	90.7	70.0	16.7	21.9	102.8	95.8	39.8	5.4
3298.7	1	12061	110.1	7.05	3.89	3.07	3.04	3.03	2.80	2.41	2.07	1.70	75.1	93.1	68.4	22.1	8.5	196.3	1154.5	39.2	5.7
3298.7	2	15928	145.4	9.01	5.15	4.12	4.14	3.95	3.52	3.14	2.81	2.23	75.1	93.1	68.4	22.1	8.5	226.9	330.0	45.0	3.0
3298.7	3	15961	145.7	8.93	5.17	4.13	4.17	3.98	3.56	3.17	2.81	2.24	75.1	93.1	68.4	22.1	8.5	232.8	328.9	44.0	3.3
3298.7	4	20233	184.7	10.83	6.39	5.14	5.19	4.93	4.39	3.91	3.50	2.76	75.1	93.1	68.4	22.1	8.5	248.2	272.9	45.8	2.8
3488.3	1	12083	110.3	10.14	6.69	5.68	5.67	4.83	3.99	3.28	2.76	2.09	77.6	92.0	67.5	12.5	7.5	232.0	88.3	33.4	1.3
3488.3	2	15982	145.9	13.25	8.93	7.61	7.63	6.48	5.34	4.41	3.75	2.80	77.6	92.0	67.5	12.5	7.5	240.0	92.5	31.6	1.1
3488.3	3	15796	144.2	13.10	8.80	7.52	7.53	6.40	5.28	4.35	3.68	2.76	77.6	92.0	67.5	12.5	7.5	242.9	90.4	31.7	1.3
3488.3	4	20222	184.6	16.35	11.26	9.58	9.60	8.17	6.73	5.54	4.72	3.49	77.6	92.0	67.5	12.5	7.5	253.4	96.6	29.7	0.8
3690.7	1	11896	108.6	22.44	17.02	12.75	13.62	8.97	5.97	3.97	2.92	1.86	79.6	90.2	66.9	6.7	6.8	222.5	47.2	8.6	2.1
3690.7	2	15818	144.4	29.67	22.76	17.06	18.30	12.22	8.28	5.60	4.09	2.50	79.6	90.2	66.9	6.7	6.8	220.8	55.3	8.2	1.9
3690.7	3	15895	145.1	29.69	22.74	17.19	18.31	12.24	8.26	5.53	4.07	2.55	79.6	90.2	66.9	6.7	6.8	229.4	51.8	8.3	1.9
3690.7	4	20288	185.2	37.98	29.19	22.09	23.52	15.86	10.78	7.31	5.35	3.26	79.6	90.2	66.9	6.7	6.8	257.3	36.8	9.4	1.7
3893.0	1	11962	109.2	20.42	15.39	11.25	11.69	7.76	5.49	3.97	3.04	2.12	78.5	90.6	69.1	6.9	7.9	192.1	45.6	12.1	2.8
3893.0	2	15928	145.4	27.17	20.72	15.28	15.76	10.74	7.54	5.50	4.35	2.96	78.5	90.6	69.1	6.9	7.9	208.4	32.1	15.5	2.2
3893.0	3	15862	144.8	27.09	20.70	15.30	15.88	10.75	7.62	5.52	4.33	2.95	78.5	90.6	69.1	6.9	7.9	197.2	49.0	11.6	2.9
3893.0	4	20288	185.2	34.46	26.46	19.70	20.48	13.97	9.92	7.26	5.74	3.89	78.5	90.6	69.1	6.9	7.9	204.8	34.9	15.2	2.1
4090.0	1	11886	108.5	27.29	19.09	12.85	13.59	7.98	4.85	3.03	2.15	1.54	79.9	92.1	69.5	6.2	8.7	147.4	30.4	8.6	2.5
4090.0	2	15752	143.8	35.39	25.07	17.12	18.16	10.82	6.61	4.20	3.07	2.12	79.9	92.1	69.5	6.2	8.7	154.7	39.2	7.3	3.6
4090.0	3	15884	145.0	35.31	25.11	17.21	18.18	10.87	6.67	4.22	3.05	2.08	79.9	92.1	69.5	6.2	8.7	160.1	38.1	7.3	3.3
4090.0	4	20277	185.1	44.54	31.89	22.02	23.35	14.04	8.69	5.49	3.96	2.57	79.9	92.1	69.5	6.2	8.7	144.5	45.8	7.1	3.5
4291.7	1	12039	109.9	24.28	18.38	13.80	15.73	9.96	6.88	4.85	3.69	2.39	80.1	94.2	68.6	7.5	10.4	177.0	27.2	10.1	2.2
4291.7	2	15731	143.6	31.45	24.09	18.17	20.41	13.28	9.27	6.57	4.96	3.20	80.1	94.2	68.6	7.5	10.4	182.1	30.7	8.8	2.3
4291.7	3	15961	145.7	31.61	24.26	18.31	20.57	13.41	9.37	6.65	5.00	3.23	80.1	94.2	68.6	7.5	10.4	188.5	29.2	9.3	2.0
4291.7	4	20364	185.9	40.46	31.20	23.70	26.52	17.42	12.19	8.67	6.52	4.10	80.1	94.2	68.6	7.5	10.4	181.5	34.7	8.1	2.2
4490.7	1	12039	109.9	23.15	15.27	9.92	11.27	6.29	4.22	3.18	2.61	2.07	77.0	91.4	69.3	10.1	5.9	76.2	14.3	33.0	4.9
4490.7	2	15895	145.1	29.40	19.80	13.06	14.54	8.42	5.72	4.27	3.61	2.78	77.0	91.4	69.3	10.1	5.9	78.6	11.0	46.5	4.9
4490.7	3	15873	144.9	28.79	19.49	12.97	14.50	8.41	5.70	4.27	3.55	2.80	77.0	91.4	69.3	10.1	5.9	85.2	14.3	33.7	4.9
4490.7	4	20419	186.4	36.43	25.02	16.84	18.63	10.97	7.46	5.58	4.67	3.61	77.0	91.4	69.3	10.1	5.9	86.9	14.3	34.1	5.0
4692.0	1	12061	110.1	16.27	12.41	9.27	9.66	6.85	5.03	3.87	3.19	2.40	78.5	93.1	69.3	9.0	5.3	190.7	33.5	24.7	2.8
4692.0	2	15906	145.2	21.24	16.36	12.33	12.93	9.20	6.80	5.22	4.31	3.19	78.5	93.1	69.3	9.0	5.3	204.5	17.5	33.7	2.5
4692.0	3	15939	145.5	21.26	16.41	12.39	12.92	9.24	6.83	5.24	4.32	3.20	78.5	93.1	69.3	9.0	5.3	200.3	34.6	23.7	2.8
4692.0	4	20222	184.6	26.81	20.82	15.79	16.43	11.81	8.75	6.69	5.48	4.10	78.5	93.1	69.3	9.0	5.3	208.3	31.2	24.5	2.7
4893.3	1	12050	110.0	30.70	23.71	17.28	17.27	11.66	7.62	4.94	3.49	2.29	79.8	91.7	69.3	6.1	6.3	192.0	42.9	5.7	2.1

## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mils (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, $E_{FWD}$ (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC	Base	AC	Base	Subgrade	
4893.3	2	15599	142.4	38.90	30.27	22.37	22.27	15.33	9.95	6.52	4.84	2.93	79.8	91.7	69.3	6.1	6.3	202.6	41.1	6.0	2.4
4893.3	3	15840	144.6	39.01	30.41	22.53	22.41	15.46	10.07	6.65	4.94	2.97	79.8	91.7	69.3	6.1	6.3	211.1	41.4	6.1	2.4
4893.3	4	20277	185.1	49.57	38.82	28.92	28.80	19.97	13.20	8.73	6.25	3.77	79.8	91.7	69.3	6.1	6.3	240.9	30.9	6.7	2.0
5096.3	1	12159	111.0	38.85	27.65	19.39	22.79	13.24	8.81	5.88	4.33	3.06	65.3	68.0	69.3	6.1	5.3	51.3	42.3	5.8	3.0
5096.3	2	15511	141.6	47.82	34.38	24.52	28.78	16.95	11.22	7.62	5.78	3.87	65.3	68.0	69.3	6.1	5.3	69.6	22.1	7.3	2.1
5096.3	3	15796	144.2	46.81	33.78	24.20	28.34	16.81	11.28	7.70	5.89	3.95	65.3	68.0	69.3	6.1	5.3	74.0	24.6	7.5	2.2
5096.3	4	20529	187.4	59.84	43.59	31.47	36.83	22.04	14.94	10.23	7.71	5.26	65.3	68.0	69.3	6.1	5.3	74.4	27.0	7.4	1.9

**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Project Name: RKS Master Plan  
Segment: Taxiway C, 8' Lt  
Direction: Southeast

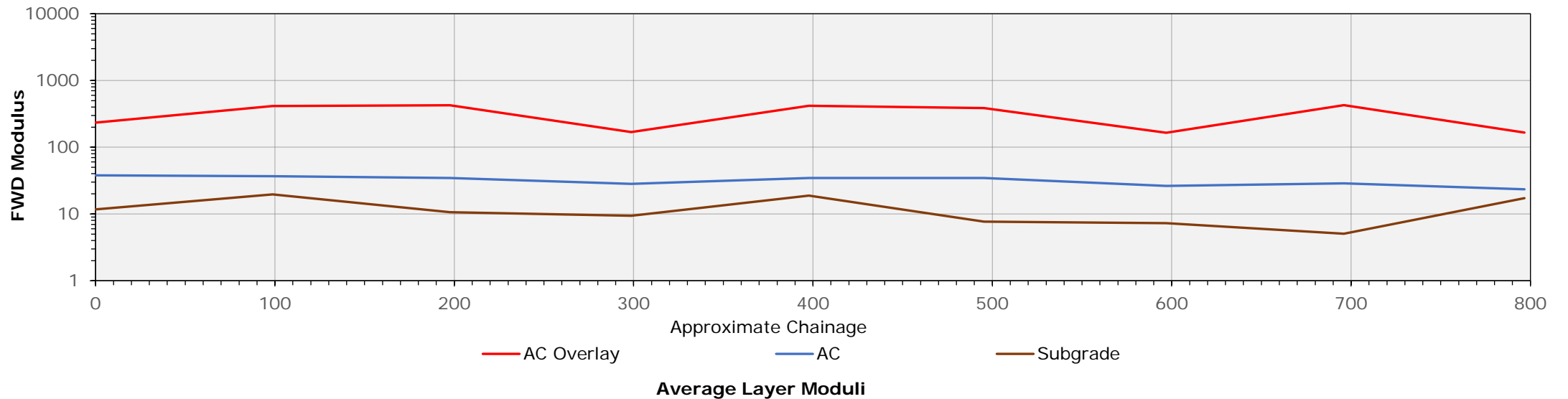
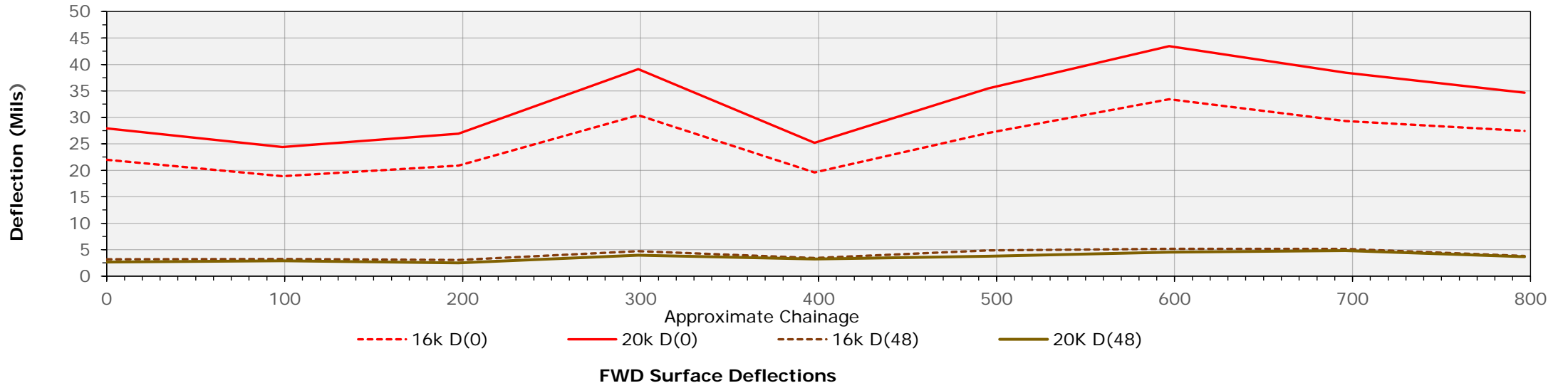
Calc. Date: August 14, 2023  
Project No.: 110339

**Summary of Input Data**

Date of FWD Testing: May 16, 2023  
PDAT (BELLS): 52° F  
FWD Plate Radius: 5.905"

**Summary of Backcalculated Moduli**

	AC	Base	Subgrade	RMS (%)
Mean:	285.8	30.9	10.8	2.1
Standard Deviation:	99.5	6.1	3.9	



## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mils (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC	Base	AC	Base	Subgrade	
0.0	1	12006	109.6	22.00	16.87	12.81	14.44	9.21	6.31	4.33	3.17	2.09	66.4	67.7	57.4	5.3	7.9	234.3	27.9	13.5	3.1
0.0	2	16202	147.9	28.46	21.87	16.73	18.78	12.08	8.33	5.74	4.17	2.68	66.4	67.7	57.4	5.3	7.9	235.2	38.3	11.5	2.1
0.0	3	15928	145.4	27.91	21.47	16.43	18.44	11.87	8.19	5.65	4.11	2.65	66.4	67.7	57.4	5.3	7.9	236.1	38.3	11.6	2.1
0.0	4	20288	185.2	35.00	26.93	20.61	23.01	14.92	10.35	7.16	5.20	3.28	66.4	67.7	57.4	5.3	7.9	230.0	47.2	10.3	1.5
98.7	1	12039	109.9	18.89	14.73	11.17	11.88	8.07	5.74	4.16	3.25	2.21	66.9	68.4	57.2	4.6	5.6	351.9	52.2	16.0	1.2
98.7	2	16300	148.8	25.08	19.68	15.06	15.98	10.98	7.86	5.74	4.42	2.96	66.9	68.4	57.2	4.6	5.6	427.4	31.7	20.7	2.4
98.7	3	15862	144.8	24.40	19.15	14.64	15.54	10.70	7.69	5.59	4.33	2.91	66.9	68.4	57.2	4.6	5.6	417.9	35.1	19.9	2.3
98.7	4	20375	186.0	31.29	24.63	18.89	20.05	13.82	9.95	7.26	5.59	3.74	66.9	68.4	57.2	4.6	5.6	452.9	27.6	22.0	2.9
197.7	1	11951	109.1	20.87	16.37	12.46	13.28	8.88	6.09	4.17	3.06	1.91	67.6	69.2	57.3	4.4	9.8	389.1	37.8	9.8	1.4
197.7	2	16180	147.7	27.68	21.91	16.76	17.74	12.00	8.30	5.69	4.13	2.57	67.6	69.2	57.3	4.4	9.8	429.3	33.3	11.1	2.1
197.7	3	15873	144.9	26.93	21.31	16.34	17.38	11.71	8.06	5.55	4.09	2.51	67.6	69.2	57.3	4.4	9.8	436.0	34.7	10.9	1.9
197.7	4	20320	185.5	34.73	27.56	21.15	22.37	15.15	10.47	7.17	5.23	3.21	67.6	69.2	57.3	4.4	9.8	451.7	33.2	10.7	1.8
298.7	1	12116	110.6	30.41	22.68	16.80	18.81	12.02	8.50	6.10	4.70	3.02	68.5	70.7	57.4	4.9	9.2	157.9	26.9	10.1	1.5
298.7	2	15993	146.0	39.57	29.91	22.44	24.88	16.13	11.49	8.23	6.26	3.99	68.5	70.7	57.4	4.9	9.2	165.7	29.1	9.3	1.1
298.7	3	15939	145.5	39.11	29.67	22.31	24.70	16.09	11.45	8.23	6.28	3.96	68.5	70.7	57.4	4.9	9.2	170.7	28.8	9.4	1.3
298.7	4	20342	185.7	50.52	38.71	29.20	32.02	21.06	15.02	10.75	8.13	5.09	68.5	70.7	57.4	4.9	9.2	179.1	28.0	8.9	1.3
397.7	1	11951	109.1	19.62	15.34	11.64	12.65	8.43	5.98	4.40	3.45	2.48	68.4	70.4	57.4	4.6	6.2	349.5	48.3	15.1	1.1
397.7	2	16322	149.0	26.04	20.50	15.70	17.04	11.44	8.19	6.04	4.71	3.33	68.4	70.4	57.4	4.6	6.2	433.7	30.5	19.4	1.7
397.7	3	15829	144.5	25.18	19.86	15.24	16.50	11.12	7.97	5.87	4.56	3.23	68.4	70.4	57.4	4.6	6.2	428.3	32.5	19.2	1.9
397.7	4	20353	185.8	32.17	25.41	19.57	21.19	14.33	10.30	7.57	5.91	4.09	68.4	70.4	57.4	4.6	6.2	453.4	26.8	21.7	2.4
495.3	1	11962	109.2	27.04	21.99	17.61	19.10	13.34	9.79	6.82	4.89	2.83	68.6	70.9	57.3	4.8	6.2	355.6	40.9	7.2	2.6
495.3	2	15982	145.9	35.94	29.33	23.63	25.75	17.88	13.17	9.15	6.56	3.79	68.6	70.9	57.3	4.8	6.2	368.4	41.7	7.1	2.6
495.3	3	15840	144.6	35.48	29.00	23.37	25.47	17.66	13.02	9.09	6.51	3.77	68.6	70.9	57.3	4.8	6.2	396.5	30.1	8.2	3.1
495.3	4	20288	185.2	46.11	37.70	30.45	33.26	22.87	16.78	11.71	8.37	4.82	68.6	70.9	57.3	4.8	6.2	425.8	25.2	8.3	3.4
597.0	1	11962	109.2	33.43	26.09	19.79	21.17	14.26	9.59	6.83	5.17	3.38	63.8	63.9	57.1	5.1	6.9	143.8	33.4	6.3	1.8
597.0	2	15851	144.7	43.66	34.38	26.34	28.07	19.12	12.98	9.31	7.04	4.49	63.8	63.9	57.1	5.1	6.9	171.4	22.5	7.8	1.6
597.0	3	15895	145.1	43.46	34.33	26.39	28.07	19.20	13.05	9.35	7.08	4.54	63.8	63.9	57.1	5.1	6.9	175.8	22.5	7.8	1.6
597.0	4	20331	185.6	55.43	43.97	33.90	36.00	24.73	16.91	12.12	9.16	5.77	63.8	63.9	57.1	5.1	6.9	167.8	26.5	7.2	1.9
696.0	1	11951	109.1	29.31	24.27	19.59	19.26	14.94	10.80	7.21	5.14	3.61	69.1	71.5	57.8	4.8	8.1	387.5	31.9	5.0	3.4
696.0	2	16015	146.2	39.05	32.46	26.35	26.04	20.16	14.63	9.81	6.96	4.87	69.1	71.5	57.8	4.8	8.1	446.6	26.3	5.2	3.2
696.0	3	15851	144.7	38.44	32.00	26.02	25.67	19.94	14.48	9.76	6.92	4.83	69.1	71.5	57.8	4.8	8.1	452.9	26.3	5.2	3.0
696.0	4	20211	184.5	49.20	41.01	33.40	33.07	25.59	18.60	12.52	8.83	6.11	69.1	71.5	57.8	4.8	8.1	420.4	30.9	4.9	3.0
796.7	1	11973	109.3	27.46	19.52	13.58	14.67	9.14	6.31	4.66	3.81	2.83	67.6	69.3	57.9	4.8	8.3	147.8	22.4	17.9	1.8
796.7	2	15993	146.0	35.39	25.52	18.03	19.37	12.24	8.52	6.23	4.99	3.68	67.6	69.3	57.9	4.8	8.3	162.2	24.4	16.6	1.5
796.7	3	15950	145.6	34.67	25.19	17.86	19.12	12.13	8.47	6.20	4.97	3.67	67.6	69.3	57.9	4.8	8.3	168.8	25.0	16.2	1.5
796.7	4	20507	187.2	44.11	32.30	23.06	24.65	15.73	11.01	8.02	6.35	4.59	67.6	69.3	57.9	4.8	8.3	185.7	22.0	18.2	1.5

**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Project Name: RKS Master Plan  
Segment: Taxiway C, 8' Rt  
Direction: Southeast

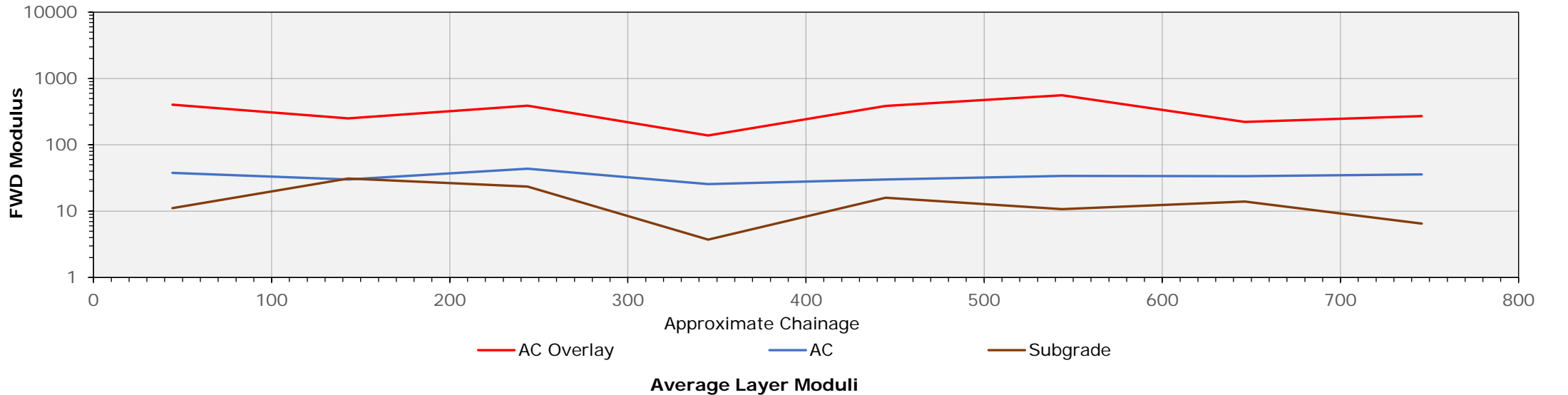
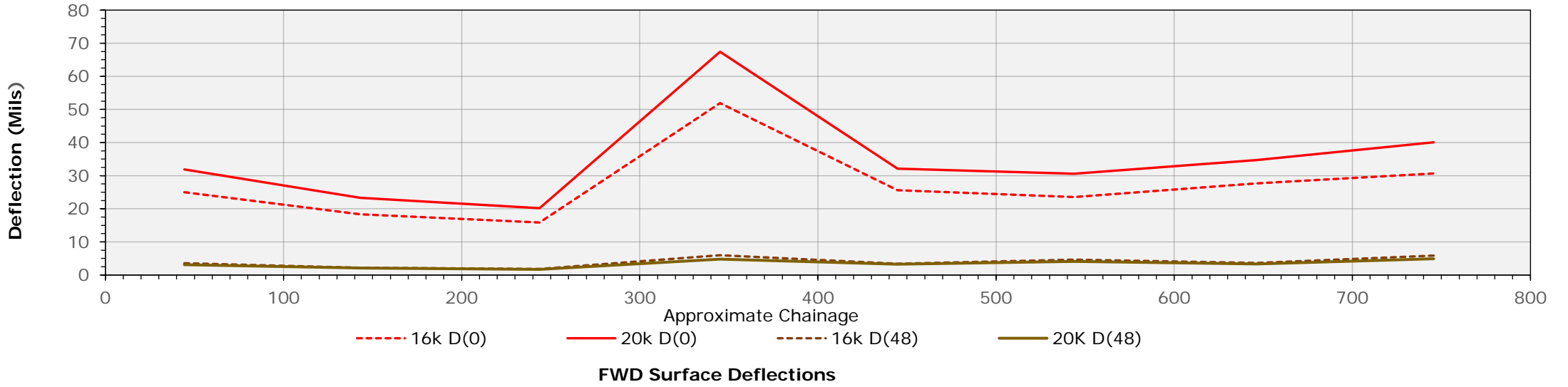
Calc. Date: August 14, 2023  
Project No.: 110339

**Summary of Input Data**

Date of FWD Testing: May 16, 2023  
PDAT (BELLS): 52° F  
FWD Plate Radius: 5.905"

**Summary of Backcalculated Moduli**

	AC	Base	Subgrade	RMS (%)
Mean:	302.3	33.1	12.1	1.7
Standard Deviation:	102.4	6.2	5.7	



## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mils (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC	Base	AC	Base	Subgrade	
44.3	1	11940	109.0	25.02	19.38	14.48	15.14	10.21	6.97	4.81	3.58	2.40	69.0	71.1	59.1	4.1	6.3	352.0	46.0	9.3	1.2
44.3	2	16092	146.9	32.40	25.19	18.91	19.72	13.39	9.22	6.39	4.79	3.17	69.0	71.1	59.1	4.1	6.3	404.4	38.0	11.0	1.6
44.3	3	15884	145.0	31.87	24.79	18.60	19.44	13.21	9.10	6.33	4.74	3.12	69.0	71.1	59.1	4.1	6.3	421.0	33.9	11.8	2.0
44.3	4	20342	185.7	40.23	31.25	23.42	24.50	16.59	11.43	7.95	5.98	3.93	69.0	71.1	59.1	4.1	6.3	432.0	33.4	12.2	2.0
143.0	1	11962	109.2	18.37	12.66	8.64	9.53	5.70	3.85	2.75	2.18	1.63	68.7	70.9	58.1	4.7	7.6	235.7	29.9	29.2	1.4
143.0	2	16300	148.8	24.09	16.71	11.52	12.71	7.62	5.20	3.72	2.96	2.23	68.7	70.9	58.1	4.7	7.6	249.1	29.8	31.9	1.8
143.0	3	15807	144.3	23.32	16.24	11.21	12.37	7.40	5.03	3.60	2.86	2.16	68.7	70.9	58.1	4.7	7.6	260.1	29.0	31.7	1.6
143.0	4	20331	185.6	29.44	20.55	14.19	15.63	9.43	6.43	4.63	3.67	2.74	68.7	70.9	58.1	4.7	7.6	259.0	31.2	31.3	1.5
243.7	1	11995	109.5	15.87	11.17	7.93	8.57	5.32	3.46	2.40	1.85	1.36	69.0	71.1	58.3	4.2	10.0	377.3	39.4	25.5	2.0
243.7	2	16256	148.4	20.78	14.73	10.50	11.25	7.07	4.61	3.17	2.42	1.76	69.0	71.1	58.3	4.2	10.0	379.8	46.2	22.4	2.0
243.7	3	15818	144.4	20.19	14.35	10.23	10.98	6.90	4.50	3.08	2.37	1.71	69.0	71.1	58.3	4.2	10.0	399.1	44.5	22.7	2.1
243.7	4	20320	185.5	25.53	18.11	12.89	13.84	8.68	5.65	3.89	2.96	2.14	69.0	71.1	58.3	4.2	10.0	406.4	44.6	23.4	2.1
345.0	1	11940	109.0	51.92	39.08	28.69	30.81	19.80	13.11	8.50	5.99	3.52	69.9	72.6	58.5	4.4	6.6	133.6	25.7	3.7	1.5
345.0	2	15446	141.0	66.76	50.62	37.44	40.27	26.04	17.38	11.31	7.96	4.65	69.9	72.6	58.5	4.4	6.6	134.5	27.2	3.7	1.5
345.0	3	15654	142.9	67.42	51.33	38.06	40.93	26.53	17.77	11.58	8.15	4.77	69.9	72.6	58.5	4.4	6.6	141.9	25.3	3.8	1.5
345.0	4	19948	182.1	87.22	66.69	49.60	53.37	34.71	23.27	15.20	10.68	6.14	69.9	72.6	58.5	4.4	6.6	143.7	24.1	3.8	1.5
444.7	1	12017	109.7	25.62	18.87	13.48	14.14	9.22	6.17	4.37	3.43	2.43	69.9	72.3	58.5	3.9	5.7	372.3	25.5	15.5	1.4
444.7	2	16070	146.7	32.67	24.27	17.50	18.19	12.13	8.30	5.89	4.57	3.25	69.9	72.3	58.5	3.9	5.7	394.0	27.0	16.6	1.7
444.7	3	15862	144.8	32.09	23.91	17.22	17.93	11.96	8.19	5.80	4.52	3.25	69.9	72.3	58.5	3.9	5.7	414.3	24.0	17.8	2.1
444.7	4	20309	185.4	39.96	29.99	21.73	22.44	15.22	10.56	7.52	5.85	4.11	69.9	72.3	58.5	3.9	5.7	363.3	43.7	13.8	1.6
543.7	1	11907	108.7	23.54	19.46	15.27	15.27	11.39	8.40	6.09	4.67	3.06	70.1	72.8	58.1	4.4	6.5	512.0	30.1	11.7	1.5
543.7	2	15993	146.0	31.02	25.89	20.52	20.48	15.41	11.46	8.39	6.39	4.17	70.1	72.8	58.1	4.4	6.5	577.3	35.7	10.0	1.5
543.7	3	15906	145.2	30.63	25.62	20.33	20.25	15.30	11.35	8.33	6.42	4.11	70.1	72.8	58.1	4.4	6.5	575.5	34.9	10.4	1.3
543.7	4	20266	185.0	39.03	32.73	26.13	25.89	19.74	14.78	10.84	8.30	5.32	70.1	72.8	58.1	4.4	6.5	573.3	34.7	10.7	1.5
646.3	1	12094	110.4	27.67	19.74	14.31	15.89	9.90	6.70	4.74	3.66	2.61	70.8	73.7	58.7	4.3	7.5	219.6	28.7	13.8	2.0
646.3	2	16015	146.2	35.37	25.51	18.67	20.71	13.01	8.88	6.28	4.80	3.32	70.8	73.7	58.7	4.3	7.5	201.6	41.3	11.4	1.3
646.3	3	15895	145.1	34.74	25.14	18.45	20.48	12.89	8.82	6.24	4.79	3.32	70.8	73.7	58.7	4.3	7.5	206.5	41.3	11.6	1.3
646.3	4	20408	186.3	43.95	31.94	23.54	26.22	16.48	11.32	8.02	6.13	4.19	70.8	73.7	58.7	4.3	7.5	257.0	23.1	19.3	4.7
745.7	1	11929	108.9	30.70	24.93	19.67	20.54	14.84	10.77	7.77	5.85	3.69	70.7	73.9	58.7	4.9	7.7	257.2	35.7	6.3	1.3
745.7	2	15873	144.9	40.16	32.75	26.02	27.06	19.74	14.39	10.39	7.83	4.87	70.7	73.9	58.7	4.9	7.7	266.5	38.4	6.2	1.1
745.7	3	15939	145.5	40.11	32.76	26.07	27.08	19.79	14.48	10.44	7.89	4.92	70.7	73.9	58.7	4.9	7.7	268.3	38.9	6.2	1.3
745.7	4	20320	185.5	50.84	41.69	33.25	34.44	25.34	18.59	13.41	10.09	6.19	70.7	73.9	58.7	4.9	7.7	293.1	29.9	7.3	1.9

**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Project Name: RKS Master Plan  
Segment: Taxiway D, 10' Lt  
Direction: Northeast

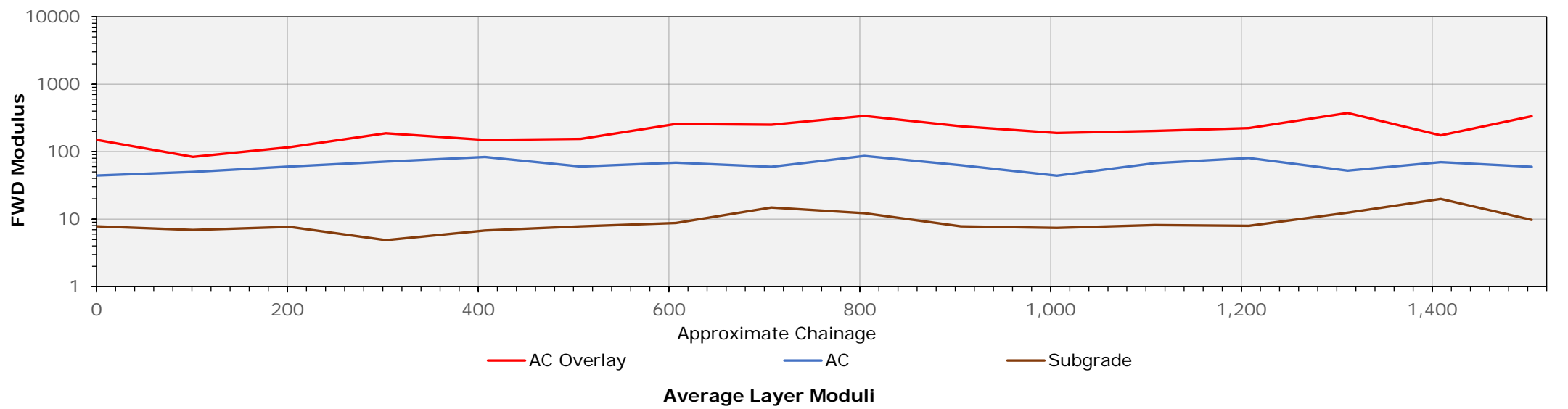
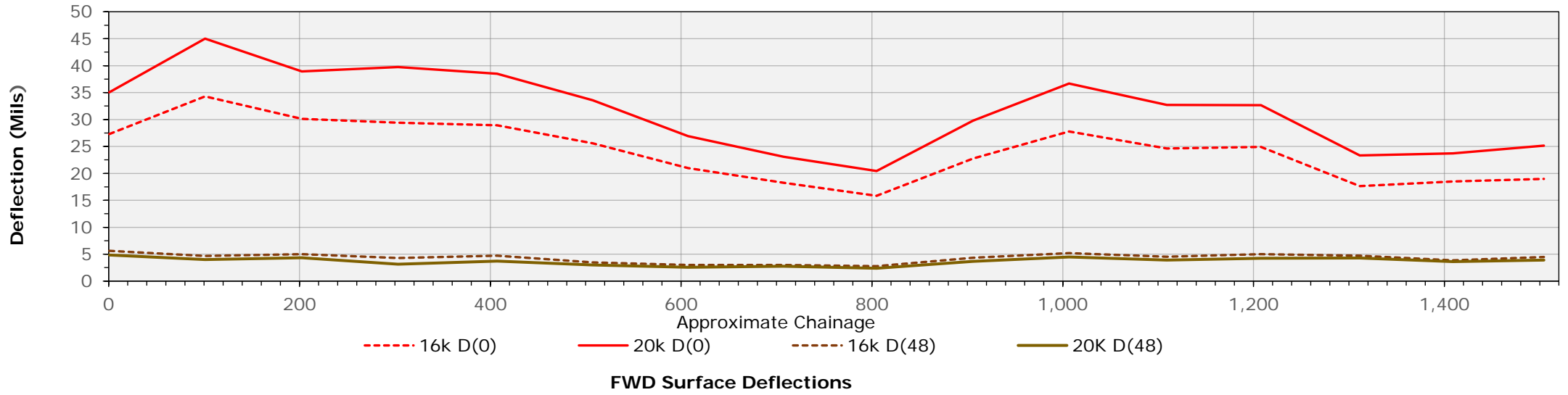
Calc. Date: August 14, 2023  
Project No.: 110339

**Summary of Input Data**

Date of FWD Testing: May 16, 2023  
PDAT (BELLS): 52° F  
FWD Plate Radius: 5.905"

**Summary of Backcalculated Moduli**

	AC	Base	Subgrade	RMS (%)
Mean:	198.5	61.5	7.8	1.7
Standard Deviation:	65.0	14.7	7.0	



**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mils (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC	Base	AC	Base	Subgrade	
0.7	1	11951	109.1	27.29	22.72	17.49	17.94	13.22	9.86	7.34	5.63	3.57	68.3	70.6	60.5	7.2	5.2	131.5	49.2	7.6	2.3
0.7	2	15895	145.1	35.37	29.50	22.94	23.41	17.44	13.06	9.79	7.54	4.79	68.3	70.6	60.5	7.2	5.2	154.6	47.3	7.3	2.4
0.7	3	15873	144.9	35.03	29.35	22.84	23.34	17.39	13.05	9.78	7.54	4.85	68.3	70.6	60.5	7.2	5.2	155.5	48.2	7.3	2.5
0.7	4	20375	186.0	44.41	37.27	29.09	29.56	22.21	16.72	12.54	9.68	6.10	68.3	70.6	60.5	7.2	5.2	156.7	32.8	9.0	2.0
101.0	1	11995	109.5	34.29	25.17	18.43	19.99	12.95	9.02	6.29	4.67	2.97	69.4	72.1	60.0	6.6	5.3	63.4	80.6	6.4	2.8
101.0	2	15709	143.4	44.81	33.25	24.57	26.46	17.42	12.22	8.56	6.39	4.00	69.4	72.1	60.0	6.6	5.3	89.3	41.0	7.1	1.7
101.0	3	15829	144.5	45.01	33.48	24.78	26.67	17.59	12.36	8.65	6.46	4.03	69.4	72.1	60.0	6.6	5.3	91.4	40.7	7.1	1.7
101.0	4	20364	185.9	58.43	43.73	32.52	34.89	23.19	16.35	11.47	8.56	5.30	69.4	72.1	60.0	6.6	5.3	90.6	38.5	7.2	1.7
202.3	1	12050	110.0	30.11	23.21	17.65	19.10	12.91	9.30	6.64	4.99	3.20	68.8	71.2	60.4	6.2	5.4	111.2	64.6	7.2	2.1
202.3	2	15818	144.4	38.98	30.13	23.04	24.93	16.94	12.31	8.80	6.63	4.30	68.8	71.2	60.4	6.2	5.4	117.9	52.6	8.1	1.4
202.3	3	15862	144.8	38.92	30.13	23.06	24.95	16.99	12.36	8.84	6.66	4.34	68.8	71.2	60.4	6.2	5.4	122.2	54.8	7.9	1.6
202.3	4	20397	186.2	50.38	39.06	29.90	32.40	22.04	16.04	11.52	8.70	5.61	68.8	71.2	60.4	6.2	5.4	115.7	68.3	7.4	2.1
303.3	1	11973	109.3	29.40	23.39	18.27	19.44	13.27	9.22	6.21	4.30	2.31	68.6	70.7	60.3	5.4	5.8	206.3	58.5	5.2	1.6
303.3	2	15741	143.7	39.37	31.46	24.73	26.26	18.09	12.69	8.60	5.94	3.13	68.6	70.7	60.3	5.4	5.8	175.3	82.8	4.7	1.6
303.3	3	15895	145.1	39.74	31.77	24.98	26.55	18.31	12.84	8.72	6.04	3.16	68.6	70.7	60.3	5.4	5.8	176.3	82.8	4.7	1.5
303.3	4	20364	185.9	52.41	42.04	33.17	35.18	24.37	17.17	11.67	8.05	4.15	68.6	70.7	60.3	5.4	5.8	189.1	60.5	5.0	1.5
407.0	1	11995	109.5	28.94	22.82	17.50	18.12	12.90	9.26	6.43	4.71	2.89	69.4	71.8	60.8	5.4	5.4	139.3	94.5	6.6	1.9
407.0	2	15796	144.2	38.38	30.45	23.56	24.31	17.46	12.62	8.83	6.48	3.86	69.4	71.8	60.8	5.4	5.4	149.7	78.8	6.9	1.7
407.0	3	15873	144.9	38.49	30.57	23.65	24.35	17.54	12.69	8.86	6.50	3.72	69.4	71.8	60.8	5.4	5.4	155.9	76.5	7.0	1.5
407.0	4	20255	184.9	49.44	39.38	30.54	31.46	22.71	16.47	11.53	8.48	4.90	69.4	71.8	60.8	5.4	5.4	151.2	85.0	6.6	1.8
507.3	1	11973	109.3	25.58	19.56	14.43	15.15	10.16	6.88	4.71	3.46	2.16	68.2	70.1	60.5	5.7	6.2	152.7	50.7	8.3	1.9
507.3	2	15862	144.8	33.69	25.99	19.40	20.26	13.79	9.42	6.50	4.80	2.97	68.2	70.1	60.5	5.7	6.2	147.2	73.3	7.0	2.5
507.3	3	15939	145.5	33.59	26.00	19.44	20.28	13.85	9.47	6.53	4.85	2.98	68.2	70.1	60.5	5.7	6.2	151.6	71.8	7.1	2.4
507.3	4	20397	186.2	43.10	33.58	25.22	26.19	18.07	12.45	8.62	6.40	3.93	68.2	70.1	60.5	5.7	6.2	164.0	45.9	8.8	1.7
607.3	1	12017	109.7	21.00	16.31	12.44	13.16	8.89	6.00	4.06	2.98	1.90	70.0	72.7	61.1	5.4	6.7	240.3	64.2	8.8	1.8
607.3	2	16004	146.1	27.41	21.36	16.44	17.32	11.83	8.09	5.52	4.03	2.57	70.0	72.7	61.1	5.4	6.7	239.2	82.6	8.1	1.8
607.3	3	15829	144.5	26.93	21.02	16.18	17.06	11.65	7.98	5.46	4.00	2.55	70.0	72.7	61.1	5.4	6.7	243.3	81.7	8.2	1.8
607.3	4	20277	185.1	34.49	26.98	20.86	21.98	15.08	10.37	7.11	5.22	3.29	70.0	72.7	61.1	5.4	6.7	307.0	46.4	10.0	1.4
707.3	1	12006	109.6	18.28	14.06	10.64	11.14	7.73	5.45	3.93	3.02	2.12	70.0	72.9	60.9	5.7	6.8	220.0	76.2	12.5	2.2
707.3	2	16092	146.9	23.63	18.32	13.98	14.57	10.21	7.29	5.31	4.11	2.81	70.0	72.9	60.9	5.7	6.8	261.3	52.9	15.4	1.3
707.3	3	15884	145.0	23.11	17.96	13.73	14.30	10.06	7.19	5.23	4.07	2.78	70.0	72.9	60.9	5.7	6.8	262.1	50.9	16.2	1.5
707.3	4	20342	185.7	29.31	22.86	17.56	18.28	12.93	9.27	6.76	5.25	3.63	70.0	72.9	60.9	5.7	6.8	258.0	57.9	15.6	1.5
805.0	1	12006	109.6	15.84	12.61	9.87	10.43	7.33	5.20	3.67	2.78	1.85	70.5	73.7	60.4	5.8	6.4	327.9	81.5	12.4	1.4
805.0	2	16180	147.7	21.02	16.77	13.20	13.95	9.82	7.00	4.93	3.72	2.44	70.5	73.7	60.4	5.8	6.4	299.0	116.8	11.2	1.9
805.0	3	15807	144.3	20.44	16.33	12.86	13.58	9.58	6.83	4.81	3.63	2.39	70.5	73.7	60.4	5.8	6.4	352.7	85.0	12.0	1.5
805.0	4	20309	185.4	26.36	21.12	16.67	17.61	12.43	8.86	6.23	4.67	3.03	70.5	73.7	60.4	5.8	6.4	377.4	62.3	13.4	1.5
906.0	1	11951	109.1	22.74	18.36	14.63	15.22	11.15	8.07	5.80	4.35	2.69	70.8	74.2	60.5	6.1	6.3	217.6	61.9	8.2	1.5
906.0	2	15884	145.0	30.03	24.41	19.56	20.30	14.97	10.90	7.89	5.92	3.66	70.8	74.2	60.5	6.1	6.3	250.6	60.6	7.7	1.5
906.0	3	15807	144.3	29.80	24.22	19.44	20.16	14.89	10.86	7.86	5.90	3.65	70.8	74.2	60.5	6.1	6.3	249.8	62.2	7.7	1.4



## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mils (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, $E_{FWD}$ (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC	Base	AC	Base	Subgrade	
906.0	4	20331	185.6	38.59	31.47	25.35	26.28	19.46	14.25	10.31	7.72	4.76	70.8	74.2	60.5	6.1	6.3	230.2	66.7	7.7	1.3
1006.7	1	11951	109.1	27.78	22.29	17.43	18.06	13.04	9.42	6.87	5.19	3.28	70.7	73.9	60.8	5.8	6.8	201.7	33.7	8.2	1.4
1006.7	2	15840	144.6	36.76	29.63	23.26	24.04	17.49	12.80	9.25	7.01	4.44	70.7	73.9	60.8	5.8	6.8	172.9	53.1	6.9	1.6
1006.7	3	15906	145.2	36.69	29.59	23.26	24.04	17.51	12.85	9.30	7.03	4.47	70.7	73.9	60.8	5.8	6.8	174.7	54.1	6.9	1.6
1006.7	4	20331	185.6	47.30	38.26	30.17	31.07	22.76	16.73	12.10	9.12	5.74	70.7	73.9	60.8	5.8	6.8	207.5	35.1	7.8	1.3
1109.0	1	11907	108.7	24.62	19.61	15.33	16.02	11.44	8.31	5.98	4.54	2.87	71.0	74.4	60.3	5.7	6.2	218.4	49.5	9.0	1.5
1109.0	2	15829	144.5	32.58	26.03	20.48	21.39	15.37	11.24	8.12	6.15	3.89	71.0	74.4	60.3	5.7	6.2	191.8	82.3	7.4	2.0
1109.0	3	15961	145.7	32.69	26.12	20.57	21.47	15.46	11.33	8.20	6.21	3.91	71.0	74.4	60.3	5.7	6.2	190.9	85.2	7.5	2.0
1109.0	4	20331	185.6	42.08	33.72	26.65	27.77	20.07	14.74	10.66	8.06	5.06	71.0	74.4	60.3	5.7	6.2	211.8	54.0	8.8	1.5
1207.7	1	12050	110.0	24.90	19.96	15.94	16.67	12.20	8.98	6.59	4.99	3.11	71.3	74.7	61.3	5.4	6.2	208.9	83.2	7.9	1.4
1207.7	2	15873	144.9	32.78	26.43	21.26	22.18	16.36	12.16	8.95	6.80	4.24	71.3	74.7	61.3	5.4	6.2	213.8	91.6	7.5	1.3
1207.7	3	15818	144.4	32.64	26.32	21.19	22.06	16.31	12.12	8.94	6.80	4.24	71.3	74.7	61.3	5.4	6.2	215.5	90.4	7.6	1.2
1207.7	4	20309	185.4	42.15	34.11	27.54	28.61	21.27	15.83	11.71	8.91	5.51	71.3	74.7	61.3	5.4	6.2	253.5	56.5	8.8	1.2
1311.3	1	12039	109.9	17.64	14.89	12.37	13.05	9.96	7.72	5.89	4.70	3.18	70.4	73.7	61.4	6.4	6.4	361.5	53.0	12.4	1.3
1311.3	2	15982	145.9	23.44	19.85	16.58	17.50	13.42	10.46	8.02	6.42	4.31	70.4	73.7	61.4	6.4	6.4	354.9	63.4	11.5	1.1
1311.3	3	15895	145.1	23.32	19.74	16.51	17.42	13.37	10.44	8.00	6.40	4.30	70.4	73.7	61.4	6.4	6.4	392.6	54.2	11.7	1.3
1311.3	4	20309	185.4	29.90	25.39	21.28	22.42	17.24	13.51	10.37	8.30	5.54	70.4	73.7	61.4	6.4	6.4	387.8	39.0	14.1	1.6
1409.0	1	12137	110.8	18.48	13.94	10.69	11.26	8.18	6.20	4.80	3.88	2.77	72.0	76.4	61.7	6.7	5.7	157.3	75.2	19.4	1.8
1409.0	2	15851	144.7	23.63	17.90	13.83	14.52	10.63	8.11	6.28	5.07	3.59	72.0	76.4	61.7	6.7	5.7	173.6	70.2	19.8	1.7
1409.0	3	16026	146.3	23.70	18.00	13.93	14.61	10.70	8.17	6.33	5.12	3.62	72.0	76.4	61.7	6.7	5.7	169.5	80.3	19.1	1.8
1409.0	4	20309	185.4	29.75	22.69	17.61	18.41	13.54	10.34	8.00	6.47	4.56	72.0	76.4	61.7	6.7	5.7	197.3	53.5	21.5	1.5
1504.3	1	11984	109.4	18.96	15.80	13.03	13.69	10.19	7.74	5.80	4.48	2.96	72.6	77.2	61.7	6.4	6.5	305.8	63.4	10.2	1.1
1504.3	2	15972	145.8	25.34	21.21	17.53	18.41	13.76	10.52	7.85	6.07	3.95	72.6	77.2	61.7	6.4	6.5	332.8	62.2	9.5	1.4
1504.3	3	15884	145.0	25.17	21.07	17.43	18.36	13.68	10.46	7.80	6.04	3.92	72.6	77.2	61.7	6.4	6.5	335.5	61.5	9.5	1.4
1504.3	4	20353	185.8	32.39	27.22	22.55	23.51	17.77	13.59	10.16	7.81	5.06	72.6	77.2	61.7	6.4	6.5	367.3	51.1	9.7	1.3

**Summary of FWD Data and Backcalculation Results**  
(ELMOD 6 version 6.1.86)

Project Name: RKS Master Plan  
Segment: Taxiway D, 6' Rt  
Direction: Northeast

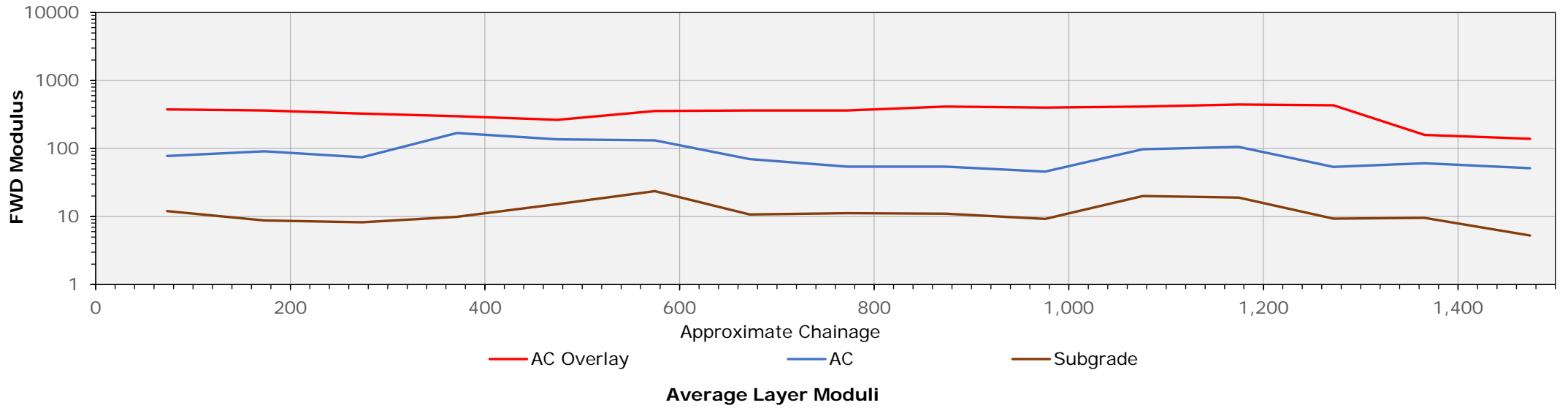
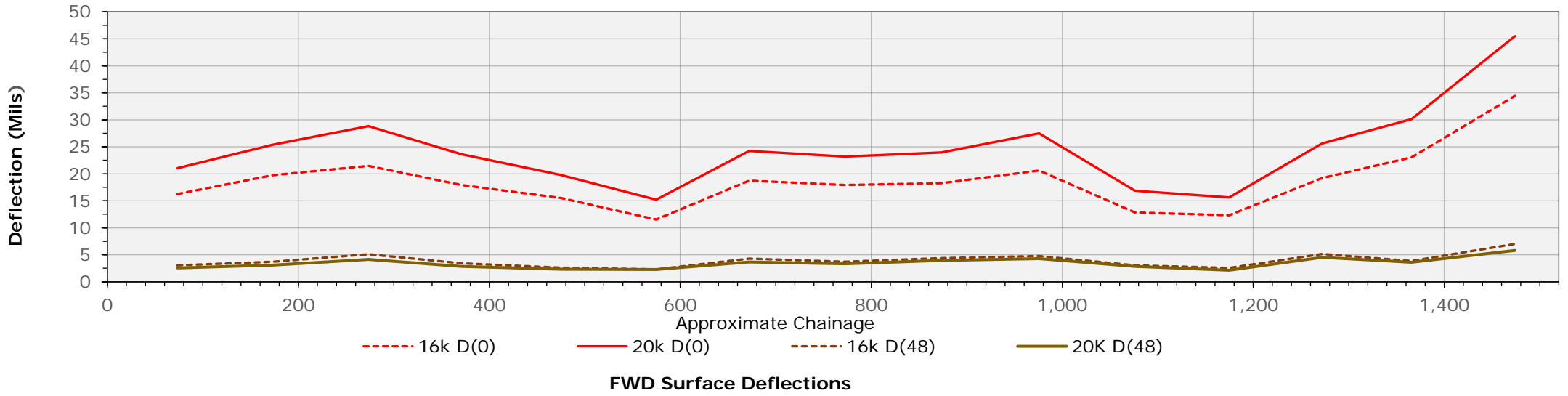
Calc. Date: August 14, 2023  
Project No.: 110339

**Summary of Input Data**

Date of FWD Testing: May 16, 2023  
PDAT (BELLS): 52° F  
FWD Plate Radius: 5.905"

**Summary of Backcalculated Moduli**

	AC	Base	Subgrade	RMS (%)
Mean:	324.0	77.4	11.3	1.5
Standard Deviation:	94.5	26.6	3.6	



## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mils (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, E <sub>FWD</sub> (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC	Base	AC	Base	Subgrade	
73.3	1	12006	109.6	16.23	13.23	10.46	10.84	7.84	5.70	4.02	3.05	1.97	71.4	75.1	62.0	5.9	6.1	328.0	89.4	11.6	1.6
73.3	2	16059	146.6	21.41	17.52	13.90	14.46	10.46	7.61	5.41	4.09	2.65	71.4	75.1	62.0	5.9	6.1	384.2	82.3	11.4	1.4
73.3	3	15785	144.1	21.03	17.22	13.67	14.23	10.30	7.49	5.33	4.06	2.59	71.4	75.1	62.0	5.9	6.1	384.5	79.7	11.6	1.5
73.3	4	20320	185.5	26.85	22.02	17.49	18.19	13.17	9.59	6.86	5.19	3.44	71.4	75.1	62.0	5.9	6.1	405.9	59.4	13.3	1.5
173.3	1	11907	108.7	19.73	16.37	13.07	13.30	9.87	7.15	5.04	3.73	2.32	72.1	76.0	61.1	5.7	5.3	313.5	97.3	8.6	1.5
173.3	2	15982	145.9	25.80	21.47	17.23	17.37	13.06	9.51	6.76	5.03	3.13	72.1	76.0	61.1	5.7	5.3	379.2	97.1	8.2	1.4
173.3	3	15720	143.5	25.40	21.15	16.96	17.14	12.87	9.39	6.67	4.97	3.09	72.1	76.0	61.1	5.7	5.3	368.8	99.0	8.3	1.4
173.3	4	20233	184.7	31.94	26.59	21.38	21.45	16.26	11.88	8.47	6.35	4.00	72.1	76.0	61.1	5.7	5.3	385.1	70.1	10.0	1.5
273.7	1	11951	109.1	21.48	18.08	14.93	15.78	11.76	8.78	6.43	5.10	3.17	71.3	75.1	61.4	6.2	5.0	277.0	72.3	9.3	1.4
273.7	2	15928	145.4	28.77	24.31	20.30	20.82	16.01	12.32	9.19	6.87	4.22	71.3	75.1	61.4	6.2	5.0	344.3	82.3	7.4	1.1
273.7	3	15993	146.0	28.85	24.38	20.48	20.87	16.10	12.43	9.31	6.89	4.13	71.3	75.1	61.4	6.2	5.0	356.2	80.1	7.4	1.3
273.7	4	20200	184.4	36.56	30.94	25.93	26.74	20.50	15.68	11.69	8.97	5.53	71.3	75.1	61.4	6.2	5.0	328.3	62.5	8.9	1.2
371.0	1	11940	109.0	17.94	14.60	11.69	12.38	8.95	6.52	4.68	3.44	2.18	71.3	74.9	62.2	5.9	4.6	242.1	227.1	9.5	1.7
371.0	2	16059	146.6	24.01	19.65	15.77	16.67	12.11	8.85	6.35	4.85	2.91	71.3	74.9	62.2	5.9	4.6	342.4	142.7	9.7	1.8
371.0	3	15829	144.5	23.62	19.33	15.51	16.41	11.93	8.70	6.26	4.74	2.86	71.3	74.9	62.2	5.9	4.6	332.0	160.8	9.3	1.8
371.0	4	20222	184.6	29.90	24.48	19.72	20.82	15.18	11.13	8.05	6.00	3.69	71.3	74.9	62.2	5.9	4.6	282.8	145.7	11.1	1.6
474.7	1	12203	111.4	15.54	12.06	9.17	9.55	6.68	4.78	3.42	2.61	1.67	71.2	74.8	62.3	6.1	4.8	239.9	196.6	13.2	2.7
474.7	2	16158	147.5	20.33	15.86	12.14	12.70	8.89	6.43	4.60	3.53	2.36	71.2	74.8	62.3	6.1	4.8	281.0	110.8	15.7	1.9
474.7	3	15818	144.4	19.80	15.50	11.86	12.36	8.70	6.28	4.48	3.44	2.31	71.2	74.8	62.3	6.1	4.8	275.1	112.0	16.1	1.8
474.7	4	20375	186.0	25.60	20.11	15.42	16.05	11.32	8.15	5.89	4.52	3.00	71.2	74.8	62.3	6.1	4.8	259.0	127.5	16.0	1.8
574.7	1	11896	108.6	11.54	9.04	7.11	7.46	5.35	3.96	2.94	2.31	1.61	72.1	76.3	62.2	6.2	5.4	345.4	137.1	22.4	1.5
574.7	2	16158	147.5	15.46	12.14	9.61	10.09	7.31	5.45	4.07	3.24	2.29	72.1	76.3	62.2	6.2	5.4	389.4	110.9	24.4	1.3
574.7	3	15917	145.3	15.21	11.96	9.44	9.94	7.19	5.36	4.00	3.19	2.28	72.1	76.3	62.2	6.2	5.4	360.7	123.4	24.5	1.3
574.7	4	20419	186.4	19.45	15.30	12.11	12.74	9.22	6.90	5.17	4.09	2.95	72.1	76.3	62.2	6.2	5.4	332.2	153.7	23.3	1.6
672.0	1	12116	110.6	18.74	15.51	12.68	13.13	9.79	7.38	5.43	4.31	2.75	72.1	76.3	61.8	6.1	5.9	335.4	64.7	11.4	1.1
672.0	2	15961	145.7	24.41	20.41	16.63	16.97	13.08	9.87	7.35	5.65	3.62	72.1	76.3	61.8	6.1	5.9	377.3	76.3	9.7	1.6
672.0	3	15972	145.8	24.26	20.31	16.56	16.93	13.03	9.88	7.33	5.57	3.66	72.1	76.3	61.8	6.1	5.9	360.2	83.5	9.7	1.4
672.0	4	20255	184.9	30.69	25.69	21.02	21.44	16.51	12.54	9.34	7.28	4.65	72.1	76.3	61.8	6.1	5.9	379.5	54.7	12.0	1.3
772.3	1	12116	110.6	17.93	14.65	11.90	12.25	9.08	6.84	4.96	3.74	2.44	72.7	77.2	61.5	6.2	7.4	331.7	56.2	10.8	1.4
772.3	2	15928	145.4	23.17	19.00	15.48	15.87	11.90	8.94	6.58	5.04	3.31	72.7	77.2	61.5	6.2	7.4	353.5	59.6	10.5	1.3
772.3	3	16048	146.5	23.21	19.03	15.51	15.93	11.95	8.94	6.60	5.09	3.33	72.7	77.2	61.5	6.2	7.4	354.6	59.7	10.8	1.3
772.3	4	20320	185.5	29.07	23.94	19.56	20.12	15.06	11.37	8.39	6.45	4.20	72.7	77.2	61.5	6.2	7.4	406.4	41.6	12.7	1.2
873.3	1	12159	111.0	18.27	15.43	12.66	12.84	9.97	7.51	5.62	4.37	2.87	73.1	77.9	62.4	6.3	6.0	401.0	52.6	11.1	1.4
873.3	2	15972	145.8	23.99	20.28	16.70	16.97	13.20	10.01	7.53	5.89	3.85	73.1	77.9	62.4	6.3	6.0	415.8	61.2	10.3	1.4
873.3	3	15939	145.5	23.96	20.28	16.71	17.00	13.21	10.01	7.55	5.90	3.96	73.1	77.9	62.4	6.3	6.0	425.7	58.6	10.3	1.3
873.3	4	20167	184.1	30.18	25.59	21.13	21.48	16.74	12.74	9.62	7.52	4.95	73.1	77.9	62.4	6.3	6.0	418.1	44.7	12.3	1.5
975.7	1	12006	109.6	20.61	17.28	14.20	14.69	11.11	8.34	6.19	4.78	3.04	73.1	77.8	61.9	6.0	6.7	384.8	42.3	9.8	1.4
975.7	2	15840	144.6	27.10	22.85	18.87	19.47	14.84	11.25	8.40	6.49	4.17	73.1	77.8	61.9	6.0	6.7	394.4	49.7	8.8	1.1
975.7	3	16147	147.4	27.51	23.21	19.17	19.78	15.09	11.47	8.57	6.63	4.30	73.1	77.8	61.9	6.0	6.7	418.6	44.7	9.1	1.1

## Summary of FWD Data and Backcalculation Results

(ELMOD 6 version 6.1.86)

Approx. Chainage (ft)	FWD Drop No.	FWD Plate Load (lbs)	Stress (psi)	Pavement Deflections in Mils (inches from load plate)									Temperatures (Deg. F)			Layer Thicknesses (inches)		Backcalculated Elastic Modulus, $E_{FWD}$ (ksi)			RMS (%)
				D(0)	D(8)	D(12)	D(18)	D(24)	D(30)	D(36)	D(48)	D(60)	Asphalt BELLS	Asphalt Surface	Air	AC	Base	AC	Base	Subgrade	
975.7	4	20309	185.4	34.43	29.11	24.11	24.84	19.01	14.48	10.85	8.41	5.43	73.1	77.8	61.9	6.0	6.7	406.4	46.5	9.4	1.3
1076.0	1	12072	110.2	12.87	10.40	8.44	8.99	6.59	5.04	3.83	3.06	2.16	72.7	77.3	62.7	6.3	6.3	397.1	87.0	20.5	1.3
1076.0	2	15928	145.4	16.79	13.63	11.12	11.74	8.76	6.78	5.18	4.17	2.87	72.7	77.3	62.7	6.3	6.3	377.6	147.6	16.5	1.9
1076.0	3	16004	146.1	16.85	13.67	11.13	11.77	8.77	6.75	5.22	4.18	2.85	72.7	77.3	62.7	6.3	6.3	436.2	73.2	22.5	1.1
1076.0	4	20266	185.0	21.11	17.18	14.07	14.96	11.12	8.63	6.59	5.29	3.76	72.7	77.3	62.7	6.3	6.3	439.8	84.4	20.9	1.3
1174.7	1	12181	111.2	12.35	9.91	7.76	7.73	5.93	4.43	3.28	2.55	1.72	73.3	78.2	62.6	6.1	6.5	401.4	99.6	19.6	1.8
1174.7	2	16147	147.4	16.00	12.92	10.26	10.18	7.83	5.84	4.38	3.42	2.20	73.3	78.2	62.6	6.1	6.5	422.1	125.6	17.7	1.6
1174.7	3	15774	144.0	15.61	12.60	10.04	10.00	7.65	5.66	4.26	3.34	2.15	73.3	78.2	62.6	6.1	6.5	457.2	114.4	17.7	1.6
1174.7	4	20342	185.7	19.87	16.10	12.82	12.68	9.87	7.47	5.61	4.37	2.79	73.3	78.2	62.6	6.1	6.5	495.9	85.1	20.9	1.3
1272.0	1	12017	109.7	19.24	16.49	13.90	14.09	11.25	8.76	6.71	5.15	3.27	73.5	78.6	62.3	6.4	6.3	387.1	53.6	10.2	1.5
1272.0	2	15807	144.3	25.56	22.01	18.65	18.81	15.18	11.91	9.15	7.15	4.38	73.5	78.6	62.3	6.4	6.3	411.8	59.5	9.1	1.3
1272.0	3	15884	145.0	25.65	22.09	18.73	18.85	15.26	11.98	9.22	7.17	4.55	73.5	78.6	62.3	6.4	6.3	407.6	56.2	9.5	1.3
1272.0	4	20255	184.9	32.76	28.32	24.17	24.21	19.68	15.52	11.99	9.33	5.84	73.5	78.6	62.3	6.4	6.3	522.8	45.7	8.6	1.0
1365.7	1	12094	110.4	23.04	17.04	13.37	13.61	9.93	6.97	4.96	3.86	2.51	71.6	75.8	62.0	6.4	7.0	153.0	55.4	10.1	1.7
1365.7	2	15928	145.4	30.17	22.52	17.76	18.15	13.31	9.44	6.73	5.17	3.52	71.6	75.8	62.0	6.4	7.0	151.3	71.7	8.7	1.7
1365.7	3	15939	145.5	30.10	22.50	17.74	18.18	13.32	9.46	6.76	5.18	3.61	71.6	75.8	62.0	6.4	7.0	151.6	73.1	8.7	1.7
1365.7	4	20342	185.7	38.51	28.93	22.89	23.49	17.21	12.26	8.79	6.77	4.55	71.6	75.8	62.0	6.4	7.0	176.7	43.7	10.9	1.6
1474.0	1	12006	109.6	34.43	27.97	22.09	24.68	17.25	12.84	9.33	7.02	4.30	73.0	78.2	63.2	6.5	5.9	133.8	51.4	5.4	1.9
1474.0	2	15544	141.9	44.92	36.59	29.00	32.39	22.72	17.00	12.39	9.32	5.71	73.0	78.2	63.2	6.5	5.9	130.8	60.6	5.0	1.8
1474.0	3	15785	144.1	45.49	37.10	29.40	32.80	23.05	17.26	12.58	9.46	5.81	73.0	78.2	63.2	6.5	5.9	139.6	56.2	5.0	2.1
1474.0	4	20353	185.8	58.79	48.07	38.17	42.48	29.97	22.49	16.42	12.32	7.50	73.0	78.2	63.2	6.5	5.9	152.4	37.1	5.7	1.9

Appendix C

# Laboratory Test Reports

Subtitle if Applicable

## CONTENTS

- Summary of Laboratory Test Results
- Sand Equivalent Test Results
- Atterberg Limits Test Results
- Particle-Size Distribution Reports
- Soil Resistivity and pH for Corrosion Testing Reports
- Chloride & Sulfate Corrosion Reports
- CBR Test Results

## Project Information

Report to: Ardurra  
 Project: RKS Master Plan  
 Report Date: 6/30/2023  
 File No.: 110339

## Material Information

Date Sampled: 6/16/2023  
 Sampled By: Shannon & Wilson  
 Date Received: 6/20/2023  
 Date Tested: 6/30/2023

## SUMMARY OF LABORATORY RESULTS

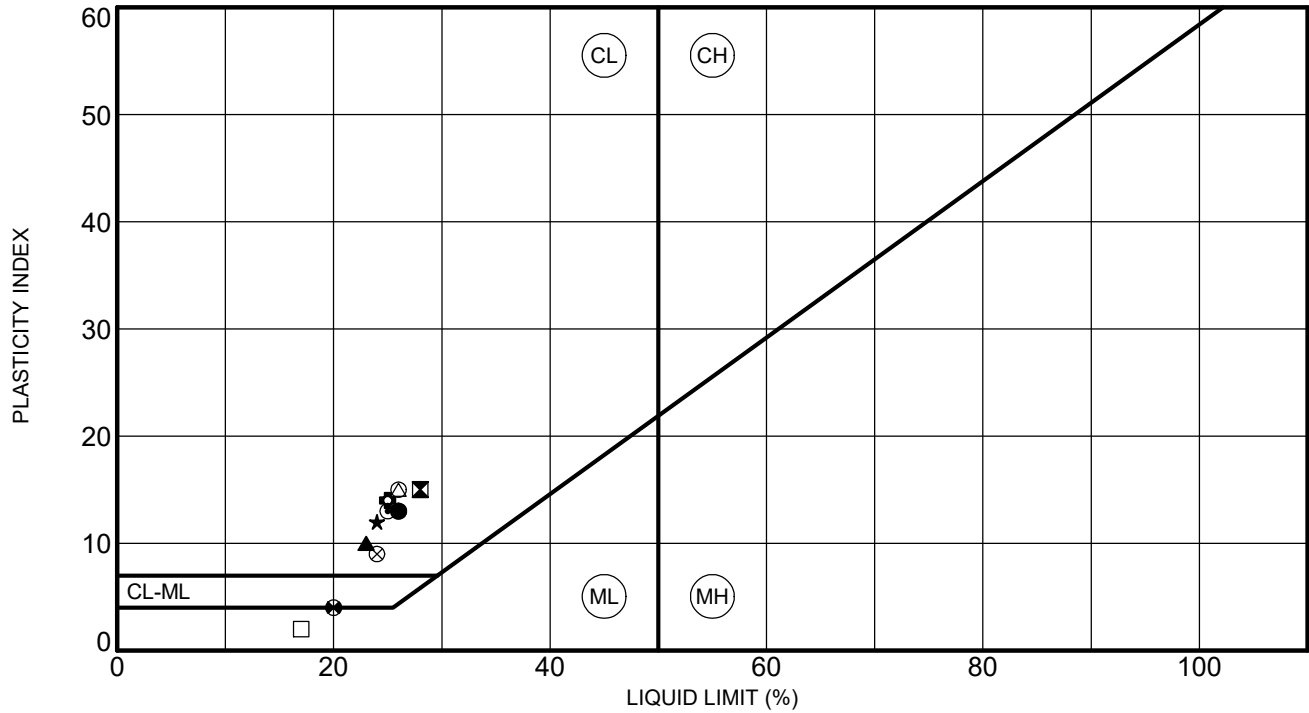
Lab Number	Borehole	Sample Type	Depth (ft)	Water Content (%)	% Passing #200 Sieve	Liquid Limit (%)	Plasticity Index	Soil Type	Remarks
23-0526	SW23-321-01	BK-23	1.0'-4.0'	11.2	53.9	26	13	CL	--
23-0527	SW23-321-04	BK-35	1.8'-4.0'	6.2	39.9	28	15	SC	--
23-0528	SW23-321-05	OSS-40	0.5'-2.5'	10.9	30.3	--	--	SM	--
23-0521	SW23-927-01	BK-03A	2.0'-4.0'	9.5	40.0	23	10	SC	--
23-0520	SW23-927-01	OSS-03	4.0'-6.0'	9.2	64.2	24	12	CL	--
23-0522	SW23-927-04	BK-14	1.5'-4.0'	9.1	34.7	25	13	SC	--
23-0523	SW23-927-07	BK-19	1.6'-4.0'	4.2	35.9	25	14	SC	--
23-0524	SW23-927-09	BK-68	1.4'-4.0'	7.7	34.0	26	15	SC	--
23-0525	SW23-927-11	BK-51	1.5'-4.0'	2.5	41.4	26	15	SC	--
23-0535	SW23-TERM-01	GB-83	0.4'-1.1'	--	8.0	--	--	GP-GM	--
23-0534	SW23-TERM-01	BK-85	1.1'-5.5'	9.3	39.2	24	9	SC	--
23-0536	SW23-TERM-03	GB-90	0.4'-1.4'	--	10.4	--	--	GW-GM	--
23-0537	SW23-TERM-03	BK-92	4.5'-6.5'	10.5	52.1	26	13	CL	--
23-0530	SW23-TWC-01	OSS-48	0.3'-2.3'	6.3	18.9	--	--	SM	--
23-0529	SW23-TWC-02	GB-60	0.4'-1.2'	--	7.7	--	--	GP-GM	--
23-0531	SW23-TWC-02	BK-62	1.2'-4.0'	2.1	25.3	17	2	SM	--
23-0532	SW23-TWD-01	GB-75	0.5'-1.0'	--	6.4	--	--	GW-GM	--
23-0533	SW23-TWD-01	BK-77	1.0'-4.0'	5.1	19.4	20	4	SC-SM	--

Prepared By: Aliona Chernish

# ATTERBERG LIMITS REPORT

**CLIENT:** Ardurra  
**FILE NUMBER:** 110339

**PROJECT NAME:** RKS Master Plan  
**PROJECT LOCATION:** Sweetwater County, WY



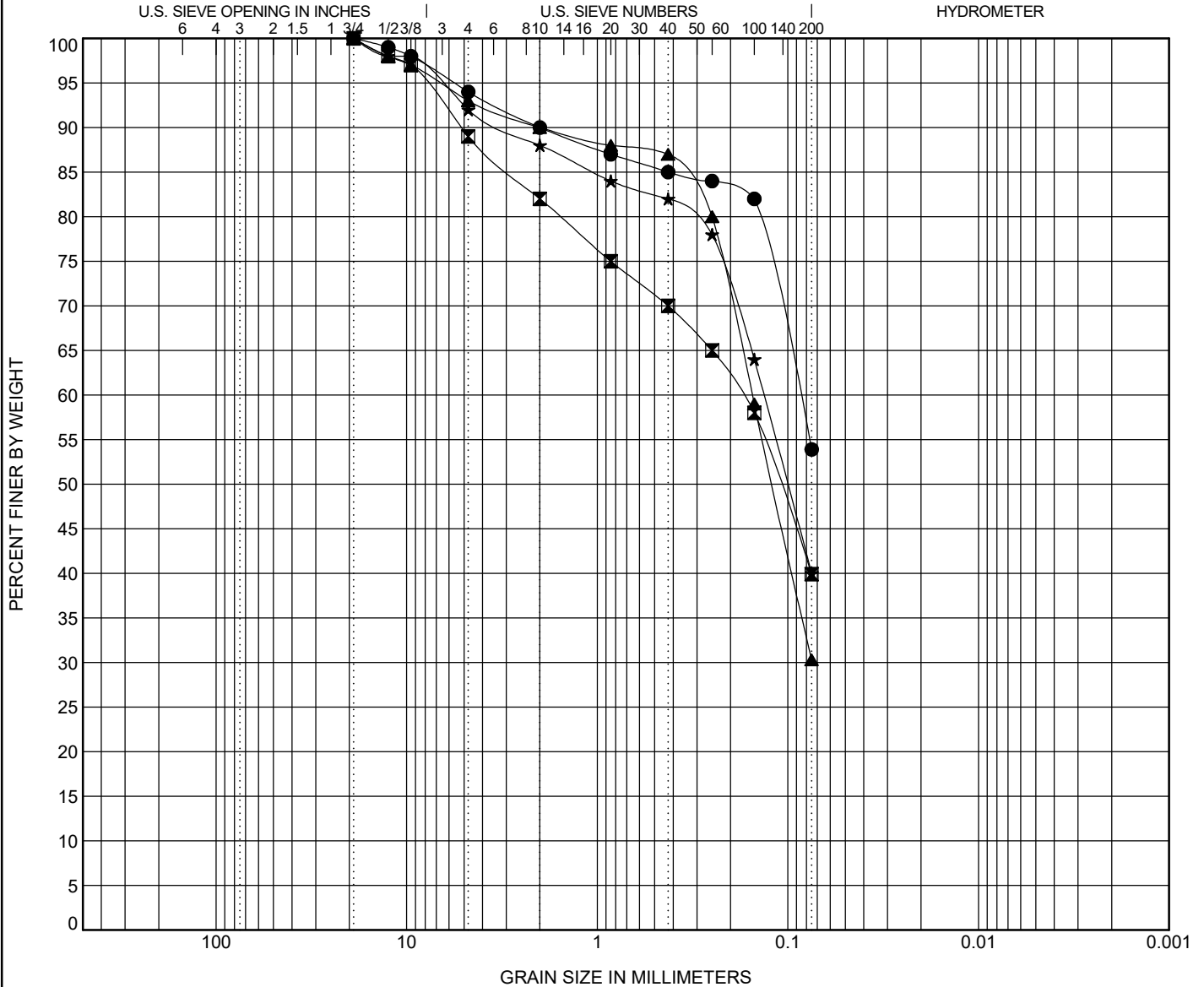
Specimen Identification	MC	LL	PL	PI	Fines	Classification
● SW23-321-01 BK-23 1.0	11.2	26	13	13	54	SANDY LEAN CLAY (CL)
⊠ SW23-321-04 BK-35 1.8	6.2	28	13	15	40	CLAYEY SAND (SC)
▲ SW23-927-01 BK-03A 2.0	9.5	23	13	10	40	CLAYEY SAND (SC)
★ SW23-927-01 OSS-03 4.0	9.2	24	12	12	64	SANDY LEAN CLAY (CL)
⊙ SW23-927-04 BK-14 1.5	9.1	25	12	13	35	CLAYEY SAND (SC)
⊕ SW23-927-07 BK-19 1.6	4.2	25	11	14	36	CLAYEY SAND (SC)
○ SW23-927-09 BK-68 1.4	7.7	26	11	15	34	CLAYEY SAND with GRAVEL (SC)
△ SW23-927-11 BK-51 1.5	2.5	26	11	15	41	CLAYEY SAND (SC)
⊗ SW23-TERM-01 BK-85 1.1	9.3	24	15	9	39	CLAYEY SAND with GRAVEL (SC)
⊕ SW23-TERM-03 BK-92 4.5	10.5	26	13	13	52	SANDY LEAN CLAY (CL)
□ SW23-TWC-02 BK-62 1.2	2.1	17	15	2	25	SILTY SAND (SM)
⊙ SW23-TWD-01 BK-77 1.0	5.1	20	16	4	19	SILTY, CLAYEY SAND with GRAVEL (SC-SM)
	--				--	
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Prepared By: Aliona Chernish

# PARTICLE-SIZE DISTRIBUTION REPORT

**CLIENT:** Ardurra  
**FILE NUMBER:** 110339

**PROJECT NAME:** RKS Master Plan  
**PROJECT LOCATION:** Sweetwater County, WY



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	D10	D30	D60
● SW23-321-01 BK-23 1.0	SANDY LEAN CLAY (CL)	--	--	0.087
■ SW23-321-04 BK-35 1.8	CLAYEY SAND (SC)	--	--	0.174
▲ SW23-321-05 OSS-40 0.5	SILTY SAND (SM)	--	--	0.154
★ SW23-927-01 BK-03A 2.0	CLAYEY SAND (SC)	--	--	0.134

Specimen Identification	%Gravel	%Sand	%Fines	D15	D50	D85	Cc	Cu	MC	LL	PI
● SW23-321-01 BK-23 1.0	6.0	40.1	53.9	--	--	0.425	--	--	11.2	26	13
■ SW23-321-04 BK-35 1.8	11.0	49.1	39.9	--	0.11	2.898	--	--	6.2	28	15
▲ SW23-321-05 OSS-40 0.5	7.0	62.7	30.3	--	0.121	0.365	--	--	10.9	--	--
★ SW23-927-01 BK-03A 2.0	8.0	52.0	40.0	--	0.1	1.053	--	--	9.5	23	10

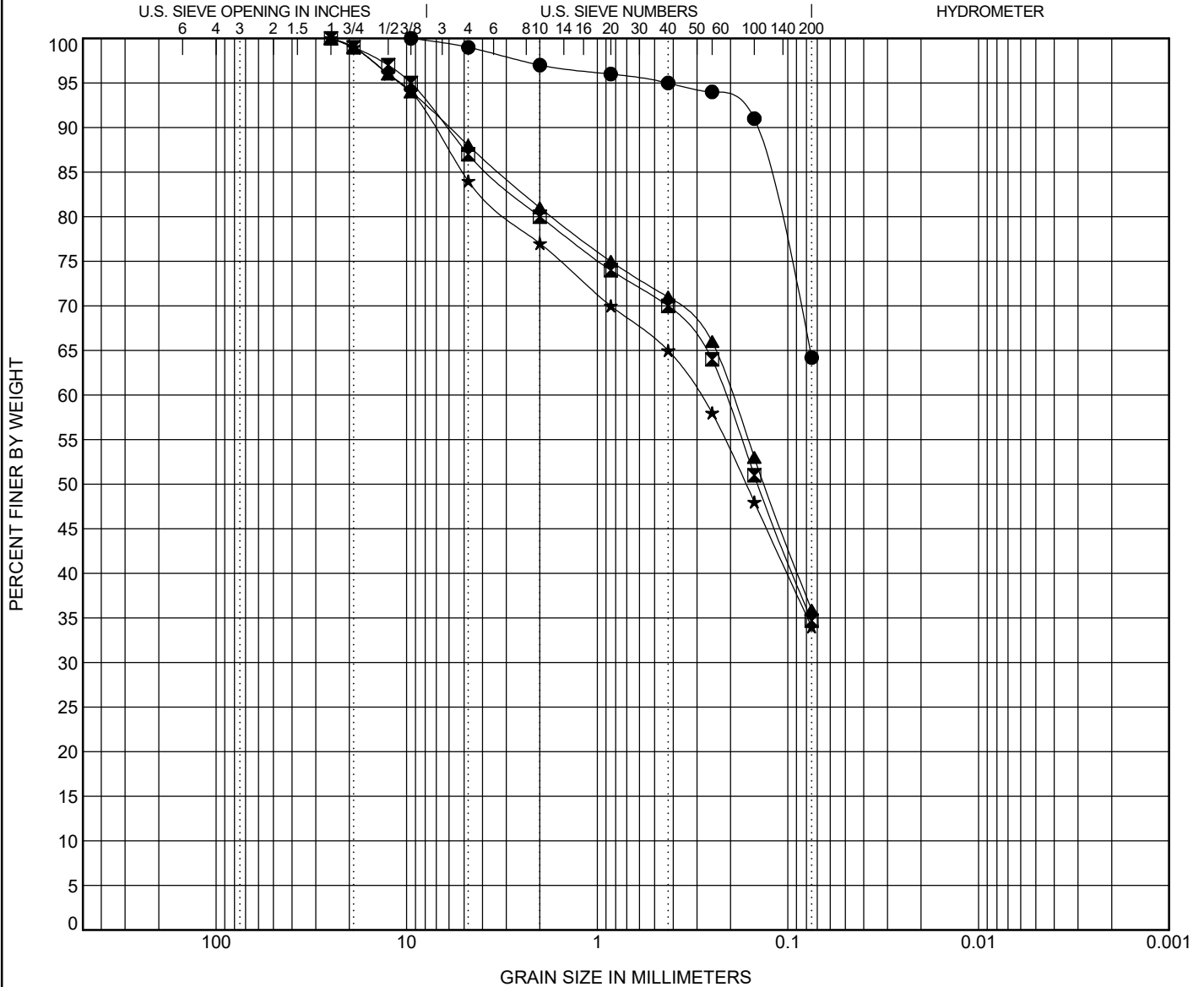
Prepared By: Aliona Chernish



# PARTICLE-SIZE DISTRIBUTION REPORT

**CLIENT:** Ardurra  
**FILE NUMBER:** 110339

**PROJECT NAME:** RKS Master Plan  
**PROJECT LOCATION:** Sweetwater County, WY



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	D10	D30	D60
● SW23-927-01 OSS-03 4.0	SANDY LEAN CLAY (CL)	--	--	--
◻ SW23-927-04 BK-14 1.5	CLAYEY SAND (SC)	--	--	0.214
▲ SW23-927-07 BK-19 1.6	CLAYEY SAND (SC)	--	--	0.197
★ SW23-927-09 BK-68 1.4	CLAYEY SAND with GRAVEL (SC)	--	--	0.291

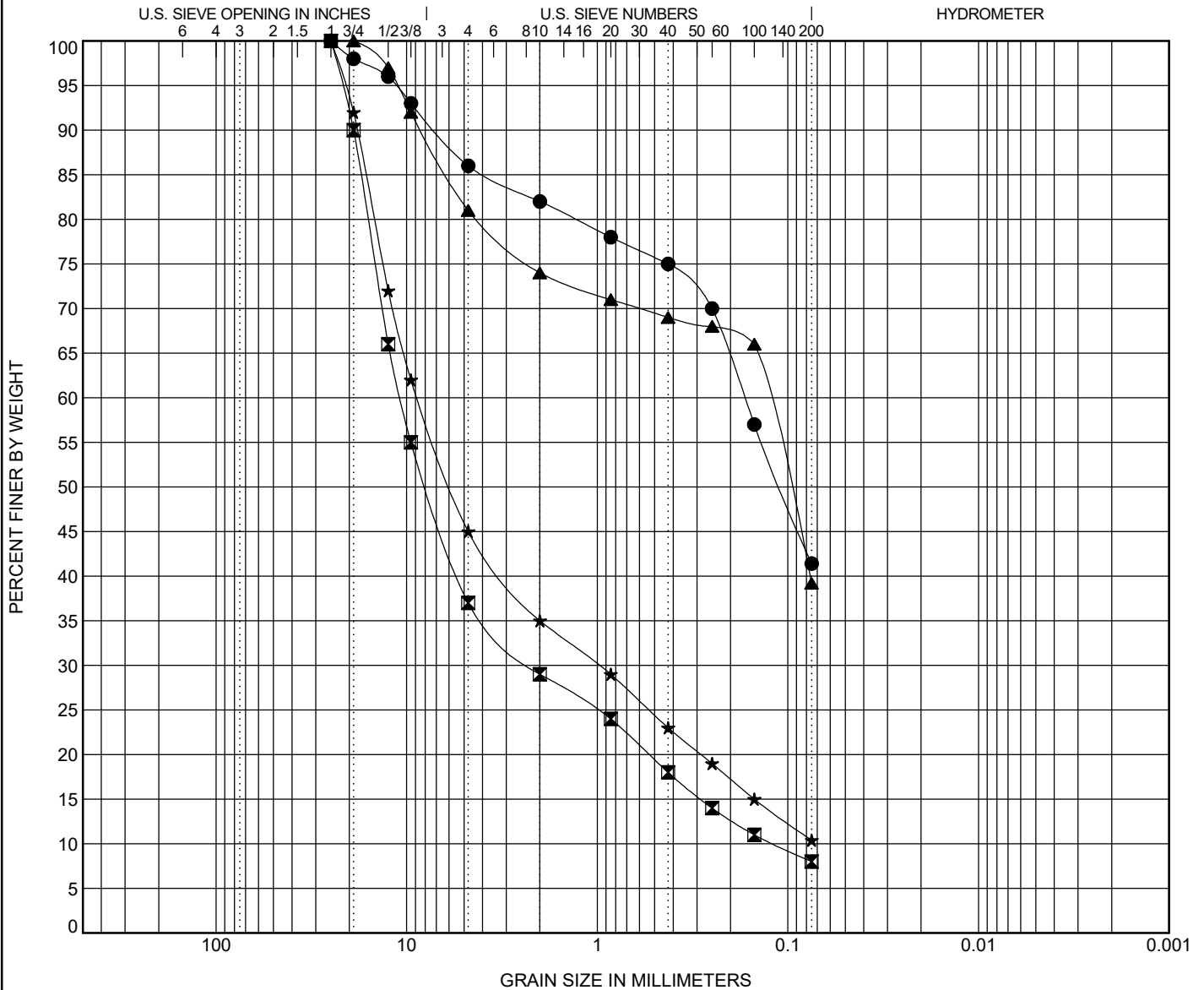
Specimen Identification	%Gravel	%Sand	%Fines	D15	D50	D85	Cc	Cu	MC	LL	PI
● SW23-927-01 OSS-03 4.0	1.0	34.8	64.2	--	--	0.128	--	--	9.2	24	12
◻ SW23-927-04 BK-14 1.5	13.0	52.3	34.7	--	0.144	3.71	--	--	9.1	25	13
▲ SW23-927-07 BK-19 1.6	12.0	52.1	35.9	--	0.133	3.279	--	--	4.2	25	14
★ SW23-927-09 BK-68 1.4	16.0	50.0	34.0	--	0.166	5.091	--	--	7.7	26	15

Prepared By: Aliona Chernish

# PARTICLE-SIZE DISTRIBUTION REPORT

**CLIENT:** Ardurra  
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**PROJECT NAME:** RKS Master Plan  
**PROJECT LOCATION:** Sweetwater County, WY



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	D10	D30	D60
● SW23-927-11 BK-51 1.5	CLAYEY SAND (SC)	--	--	0.169
■ SW23-TERM-01 GB-83 0.4	POORLY GRADED GRAVEL with SILT and SAND (GP-GM)	0.119	2.228	10.762
▲ SW23-TERM-01 BK-85 1.1	CLAYEY SAND with GRAVEL (SC)	--	--	0.128
★ SW23-TERM-03 GB-90 0.4	WELL-GRADED GRAVEL with SILT and SAND (GW-GM)	--	0.98	8.756

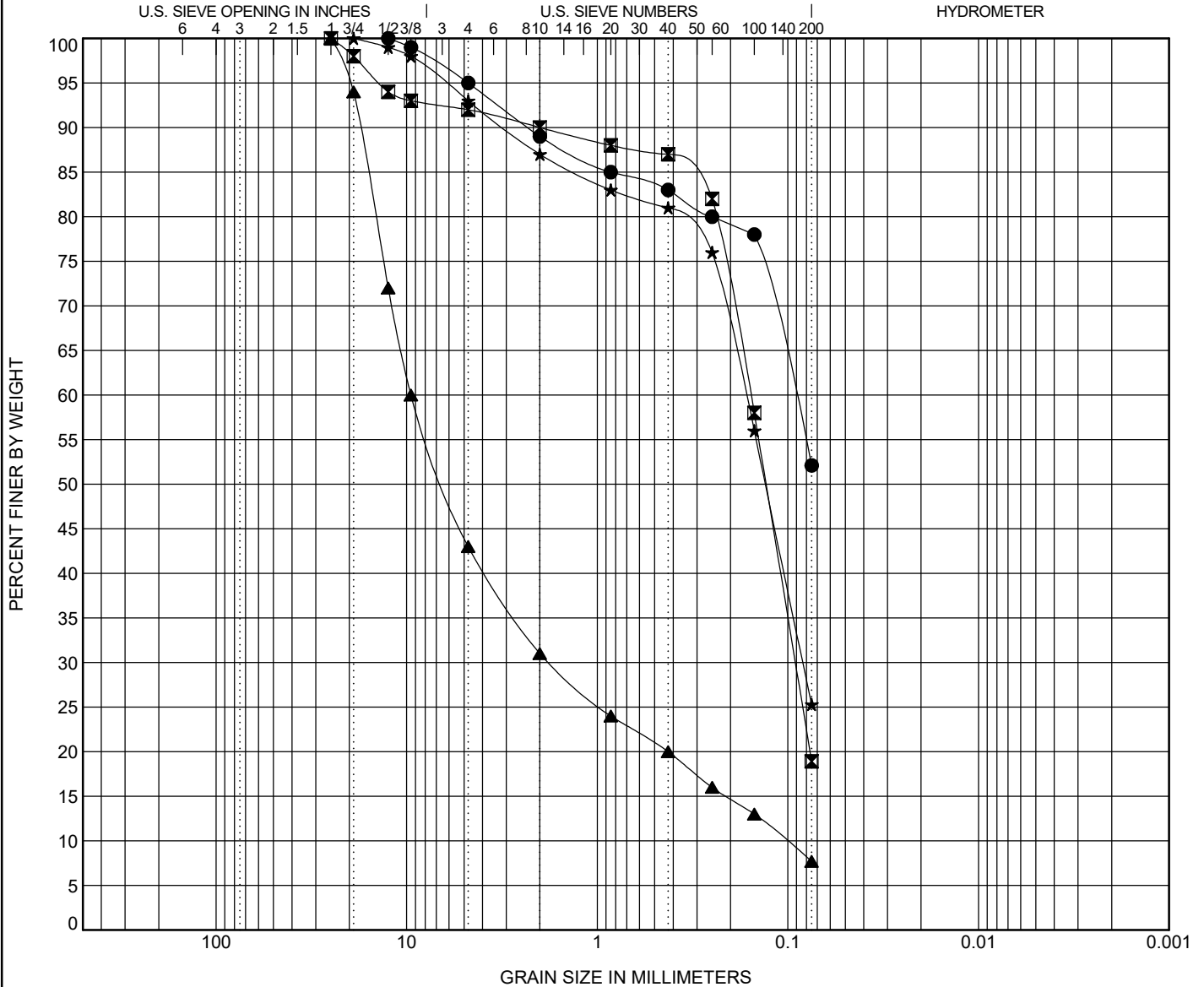
Specimen Identification	%Gravel	%Sand	%Fines	D15	D50	D85	Cc	Cu	MC	LL	PI
● SW23-927-11 BK-51 1.5	14.0	44.6	41.4	--	0.11	3.826	--	--	2.5	26	15
■ SW23-TERM-01 GB-83 0.4	63.0	29.0	8.0	0.285	7.836	17.413	3.88	90.40	--	--	--
▲ SW23-TERM-01 BK-85 1.1	19.0	41.8	39.2	--	0.099	6.112	--	--	9.3	24	9
★ SW23-TERM-03 GB-90 0.4	55.0	34.6	10.4	0.15	5.824	16.41	1.55	124.00	--	--	--

Prepared By: Aliona Chernish

# PARTICLE-SIZE DISTRIBUTION REPORT

**CLIENT:** Ardurra  
**FILE NUMBER:** 110339

**PROJECT NAME:** RKS Master Plan  
**PROJECT LOCATION:** Sweetwater County, WY



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	D10	D30	D60
● SW23-TERM-03 BK-92 4.5	SANDY LEAN CLAY (CL)	--	--	0.093
☒ SW23-TWC-01 OSS-48 0.3	SILTY SAND (SM)	--	0.091	0.157
▲ SW23-TWC-02 GB-60 0.4	POORLY GRADED GRAVEL with SILT and SAND (GP-GM)	0.101	1.77	9.5
★ SW23-TWC-02 BK-62 1.2	SILTY SAND (SM)	--	0.083	0.166

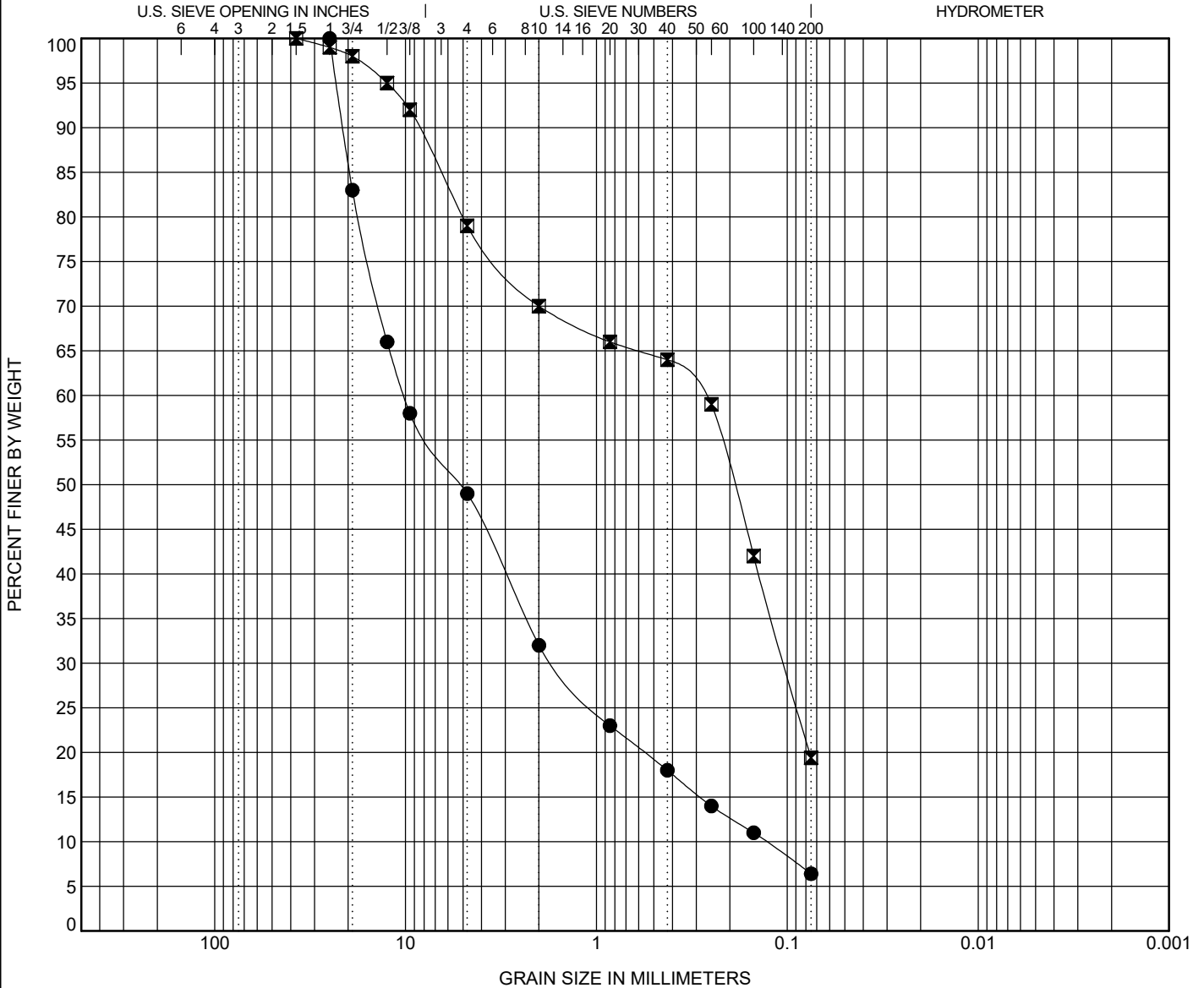
Specimen Identification	%Gravel	%Sand	%Fines	D15	D50	D85	Cc	Cu	MC	LL	PI
● SW23-TERM-03 BK-92 4.5	5.0	42.9	52.1	--	--	0.85	--	--	10.5	26	13
☒ SW23-TWC-01 OSS-48 0.3	8.0	73.1	18.9	--	0.13	0.344	--	--	6.3	--	--
▲ SW23-TWC-02 GB-60 0.4	57.0	35.3	7.7	0.211	6.319	16.009	3.25	93.76	--	--	--
★ SW23-TWC-02 BK-62 1.2	7.0	67.7	25.3	--	0.131	1.304	--	--	2.1	17	2

Prepared By: Aliona Chernish

# PARTICLE-SIZE DISTRIBUTION REPORT

**CLIENT:** Ardurra  
**FILE NUMBER:** 110339

**PROJECT NAME:** RKS Master Plan  
**PROJECT LOCATION:** Sweetwater County, WY



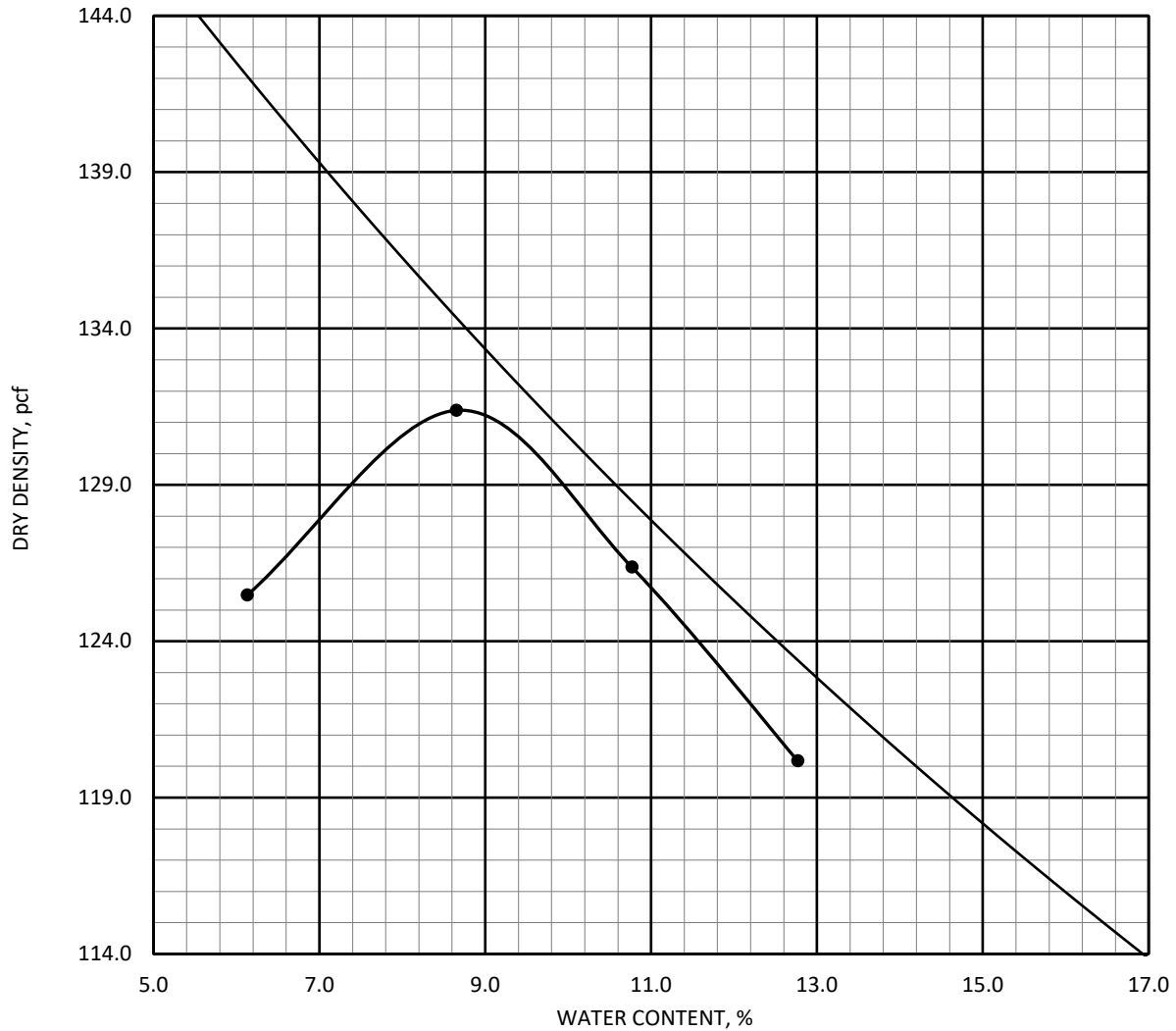
COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	D10	D30	D60
● SW23-TWD-01 GB-75 0.5	WELL-GRADED GRAVEL with SILT and SAND (GW-GM)	0.129	1.654	10.175
☒ SW23-TWD-01 BK-77 1.0	SILTY, CLAYEY SAND with GRAVEL (SC-SM)	--	0.104	0.278

Specimen Identification	%Gravel	%Sand	%Fines	D15	D50	D85	Cc	Cu	MC	LL	PI
● SW23-TWD-01 GB-75 0.5	51.0	42.6	6.4	0.285	5.13	19.623	2.08	78.86	--	--	--
☒ SW23-TWD-01 BK-77 1.0	21.0	59.6	19.4	--	0.191	6.541	--	--	5.1	20	4

Prepared By: Aliona Chernish

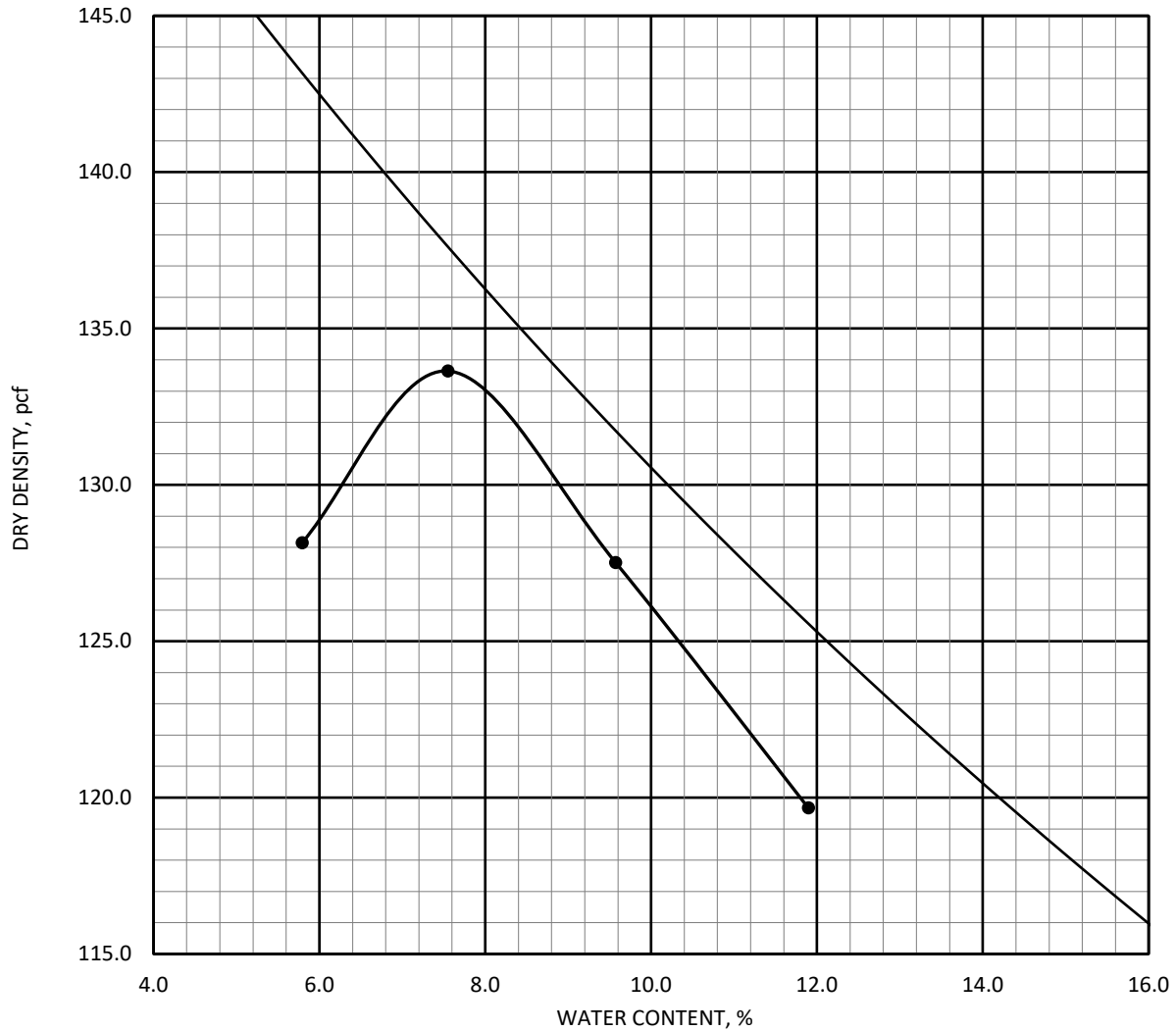
# COMPACTION TEST REPORT



Sp.G. for ZAV = 2.65

<b>Project Number</b>	110339	<b>ASTM D-1557, Method C</b>	
<b>Project Name</b>	RKS Master Plan	<b>Maximum Dry Density, pcf</b>	<b>131.4</b>
<b>Client</b>	Ardurra		
<b>Sample Location</b>	SW23 321-01, BK-23; 1.0'-4.0'	<b>Optimum Moisture, %</b>	<b>8.7</b>
<b>Sample Description</b>	Sandy Lean Clay (CL)		
<b>Lab Number</b>	23-0526	Percent of Aggregate > 3/4"	1
<b>Date Sampled</b>	6/16/2023	Assumed Specific Gravity of Oversized	2.650
<b>Sampled By</b>	Shannon & Wilson	Oversized Aggregate was Replaced	
<b>Date Tested</b>	6/21/2023		
<b>Tested By</b>	KB		
<b>Remarks</b>	4" mold used due to limited material.		
<b>SHANNON &amp; WILSON</b>		Reviewed By: <i>Paul Clawges</i>	

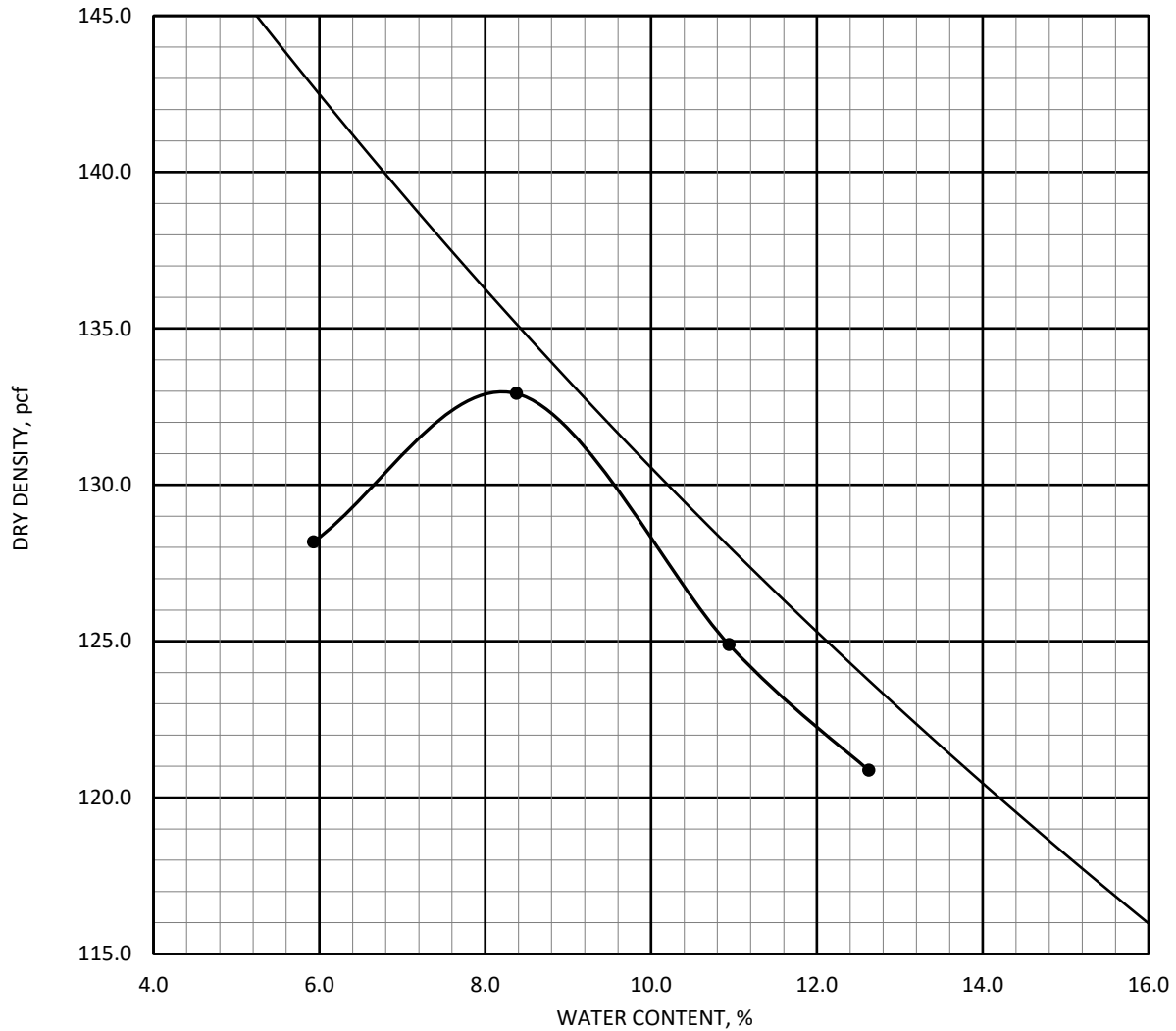
# COMPACTION TEST REPORT



Sp.G. for ZAV = 2.65

<b>Project Number</b>	110339	<b>ASTM D-1557, Method C</b>	
<b>Project Name</b>	RKS Master Plan	<b>Maximum Dry Density, pcf</b>	<b>133.6</b>
<b>Client</b>	Ardurra		
<b>Sample Location</b>	SW23 321-04, BK-35; 1.8'-4.0'	<b>Optimum Moisture, %</b>	<b>7.5</b>
<b>Sample Description</b>	Clayey Sand (SC)		
<b>Lab Number</b>	23-0527	Percent of Aggregate > 3/4"	0
<b>Date Sampled</b>	6/16/2023		
<b>Sampled By</b>	Shannon & Wilson		
<b>Date Tested</b>	6/21/2023		
<b>Tested By</b>	EH		
<b>Remarks</b>	4" mold used due to limited material.		
<b>SHANNON &amp; WILSON</b>		Reviewed By: <i>Paul Clawges</i>	

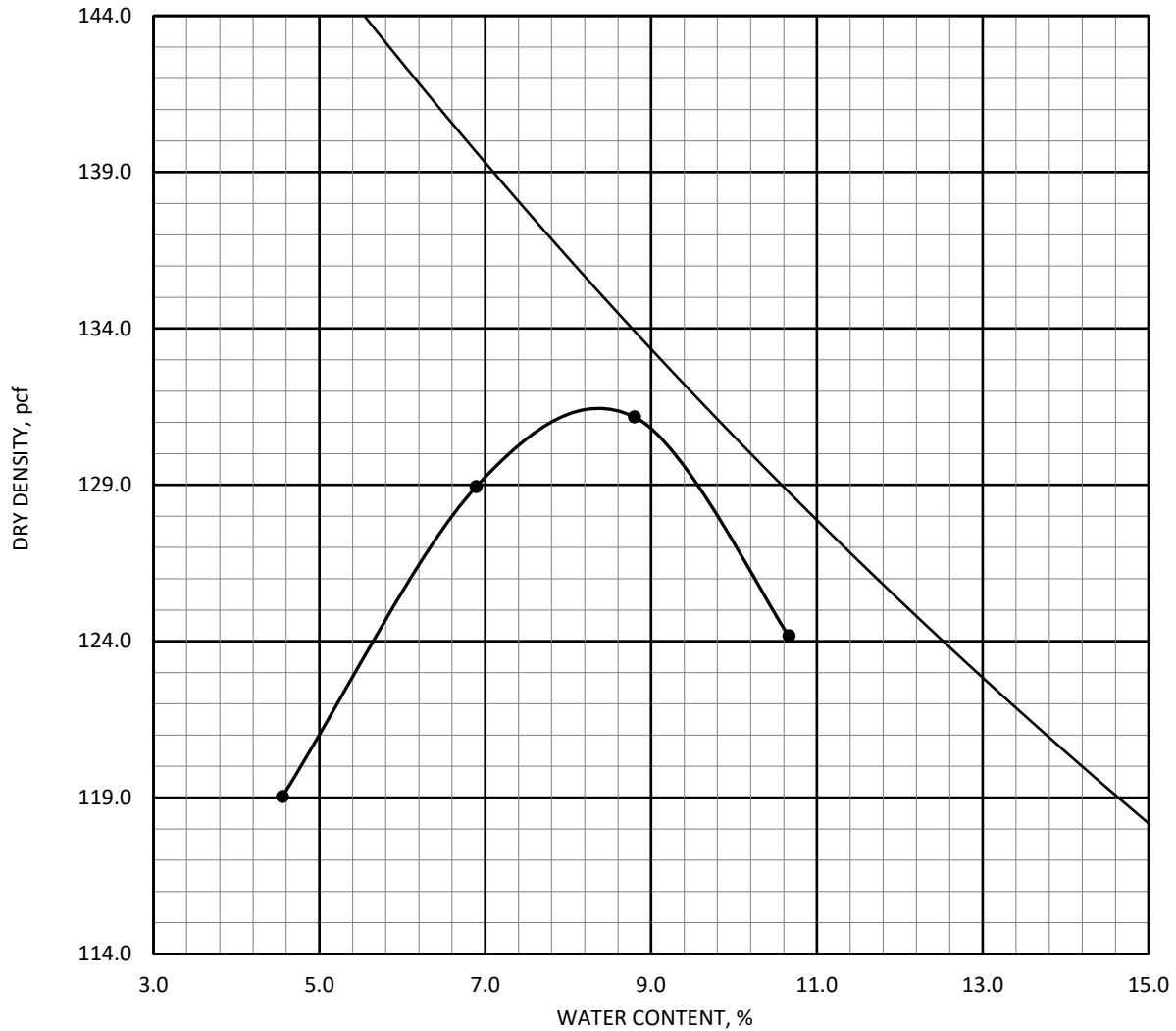
# COMPACTION TEST REPORT



Sp.G. for ZAV = 2.65

<b>Project Number</b>	110339	<b>ASTM D-1557, Method C</b>	
<b>Project Name</b>	RKS Master Plan	<b>Maximum Dry Density, pcf</b>	<b>133.0</b>
<b>Client</b>	Ardurra		
<b>Sample Location</b>	SW23 927-01, BK-03A; 2.0'-4.0'	<b>Optimum Moisture, %</b>	<b>8.2</b>
<b>Sample Description</b>	Clayey Sand (SC)		
<b>Lab Number</b>	23-0521	Percent of Aggregate > 3/4"	0
<b>Date Sampled</b>	6/16/2023		
<b>Sampled By</b>	Shannon & Wilson		
<b>Date Tested</b>	6/21/2023		
<b>Tested By</b>	EH		
<b>Remarks</b>	4" mold used due to limited material.		
<b>SHANNON &amp; WILSON</b>		Reviewed By: <i>Paul Clawges</i>	

# COMPACTION TEST REPORT

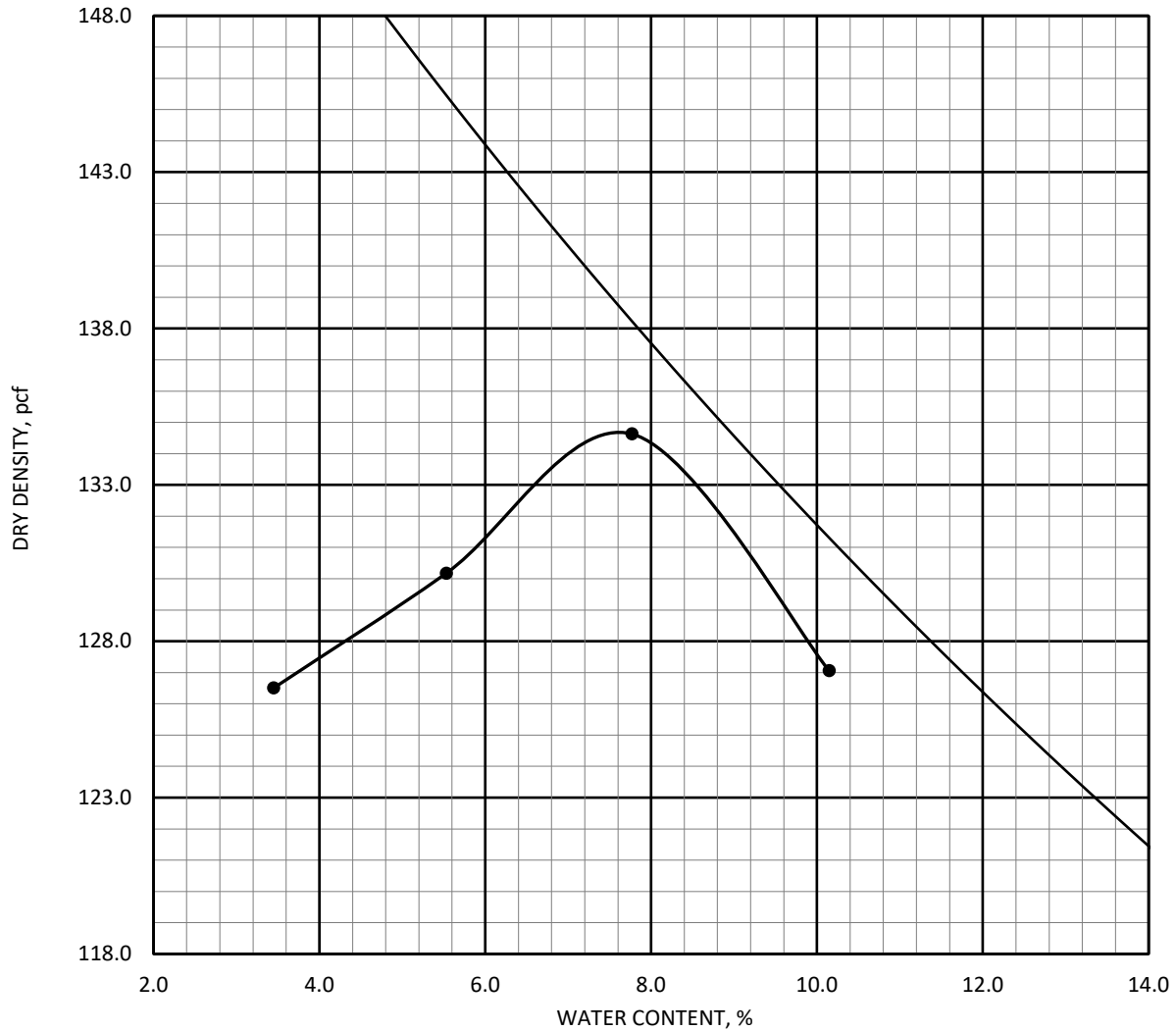


Sp.G. for ZAV = 2.65

<b>Project Number</b>	110339	<b>ASTM D-1557, Method C</b>	
<b>Project Name</b>	RKS Master Plan	<b>Maximum Dry Density, pcf</b>	<b>131.4</b>
<b>Client</b>	Ardurra		
<b>Sample Location</b>	SW23 927-04, BK-14; 1.5'-4.0'	<b>Optimum Moisture, %</b>	<b>8.4</b>
<b>Sample Description</b>	Clayey Sand (SC)		
<b>Lab Number</b>	23-0522	Percent of Aggregate > 3/4"	1
<b>Date Sampled</b>	6/16/2023	Assumed Specific Gravity of Oversized	2.650
<b>Sampled By</b>	Shannon & Wilson	Oversized Aggregate was Replaced	
<b>Date Tested</b>	6/22/2023		
<b>Tested By</b>	KB		
<b>Remarks</b>	4" mold used due to limited material.		
<b>SHANNON &amp; WILSON</b>		Reviewed By: <i>Paul Clawges</i>	



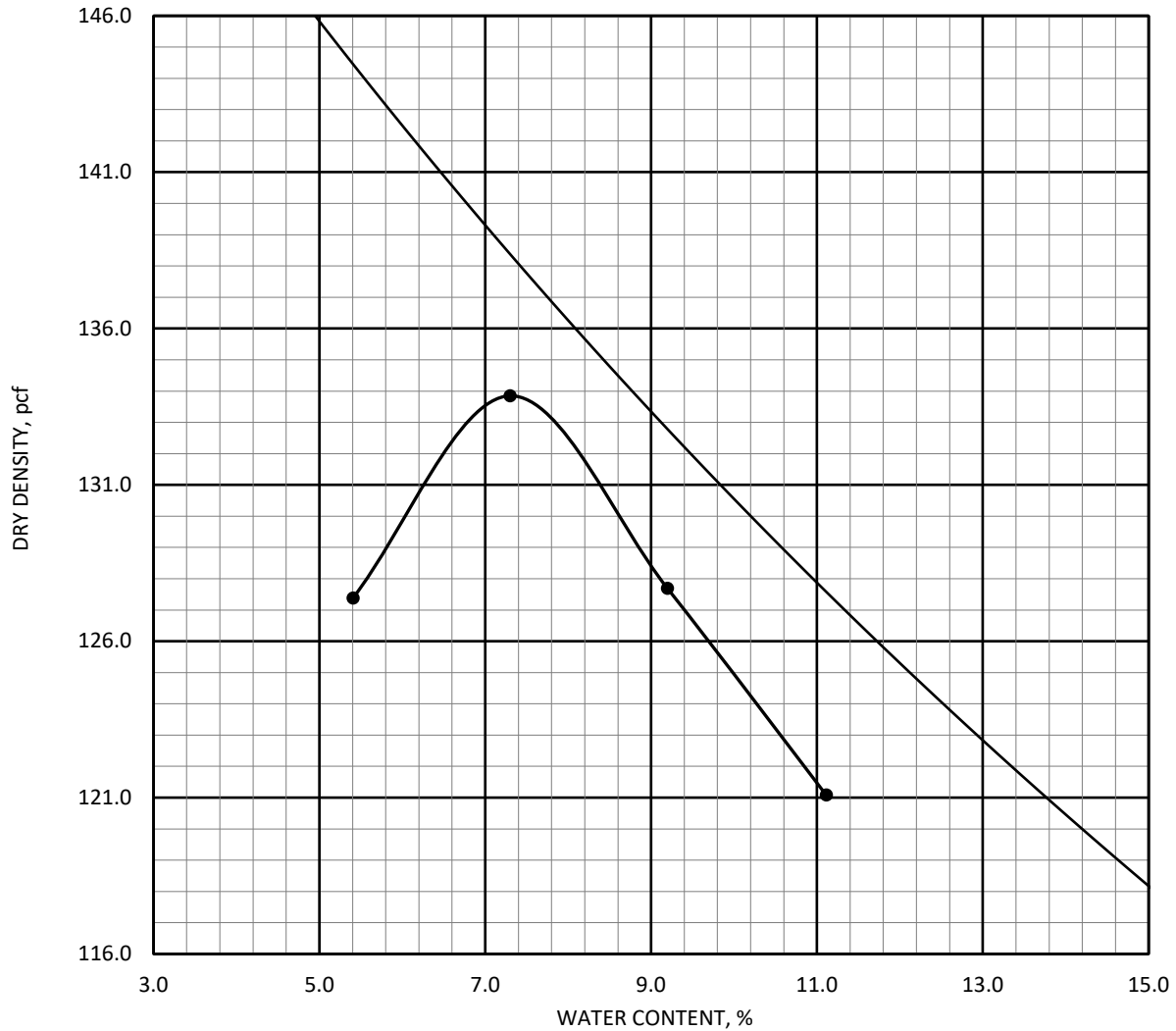
# COMPACTION TEST REPORT



Sp.G. for ZAV = 2.68

<b>Project Number</b>	110339	<b>ASTM D-1557, Method C</b>	
<b>Project Name</b>	RKS Master Plan	<b>Maximum Dry Density, pcf</b>	<b>134.7</b>
<b>Client</b>	Ardurra		
<b>Sample Location</b>	SW23 927-07, BK-19; 1.6'-4.0'	<b>Optimum Moisture, %</b>	<b>7.6</b>
<b>Sample Description</b>	Clayey Sand (SC)		
<b>Lab Number</b>	23-0523	Percent of Aggregate > 3/4"	1
<b>Date Sampled</b>	6/16/2023	Assumed Specific Gravity of Oversized	2.650
<b>Sampled By</b>	Shannon & Wilson	Oversized Aggregate was Replaced	
<b>Date Tested</b>	6/21/2023		
<b>Tested By</b>	EH		
<b>Remarks</b>	4" mold used due to limited material.		
<b>SHANNON &amp; WILSON</b>		Reviewed By: <i>Paul Clawges</i>	

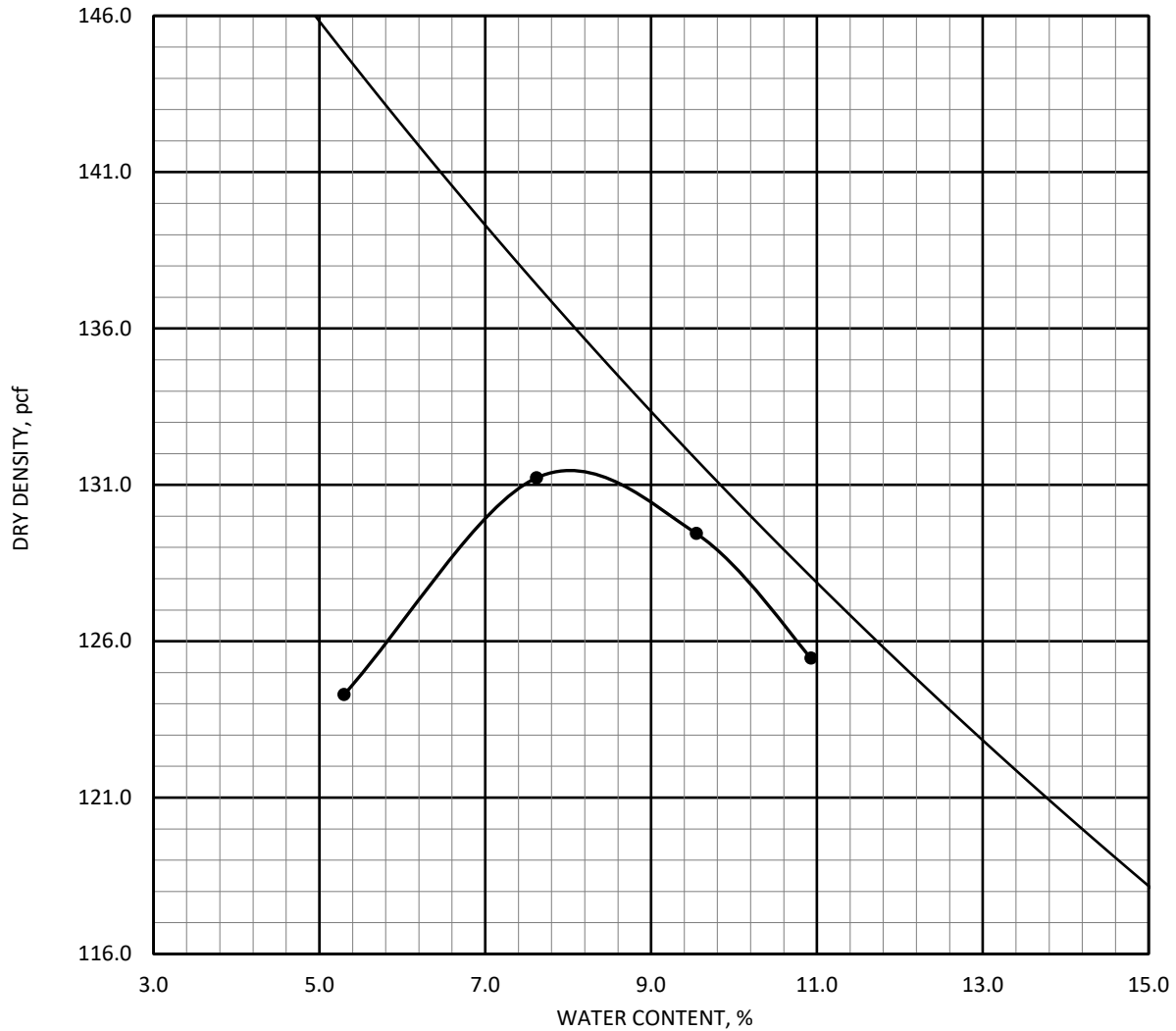
# COMPACTION TEST REPORT



Sp.G. for ZAV = 2.65

<b>Project Number</b>	110339	<b>ASTM D-1557, Method C</b>	
<b>Project Name</b>	RKS Master Plan	<b>Maximum Dry Density, pcf</b>	<b>133.8</b>
<b>Client</b>	Ardurra		
<b>Sample Location</b>	SW23 927-09, BK-68; 1.4'-4.0'	<b>Optimum Moisture, %</b>	<b>7.3</b>
<b>Sample Description</b>	Clayey Sand with Gravel (SC)		
<b>Lab Number</b>	23-0524	Percent of Aggregate > 3/4"	1
<b>Date Sampled</b>	6/16/2023	Assumed Specific Gravity of Oversized	2.650
<b>Sampled By</b>	Shannon & Wilson	Oversized Aggregate was Replaced	
<b>Date Tested</b>	6/22/2023		
<b>Tested By</b>	KB		
<b>Remarks</b>	4" mold used due to limited material.		
<b>SHANNON &amp; WILSON</b>		Reviewed By: <i>Paul Clawges</i>	

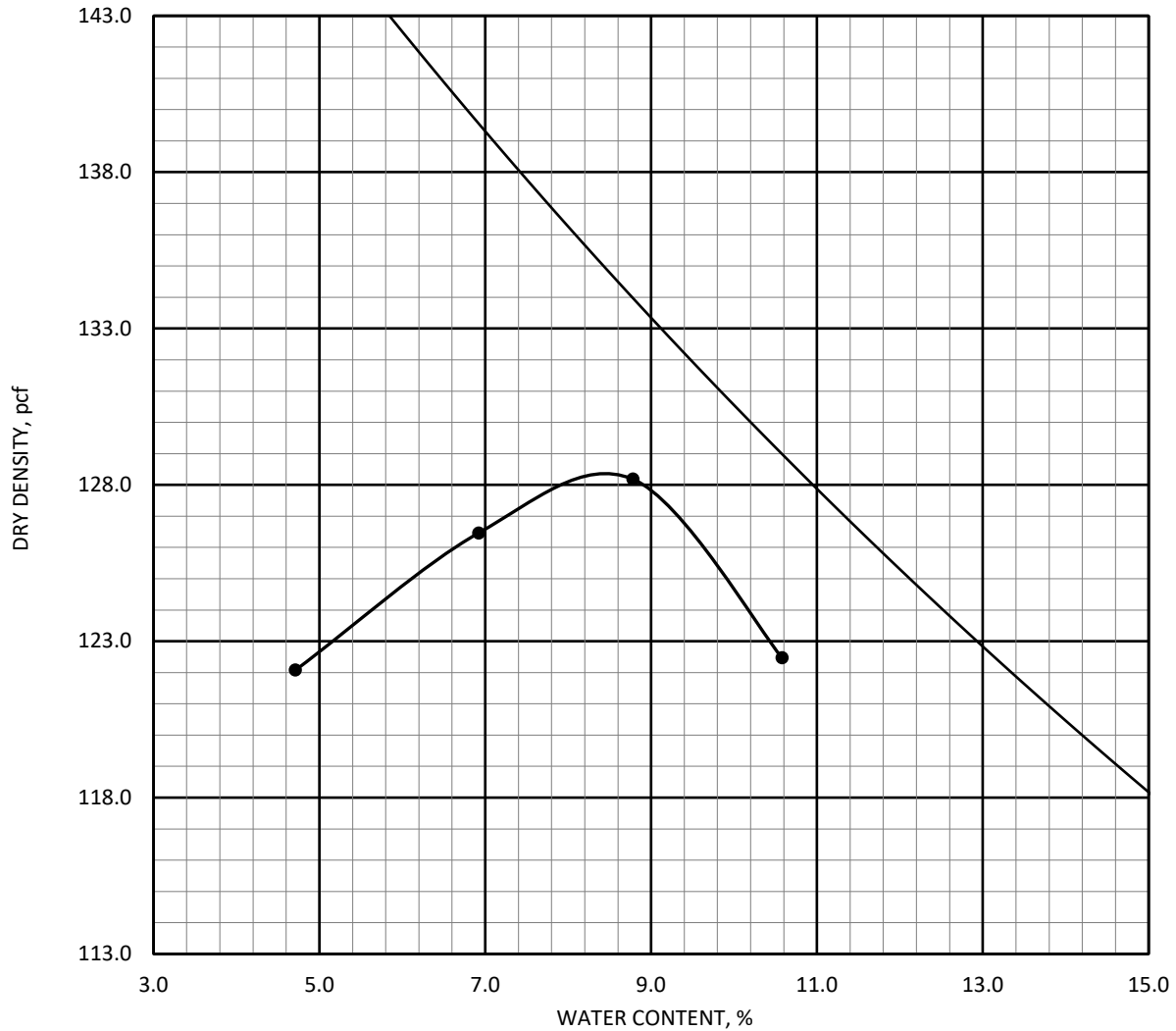
# COMPACTION TEST REPORT



Sp.G. for ZAV = 2.65

<b>Project Number</b>	110339	<b>ASTM D-1557, Method C</b>	
<b>Project Name</b>	RKS Master Plan	<b>Maximum Dry Density, pcf</b>	<b>131.5</b>
<b>Client</b>	Ardurra		
<b>Sample Location</b>	SW23 927-11, BK-51; 1.5'-4.0'	<b>Optimum Moisture, %</b>	<b>8.0</b>
<b>Sample Description</b>	Clayey Sand (SC)		
<b>Lab Number</b>	23-0525	Percent of Aggregate > 3/4"	2
<b>Date Sampled</b>	6/16/2023	Assumed Specific Gravity of Oversized	2.650
<b>Sampled By</b>	Shannon & Wilson	Oversized Aggregate was Replaced	
<b>Date Tested</b>	6/21/2023		
<b>Tested By</b>	KB		
<b>Remarks</b>	4" mold used due to limited material		
<b>SHANNON &amp; WILSON</b>		Reviewed By: <i>Paul Clawges</i>	

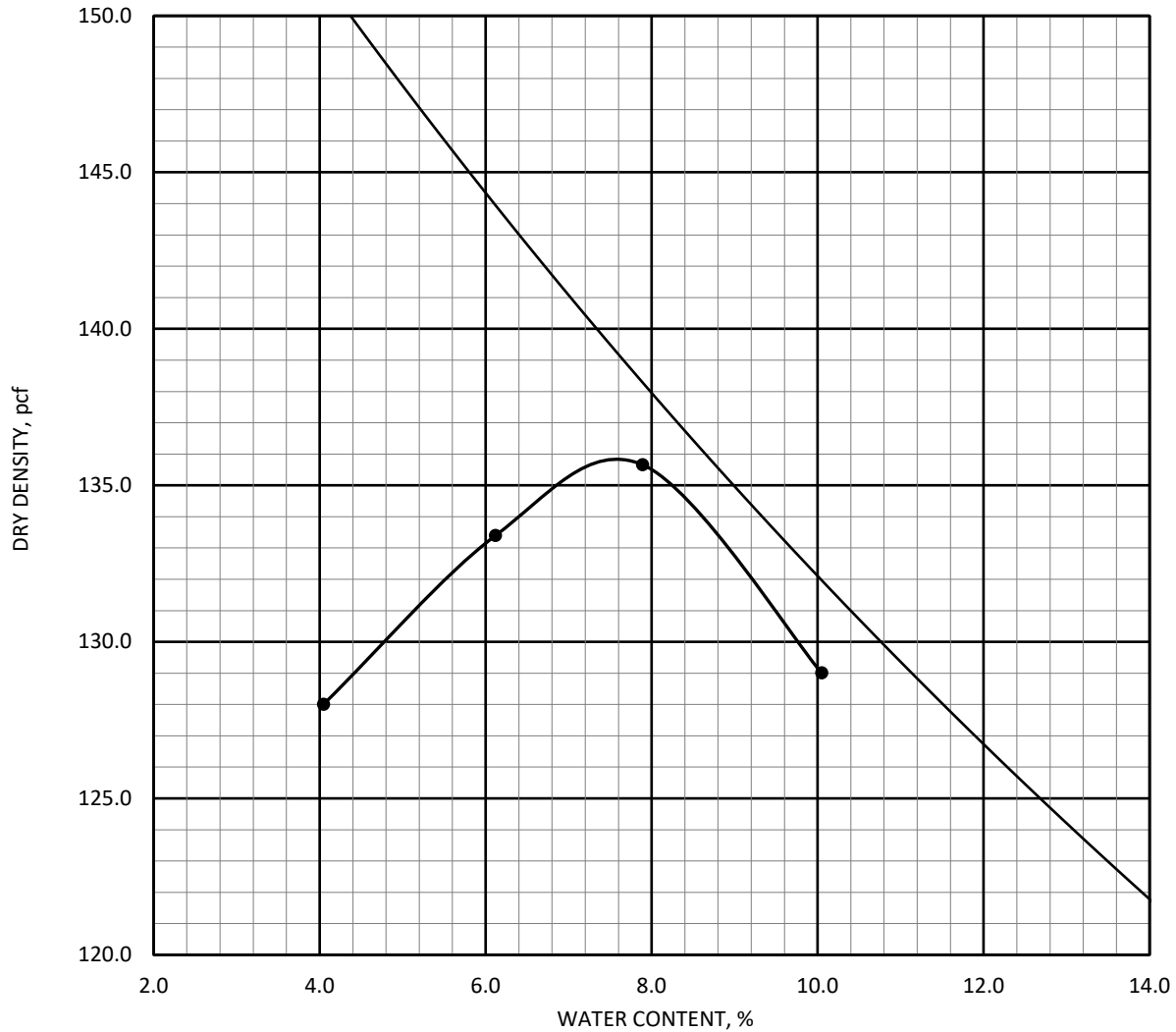
# COMPACTION TEST REPORT



Sp.G. for ZAV = 2.65

<b>Project Number</b>	110339	<b>ASTM D-1557, Method C</b>	
<b>Project Name</b>	RKS Master Plan	<b>Maximum Dry Density, pcf</b>	<b>128.4</b>
<b>Client</b>	Ardurra		
<b>Sample Location</b>	SW23 TERM-01, BK-85; 1.1'-5.5'	<b>Optimum Moisture, %</b>	<b>8.4</b>
<b>Sample Description</b>	Clayey Sand with Gravel (SC)		
<b>Lab Number</b>	23-0534	Percent of Aggregate > 3/4"	0
<b>Date Sampled</b>	6/16/2023	Assumed Specific Gravity of Oversized	2.650
<b>Sampled By</b>	Shannon & Wilson		
<b>Date Tested</b>	6/21/2023		
<b>Tested By</b>	KB		
<b>Remarks</b>	4" Mold used due to limited material.		
<b>SHANNON &amp; WILSON</b>		Reviewed By: <i>Paul Clawges</i>	

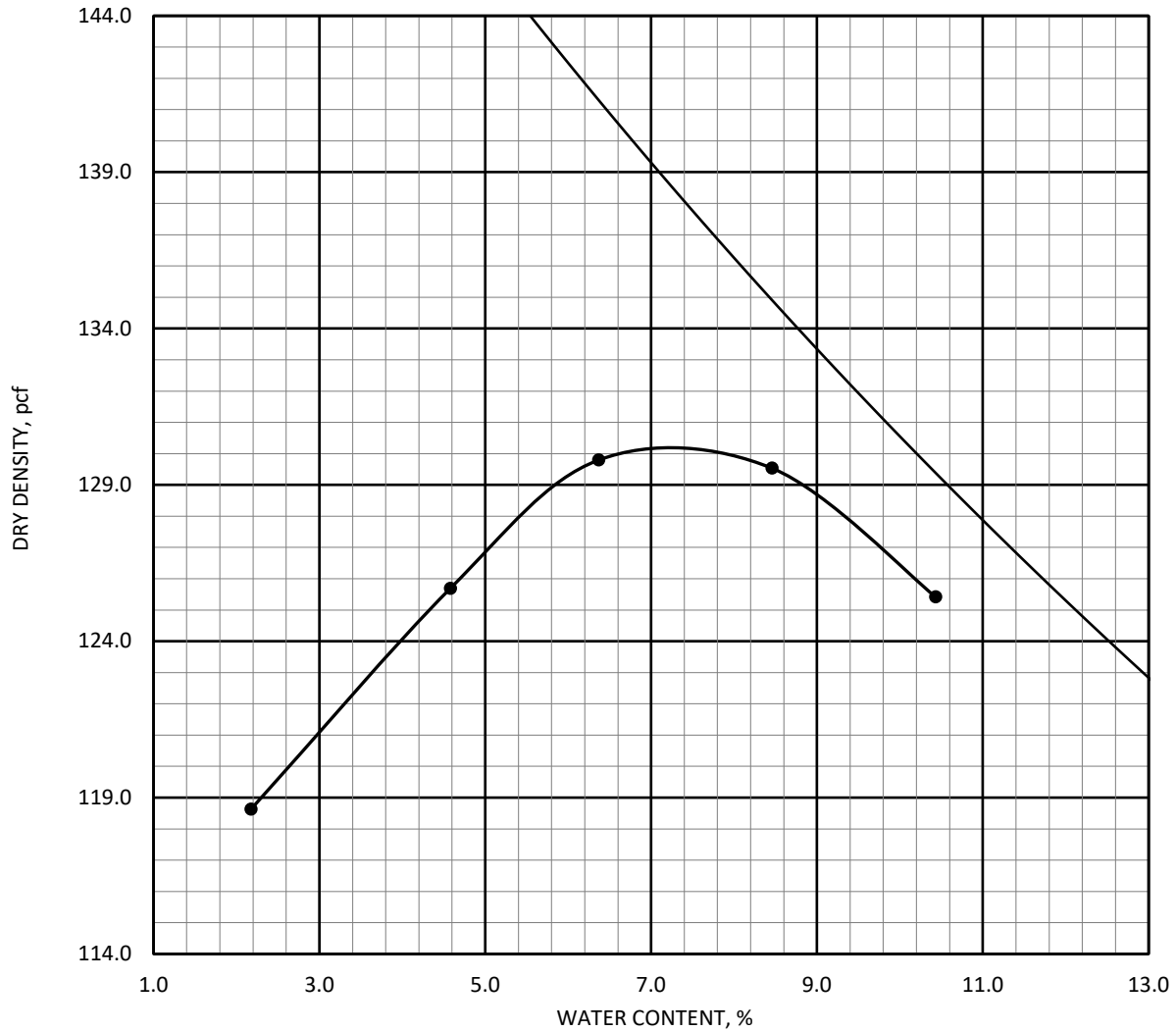
# COMPACTION TEST REPORT



Sp.G. for ZAV = 2.69

<b>Project Number</b>	110339	<b>ASTM D-1557, Method C</b>	
<b>Project Name</b>	RKS Master Plan	<b>Maximum Dry Density, pcf</b>	<b>135.8</b>
<b>Client</b>	Ardurra		
<b>Sample Location</b>	SW23 TERM-03, BK-92; 4.6'-6.5'	<b>Optimum Moisture, %</b>	<b>7.6</b>
<b>Sample Description</b>	Sandy Lean Clay (CL)		
<b>Lab Number</b>	23-0537	Percent of Aggregate > 3/4"	0
<b>Date Sampled</b>	6/16/2023	Assumed Specific Gravity of Oversized	2.690
<b>Sampled By</b>	Shannon & Wilson		
<b>Date Tested</b>	6/21/2023		
<b>Tested By</b>	EH		
<b>Remarks</b>	4" mold used due to limited material.		
<b>SHANNON &amp; WILSON</b>		Reviewed By: <i>Paul Clawges</i>	

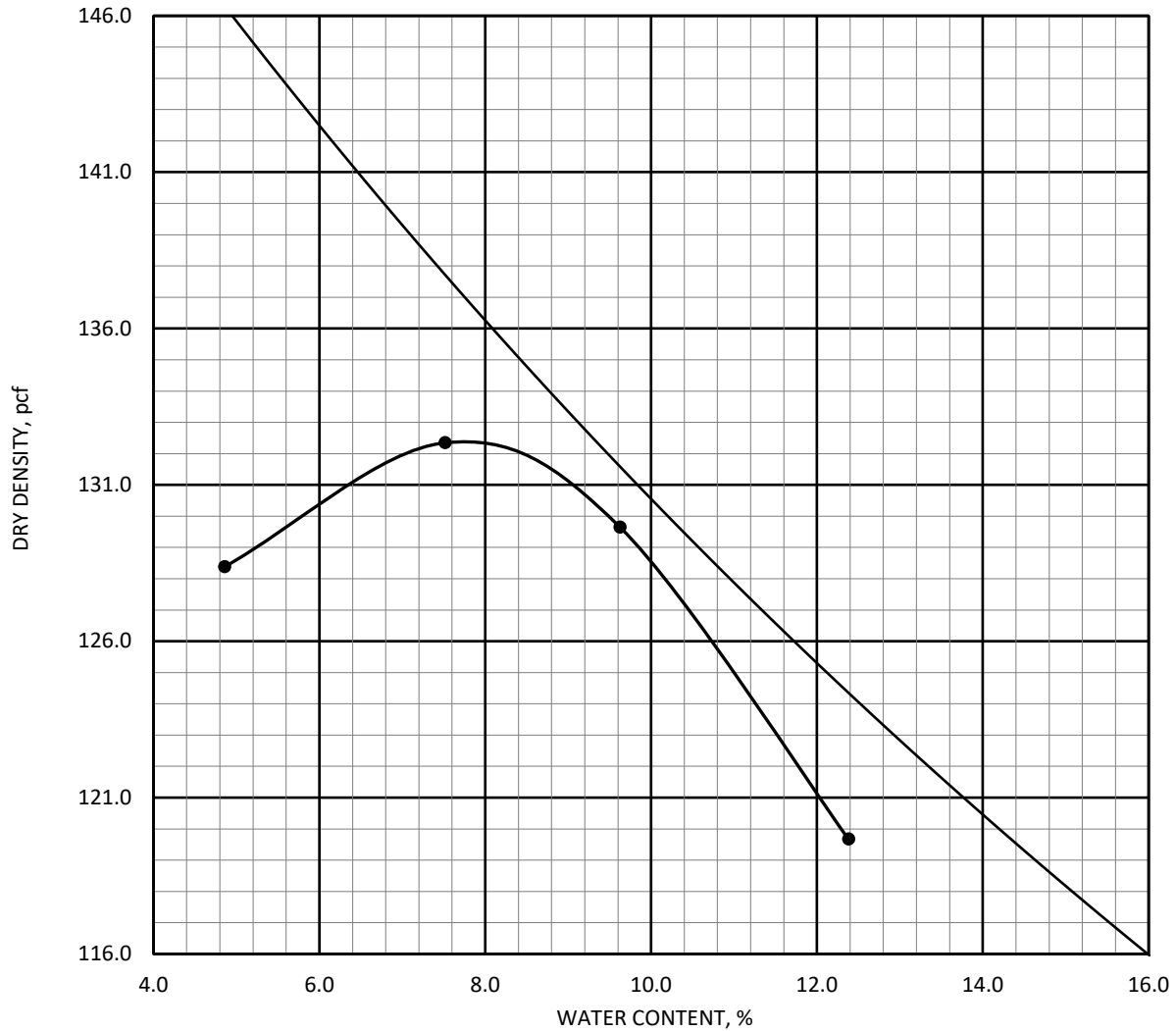
# COMPACTION TEST REPORT



Sp.G. for ZAV = 2.65

<b>Project Number</b>	110339	<b>ASTM D-1557, Method C</b>	
<b>Project Name</b>	RKS Master Plan	<b>Maximum Dry Density, pcf</b>	<b>130.2</b>
<b>Client</b>	Ardurra		
<b>Sample Location</b>	SW23 TWC-02, BK-62; 1.2'-4.0'	<b>Optimum Moisture, %</b>	<b>7.2</b>
<b>Sample Description</b>	Silty Sand (SM)		
<b>Lab Number</b>	23-0531	Percent of Aggregate > 3/4"	0
<b>Date Sampled</b>	6/16/2023		
<b>Sampled By</b>	Shannon & Wilson		
<b>Date Tested</b>	6/21/2023		
<b>Tested By</b>	EH		
<b>Remarks</b>	4" mold used due to limited material.		
<b>SHANNON &amp; WILSON</b>		Reviewed By: <i>Paul Clawges</i>	

# COMPACTION TEST REPORT



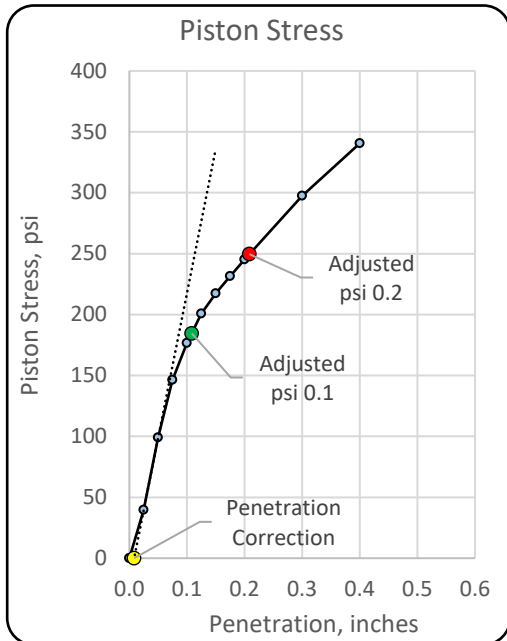
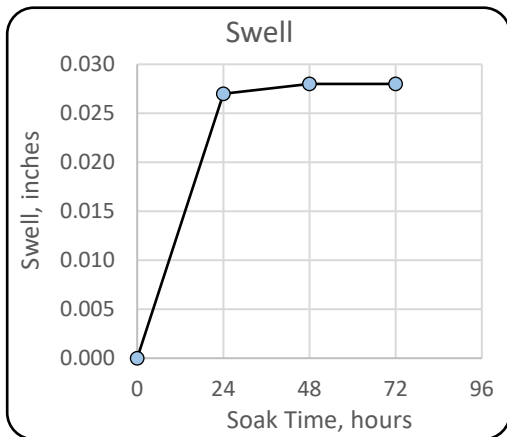
Sp.G. for ZAV = 2.65

<b>Project Number</b>	110339	<b>ASTM D-1557, Method C</b>	
<b>Project Name</b>	RKS Master Plan	<b>Maximum Dry Density, pcf</b>	<b>132.4</b>
<b>Client</b>	Ardurra		
<b>Sample Location</b>	SW23 TWD-01, BK-77; 1.0'-4.0'	<b>Optimum Moisture, %</b>	<b>7.8</b>
<b>Sample Description</b>	Silty, Clayey Sand with Gravel (SC-SM)		
<b>Lab Number</b>	23-0533	Percent of Aggregate > 3/4"	1
<b>Date Sampled</b>	6/16/2023	Assumed Specific Gravity of Oversized	2.650
<b>Sampled By</b>	Shannon & Wilson	Oversized Aggregate was Replaced	
<b>Date Tested</b>	6/21/2023		
<b>Tested By</b>	KB		
<b>Remarks</b>	4" mold used due to limited material.		
<b>SHANNON &amp; WILSON</b>		Reviewed By: <i>Paul Clawges</i>	

**Report To:** Ardurra  
**Project:** RKS Master Plan  
**Project No.:** 110339  
**Sample ID:** SW23 321-01, BK-23  
**Sample Depth:** 1.0'-4.0'  
**Soil Description:** Sandy Lean Clay (CL)

**Report Date:** 6/30/2023  
**Date Sampled:** 6/16/2023  
**Date Received:** 6/20/2023  
**Date Tested:** 6/23/2023  
**Tested By:** EH/KB  
**Lab Number:** 23-0526

**California Bearing Ratio Test Report**



Test Data	
CBR Test Method	ASTM D-1883
CBR Sample Type	Remolded & Soaked
Requested Remold, %	95
Proctor Test Method	ASTM D-1557, Method C
Oversized Material (>19mm)	No Oversized Material
Maximum Dry Density, pcf	131.4
Optimum Moisture, %	8.7
Initial Sample Data	
Number of Lifts	5
Blows per Lift	15
Dry Density Achieved, pcf	123.7
Moisture Achieved, %	9.5
Remold Achieved, %	94
Final Test Results	
Final Swell Height, inches	0.028
Total Soak Time, hours	72
Final Dry Density, pcf	123.0
Final Moisture, %	11.7
Adjusted Stress for 0.1, psi	184.6
Adjusted Stress for 0.2, psi	249.6
<b>Total Swell (% of initial ht.)</b>	<b>0.61</b>
<b>Soaked CBR at 0.1, %</b>	<b>18.5</b>

Remarks: Proctor performed with a 4" mold due to limited sample quantities.

Note: This report covers only material as represented by this sample and does not necessarily cover all soils from this layer or source.

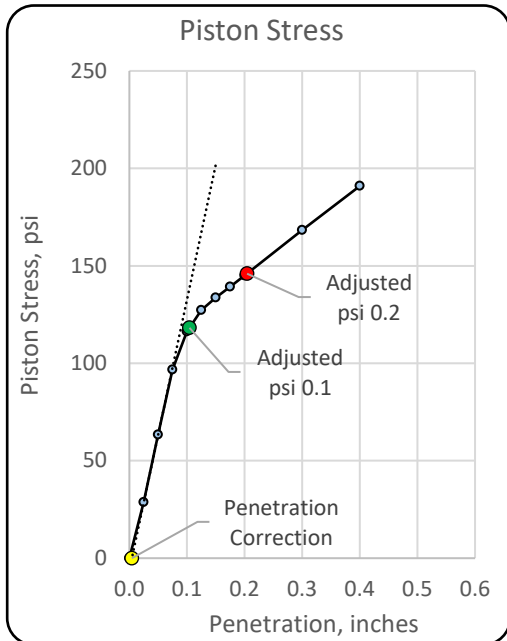
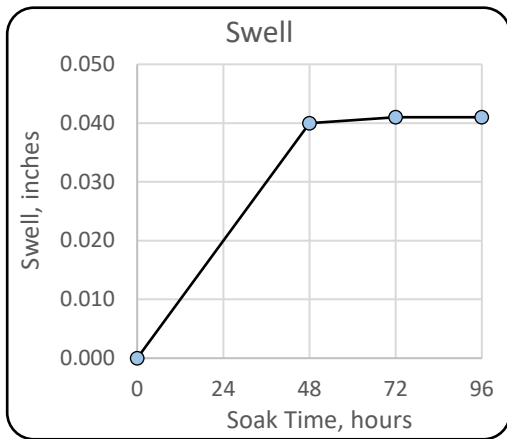
Reviewed by: Paul Clawges



**Report To:** Ardurra  
**Project:** RKS Master Plan  
**Project No.:** 110339  
**Sample ID:** SW23 321-04, BK-35  
**Sample Depth:** 1.8'-4.0'  
**Soil Description:** Clayey Sand (SC)

**Report Date:** 6/30/2023  
**Date Sampled:** 6/16/2023  
**Date Received:** 6/20/2023  
**Date Tested:** 6/22/2023  
**Tested By:** EH/KB  
**Lab Number:** 23-0527

**California Bearing Ratio Test Report**



Test Data	
CBR Test Method	ASTM D-1883
CBR Sample Type	Remolded & Soaked
Requested Remold, %	95
Proctor Test Method	ASTM D-1557, Method C
Oversized Material (>19mm)	No Oversized Material
Maximum Dry Density, pcf	133.6
Optimum Moisture, %	7.5
Initial Sample Data	
Number of Lifts	5
Blows per Lift	12
Dry Density Achieved, pcf	125.8
Moisture Achieved, %	7.1
Remold Achieved, %	94
Final Test Results	
Final Swell Height, inches	0.041
Total Soak Time, hours	96
Final Dry Density, pcf	124.6
Final Moisture, %	10.6
Adjusted Stress for 0.1, psi	118.2
Adjusted Stress for 0.2, psi	146.0
<b>Total Swell (% of initial ht.)</b>	<b>0.89</b>
<b>Soaked CBR at 0.1, %</b>	<b>11.8</b>

Remarks: Proctor performed with a 4" mold due to limited sample quantities.

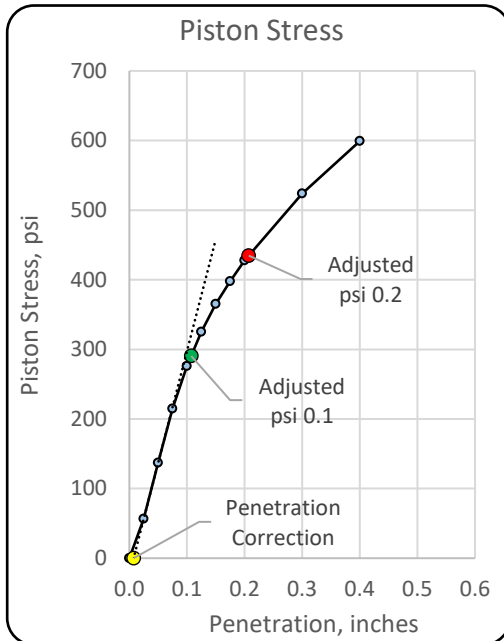
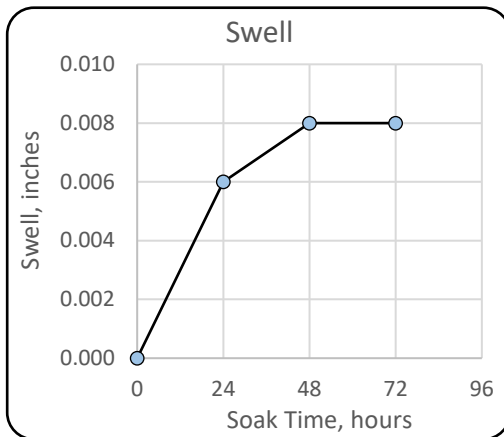
Note: This report covers only material as represented by this sample and does not necessarily cover all soils from this layer or source.

Reviewed by: Paul Clawges

**Report To:** Ardurra  
**Project:** RKS Master Plan  
**Project No.:** 110339  
**Sample ID:** SW23 927-01 BK-03A  
**Sample Depth:** 2.0'-4.0'  
**Soil Description:** Clayey Sand (SC)

**Report Date:** 6/30/2023  
**Date Sampled:** 6/16/2023  
**Date Received:** 6/20/2023  
**Date Tested:** 6/23/2023  
**Tested By:** EH/KB  
**Lab Number:** 23-0521

**California Bearing Ratio Test Report**



Test Data	
CBR Test Method	ASTM D-1883
CBR Sample Type	Remolded & Soaked
Requested Remold, %	95
Proctor Test Method	ASTM D-1557, Method C
Oversized Material (>19mm)	No Oversized Material
Maximum Dry Density, pcf	133
Optimum Moisture, %	8.2
Initial Sample Data	
Number of Lifts	5
Blows per Lift	14
Dry Density Achieved, pcf	125.5
Moisture Achieved, %	8.9
Remold Achieved, %	94
Final Test Results	
Final Swell Height, inches	0.008
Total Soak Time, hours	72
Final Dry Density, pcf	125.2
Final Moisture, %	10.3
Adjusted Stress for 0.1, psi	290.4
Adjusted Stress for 0.2, psi	434.6
<b>Total Swell (% of initial ht.)</b>	<b>0.17</b>
<b>Soaked CBR at 0.1, %</b>	<b>29.0</b>

Remarks: Proctor performed with a 4" mold due to limited sample quantities.

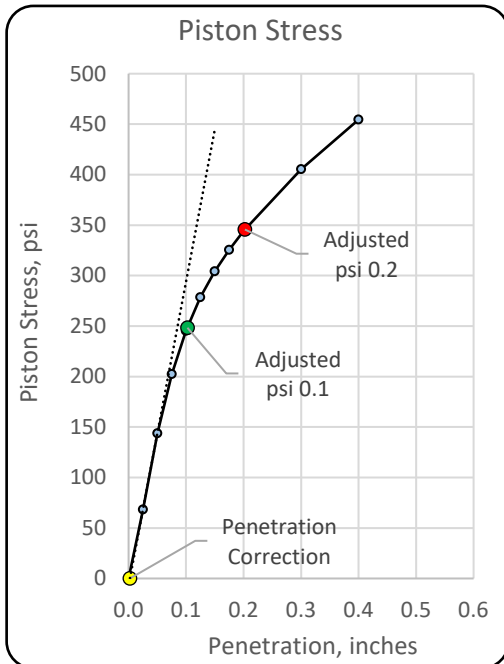
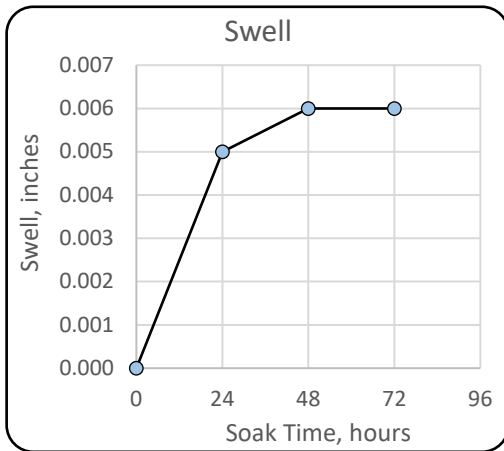
Note: This report covers only material as represented by this sample and does not necessarily cover all soils from this layer or source.

Reviewed by: Paul Clawges

**Report To:** Ardurra  
**Project:** RKS Master Plan  
**Project No.:** 110339  
**Sample ID:** SW23 927-04, BK-14  
**Sample Depth:** 1.5'-4.0'  
**Soil Description:** Clayey Sand (SC)

**Report Date:** 7/5/2023  
**Date Sampled:** 6/16/2023  
**Date Received:** 6/20/2023  
**Date Tested:** 6/30/2023  
**Tested By:** KB/KS  
**Lab Number:** 23-0522

### California Bearing Ratio Test Report



Test Data	
CBR Test Method	ASTM D-1883
CBR Sample Type	Remolded & Soaked
Requested Remold, %	95
Proctor Test Method	ASTM D-1557, Method C
Oversized Material (>19mm)	1 Percent was Replaced
Maximum Dry Density, pcf	131.4
Optimum Moisture, %	8.4
Initial Sample Data	
Number of Lifts	5
Blows per Lift	11
Dry Density Achieved, pcf	124.4
Moisture Achieved, %	8.7
Remold Achieved, %	95
Final Test Results	
Final Swell Height, inches	0.006
Total Soak Time, hours	72
Final Dry Density, pcf	124.2
Final Moisture, %	10.4
Adjusted Stress for 0.1, psi	248.4
Adjusted Stress for 0.2, psi	345.6
<b>Total Swell (% of initial ht.)</b>	<b>0.13</b>
<b>Soaked CBR at 0.1, %</b>	<b>24.8</b>

Remarks: Proctor performed with a 4" mold due to limited sample quantities.

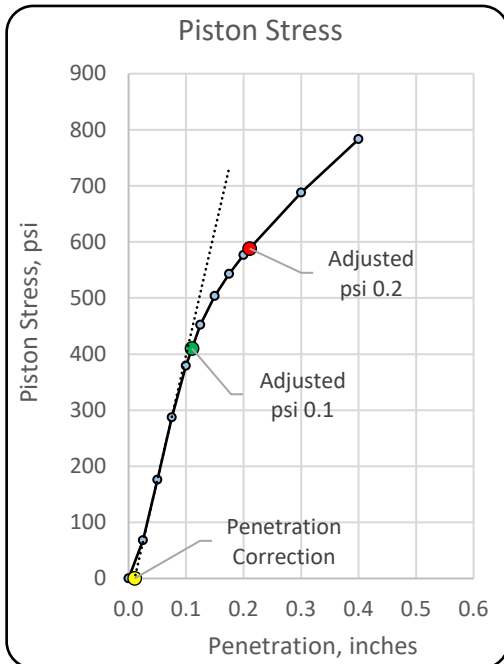
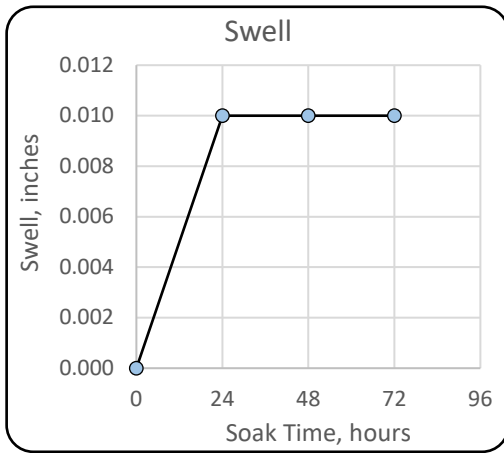
Note: This report covers only material as represented by this sample and does not necessarily cover all soils from this layer or source.

Reviewed by: Paul Clawges

**Report To:** Ardurra  
**Project:** RKS Master Plan  
**Project No.:** 110339  
**Sample ID:** SW23 927-07, BK-19  
**Sample Depth:** 1.6'-4.0'  
**Soil Description:** Clayey Sand (SC)

**Report Date:** 7/5/2023  
**Date Sampled:** 6/16/2023  
**Date Received:** 6/20/2023  
**Date Tested:** 6/30/2023  
**Tested By:** KB/KS  
**Lab Number:** 23-0523

**California Bearing Ratio Test Report**



Test Data	
CBR Test Method	ASTM D-1883
CBR Sample Type	Remolded & Soaked
Requested Remold, %	95
Proctor Test Method	ASTM D-1557, Method C
Oversized Material (>19mm)	1 Percent was Replaced
Maximum Dry Density, pcf	134.7
Optimum Moisture, %	7.6
Initial Sample Data	
Number of Lifts	5
Blows per Lift	20
Dry Density Achieved, pcf	127.2
Moisture Achieved, %	8.1
Remold Achieved, %	94
Final Test Results	
Final Swell Height, inches	0.010
Total Soak Time, hours	72
Final Dry Density, pcf	127.0
Final Moisture, %	9.7
Adjusted Stress for 0.1, psi	409.9
Adjusted Stress for 0.2, psi	588.1
<b>Total Swell (% of initial ht.)</b>	<b>0.22</b>
<b>Soaked CBR at 0.1, %</b>	<b>41.0</b>

Remarks: Proctor performed with a 4" mold due to limited sample quantities.

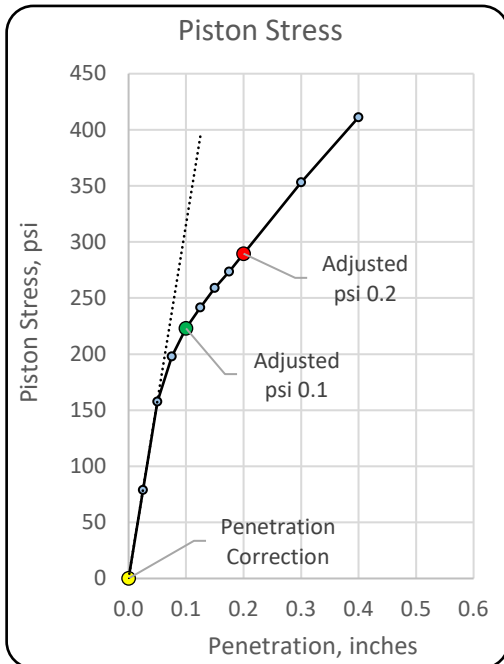
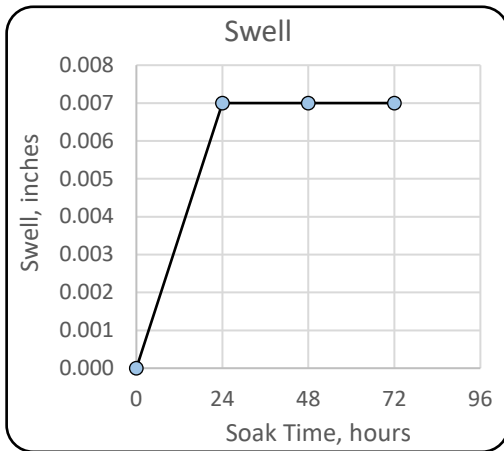
Note: This report covers only material as represented by this sample and does not necessarily cover all soils from this layer or source.

Reviewed by: Paul Clawges

**Report To:** Ardurra  
**Project:** RKS Master Plan  
**Project No.:** 110339  
**Sample ID:** SW23 927-09, BK-68  
**Sample Depth:** 1.4'-4.0'  
**Soil Description:** Clayey Sand with Gravel (SC)

**Report Date:** 7/5/2023  
**Date Sampled:** 6/16/2023  
**Date Received:** 6/20/2023  
**Date Tested:** 6/30/2023  
**Tested By:** KB/KS  
**Lab Number:** 23-0524

### California Bearing Ratio Test Report



Test Data	
CBR Test Method	ASTM D-1883
CBR Sample Type	Remolded & Soaked
Requested Remold, %	95
Proctor Test Method	ASTM D-1557, Method C
Oversized Material (>19mm)	1 Percent was Replaced
Maximum Dry Density, pcf	133.8
Optimum Moisture, %	7.3

Initial Sample Data	
Number of Lifts	5
Blows per Lift	20
Dry Density Achieved, pcf	127.1
Moisture Achieved, %	7.2
Remold Achieved, %	95

Final Test Results	
Final Swell Height, inches	0.007
Total Soak Time, hours	72
Final Dry Density, pcf	126.9
Final Moisture, %	9.5
Adjusted Stress for 0.1, psi	222.9
Adjusted Stress for 0.2, psi	289.6
<b>Total Swell (% of initial ht.)</b>	<b>0.15</b>
<b>Soaked CBR at 0.1, %</b>	<b>22.3</b>

Remarks: Proctor performed with a 4" mold due to limited sample quantities.

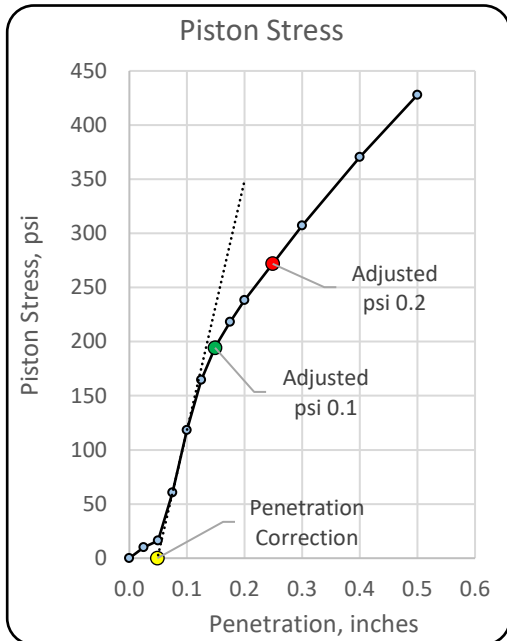
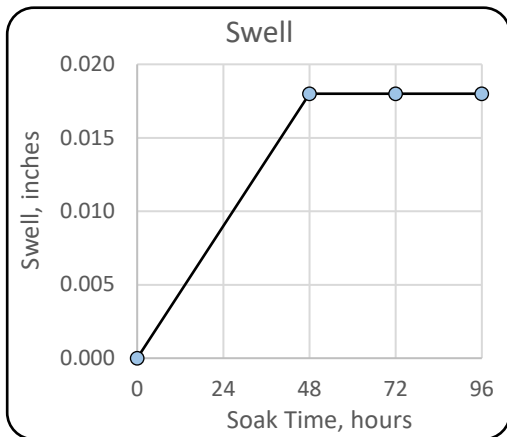
Note: This report covers only material as represented by this sample and does not necessarily cover all soils from this layer or source.

Reviewed by: Paul Clawges

**Report To:** Ardurra  
**Project:** RKS Master Plan  
**Project No.:** 110339  
**Sample ID:** SW23 927-11, BK-51  
**Sample Depth:** 1.5'-4.0'  
**Soil Description:** Clayey Sand (SC)

**Report Date:** 6/30/2023  
**Date Sampled:** 6/16/2023  
**Date Received:** 6/20/2023  
**Date Tested:** 6/22/2023  
**Tested By:** EH/KB  
**Lab Number:** 23-0525

**California Bearing Ratio Test Report**



Test Data	
CBR Test Method	ASTM D-1883
CBR Sample Type	Remolded & Soaked
Requested Remold, %	95
Proctor Test Method	ASTM D-1557, Method C
Oversized Material (>19mm)	2 Percent was Replaced
Maximum Dry Density, pcf	131.5
Optimum Moisture, %	8
Initial Sample Data	
Number of Lifts	5
Blows per Lift	6
Dry Density Achieved, pcf	124.2
Moisture Achieved, %	8.5
Remold Achieved, %	94
Final Test Results	
Final Swell Height, inches	0.018
Total Soak Time, hours	96
Final Dry Density, pcf	123.8
Final Moisture, %	10.5
Adjusted Stress for 0.1, psi	194.3
Adjusted Stress for 0.2, psi	271.8
<b>Total Swell (% of initial ht.)</b>	<b>0.39</b>
<b>Soaked CBR at 0.1, %</b>	<b>19.4</b>

Remarks: Proctor performed with a 4" mold due to limited sample quantities.

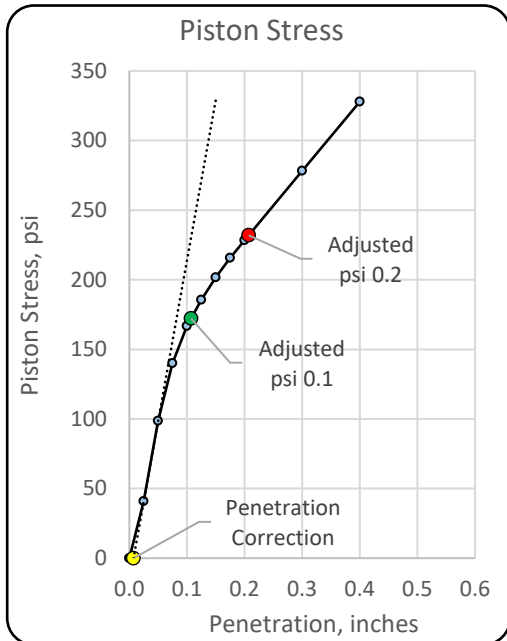
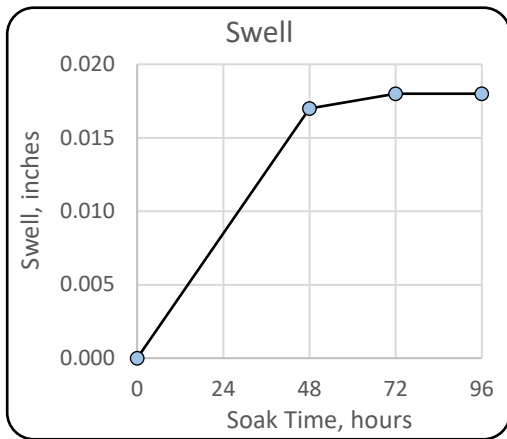
Note: This report covers only material as represented by this sample and does not necessarily cover all soils from this layer or source.

Reviewed by: Paul Clawges

**Report To:** Ardurra  
**Project:** RKS Master Plan  
**Project No.:** 110339  
**Sample ID:** SW23 TERM-01, BK-85  
**Sample Depth:** 1.1'-5.5'  
**Soil Description:** Clayey Sand with Gravel (SC)

**Report Date:** 6/30/2023  
**Date Sampled:** 6/16/2023  
**Date Received:** 6/20/2023  
**Date Tested:** 6/22/2023  
**Tested By:** EH/KB  
**Lab Number:** 23-0534

**California Bearing Ratio Test Report**



Test Data	
CBR Test Method	ASTM D-1883
CBR Sample Type	Remolded & Soaked
Requested Remold, %	95
Proctor Test Method	ASTM D-1557, Method C
Oversized Material (>19mm)	No Oversized Material
Maximum Dry Density, pcf	128.4
Optimum Moisture, %	8.4
Initial Sample Data	
Number of Lifts	5
Blows per Lift	7
Dry Density Achieved, pcf	121.2
Moisture Achieved, %	8.6
Remold Achieved, %	94
Final Test Results	
Final Swell Height, inches	0.018
Total Soak Time, hours	96
Final Dry Density, pcf	120.7
Final Moisture, %	12.1
Adjusted Stress for 0.1, psi	172.1
Adjusted Stress for 0.2, psi	231.9
<b>Total Swell (% of initial ht.)</b>	<b>0.39</b>
<b>Soaked CBR at 0.1, %</b>	<b>17.2</b>

Remarks: Proctor performed with a 4" mold due to limited sample quantities.

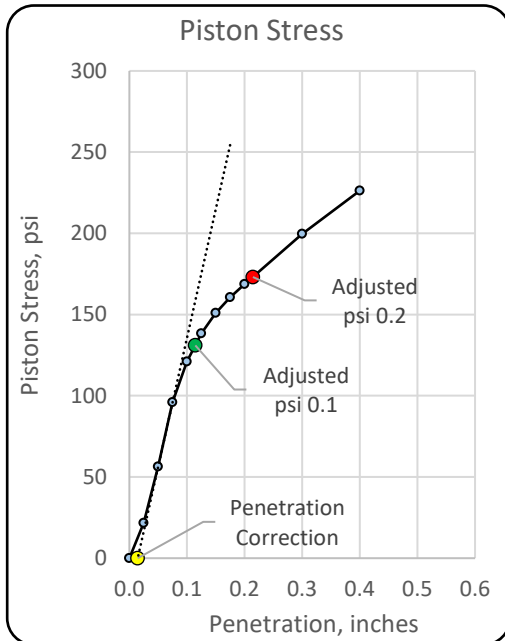
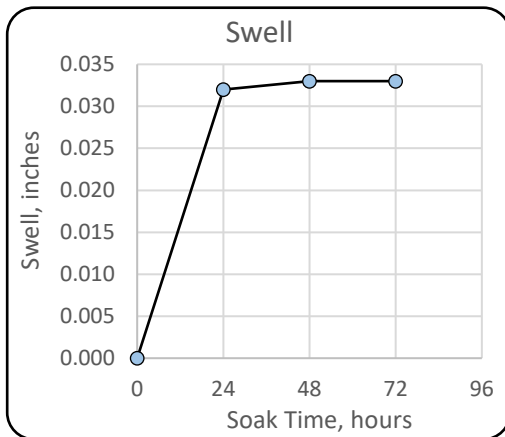
Note: This report covers only material as represented by this sample and does not necessarily cover all soils from this layer or source.

Reviewed by: Paul Clawges

**Report To:** Ardurra  
**Project:** RKS Master Plan  
**Project No.:** 110339  
**Sample ID:** SW23 TERM-03, BK-92  
**Sample Depth:** 4.6'-6.5'  
**Soil Description:** Sandy Lean Clay (CL)

**Report Date:** 6/30/2023  
**Date Sampled:** 6/16/2023  
**Date Received:** 6/20/2023  
**Date Tested:** 6/23/2023  
**Tested By:** EH/KB  
**Lab Number:** 23-0537

### California Bearing Ratio Test Report



Test Data	
CBR Test Method	ASTM D-1883
CBR Sample Type	Remolded & Soaked
Requested Remold, %	95
Proctor Test Method	ASTM D-1557, Method C
Oversized Material (>19mm)	No Oversized Material
Maximum Dry Density, pcf	135.8
Optimum Moisture, %	7.6
Initial Sample Data	
Number of Lifts	5
Blows per Lift	14
Dry Density Achieved, pcf	127.0
Moisture Achieved, %	8.5
Remold Achieved, %	94
Final Test Results	
Final Swell Height, inches	0.033
Total Soak Time, hours	72
Final Dry Density, pcf	126.1
Final Moisture, %	10.8
Adjusted Stress for 0.1, psi	131.0
Adjusted Stress for 0.2, psi	173.1
<b>Total Swell (% of initial ht.)</b>	<b>0.72</b>
<b>Soaked CBR at 0.1, %</b>	<b>13.1</b>

Remarks: Proctor performed with a 4" mold due to limited sample quantities.

Note: This report covers only material as represented by this sample and does not necessarily cover all soils from this layer or source.

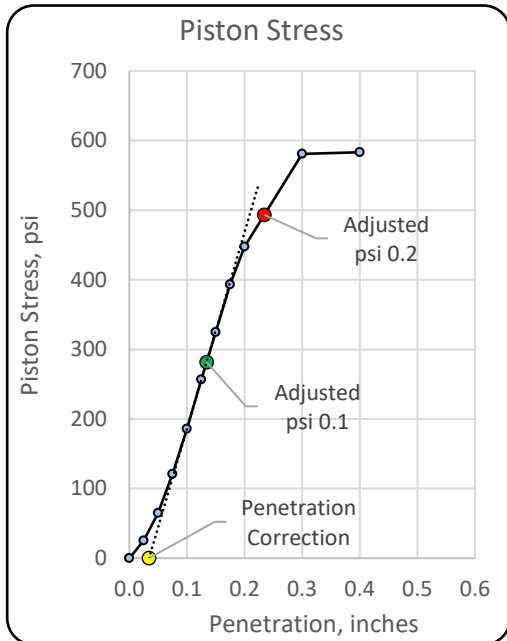
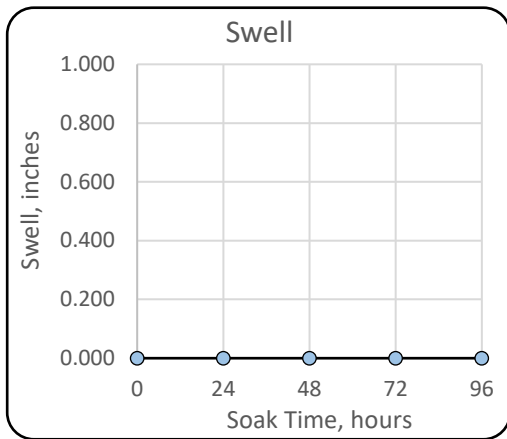
Reviewed by: Paul Clawges



**Report To:** Ardurra  
**Project:** RKS Master Plan  
**Project No.:** 110339  
**Sample ID:** SW23 TWC-02, BK-62  
**Sample Depth:** 1.2'-4.0'  
**Soil Description:** Silty Sand (SM)

**Report Date:** 6/30/2023  
**Date Sampled:** 6/16/2023  
**Date Received:** 6/20/2023  
**Date Tested:** 6/22/2023  
**Tested By:** EH/KB  
**Lab Number:** 23-0531

**California Bearing Ratio Test Report**



Test Data	
CBR Test Method	ASTM D-1883
CBR Sample Type	Remolded & Soaked
Requested Remold, %	95
Proctor Test Method	ASTM D-1557, Method C
Oversized Material (>19mm)	No Oversized Material
Maximum Dry Density, pcf	130.2
Optimum Moisture, %	7.2
Initial Sample Data	
Number of Lifts	5
Blows per Lift	5
Dry Density Achieved, pcf	120.8
Moisture Achieved, %	9.6
Remold Achieved, %	93
Final Test Results	
Final Swell Height, inches	0.000
Total Soak Time, hours	96
Final Dry Density, pcf	120.8
Final Moisture, %	9.9
Adjusted Stress for 0.1, psi	281.6
Adjusted Stress for 0.2, psi	493.1
<b>Total Swell (% of initial ht.)</b>	<b>0.00</b>
<b>Soaked CBR at 0.2, %</b>	<b>32.9</b>

Remarks: Proctor performed with a 4" mold due to limited sample quantities.

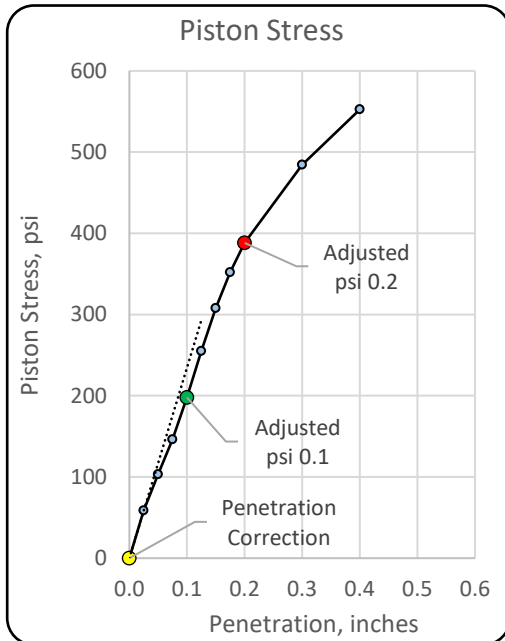
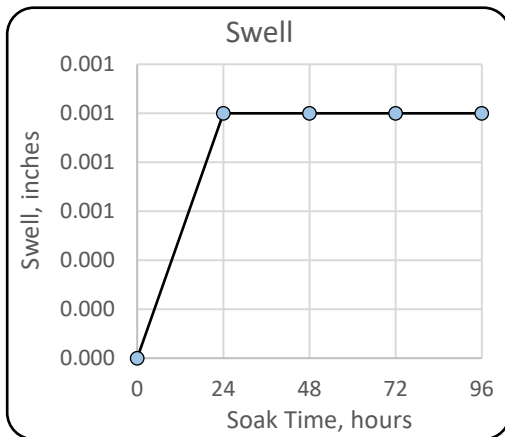
Note: This report covers only material as represented by this sample and does not necessarily cover all soils from this layer or source.

Reviewed by: Paul Clawges

**Report To:** Ardurra  
**Project:** RKS Master Plan  
**Project No.:** 110339  
**Sample ID:** SW23 TWD-01, BK-77  
**Sample Depth:** 1.0'-4.0'  
**Soil Description:** Silty, Clayey Sand with Gravel (SC-SM)

**Report Date:** 6/30/2023  
**Date Sampled:** 6/16/2023  
**Date Received:** 6/20/2023  
**Date Tested:** 6/22/2023  
**Tested By:** EH/KB  
**Lab Number:** 23-0533

### California Bearing Ratio Test Report



Test Data	
CBR Test Method	ASTM D-1883
CBR Sample Type	Remolded & Soaked
Requested Remold, %	95
Proctor Test Method	ASTM D-1557, Method C
Oversized Material (>19mm)	2 Percent was Replaced
Maximum Dry Density, pcf	132.4
Optimum Moisture, %	7.8
Initial Sample Data	
Number of Lifts	5
Blows per Lift	4
Dry Density Achieved, pcf	125.0
Moisture Achieved, %	7.9
Remold Achieved, %	94
Final Test Results	
Final Swell Height, inches	0.001
Total Soak Time, hours	96
Final Dry Density, pcf	125.0
Final Moisture, %	9.6
Adjusted Stress for 0.1, psi	197.9
Adjusted Stress for 0.2, psi	388.2
<b>Total Swell (% of initial ht.)</b>	<b>0.02</b>
<b>Soaked CBR at 0.2, %</b>	<b>25.9</b>

Remarks: Proctor performed with a 4" mold due to limited sample quantities.

Note: This report covers only material as represented by this sample and does not necessarily cover all soils from this layer or source.

Reviewed by: Paul Clawges

Appendix D

# Traffic

Subtitle if Applicable

## CONTENTS

- Projected RKS Airfield Aircraft Traffic

## Projected RKS Airfield Aircraft Traffic

### Future Critical Aircraft - Overall Airport

ARC Class	2042 Est		2023		Representative Types	Proposed FAARFIELD Equivalents
	Landings/Departures	Landings/Departures	Landings/Departures	Landings/Departures		
A-1	5173	3551			Mitsubishi Marquise/Solitaire (MU2), Cirrus SR 22 (SR22), Piper Malibu Meridian (P46T), Cessna Skylane 182 (C182)	PA-46-350P Malibu Mirage
A-II	2372	1629			Pilatus PC-12 (PC12), DeHavilland Twin Otter (DHC6)	Cessna 208B Grand Caravan EX
B-I	3990	2739			Beech King Air 90 (BE9L), Cessna CitationJet/CJ1 (C525), Cessna Citation Mustang (C510), Cessna 340 (C340)	Cessna C414/414A Chancellor
B-II	3264	2241			Cessna 408 SkyCourier (C408), Swearingen Metroliner (SW4), Beech 200 Super King (BE20), Beech 1900/C-12J (B190)	Beechcraft King Air B200
B-III	4	3			CASA CN-235 (CN35)	Fokker F27
C-I	55	38			BAe HS 125/700-800/Hawker 800 (H25B), Bombardier Learjet 60 (LJ60), Bombardier Learjet 31/A/B (LJ31), Bombardier Learjet 55 (LJ55)	HS125
C-II	296	204			Bombardier Challenger 300 (CL30/CL35); Learjet 70/75	Bombardier CL-604/605
C-III	1076	739			Embraer 175 (E175); Boeing 737-700 (B737); Airbus A320 (A320); Bombardier BD-700 Global Express (GLEX)	Boeing 737-700
C-IV	55	38			Boeing KC-135 Stratotanker (K35R)	Boeing 767-200
D-I	14	10			Bombardier Learjet 35/36 (LJ35)	Learjet 35/36/35A/36A
D-II	59	41			Gulfstream IV/G400 (GLF4)	Gulfstream-G-IV
D-III	14	10			Boeing 737-800/-MAX 8 (B738); Gulfstream 650 (GLF6)	Boeing 737-800
B-III	50	35			Bombardier Global Express 6000	Gulfstream V/G500/G550 (Weight 99,500 lbs)
B-II	150	103			Embraer Praeter 600	Dassault Falcon 900B/C
No data	1152	791			N/A	
<b>Total</b>	<b>17724</b>	<b>12172</b>				
<b>ADT</b>	<b>49</b>	<b>33</b>				

### Runway 9/27 (Taxiways A, A1, A2, A3, A4, A5, Air Carrier Apron)

ARC Class	2042 Est		2023		Representative Types	Proposed FAARFIELD Equivalents
	Landings/Departures	Landings/Departures	Landings/Departures	Landings/Departures		
A-1	3621	2486			Mitsubishi Marquise/Solitaire (MU2), Cirrus SR 22 (SR22), Piper Malibu Meridian (P46T), Cessna Skylane 182 (C182)	PA-46-350P Malibu Mirage
A-II	1661	1141			Pilatus PC-12 (PC12), DeHavilland Twin Otter (DHC6)	Cessna 208B Grand Caravan EX
B-I	2793	1918			Beech King Air 90 (BE9L), Cessna CitationJet/CJ1 (C525), Cessna Citation Mustang (C510), Cessna 340 (C340)	Cessna C414/414A Chancellor
B-II	2285	1569			Cessna 408 SkyCourier (C408), Swearingen Metroliner (SW4), Beech 200 Super King (BE20), Beech 1900/C-12J (B190)	Beechcraft King Air B200
B-III	4	3			CASA CN-235 (CN35)	Fokker F27
C-I	49	34			BAe HS 125/700-800/Hawker 800 (H25B), Bombardier Learjet 60 (LJ60), Bombardier Learjet 31/A/B (LJ31), Bombardier Learjet 55 (LJ55)	HS125
C-II	266	183			Bombardier Challenger 300 (CL30/CL35); Learjet 70/75	Bombardier CL-604/605
C-III	1076	739			Embraer 175 (E175); Boeing 737-700 (B737); Airbus A320 (A320); Bombardier BD-700 Global Express (GLEX)	Boeing 737-700
C-IV	55	38			Boeing KC-135 Stratotanker (K35R)	Boeing 767-200
D-I	14	10			Bombardier Learjet 35/36 (LJ35)	Learjet 35/36/35A/36A
D-II	59	41			Gulfstream IV/G400 (GLF4)	Gulfstream-G-IV
D-III	14	10			Boeing 737-800/-MAX 8 (B738); Gulfstream 650 (GLF6)	Boeing 737-800
<b>Total</b>	<b>11897</b>	<b>8172</b>				
<b>ADT</b>	<b>33</b>	<b>22</b>				

### Runway 3/21 (Runway 3/21, Taxiway B, C, D, E, F, F1, F2, F3, GA Apron)\*\*

ARC Class	2042 Est		2023		Representative Types	Proposed FAARFIELD Equivalents
	Landings/Departures	Landings/Departures	Landings/Departures	Landings/Departures		
A-1	1552	1066			Mitsubishi Marquise/Solitaire (MU2), Cirrus SR 22 (SR22), Piper Malibu Meridian (P46T), Cessna Skylane 182 (C182)	PA-46-350P Malibu Mirage
A-II	712	489			Pilatus PC-12 (PC12), DeHavilland Twin Otter (DHC6)	Cessna 208B Grand Caravan EX
B-I	1197	822			Beech King Air 90 (BE9L), Cessna CitationJet/CJ1 (C525), Cessna Citation Mustang (C510), Cessna 340 (C340)	Cessna C414/414A Chancellor
B-II	979	673			Cessna 408 SkyCourier (C408), Swearingen Metroliner (SW4), Beech 200 Super King (BE20), Beech 1900/C-12J (B190)	Beechcraft King Air B200
C-I	5	4			BAe HS 125/700-800/Hawker 800 (H25B), Bombardier Learjet 60 (LJ60), Bombardier Learjet 31/A/B (LJ31), Bombardier Learjet 55 (LJ55)	HS125
C-II	30	21			Bombardier Challenger 300 (CL30/CL35); Learjet 70/75	Bombardier CL-604/605
C-III	0	0			Embraer 175 (E175); Boeing 737-700 (B737); Airbus A320 (A320); Bombardier BD-700 Global Express (GLEX)	Boeing 737-700
C-IV	0	0			Boeing KC-135 Stratotanker (K35R)	Boeing 767-200
D-I	0	0			Bombardier Learjet 35/36 (LJ35)	Learjet 35/36/35A/36A
D-II	0	0			Gulfstream IV/G400 (GLF4)	Gulfstream-G-IV
D-III	0	0			Boeing 737-800/-MAX 8 (B738); Gulfstream 650 (GLF6)	Boeing 737-800
B-III	50	35			Global Express 6000 (TW D Only)	Gulfstream V/G500/G550 (Weight 99,500 lbs)
B-II	150	103			Embraer Praeter 600 (TW D Only)	Dassault Falcon 900B/C
<b>Total</b>	<b>4475</b>	<b>3075</b>				
<b>ADT</b>	<b>12</b>	<b>8</b>				

\*\* TW D should include 50 Global Express 6000 operations and 150 Embraer Praeter 600 operations per year

Appendix E

# Pavement Analysis Reports

Subtitle if Applicable

## CONTENTS

- FAARFIELD PCR Reports for Airfield Pavements
- AASHTO 93 Pavement Design for the Terminal Road

# Federal Aviation Administration FAARFIELD 2.0 Section Report

FAARFIELD 2.0.18 (Build 05/26/2022)

**Job Name: 110339 - RKS Master Plan\_8-15-2023**

**Section: RW 9/27 New Flexible**

Analysis Type: HMA on Flexible

No run has been done on this section.

## Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	Poisson's Ratio	Strength R (psi)
1	P-401/P-403 HMA Overlay	2.0	200,000	0.35	0
2	User Defined	5.5	336,900	0.35	0
3	User Defined	10.6	400,000	0.35	0
4	Subgrade	0	27,300	0.35	0

## Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	PA-46-350P Malibu Mirage	4,118	2,486	2
2	Cessna 208B Grand Caravan EX	8,750	1,141	2
3	Cessna 414/414A Chancellor	6,200	1,918	2
4	Beechcraft King Air B200	12,590	1,569	2
5	Fokker F27	43,601	3	2
6	HS125	25,000	34	2
7	Bombardier CL-604/605	48,200	183	2
8	B737-700	155,000	739	2
9	B767-200	368,000	38	2
10	Learjet 35/36/35A/36A	18,000	10	2
11	Gulfstream-G-IV	75,000	41	2
12	B737-800	174,700	10	2
13	Gulfstream G-V/G500/G550	99,500	35	2
14	Dassault Falcon 900B/C	45,500	103	2
15	Truck Axle Single	18,740	100	0
16	Truck Axle Tandem	37,480	100	0

## Additional Airplane Information

### Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	1.23
2	Cessna 208B Grand Caravan EX	0.00	0.00	3.17
3	Cessna 414/414A Chancellor	0.00	0.00	3.24
4	Beechcraft King Air B200	0.00	0.00	2.33
5	Fokker F27	0.00	0.00	1.92
6	HS125	0.00	0.00	2.22
7	Bombardier CL-604/605	0.00	0.00	2.01
8	B737-700	0.00	0.00	1.53
9	B767-200	0.00	0.00	1.63
10	Learjet 35/36/35A/36A	0.00	0.00	2.33
11	Gulfstream-G-IV	0.00	0.00	1.94
12	B737-800	0.00	0.00	1.5
13	Gulfstream G-V/G500/G550	0.00	0.00	1.81
14	Dassault Falcon 900B/C	0.00	0.00	2.06
15	Truck Axle Single	0.00	0.00	2.93
16	Truck Axle Tandem	0.00	0.00	2.93

### Overlay HMA CDF

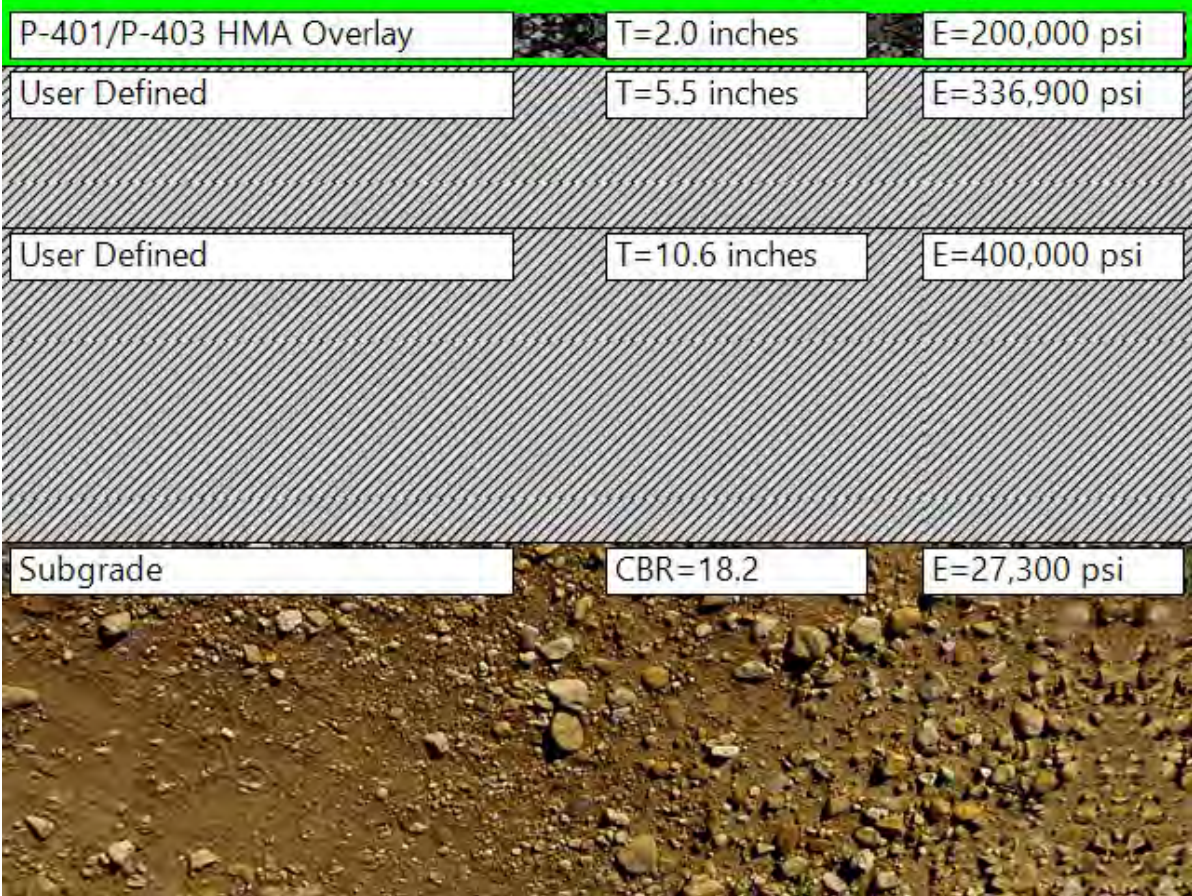
No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	0.97
2	Cessna 208B Grand Caravan EX	0.00	0.00	3.17
3	Cessna 414/414A Chancellor	0.00	0.00	3.24
4	Beechcraft King Air B200	0.00	0.00	2.33
5	Fokker F27	0.00	0.00	1.92
6	HS125	0.00	0.00	2.22
7	Bombardier CL-604/605	0.00	0.00	2.01
8	B737-700	0.00	0.00	1.53
9	B767-200	0.00	0.00	1.63
10	Learjet 35/36/35A/36A	0.00	0.00	2.33
11	Gulfstream-G-IV	0.00	0.00	1.94
12	B737-800	0.00	0.00	1.50
13	Gulfstream G-V/G500/G550	0.00	0.00	1.81
14	Dassault Falcon 900B/C	0.00	0.00	2.06
15	Truck Axle Single	0.00	0.00	2.93
16	Truck Axle Tandem	0.00	0.00	2.93

## HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	0.81
2	Cessna 208B Grand Caravan EX	0.00	0.00	3.17
3	Cessna 414/414A Chancellor	0.00	0.00	3.24
4	Beechcraft King Air B200	0.00	0.00	2.33
5	Fokker F27	0.00	0.00	1.92
6	HS125	0.00	0.00	2.22
7	Bombardier CL-604/605	0.00	0.00	2.01
8	B737-700	0.00	0.00	1.53
9	B767-200	0.00	0.00	1.63
10	Learjet 35/36/35A/36A	0.00	0.00	2.33
11	Gulfstream-G-IV	0.00	0.00	1.94
12	B737-800	0.00	0.00	1.50
13	Gulfstream G-V/G500/G550	0.00	0.00	1.81
14	Dassault Falcon 900B/C	0.00	0.00	2.06
15	Truck Axle Single	0.00	0.00	2.93
16	Truck Axle Tandem	0.00	0.00	2.93

*User Is responsible For checking frost protection requirements.*





# Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.0.18 (Build 05/26/2022)

**Job Name: 110339 - RKS Master Plan\_8-15-2023**

**Section: RW 9/27 New Flexible**

Analysis Type: HMA on Flexible

Analysis Run Time: 2023-08-18 05:07:58

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 18.1in.



# Federal Aviation Administration FAARFIELD 2.0 PCR Report

FAARFIELD 2.0.18 (Build 05/26/2022)

**Job Name: 110339 - RKS Master Plan\_8-15-2023**

**Section: RW 9/27 New Flexible**

This file name = PCR Results for HMA on Flexible 2023-08-18 05:07:58

Evaluation pavement type is flexible and design program is FAARFIELD.

Section name: RW 9/27 New Flexible in job file: 110339 - RKS Master Plan\_8-15-2023.JOB.xml

Units = US Customary

Analysis Type: HMA on Flexible

Subgrade Modulus =27,300psi (Subgrade Category is A)

Evaluation Pavement Thickness = 18.1 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 4

CDF = 0.000

**Results Table 1. Input Traffic Data**

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	PA-46-350P Malibu Mirage	4,118	95.00	55	2,486	9,897
2	Cessna 208B Grand Caravan EX	8,750	95.00	75	1,141	5,016
3	Cessna 414/414A Chancellor	6,200	95.00	62	1,918	8,139
4	Beechcraft King Air B200	12,590	95.00	98	1,569	11,492
5	Fokker F27	43,601	95.00	154	3	27
6	HS125	25,000	91.00	120	34	269
7	Bombardier CL-604/605	48,200	95.00	145	183	1,676
8	B737-700	155,000	91.80	197	739	7,638
9	B767-200	368,000	92.40	190	38	749
10	Learjet 35/36/35A/36A	18,000	95.00	171	10	73
11	Gulfstream-G-IV	75,000	95.00	185	41	394
12	B737-800	174,700	93.60	204	10	107
13	Gulfstream G-V/G500/G550	99,500	95.00	206	35	360
14	Dassault Falcon 900B/C	45,500	95.00	145	103	908
15	Truck Axle Single	18,740	100.00	95	100	423
16	Truck Axle Tandem	37,480	100.00	95	100	845

**Results Table 2. PCR Value**

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/A
1	B767-200	38	1,222,970	33.7	1852.4

**Results Table 3. HMA on Flexible ACR at Indicated Gross Weight and Strength**

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)
1	PA-46-350P Malibu Mirage	4,118	95	55
2	Cessna 208B Grand Caravan EX	8,750	95	75
3	Cessna 414/414A Chancellor	6,200	95	62
4	Beechcraft King Air B200	12,590	95	98
5	Fokker F27	43,601	95	154
6	HS125	25,000	91	120
7	Bombardier CL-604/605	48,200	95	145
8	B737-700	155,000	91.8	197
9	B767-200	368,000	92.4	190
10	Learjet 35/36/35A/36A	18,000	95	171
11	Gulfstream-G-IV	75,000	95	185
12	B737-800	174,700	93.6	204
13	Gulfstream G-V/G500/G550	99,500	95	206
14	Dassault Falcon 900B/C	45,500	95	145
15	Truck Axle Single	18,740	100	95
16	Truck Axle Tandem	37,480	100	95

**Results Table 3. Continue**

No.	Aircraft Name	(A)	(B)	(C)	(D)	ACR/F/A	ACR/F/B	ACR/F/C	ACR/F/D
1	PA-46-350P Malibu Mirage	6.4	9	11.2	14.1	12.9	13.4	13.9	14.3
2	Cessna 208B Grand Caravan EX	6.4	9	11.2	14.1	25.1	27.4	31.2	33.7
3	Cessna 414/414A Chancellor	6.4	9	11.2	14.1	18.1	19.1	19.9	22.8
4	Beechcraft King Air B200	6.4	9	11.2	14.1	22.3	23.5	26.7	32
5	Fokker F27	6.4	9	11.2	14.1	86.5	97.5	108.1	126.8
6	HS125	6.4	9	11.2	14.1	42.4	51.6	60.9	74
7	Bombardier CL-604/605	6.4	9	11.2	14.1	99.1	119.2	143.3	165.1
8	B737-700	6.4	9	11.2	14.1	321.1	345.5	376.8	422.9
9	B767-200	6.4	9	11.2	14.1	384.4	413.6	468.2	606.1
10	Learjet 35/36/35A/36A	6.4	9	11.2	14.1	36.5	40.3	44.2	52.2
11	Gulfstream-G-IV	6.4	9	11.2	14.1	180	226.3	257.2	278.7
12	B737-800	6.4	9	11.2	14.1	377.4	410.5	448.9	509.5
13	Gulfstream G-V/G500/G550	6.4	9	11.2	14.1	241.9	291.1	335.5	365.1
14	Dassault Falcon 900B/C	6.4	9	11.2	14.1	95.2	118.1	141	159.5
15	Truck Axle Single	6.4	9	11.2	14.1	58.8	70	74.9	78.5
16	Truck Axle Tandem	6.4	9	11.2	14.1	62.3	73	77.7	81.6

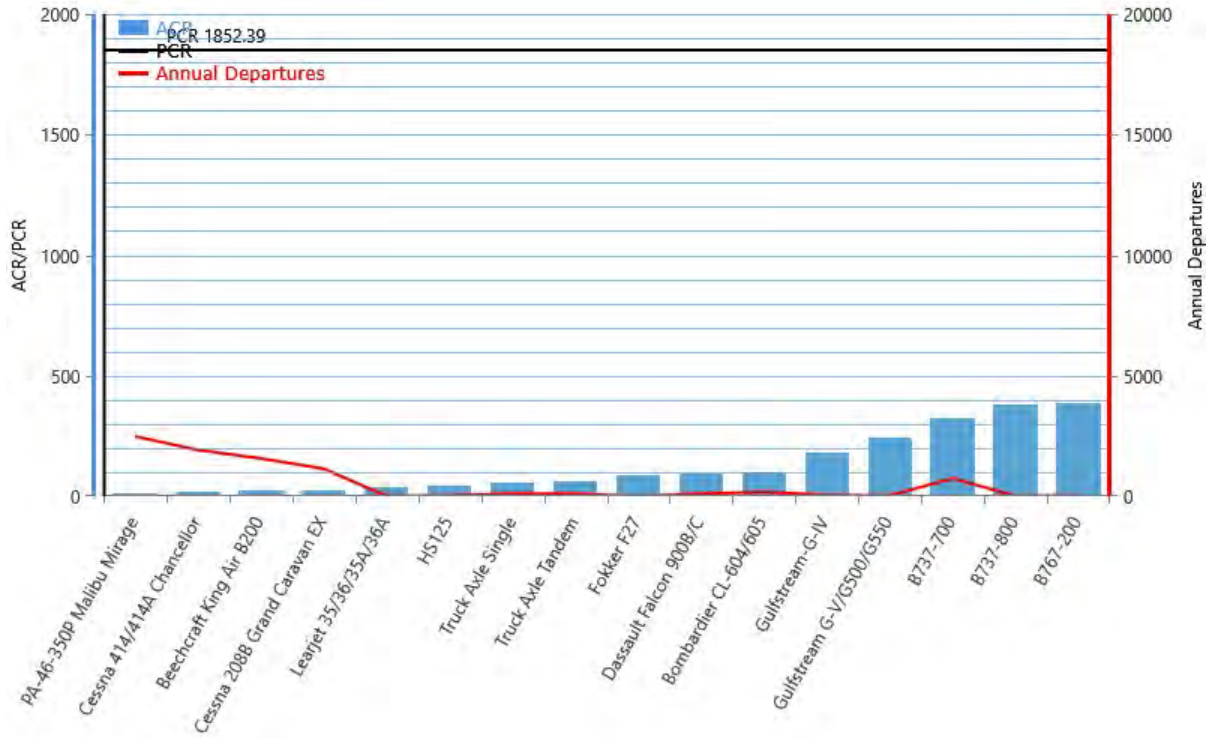
# Federal Aviation Administration FAARFIELD 2.0 PCR Graph

FAARFIELD 2.0.18 (Build 05/26/2022)

Job Name: 110339 - RKS Master Plan\_8-15-2023

Section: RW 9/27 New Flexible

Analysis Type: HMA on Flexible



	PA-46-350P Malibu Mirage	Cessna 208B Grand Caravan EX	Cessna 414/414A Chancellor	Beechcraft King Air B200	Fokker F27	HS125	Bombardier CL-604/605	B737-700	B767-200	Learjet 35/36/35A/36A	Gulfstream-G-IV	B737-800	Gulfstream G-V/G500/G550	Dassault Falcon 900B/C	Truck Axle Single	Truck Axle Tandem
Aircraft ACR (Blue Square Bar)	12.9	25.1	18.1	22.3	86.5	42.4	99.1	321.1	384.4	36.5	180	377.4	241.9	95.2	58.8	62.3

# Federal Aviation Administration FAARFIELD 2.0 Form 5010

FAARFIELD 2.0.18 (Build 05/26/2022)

## RUNWAY DATA

Job Name: 110339 - RKS Master Plan\_8-15-2023

Section: RW 9/27 New Flexible

### Gross Weight (In THSDS)

35 S	120
36 D	250
37 2D	550
38 2D/2D2	1,120

39 PCR	1852/F/A/X/T
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# Federal Aviation Administration FAARFIELD 2.0 Section Report

FAARFIELD 2.0.18 (Build 05/26/2022)

**Job Name: 110339 - RKS Master Plan\_8-17-2023a**

**Section: RW 3/21**

Analysis Type: HMA on Flexible

Last Run: Life Analysis 2023-09-13 20:31:03

Calculated Life = 5.2 Years

Total thickness to the top of the subgrade = 14.4in.

## Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	Poisson's Ratio	Strength R (psi)
1	P-401/P-403 HMA Overlay	2.0	200,000	0.35	0
2	User Defined	4.6	164,700	0.35	0
3	User Defined	7.8	19,600	0.35	0
4	Subgrade	0	3,300	0.35	0

## Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	PA-46-350P Malibu Mirage	4,118	1,066	2
2	Cessna 208B Grand Caravan EX	8,750	489	2
3	Cessna 414/414A Chancellor	6,200	822	2
4	Beechcraft King Air B200	12,590	673	2
5	HS125	25,000	4	2
6	Bombardier CL-604/605	48,200	21	2
7	Truck Axle Single	18,740	100	0
8	Truck Axle Tandem	37,480	100	0



## Additional Airplane Information

### Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	3.95
2	Cessna 208B Grand Caravan EX	0.00	0.00	3.71
3	Cessna 414/414A Chancellor	0.00	0.00	3.79
4	Beechcraft King Air B200	0.00	0.00	2.59
5	HS125	0.00	0.00	2.44
6	Bombardier CL-604/605	1.47	1.47	2.18
7	Truck Axle Single	0.00	0.00	3.37
8	Truck Axle Tandem	0.00	0.00	3.37

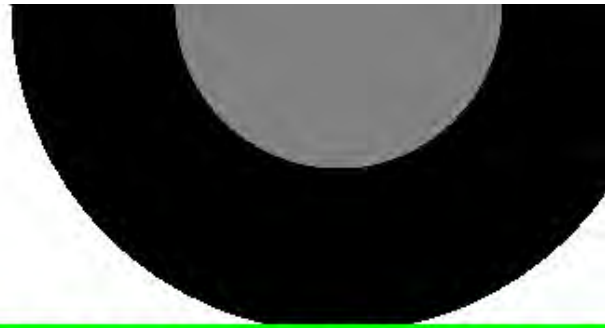
### Overlay HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	10.51
2	Cessna 208B Grand Caravan EX	0.00	0.00	8.89
3	Cessna 414/414A Chancellor	0.00	0.00	9.43
4	Beechcraft King Air B200	0.00	0.00	5.65
5	HS125	0.00	0.00	4.80
6	Bombardier CL-604/605	0.00	0.00	3.99
7	Truck Axle Single	0.00	0.00	7.08
8	Truck Axle Tandem	0.00	0.00	3.54

### HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	6.48
2	Cessna 208B Grand Caravan EX	0.00	0.00	5.82
3	Cessna 414/414A Chancellor	0.00	0.00	6.05
4	Beechcraft King Air B200	0.00	0.00	3.41
5	HS125	0.00	0.00	3.12
6	Bombardier CL-604/605	0.00	0.00	2.74
7	Truck Axle Single	0.00	0.00	5.00
8	Truck Axle Tandem	0.00	0.00	2.50

*User Is responsible For checking frost protection requirements.*



# Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.0.18 (Build 05/26/2022)

Job Name: 110339 - RKS Master Plan\_8-17-2023a

Section: RW 3/21

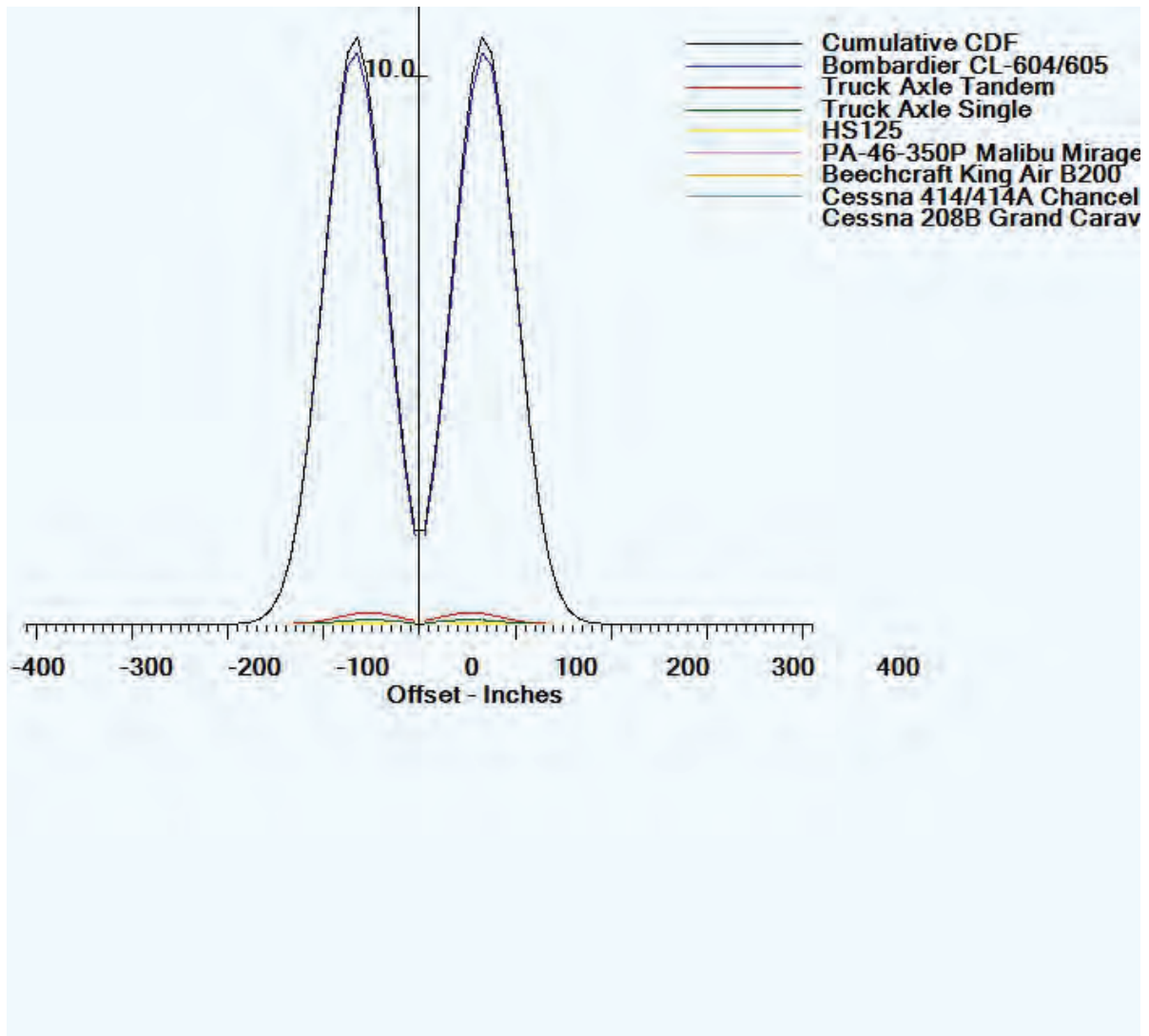
Analysis Type: HMA on Flexible

Analysis Run Time: 2023-09-13 20:31:03

Last Run: Life Analysis

Calculated Life = 5.8 Years

Total thickness to the top of the subgrade = 14.4in.



# Federal Aviation Administration FAARFIELD 2.0 PCR Report

FAARFIELD 2.0.18 (Build 05/26/2022)

**Job Name: 110339 - RKS Master Plan\_8-17-2023a**

**Section: RW 3/21**

This file name = PCR Results for HMA on Flexible 2023-09-13 22:35:47

Evaluation pavement type is flexible and design program is FAARFIELD.

Section name: RW 3/21 in job file: 110339 - RKS Master Plan\_8-17-2023a.JOB.xml

Units = US Customary

Analysis Type: HMA on Flexible

Subgrade Modulus =3,300psi (Subgrade Category is D)

Evaluation Pavement Thickness = 14.4 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 10.700

**Results Table 1. Input Traffic Data**

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	PA-46-350P Malibu Mirage	4,118	95.00	55	1,066	3,950
2	Cessna 208B Grand Caravan EX	8,750	95.00	75	489	2,015
3	Cessna 414/414A Chancellor	6,200	95.00	62	822	3,261
4	Beechcraft King Air B200	12,590	95.00	98	673	4,740
5	HS125	25,000	91.00	120	4	31
6	Bombardier CL-604/605	48,200	95.00	145	21	184
7	Truck Axle Single	18,740	100.00	95	100	400
8	Truck Axle Tandem	37,480	100.00	95	100	800

**Results Table 2. PCR Value**

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/D
1	Bombardier CL-604/605	22	35,832	16.6	112.1

**Results Table 3. HMA on Flexible ACR at Indicated Gross Weight and Strength**

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)
1	PA-46-350P Malibu Mirage	4,118	95	55
2	Cessna 208B Grand Caravan EX	8,750	95	75
3	Cessna 414/414A Chancellor	6,200	95	62
4	Beechcraft King Air B200	12,590	95	98
5	HS125	25,000	91	120
6	Bombardier CL-604/605	48,200	95	145
7	Truck Axle Single	18,740	100	95
8	Truck Axle Tandem	37,480	100	95

**Results Table 3. Continue**

No.	Aircraft Name	(A)	(B)	(C)	(D)	ACR/F/A	ACR/F/B	ACR/F/C	ACR/F/D
1	PA-46-350P Malibu Mirage	6.4	9	11.2	14.1	12.9	13.4	13.9	14.3
2	Cessna 208B Grand Caravan EX	6.4	9	11.2	14.1	25.1	27.4	31.2	33.7
3	Cessna 414/414A Chancellor	6.4	9	11.2	14.1	18.1	19.1	19.9	22.8
4	Beechcraft King Air B200	6.4	9	11.2	14.1	22.3	23.5	26.7	32
5	HS125	6.4	9	11.2	14.1	42.4	51.6	60.9	74
6	Bombardier CL-604/605	6.4	9	11.2	14.1	99.1	119.2	143.3	165.1
7	Truck Axle Single	6.4	9	11.2	14.1	58.8	70	74.9	78.5
8	Truck Axle Tandem	6.4	9	11.2	14.1	62.3	73	77.7	81.6

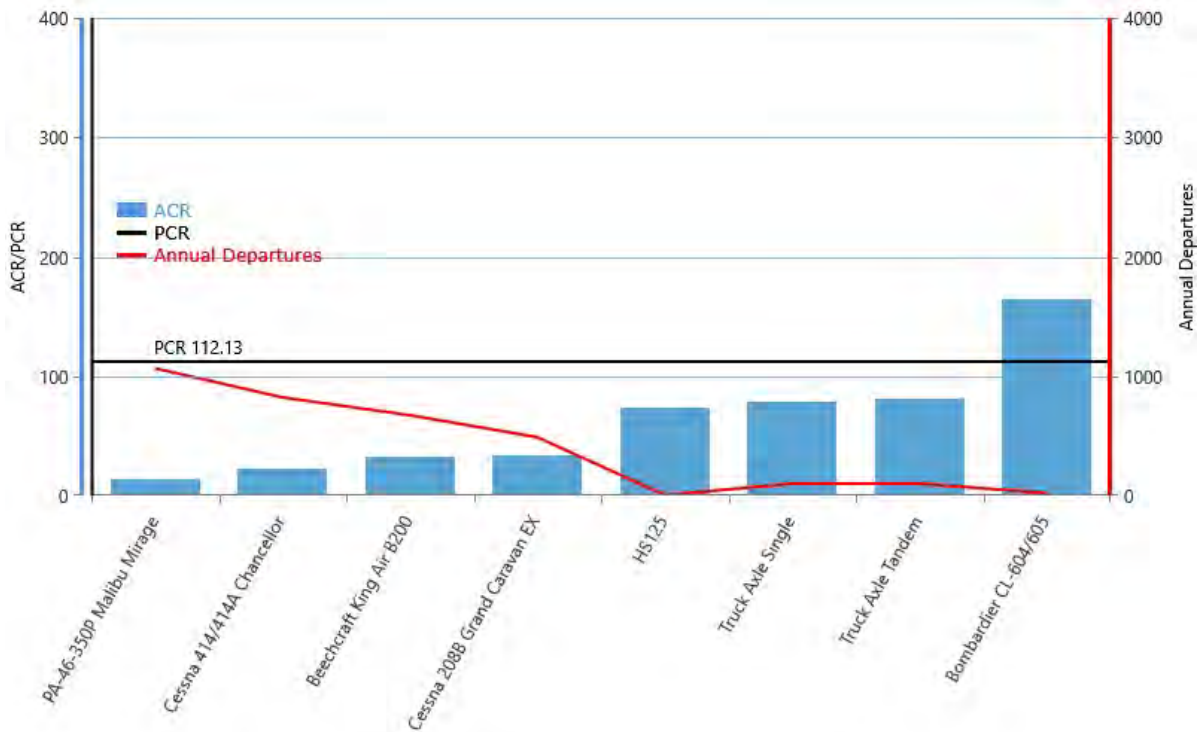
# Federal Aviation Administration FAARFIELD 2.0 PCR Graph

FAARFIELD 2.0.18 (Build 05/26/2022)

Job Name: 110339 - RKS Master Plan\_8-17-2023a

Section: RW 3/21

Analysis Type: HMA on Flexible



	PA-46-350P Malibu Mirage	Cessna 208B Grand Caravan EX	Cessna 414/414A Chancellor	Beechcraft King Air B200	HS125	Bombardier CL-604/605	Truck Axle Single	Truck Axle Tandem
Aircraft ACR (Blue Square Bar)	14.3	33.7	22.8	32	74	165.1	78.5	81.6
Calculated PCR (Black Line)	-	-	-	-	-	112.1	-	-
Annual Departure (Red Line)	1066	489	822	673	4	21	100	100

# Federal Aviation Administration FAARFIELD 2.0 Form 5010

FAARFIELD 2.0.18 (Build 05/26/2022)

## RUNWAY DATA

Job Name: 110339 - RKS Master Plan\_8-17-2023a

Section: RW 3/21

### Gross Weight (In THSDS)

35 S	30
36 D	44
37 2D	0
38 2D/2D2	0

39 PCR	112/F/D/X/T
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# Federal Aviation Administration FAARFIELD 2.0 Section Report

FAARFIELD 2.0.18 (Build 05/26/2022)

**Job Name: 110339 - RKS Master Plan\_8-15-2023**

**Section: Taxiway C**

Analysis Type: HMA on Flexible

No run has been done on this section.

## Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	Poisson's Ratio	Strength R (psi)
1	P-401/P-403 HMA Overlay	2.0	200,000	0.35	0
2	User Defined	2.6	294,100	0.35	0
3	User Defined	7.2	19,800	0.35	0
4	Subgrade	0	6,600	0.35	0

## Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	PA-46-350P Malibu Mirage	4,118	1,066	2
2	Cessna 208B Grand Caravan EX	8,750	489	2
3	Cessna 414/414A Chancellor	6,200	822	2
4	Beechcraft King Air B200	12,590	673	2
5	HS125	25,000	4	2
6	Bombardier CL-604/605	48,200	21	2
7	Truck Axle Single	18,740	100	0
8	Truck Axle Tandem	37,480	100	0



## Additional Airplane Information

### Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	2.37
2	Cessna 208B Grand Caravan EX	0.00	0.00	4.21
3	Cessna 414/414A Chancellor	0.00	0.00	4.32
4	Beechcraft King Air B200	0.00	0.00	2.81
5	HS125	0.00	0.00	2.64
6	Bombardier CL-604/605	4.98	4.98	2.32
7	Truck Axle Single	0.10	0.11	3.77
8	Truck Axle Tandem	0.18	0.20	3.77

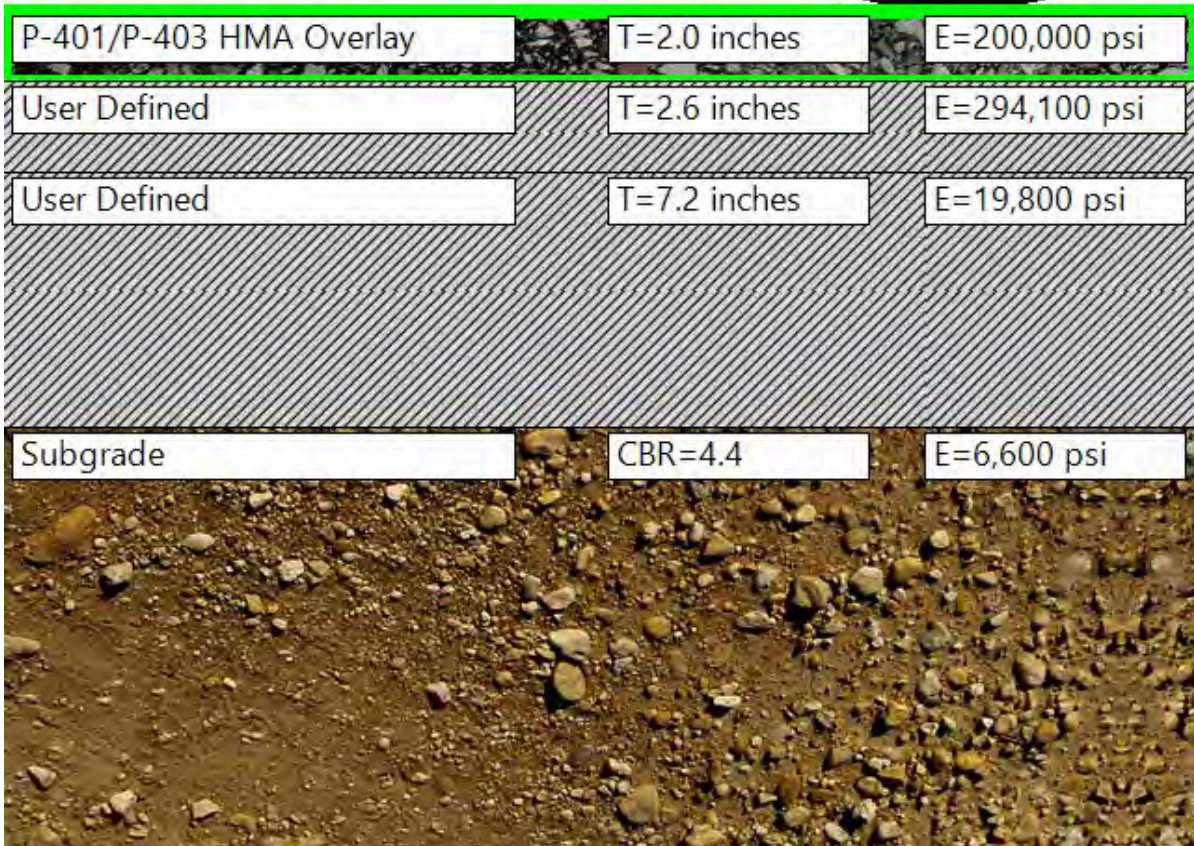
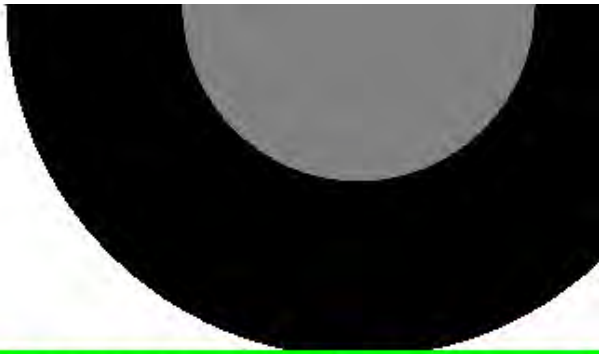
### Overlay HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	4.34
2	Cessna 208B Grand Caravan EX	0.00	0.00	4.21
3	Cessna 414/414A Chancellor	0.00	0.00	4.32
4	Beechcraft King Air B200	0.00	0.00	2.81
5	HS125	0.00	0.00	2.64
6	Bombardier CL-604/605	4.98	4.98	2.32
7	Truck Axle Single	0.10	0.11	3.77
8	Truck Axle Tandem	0.18	0.20	3.77

### HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	3.38
2	Cessna 208B Grand Caravan EX	0.00	0.00	4.21
3	Cessna 414/414A Chancellor	0.00	0.00	4.32
4	Beechcraft King Air B200	0.00	0.00	2.81
5	HS125	0.00	0.00	2.64
6	Bombardier CL-604/605	4.98	4.98	2.32
7	Truck Axle Single	0.10	0.11	3.77
8	Truck Axle Tandem	0.18	0.20	3.77

*User Is responsible For checking frost protection requirements.*



# Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.0.18 (Build 05/26/2022)

Job Name: 110339 - RKS Master Plan\_8-15-2023

Section: Taxiway C

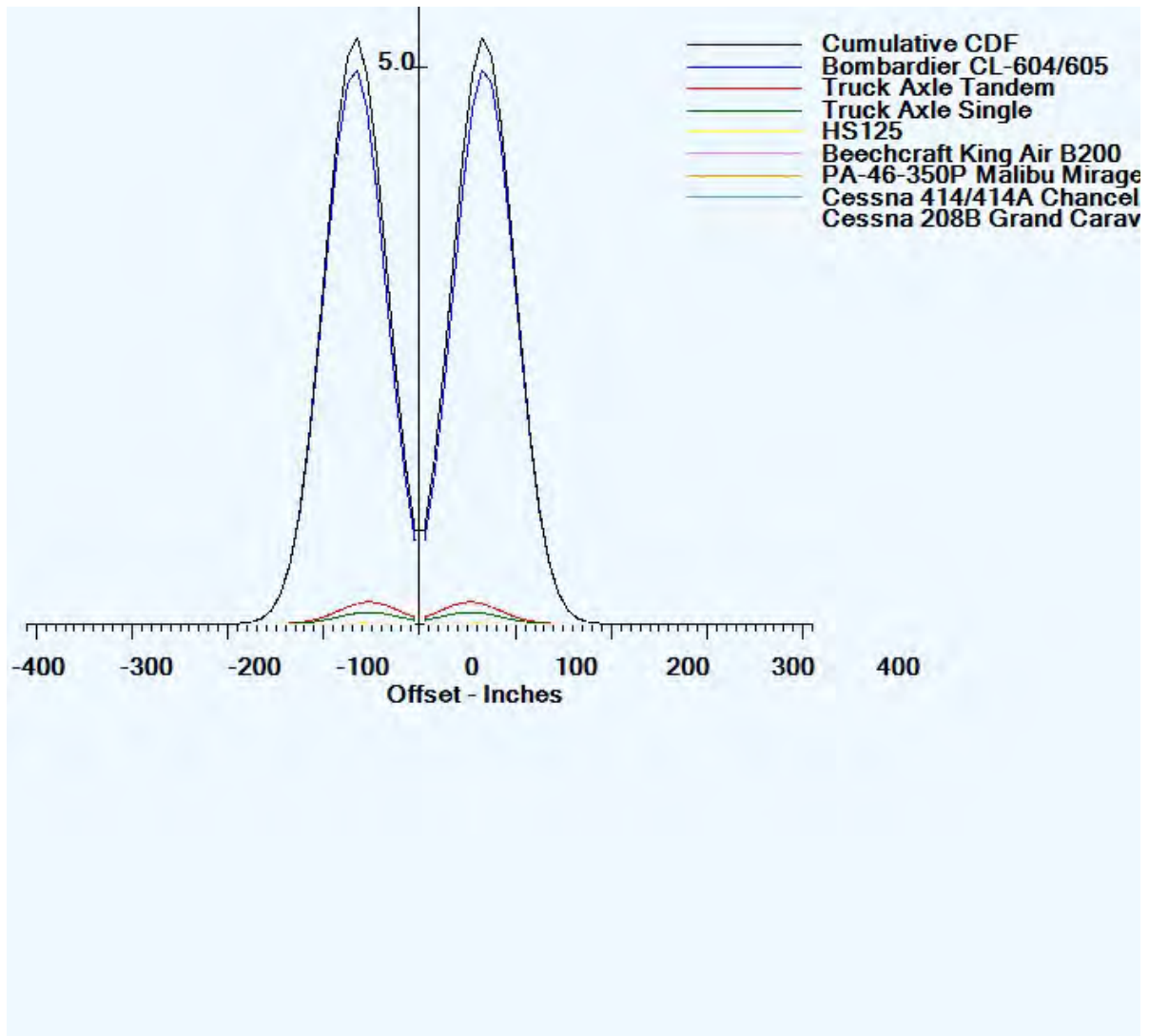
Analysis Type: HMA on Flexible

Analysis Run Time: 2023-08-18 05:30:10

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 11.8in.



# Federal Aviation Administration FAARFIELD 2.0 PCR Report

FAARFIELD 2.0.18 (Build 05/26/2022)

**Job Name: 110339 - RKS Master Plan\_8-15-2023**

**Section: Taxiway C**

This file name = PCR Results for HMA on Flexible 2023-08-18 05:30:10

Evaluation pavement type is flexible and design program is FAARFIELD.

Section name: Taxiway C in job file: 110339 - RKS Master Plan\_8-15-2023.JOB.xml

Units = US Customary

Analysis Type: HMA on Flexible

Subgrade Modulus =6,600psi (Subgrade Category is D)

Evaluation Pavement Thickness = 11.8 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 5.260

**Results Table 1. Input Traffic Data**

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	PA-46-350P Malibu Mirage	4,118	95.00	55	1,066	3,293
2	Cessna 208B Grand Caravan EX	8,750	95.00	75	489	1,714
3	Cessna 414/414A Chancellor	6,200	95.00	62	822	2,755
4	Beechcraft King Air B200	12,590	95.00	98	673	3,924
5	HS125	25,000	91.00	120	4	26
6	Bombardier CL-604/605	48,200	95.00	145	21	159
7	Truck Axle Single	18,740	100.00	95	100	349
8	Truck Axle Tandem	37,480	100.00	95	100	698

**Results Table 2. PCR Value**

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/D
1	Bombardier CL-604/605	22	39,117	17.7	126.3

**Results Table 3. HMA on Flexible ACR at Indicated Gross Weight and Strength**

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)
1	PA-46-350P Malibu Mirage	4,118	95	55
2	Cessna 208B Grand Caravan EX	8,750	95	75
3	Cessna 414/414A Chancellor	6,200	95	62
4	Beechcraft King Air B200	12,590	95	98
5	HS125	25,000	91	120
6	Bombardier CL-604/605	48,200	95	145
7	Truck Axle Single	18,740	100	95
8	Truck Axle Tandem	37,480	100	95

**Results Table 3. Continue**

No.	Aircraft Name	(A)	(B)	(C)	(D)	ACR/F/A	ACR/F/B	ACR/F/C	ACR/F/D
1	PA-46-350P Malibu Mirage	6.4	9	11.2	14.1	12.9	13.4	13.9	14.3
2	Cessna 208B Grand Caravan EX	6.4	9	11.2	14.1	25.1	27.4	31.2	33.7
3	Cessna 414/414A Chancellor	6.4	9	11.2	14.1	18.1	19.1	19.9	22.8
4	Beechcraft King Air B200	6.4	9	11.2	14.1	22.3	23.5	26.7	32
5	HS125	6.4	9	11.2	14.1	42.4	51.6	60.9	74
6	Bombardier CL-604/605	6.4	9	11.2	14.1	99.1	119.2	143.3	165.1
7	Truck Axle Single	6.4	9	11.2	14.1	58.8	70	74.9	78.5
8	Truck Axle Tandem	6.4	9	11.2	14.1	62.3	73	77.7	81.6

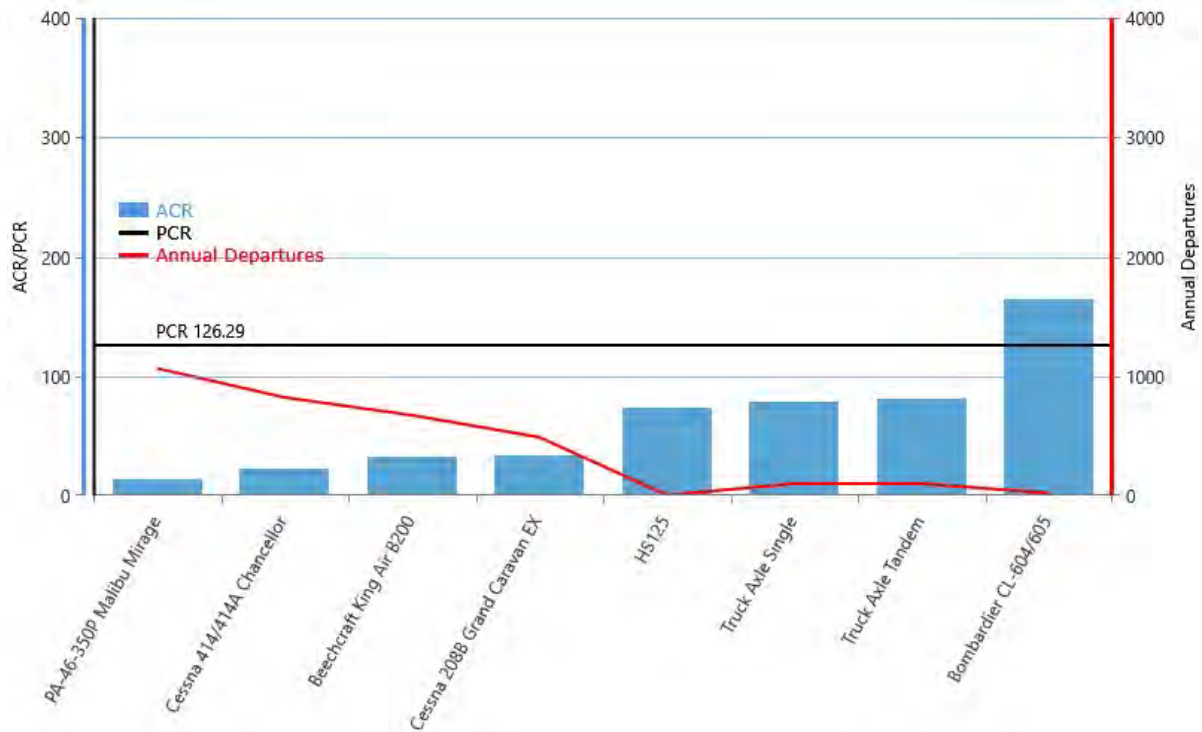
# Federal Aviation Administration FAARFIELD 2.0 PCR Graph

FAARFIELD 2.0.18 (Build 05/26/2022)

Job Name: 110339 - RKS Master Plan\_8-15-2023

Section: Taxiway C

Analysis Type: HMA on Flexible



	PA-46-350P Malibu Mirage	Cessna 208B Grand Caravan EX	Cessna 414/414A Chancellor	Beechcraft King Air B200	HS125	Bombardier CL-604/605	Truck Axle Single	Truck Axle Tandem
Aircraft ACR (Blue Square Bar)	14.3	33.7	22.8	32	74	165.1	78.5	81.6
Calculated PCR (Black Line)	-	-	-	-	-	126.3	-	-
Annual Departure (Red Line)	1066	489	822	673	4	21	100	100

# Federal Aviation Administration FAARFIELD 2.0 Form 5010

FAARFIELD 2.0.18 (Build 05/26/2022)

## RUNWAY DATA

Job Name: 110339 - RKS Master Plan\_8-15-2023

Section: Taxiway C

### Gross Weight (In THSDS)

35 S	33
36 D	48
37 2D	0
38 2D/2D2	0

39 PCR	126/F/D/X/T
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# Federal Aviation Administration FAARFIELD 2.0 Section Report

FAARFIELD 2.0.18 (Build 05/26/2022)

**Job Name: 110339 - RKS Master Plan\_8-15-2023**

**Section: Taxiway D**

Analysis Type: HMA on Flexible

No run has been done on this section.

## Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	Poisson's Ratio	Strength R (psi)
1	P-401/P-403 HMA Overlay	2.0	200,000	0.35	0
2	User Defined	4.1	261,300	0.35	0
3	User Defined	6.0	43,100	0.35	0
4	Subgrade	0	5,400	0.35	0

## Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	PA-46-350P Malibu Mirage	4,118	1,066	2
2	Cessna 208B Grand Caravan EX	8,750	489	2
3	Cessna 414/414A Chancellor	6,200	822	2
4	Beechcraft King Air B200	12,590	673	2
5	HS125	25,000	4	2
6	Bombardier CL-604/605	48,200	21	2
7	Gulfstream G-V/G500/G550	99,500	35	2
8	Dassault Falcon 900B/C	45,500	103	2
9	Truck Axle Single	18,740	100	0
10	Truck Axle Tandem	37,480	100	0



## Additional Airplane Information

### Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	2.18
2	Cessna 208B Grand Caravan EX	0.00	0.00	4.14
3	Cessna 414/414A Chancellor	0.00	0.00	4.25
4	Beechcraft King Air B200	0.00	0.00	2.78
5	HS125	0.00	0.00	2.61
6	Bombardier CL-604/605	0.69	0.99	2.31
7	Gulfstream G-V/G500/G550	232.05	232.05	2.03
8	Dassault Falcon 900B/C	4.05	4.05	2.38
9	Truck Axle Single	0.00	0.00	3.72
10	Truck Axle Tandem	0.00	0.00	3.72

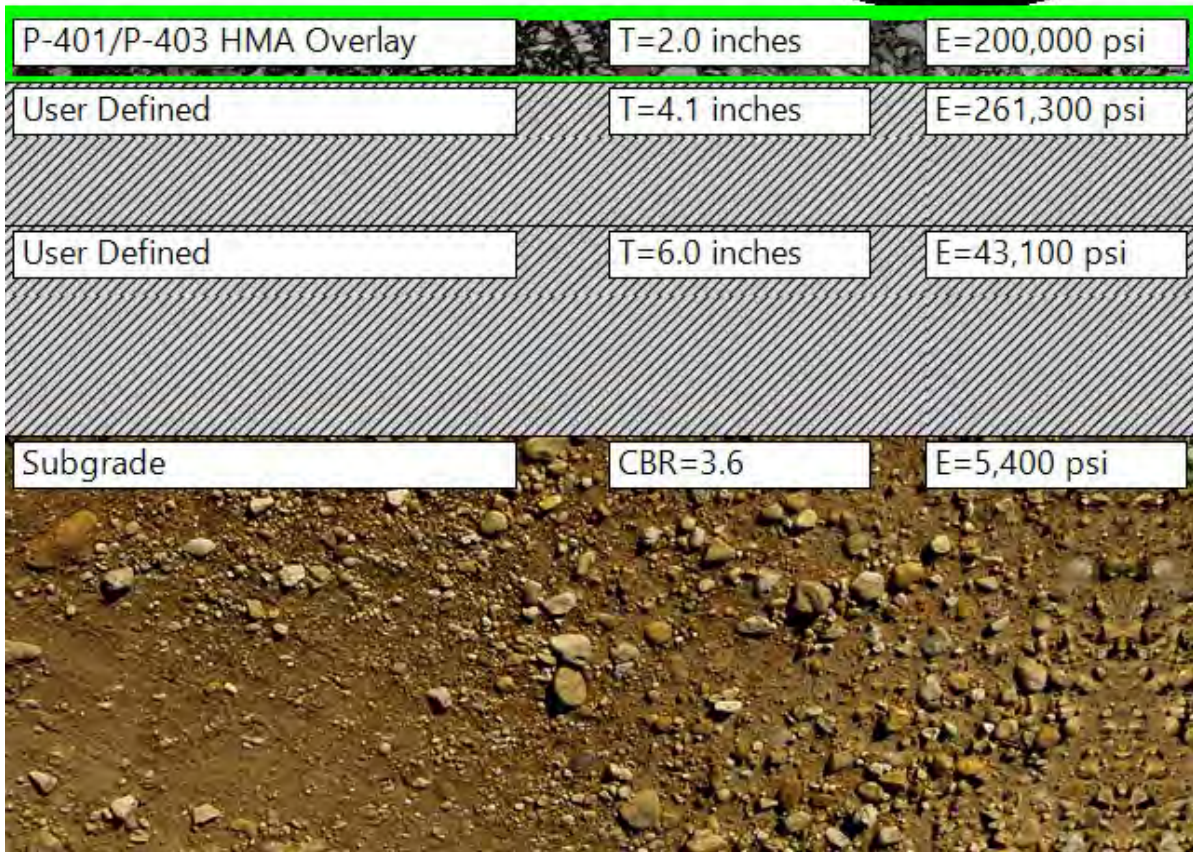
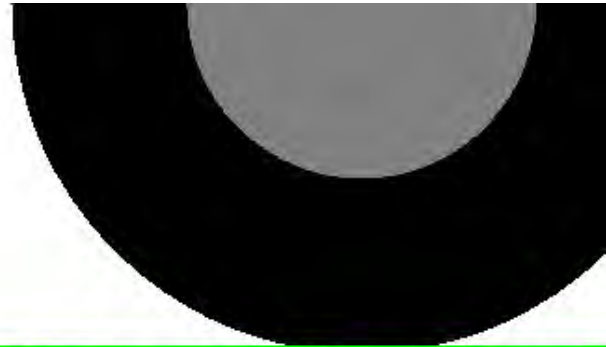
### Overlay HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	4.50
2	Cessna 208B Grand Caravan EX	0.00	0.00	4.14
3	Cessna 414/414A Chancellor	0.00	0.00	4.25
4	Beechcraft King Air B200	0.00	0.00	2.78
5	HS125	0.00	0.00	2.61
6	Bombardier CL-604/605	0.69	0.99	2.31
7	Gulfstream G-V/G500/G550	232.05	232.05	2.03
8	Dassault Falcon 900B/C	4.05	4.05	2.38
9	Truck Axle Single	0.00	0.00	3.72
10	Truck Axle Tandem	0.00	0.00	3.72

### HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	3.10
2	Cessna 208B Grand Caravan EX	0.00	0.00	4.14
3	Cessna 414/414A Chancellor	0.00	0.00	4.25
4	Beechcraft King Air B200	0.00	0.00	2.78
5	HS125	0.00	0.00	2.61
6	Bombardier CL-604/605	0.69	0.99	2.31
7	Gulfstream G-V/G500/G550	232.05	232.05	2.03
8	Dassault Falcon 900B/C	4.05	4.05	2.38
9	Truck Axle Single	0.00	0.00	3.72
10	Truck Axle Tandem	0.00	0.00	3.72

User Is responsible For checking frost protection requirements.



# Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.0.18 (Build 05/26/2022)

Job Name: 110339 - RKS Master Plan\_8-15-2023

Section: Taxiway D

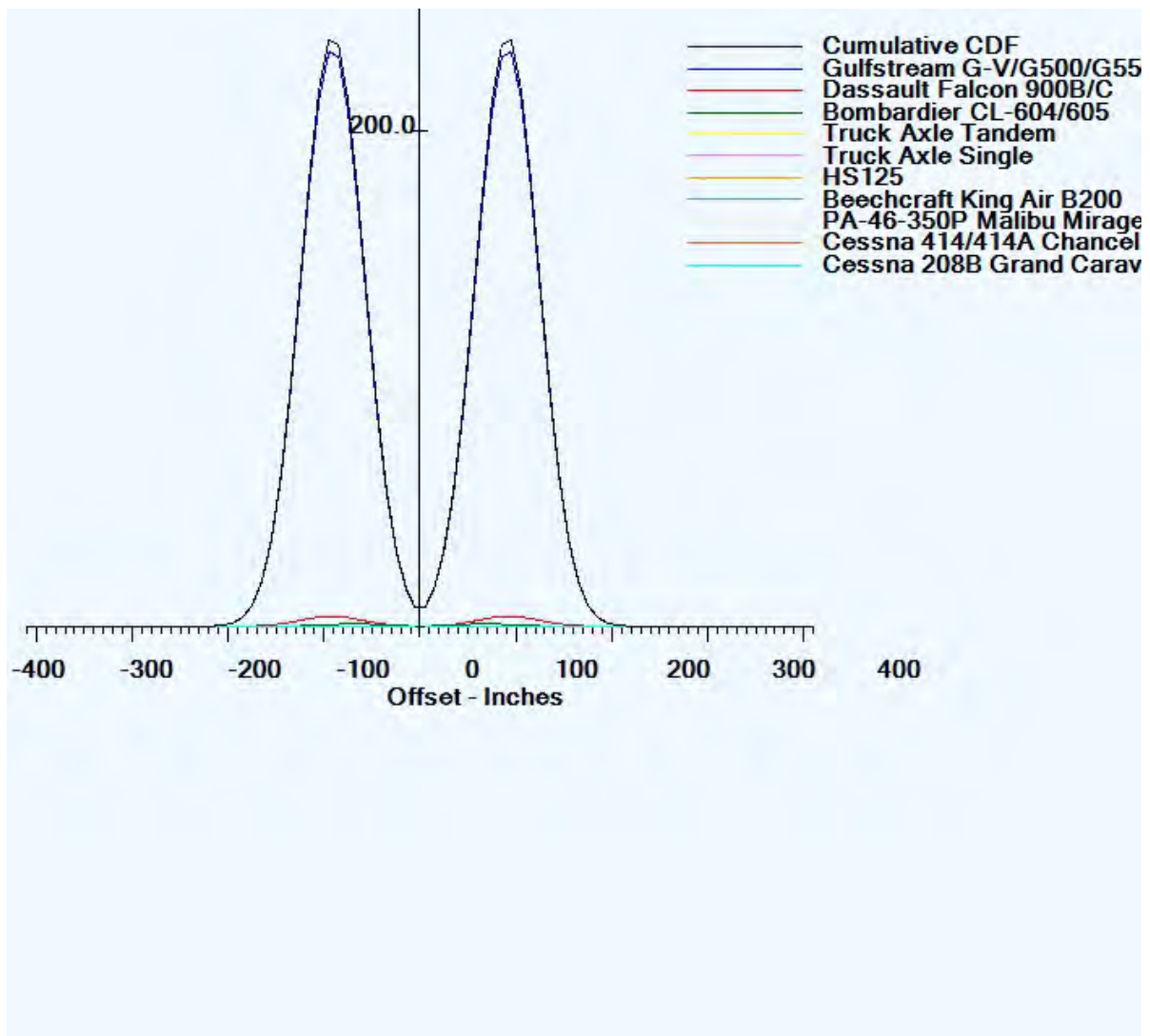
Analysis Type: HMA on Flexible

Analysis Run Time: 2023-08-18 05:35:24

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 12.1in.



# Federal Aviation Administration FAARFIELD 2.0 PCR Report

FAARFIELD 2.0.18 (Build 05/26/2022)

**Job Name: 110339 - RKS Master Plan\_8-15-2023**

**Section: Taxiway D**

This file name = PCR Results for HMA on Flexible 2023-08-18 05:35:24

Evaluation pavement type is flexible and design program is FAARFIELD.

Section name: Taxiway D in job file: 110339 - RKS Master Plan\_8-15-2023.JOB.xml

Units = US Customary

Analysis Type: HMA on Flexible

Subgrade Modulus =5,400psi (Subgrade Category is D)

Evaluation Pavement Thickness = 12.1 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 236.790

**Results Table 1. Input Traffic Data**

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	PA-46-350P Malibu Mirage	4,118	95.00	55	1,066	3,786
2	Cessna 208B Grand Caravan EX	8,750	95.00	75	489	1,940
3	Cessna 414/414A Chancellor	6,200	95.00	62	822	3,135
4	Beechcraft King Air B200	12,590	95.00	98	673	4,537
5	HS125	25,000	91.00	120	4	30
6	Bombardier CL-604/605	48,200	95.00	145	21	178
7	Gulfstream G-V/G500/G550	99,500	95.00	206	35	332
8	Dassault Falcon 900B/C	45,500	95.00	145	103	861
9	Truck Axle Single	18,740	100.00	95	100	387
10	Truck Axle Tandem	37,480	100.00	95	100	774

**Results Table 2. PCR Value**

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/D
1	Gulfstream G-V/G500/G550	36	48,623	18.6	143.4

**Results Table 3. HMA on Flexible ACR at Indicated Gross Weight and Strength**

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)
1	PA-46-350P Malibu Mirage	4,118	95	55
2	Cessna 208B Grand Caravan EX	8,750	95	75
3	Cessna 414/414A Chancellor	6,200	95	62
4	Beechcraft King Air B200	12,590	95	98
5	HS125	25,000	91	120
6	Bombardier CL-604/605	48,200	95	145
7	Gulfstream G-V/G500/G550	99,500	95	206
8	Dassault Falcon 900B/C	45,500	95	145
9	Truck Axle Single	18,740	100	95
10	Truck Axle Tandem	37,480	100	95

**Results Table 3. Continue**

No.	Aircraft Name	(A)	(B)	(C)	(D)	ACR/F/A	ACR/F/B	ACR/F/C	ACR/F/D
1	PA-46-350P Malibu Mirage	6.4	9	11.2	14.1	12.9	13.4	13.9	14.3
2	Cessna 208B Grand Caravan EX	6.4	9	11.2	14.1	25.1	27.4	31.2	33.7
3	Cessna 414/414A Chancellor	6.4	9	11.2	14.1	18.1	19.1	19.9	22.8
4	Beechcraft King Air B200	6.4	9	11.2	14.1	22.3	23.5	26.7	32
5	HS125	6.4	9	11.2	14.1	42.4	51.6	60.9	74
6	Bombardier CL-604/605	6.4	9	11.2	14.1	99.1	119.2	143.3	165.1
7	Gulfstream G-V/G500/G550	6.4	9	11.2	14.1	241.9	291.1	335.5	365.1
8	Dassault Falcon 900B/C	6.4	9	11.2	14.1	95.2	118.1	141	159.5
9	Truck Axle Single	6.4	9	11.2	14.1	58.8	70	74.9	78.5
10	Truck Axle Tandem	6.4	9	11.2	14.1	62.3	73	77.7	81.6

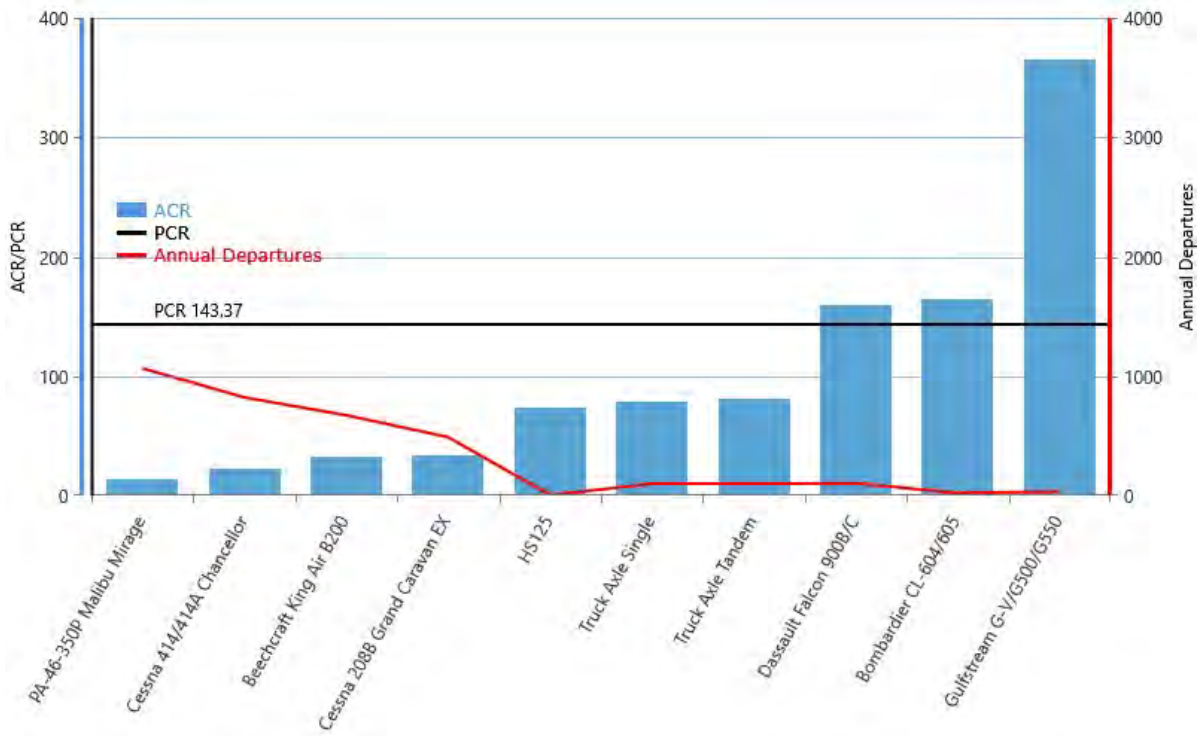
# Federal Aviation Administration FAARFIELD 2.0 PCR Graph

FAARFIELD 2.0.18 (Build 05/26/2022)

Job Name: 110339 - RKS Master Plan\_8-15-2023

Section: Taxiway D

Analysis Type: HMA on Flexible



	PA-46-350P Malibu Mirage	Cessna 208B Grand Caravan EX	Cessna 414/414A Chancellor	Beechcraft King Air B200	HS125	Bombardier CL-604/605	Gulfstream G-V/G500/G550	Dassault Falcon 900B/C	Truck Axle Single	Truck Axle Tandem
Aircraft ACR (Blue Square Bar)	14.3	33.7	22.8	32	74	165.1	365.1	159.5	78.5	81.6
Calculated PCR (Black Line)	-	-	-	-	-	-	143.4	-	-	-
Annual Departure (Red Line)	1066	489	822	673	4	21	35	103	100	100

# Federal Aviation Administration FAARFIELD 2.0 Form 5010

FAARFIELD 2.0.18 (Build 05/26/2022)

## RUNWAY DATA

Job Name: 110339 - RKS Master Plan\_8-15-2023

Section: Taxiway D

### Gross Weight (In THSDS)

35 S	37
36 D	53
37 2D	0
38 2D/2D2	0

39 PCR	143/F/D/X/T
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# Federal Aviation Administration FAARFIELD 2.0 Section Report

FAARFIELD 2.0.18 (Build 05/26/2022)

**Job Name: 110339 - RKS Master Plan\_8-17-2023b**

**Section: Taxiway D**

Analysis Type: New Flexible

No run has been done on this section.

## Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	Poisson's Ratio	Strength R (psi)
1	P-401/P-403 HMA Surface	4.0	200,000	0.35	0
2	P-401/P-403 HMA Stabilized	5.0	400,000	0.35	0
3	P-209 Crushed Aggregate	6.0	40,303	0.35	0
4	Subgrade	0	15,000	0.35	0

## Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	PA-46-350P Malibu Mirage	4,118	1,066	2
2	Cessna 208B Grand Caravan EX	8,750	489	2
3	Cessna 414/414A Chancellor	6,200	822	2
4	Beechcraft King Air B200	12,590	673	2
5	HS125	25,000	4	2
6	Bombardier CL-604/605	48,200	21	2
7	Gulfstream G-V/G500/G550	99,500	35	2
8	Dassault Falcon 900B/C	45,500	103	2
9	Truck Axle Single	18,740	100	0
10	Truck Axle Tandem	37,480	100	0



## Additional Airplane Information

### Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	0
2	Cessna 208B Grand Caravan EX	0.00	0.00	0
3	Cessna 414/414A Chancellor	0.00	0.00	0
4	Beechcraft King Air B200	0.00	0.00	0
5	HS125	0.00	0.00	0
6	Bombardier CL-604/605	0.00	0.00	0
7	Gulfstream G-V/G500/G550	0.00	0.00	0
8	Dassault Falcon 900B/C	0.00	0.00	0
9	Truck Axle Single	0.00	0.00	0
10	Truck Axle Tandem	0.00	0.00	0

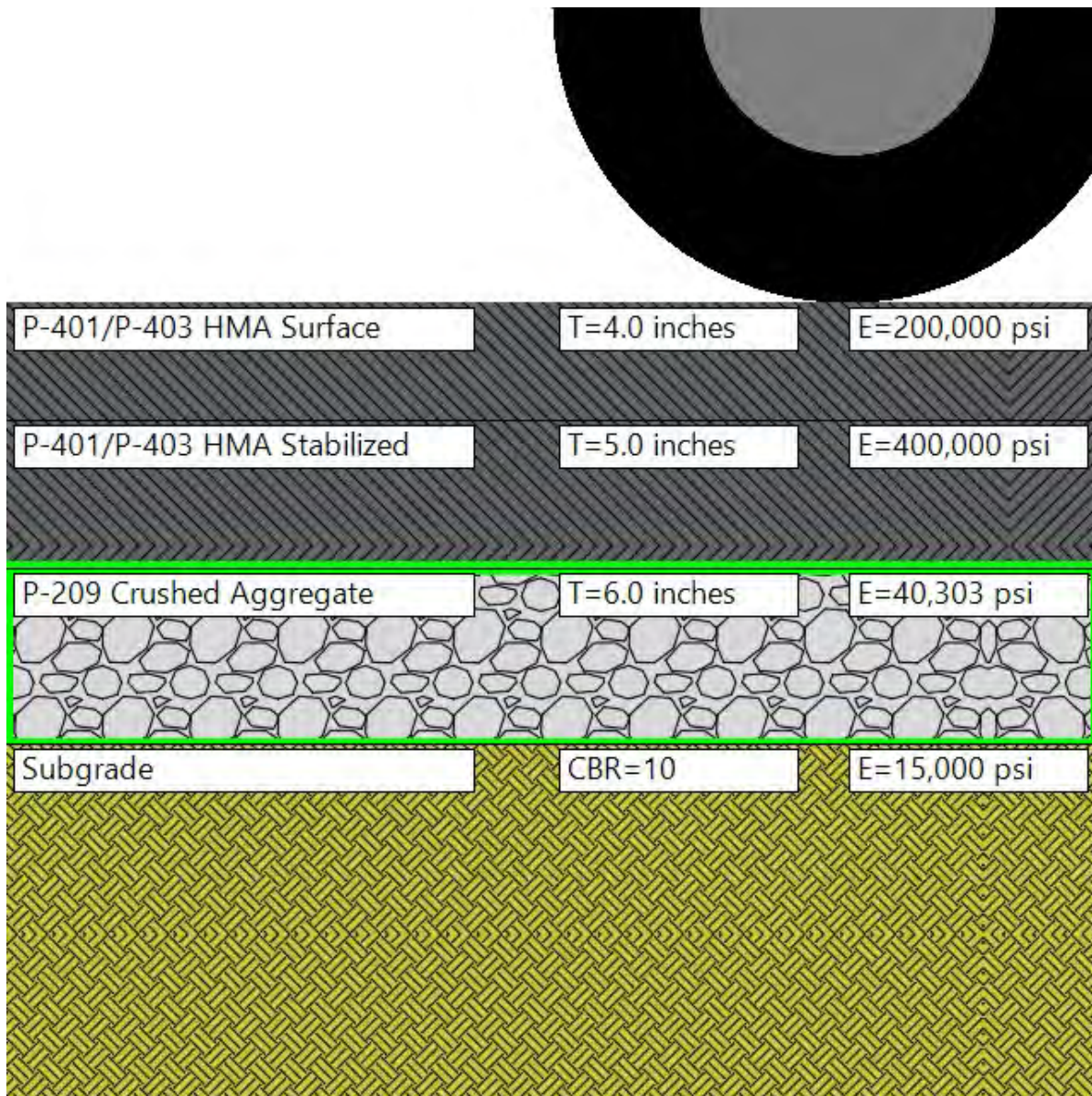
### HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.00	0.00	2.58
2	Cessna 208B Grand Caravan EX	0.00	0.00	3.61
3	Cessna 414/414A Chancellor	0.00	0.00	3.69
4	Beechcraft King Air B200	0.00	0.00	2.54
5	HS125	0.00	0.00	2.41
6	Bombardier CL-604/605	0.00	0.00	2.15
7	Gulfstream G-V/G500/G550	0.05	0.05	1.92
8	Dassault Falcon 900B/C	0.00	0.00	2.21
9	Truck Axle Single	0.00	0.00	3.29
10	Truck Axle Tandem	0.00	0.00	3.29

### P-401/P-403 HMA Stabilized CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	PA-46-350P Malibu Mirage	0.01	0.01	2.10
2	Cessna 208B Grand Caravan EX	0.00	0.00	3.61
3	Cessna 414/414A Chancellor	0.00	0.00	3.69
4	Beechcraft King Air B200	0.00	0.00	2.54
5	HS125	0.00	0.00	2.41
6	Bombardier CL-604/605	0.00	0.00	2.15
7	Gulfstream G-V/G500/G550	0.05	0.05	1.92
8	Dassault Falcon 900B/C	0.00	0.00	2.21
9	Truck Axle Single	0.00	0.00	3.29
10	Truck Axle Tandem	0.00	0.00	3.29

User Is responsible For checking frost protection requirements.



# Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.0.18 (Build 05/26/2022)

Job Name: 110339 - RKS Master Plan\_8-17-2023b

Section: Taxiway D

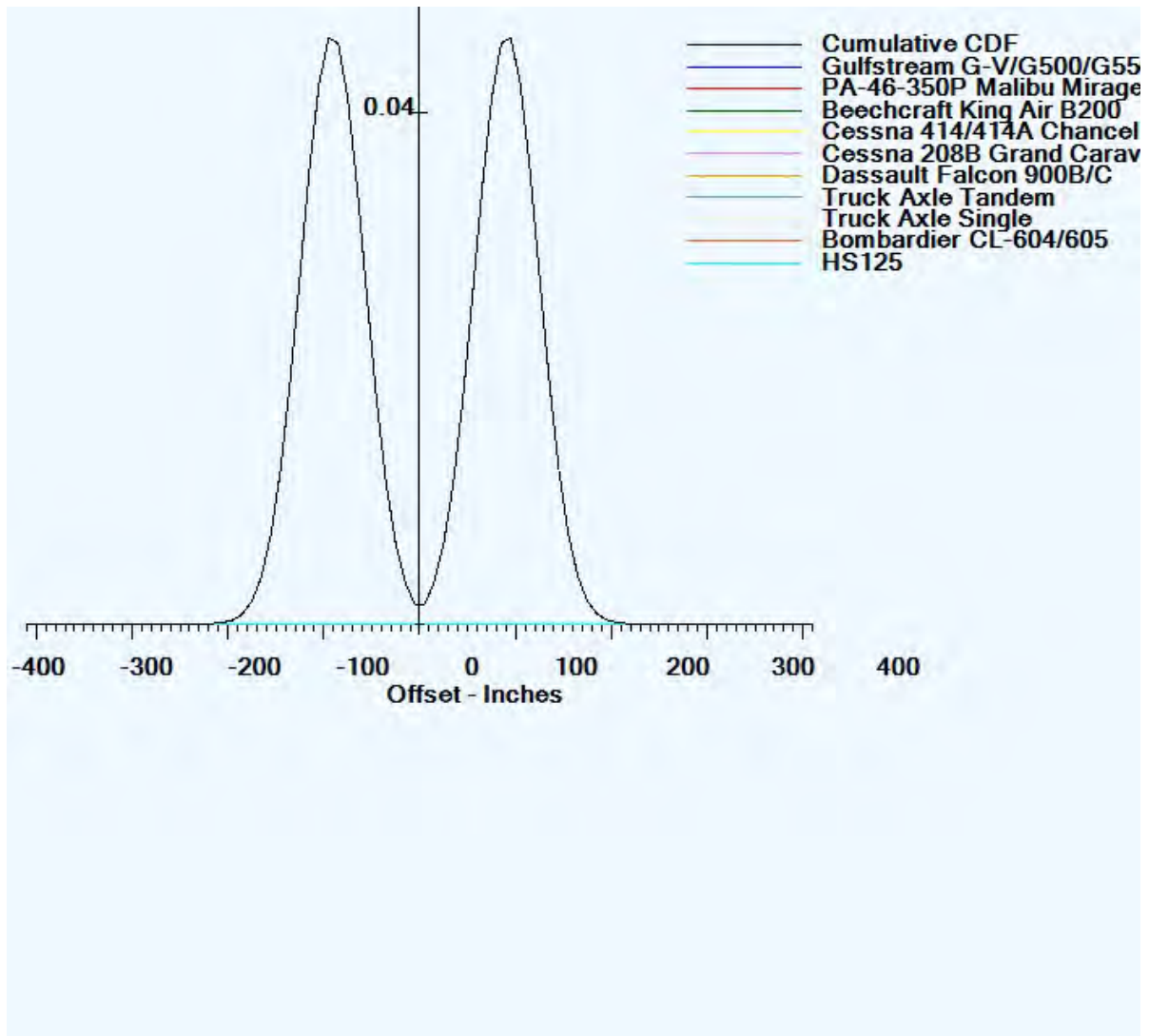
Analysis Type: New Flexible

Analysis Run Time: 2023-08-18 05:55:47

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 15.0in.



# Federal Aviation Administration FAARFIELD 2.0 PCR Report

FAARFIELD 2.0.18 (Build 05/26/2022)

**Job Name: 110339 - RKS Master Plan\_8-17-2023b**

**Section: Taxiway D**

This file name = PCR Results for New Flexible 2023-08-18 05:55:47

Evaluation pavement type is flexible and design program is FAARFIELD.

Section name: Taxiway D in job file: 110339 - RKS Master Plan\_8-17-2023b.JOB.xml

Units = US Customary

Analysis Type: New Flexible

Subgrade Modulus =15,000psi (Subgrade Category is B)

Evaluation Pavement Thickness = 15.0 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 0.050

No aircraft have 4 or more wheels per gear.

**Results Table 1. Input Traffic Data**

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	PA-46-350P Malibu Mirage	4,118	95.00	55	1,066	4,736
2	Cessna 208B Grand Caravan EX	8,750	95.00	75	489	2,375
3	Cessna 414/414A Chancellor	6,200	95.00	62	822	3,867
4	Beechcraft King Air B200	12,590	95.00	98	673	5,223
5	HS125	25,000	91.00	120	4	33
6	Bombardier CL-604/605	48,200	95.00	145	21	201
7	Gulfstream G-V/G500/G550	99,500	95.00	206	35	385
8	Dassault Falcon 900B/C	45,500	95.00	145	103	951
9	Truck Axle Single	18,740	100.00	95	100	461
10	Truck Axle Tandem	37,480	100.00	95	100	921



# Federal Aviation Administration FAARFIELD 2.0 PCR Graph

FAARFIELD 2.0.18 (Build 05/26/2022)

Job Name: 110339 - RKS Master Plan\_8-17-2023b

Section: Taxiway D

Analysis Type: New Flexible

■ ACR  
— PCR  
— Annual Departures

No data to plot.

	PA-46-350P Malibu Mirage	Cessna 208B Grand Caravan EX	Cessna 414/414A Chancellor	Beechcraft King Air B200	HS125	Bombardier CL-604/605	Gulfstream G- V/G500/G550	Dassault Falcon 900B/C	Truck Axle Single	Truck Axle Tandem
Aircraft ACR (Blue Square Bar)	0	0	0	0	0	0	0	0	0	0
Calculated PCR (Black Line)	-	-	-	-	-	-	466.8	-	-	-
Annual Departure (Red Line)	1066	489	822	673	4	21	35	103	100	100

# Federal Aviation Administration FAARFIELD 2.0 Form 5010

FAARFIELD 2.0.18 (Build 05/26/2022)

## RUNWAY DATA

Job Name: 110339 - RKS Master Plan\_8-17-2023b

Section: Taxiway D

### Gross Weight (In THSDS)

35 S	115
36 D	191
37 2D	324
38 2D/2D2	780

39 PCR	467/F/B/X/T
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## Flexible Pavement Design - AASHTO 1993 Method

**Project Name:** RKS Master Plan  
**Segment:** Terminal/Airport Rd  
**Project No.:** 110339  
**Date:** 8/17/2023

### Performance Criteria

Initial Serviceability, $p_o$ :	4.2		
Terminal Serviceability, $p_t$ :	2.0		
Reliability Level R:	90%	90	
Overall Standard Deviation, $S_o$ :	0.45		
Performance Period:	20		years

### Design Traffic Load

Traffic Index, TI:  - or - ESALs:

### Design Subgrade Resistance

CBR:  - or - Resilient Modulus,  $M_r$ :  psi  
14,580

### Layered Thickness Design

**Required Structural Number,  $SN_f$ : 2.75**

Layer No.	Layer Name	Thickness (inches)	Structural Coefficient	Drainage Coefficient	Structural Number, SN
1	Plant Mix	5.00	0.44	n.a.	2.20
2	Base	7.20	0.15	1.00	1.08
3	Subbase	0.00	0.09	1.00	0.00
4					0.00
5					0.00

**Total SN Provided: 3.28**

**Acceptable**



# Important Information

## About Your Airfield Pavement Evaluation Report

### CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

### THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors that were considered in the development of the report have changed.

### SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events and should be consulted to determine if additional tests are necessary.

## MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

## A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary, because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

## THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

## BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always

insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

#### READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

**The preceding paragraphs are based on information  
provided by the GBA, Silver Spring, Maryland**

