TRUCKEE-TAHOE AIRPORT Pavement Evaluation Study Pavement Maintenance/Management Plan

PRESENTED TO TRUCKEE TAHOE AIRPORT DISTRICT









PRESENTED BY
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TRUCKEE TAHOE AIRPORT PAVEMENT EVALUATION STUDY PAVEMENT MAINTENANCE/MANAGEMENT PLAN

Prepared for Truckee Tahoe Airport District, California

Prepared by: Reinard W. Brandley Consulting Airport Engineer

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PREFACE: 2014 UPDATE

This report presents an update of the original report submitted in November 2011 and includes records of maintenance and reconstruction programs performed in 2012, 2013, and 2014, the change in Pavement Condition Index of all pavements since 2011, and updated maintenance and reconstruction recommendations.

The original testing and management plan was conducted in 2011. A new pavement condition survey of all pavements, including determination of the Pavement Condition Index was conducted for this PMMP update in the Fall of 2013. The update did not include any supplemental FWD testing, Fatigue Analysis, Geotechnical updates, or frost action studies since these factors do not change appreciably in 3 to 6 years.

The runway designations of all four runways changed in 2012, this report has been updated to reflect these changes. Runway 10-28 changed to Runway 11-29 and Runway 1-19 changed to Runway 2-20.

Hangars H1, H2, and H3 have been renamed to Hangars A-H, Hangars J-K, and Hangars L-M, respectively, with their row names also corresponding to the hangar locations.

The updated or modified sections of the text of this report are identified with a vertical bar located in the margin of the report. The updated tables and plates do not have a vertical bar located in the margin as the majority of the tables and plates were updated.

CHAPTER 1. INTRODUCTION

The Truckee Tahoe Airport was originally constructed in the early 1960s and consisted of approximately 5,500 feet of Runway 11-29, associated taxiways, aprons, and hangar development. In the mid 1960s Runway 2-20 was constructed from Runway 11-29 to the north end. In the early 1970s extensions were constructed to both runways. Aprons, hangars, and other building facilities were constructed as needed beginning in the early 1960s.

Major sections of the pavement at this airport are 40 to 50 years old and have been subjected to significant traffic. In recent times the airport has been used extensively by larger propeller-driven aircraft and the business jet aircraft. The easterly 2,600 feet of Runway 11-29 was reconstructed in 2008. The new pavement section used in this reconstruction project consisted of 4 inches of asphaltic concrete over 8 inches of aggregate base course. All pavements at the airport are flexible pavements, of which the surface consists of a bituminous surface course. These pavements have been subjected to significant traffic and severe environmental conditions including large daily temperature changes, fairly hot weather in the summer and cold in the winter, snow, and rain. Significant surface distress is evident in the form of thermal cracking, weathering, and some raveling. There has been little evidence of deep-seated distress. In an effort to control cracking developing from thermal stresses, a joint pattern has been installed in many of the pavements on the airport.

The pavements at this airport have reached a state where significant maintenance is required and it is anticipated that reconstruction of many of the pavements will be necessary within the next 20 years. Since funding for pavement maintenance is limited to the grants available from the Federal Aviation Administration and the California Division of Aeronautics and to local funds, it is necessary to establish a Pavement Maintenance and Management Program (PMMP) that will allow reconstruction of the facilities within the necessary timeframe and to provide adequate maintenance on all pavements so as to allow safe operation of all aircraft. This PMMP must take into consideration available funding each year.

There are two major distress types that develop at an airport. One is deep-seated distress and the second is surface distress. Deep-seated distress is caused by repetitive loading and development of stresses in the subgrade materials and subsoils that lead to a fatigue-type failure of these materials. When these materials fail, then there is a corresponding complete failure of the materials in the pavement section and it becomes necessary to completely reconstruct these failed sections. These type failures show up as rutting and severe alligator cracking in the surface of the pavement.

Surface distress is not only caused by the deep-seated failures, but also by age, traffic, and environmental conditions. The older pavements shrink and become brittle, which leads to surface cracking, raveling, and spalling. Environmental factors such as large temperature changes each day throughout most of the year, freezing, snow, snow

removal, and rain all cause thermal cracking, raveling, and spalling. Freezing conditions can also cause frostheave in the winter months and significant loss of strength during the spring thaw due to super-saturation of the base and subgrade materials.

A detailed pavement evaluation study has been conducted, which identifies and quantifies the distress that develops in the pavement sections and evaluates and determines the time and type of maintenance that is required and the time and type of reconstruction, strengthening, or overlays that are required to maintain the quality, rideability, and aesthetic characteristics required for the safe operation of the airport. All pavement elements on the airport were evaluated in this study, except the pavements within the glider parking area off the northern end of Runway 2-20. These studies have been conducted by the office of Reinard W. Brandley, Consulting Airport Engineer, and the results of these studies are included in this report.

CHAPTER 2. DATA COLLECTION

Significant data were collected for the development of the original pavement evaluation and Pavement Maintenance/Management Program. All previous test information available was gathered, a testing and inspection program was developed, and new data from the new test program were accumulated. New surface pavement condition survey data collected in 2013 has been added.

Weather data for the past several years were obtained from the Weather Bureau and gauges were installed at one location in Runway 11-29 in an effort to determine the actual depth of frost penetration at the Truckee Tahoe Airport. A summarization of the data collected is included in Appendices A, B, C, and D.

2-1 Geotechnical Studies

Before a Pavement Evaluation Study can be successfully completed, it is necessary that detailed data be available showing the character and strength of the existing soils at the site on which the pavement sections are constructed. With the heavy aircraft business jet (40,000+ pounds) operating at this airport, detailed soils data are required to a depth of at least 10 feet. Soils data developed should include uniformity of stratification, soil classification, soil density, soil moisture content, and soil strength and consolidation characteristics.

A detailed geotechnical study was conducted at the airport in 1971 by the office of Reinard W. Brandley, Consulting Airport Engineer. This study included excavation of a series of test pits in the pavement sections themselves and drilling a series of test holes in the infield adjacent to the pavement. These test pits and test holes were located on Runway 11-29, Runway 2-20, Taxiway A, and a portion of the general aviation apron. Field in-place California Bearing Ratio (CBR) tests were conducted in the test pits on various layers of the base course and subgrade and samples were obtained from all test holes and test pits and submitted to the laboratory for classification, strength, and consolidation characteristics of the soils. The results of this study are summarized in Appendix A.

A second geotechnical study was conducted by Stantec in 2007. The Stantec test program consisted of excavating a series of test pits on Runway 11-29 and drilling a series of test holes adjacent to Runway 11-29 and in the area of the proposed new construction of the West Hangar and Warehouse Area. The logs of the borings for the Stantec testing program were presented as individual boring logs. For this report these logs were transferred into soil profiles and are included in Appendix A. Stantec also conducted a series of classification tests on the soil samples obtained, and these data are also included in Appendix A.

It will be noted that there is significant difference between the classification of the soils as shown on the soil profile sheets of the Brandley test program and the Stantec test program. An examination of the grading analysis and Atterberg limit

tests conducted by both Brandley and Stantec shows that the soils are in fact the same materials but have been classified using a different basis. The Stantec classification was based mainly on gradation, and since the larger percentage of material in each sample was within the sand range, they were classified as "silty gravel with sand" or "clayey sand with gravel." In the Brandley study the soils were largely classified by the character of the fine materials as demonstrated by the Atterberg limit tests and the upper soils were classified as "sandy silts and gravels," some of which were clayey, and the materials at lower depths were classified as "silty fine to coarse sand and rock." The classification using the Atterberg limit tests as shown in the Brandley report more accurately identifies the performance characteristics of the soils under load.

In general, it was found that the surface soils to depths ranging from 5 to 10 feet consisted of sandy silts and gravels and, in some cases, sandy clays. These materials were underlain by silty fine to coarse sands and cobbles. The surface soils to a depth of 4 feet in all areas were fairly loose and soft; whereas, the soils below a depth of 4 feet were very firm and compact. No groundwater was encountered in any of the test holes to the explored depth of 21 feet.

2-2 Existing Pavement Sections

The existing pavement sections throughout the airport were evaluated based on the study of original construction drawings, reconstruction and maintenance drawings, test pits excavated, previous reports, and F.A.A. files. It has been reported that the bituminous surface course placed on the apron in the 1998 project came from Nevada sources that are reported to be of questionable quality. The areas on the airport where this pavement was placed using the Nevada aggregates included all aprons and the tee hangar taxilanes on both sides of Hangar Rows D, E, and F.

In general, all other existing pavements are F.A.A. Marshall mix design materials or California Highway Department specification materials. These pavements are a good quality product but are old, weathered, and somewhat brittle. The existing aggregate base course consists mainly of a well-graded crushed aggregate base course ranging in maximum size from 1 inch to 1½ inch depending on location. Both the aggregate base and pavement were obtained from local pits and quarries, except as noted above, which are high-quality materials.

The thickness of each layer of asphalt pavement or aggregate base is shown, wherever it is known, in Appendix C, Tables C-1 through C-72. In general, the pavement section on Runway 11-29 and associated taxiways consists of 3 to 4 inches of bituminous surface course underlain by 8 to 14 inches of aggregate base, for a total thickness of 11 to 17 inches. The pavement section for Runway 2-20 and associated taxiways consists of 5 to 6 inches of bituminous surface course over 6 to 8 inches of aggregate base course, for a total section ranging from 11 to 13 inches. The pavement section for the aprons and tee hangar

taxilanes, except for the new West Hangar and Warehouse Area, generally consists of 3 inches of bituminous surface course underlain by 6 inches of aggregate base course. The pavement section for the West Hangar and Warehouse Area consists of 4 inches of bituminous surface course over 10 inches of aggregate base course. The section around the hangars consists of 3 inches of bituminous surface course over 6 inches of aggregate base course.

In this updated report the changes to pavement sections included in the maintenance and reconstruction projects performed in 2012 and 2013 have been added.

2-3 Falling Weight Deflectometer (FWD) Tests

The heavy-duty falling weight deflectometer as manufactured by Dynatest Corporation is capable of applying dynamic loads to the pavement of up to 50,000 pounds on a 12 or 18-inch diameter plate. This FWD measures the deflections of the surface of the pavement not only under the center of the plate, but at various increments out to 7 feet from the centerline of the plate. The shape and magnitude of the deflection bowl caused at the surface of the pavement under the applied loads can thus be determined. These FWD tests can be conducted fairly quickly, generally 20 to 30 tests per hour. Therefore, enough tests can be conducted to determine the uniformity of the load-carrying characteristics of the pavement in one element of the airport, together with the size and shape of the deflection bowl of the surface of the pavement under load.

At the Truckee-Tahoe Airport FWD tests were conducted on each side of the runway centerline in the wheel path at a spacing of 200 feet. The locations of the tests were staggered so that tests are available at 100-foot intervals. One row of tests at 200-foot spacing was conducted on all taxiways, approximately 10 feet off centerline. On all aprons tests were conducted on a grid of approximately 200-foot by 200-foot. On all hangar taxilanes FWD tests were conducted in the wheel path of the taxilane at a spacing of approximately 200 feet.

The FWD tests not only measure the deflection obtained under each test, but also measure the load that was applied to the pavement. Even though the height of fall of the weights remains the same, the actual load applied to the pavement varies somewhat depending on the resistance to load. In order to compare the test results, all deflections obtained were normalized to the deflections under loads of 10, 20, 25, and/or 30 kips. The results of the falling weight deflectometer tests showing center plate deflections are included in Appendix B, Plate No. B-1. A full-size copy of this drawing is located in the back pocket of this report. The center deflections for each element of the airport were also plotted as profiles and these data are included in Appendix B, Plates No. B-2 through B-41.

The basic soil parameters that are utilized in the Fatigue Analysis to determine pavement life are Modulus of Elasticity and Poisson's Ratio. The magnitude of

deflection and shape of the deflection bowl of the surface of the pavement under load can be used with the computer program for calculations of stresses, strains, and deflections on multi-layer systems to back calculate the soil parameters of Modulus of Elasticity. The data developed from all of the falling weight deflectometer tests were utilized to back calculate Modulus of Elasticity of each layer of the pavement section, of the upper 4 feet of subgrade soil, and of the subsoils located below 4 feet from the surface. The results of these back calculated values of Modulus of Elasticity of each layer analyzed are included in Appendix C, Tables No. C-1 through C-72. No additional FWD tests were conducted in the 2013 Update.

2-4 Pavement Condition Survey

Pavement condition surveys were conducted on all pavements at the Truckee Tahoe Airport to determine the type of distress and degree of distress that has occurred on each pavement element and the general character of the pavement. A standard test method for pavement condition surveys is included in ASTM D 5340-11, *Standard Test Method for Airport Pavement Condition Index Surveys*. On the pavement condition surveys a detailed assessment of the pavement is conducted, which evaluates the following distresses:

- Alligator Cracking
- Bleeding
- Block Cracking
- Corrugation
- Depression
- Jet Blast
- Joint Reflection (PCC)
- Longitudinal and Transverse Cracking
- Oil Spillage
- Patching
- Polished Aggregate
- Raveling/Weathering
- Rutting
- Shoving from PCC
- Slippage Cracking
- Swell

The normal procedure is to divide the element into sample units. The sample units generally represent approximately 10 percent of the total pavement section. The type and severity of each airport pavement distress is assessed by visual inspection of the pavement sample units. The quantity of distress is measured and the distress data are used to calculate the Pavement Condition Index (PCI) of each sample unit. The process involves detailed inspection of sample units throughout the section, which covers approximately 10 percent of the total area of the pavement.

The office of Reinard W. Brandley deviates from this process in that the types of distress that are apparent in three or four representative samples of the section are evaluated in detail, which includes the worst case unit as well as the average unit. Generally there are only three or four of the distress types that are evident on the unit. After these have been determined, 100 percent of the pavement surface is surveyed to determine the severity and magnitude of distress for each type of distress that is occurring on that section of pavement. By this procedure the coverage of the survey is increased from the 10 percent included in the standard ASTM method to 100 percent. It is considered important to expand the survey in this manner so as to identify the worst-case conditions as well as the average and best case conditions.

The Pavement Condition Index (PCI) and pavement condition description were determined for each section of pavement. This information is included in Appendix C of this report. The data for each segment are included in Tables C-1 through C-72. Additional information is also included on these tables. Pavement condition determinations are based on visual observations and can vary significantly based on the experience and judgment of the Engineer.

The ASTM Standard provides a relationship between Pavement Condition Index (PCI) and pavement rating. On Plates No. 2-1a and 2-1b the rating system is indicated as a color legend and the rating of each segment of pavement is indicated by color. The PCI of each segment is also indicated adjacent to each segment of the pavement. It will be noted that in 2013 most pavements at the airport range from the "fair" to "excellent" condition. The South Jet Apron and Portions of Taxiway A are rated as "poor", and Apron A4 and run-up areas at Taxiways B and H are rated "very poor".

Pavement Condition Index (PCI) values for each section of pavement were determined in 2011. Updated PCI values for all pavement sections were determined in the 2013 update study, including new and existing sections. The original (2011) PCI values and updated (2013) PCI values are included in this updated report to show how much they have changed as a result of two more years of use or after rehabilitation or reconstruction of the pavement sections.

2-5 Forecast Traffic

Traffic forecasts furnished by the Truckee Tahoe Airport District were used to evaluate the pavements at this airport. These data included the type aircraft currently operating at the airport, along with the annual number of operations of that aircraft. They also included the forecast growth of use of these aircraft. In Table No. 2-1 the traffic data used are presented.

Table No. 2-1a lists the aircraft utilizing the airport and includes their maximum takeoff weight, empty weight, empty weight plus 60 percent of maximum fuel weight, and gear configuration. These aircraft have been grouped into 11 aircraft groups and each group has approximately the same aircraft characteristics of

maximum takeoff weight and gear type.

In Table No. 2-1b the 2011 annual operations and the annual growth rate for each aircraft group are included.

In evaluating airfield pavements for deep-seated distress it is the number of coverages of each wheel on each aircraft over a given point of pavement that contributes to the deep-seated distress on or near that section of pavement. The distribution of aircraft traffic on the airport is a function of:

- Wind direction, which dictates which runways are used
- Landing length of each aircraft and takeoff length of each aircraft
- Destination on the airport.

For this evaluation it was assumed that 90 percent of the traffic uses Runway 11-29 and 10 percent uses Runway 2-20. Of the 90 percent that use Runway 11-29, 90 percent land and take off on Runway 29 and only 10 percent use Runway 11. Of the 10 percent that use Runway 2-20, 90 percent land and take off on Runway 20 and only 10 percent land and take off on Runway 2.

When an aircraft lands on a runway, only the large aircraft generally use the full length of runway. Intermediate and smaller size aircraft exit the runway at the appropriate cross taxiway. The taxiways that are used by aircraft are dependent upon the location at which the aircraft take off and land and the destination of the aircraft on the airport.

Based on the aircraft characteristics, the runway use dictated by wind, and the destination of aircraft on the airport, the annual operations of each aircraft have been evaluated to best represent the actual traffic that occurs on each segment. The traffic forecast to occur on each segment is defined as "Traffic Index." A total of 17 traffic indexes were evaluated. The number of annual operations for each aircraft group and each traffic index are indicated in Table No. 2-1c. This traffic index was utilized in the evaluation of pavements for deep-seated distress.

Since the business jet traffic at Truckee Tahoe Airport has increased significantly over the past few years and the national fleet is increasing, there is a possibility that the amount of larger aircraft using the airport will increase more than what has been forecast. In order to evaluate the effect that increased traffic would have, a new set of traffic indexes was prepared and used in the Fatigue Analysis studies. With the new traffic indexes the number of operations of the large aircraft (those with maximum takeoff weight in excess of 37,500 pounds) was doubled. The new traffic index with the doubling of the heavy aircraft operations has also been included in Table No. 2-1 as Table No. 2-1d. The traffic index designation is the same as with the existing forecasts except that a "1" has been added. For example, "A" is existing forecasts and "A1" is existing forecasts with double the number of aircraft weighing more than 37,500 pounds. The Fatigue Analysis was conducted using both the forecast traffic and the traffic with the

large aircraft numbers doubled.

Using the traffic index and the total annual operations, the number of operations on a given segment of the airport can be estimated. Each operation does not travel over the same spot on a pavement and, therefore, the number of coverages on the pavement section will be less than the total operations for each traffic index. The distribution of traffic on each section is a function of the aircraft type, the gear type, the wind conditions, and the skill of the pilot. There is generally a fairly wide distribution of traffic on a runway; whereas, on a taxiway the traffic is more concentrated. On the aprons the traffic generally follows specified taxilane markings, but only a fraction of the total aircraft operate onto each section of apron. Different factors are applied to the operations estimated for a given section to convert operations to coverages. Coverages are used in the Fatigue Analysis for remaining pavement life calculations.

The traffic distribution used for various segments of the pavement is shown on Plate No. 2-2.

It has been assumed in the 2013 Update that the "Traffic Indexes" used in the original study (2011) will still apply.

2-6 Frost Action

The natural soils at the Truckee Tahoe Airport are highly susceptible to frost action because of the gradation of these materials and the access to ground moisture. When soils freeze, if the level of frost penetration remains stable for a significant period of time, water is drawn to the freezing layer and this water accumulates and freezes in the form of ice lenses, which cause the soils above that level to heave. When the frost penetrates deeper, the process is repeated and additional ice lenses are formed. In a frost-susceptible soil with deep penetration of frost, numerous ice lenses will form and significant heave will occur.

At Lake Tahoe Airport in South Lake Tahoe, California, a 10-foot wide white painted threshold bar heaved 12 inches more than the adjacent black pavement in one short period of the winter. This was caused by frost action and differential depth of frost penetration under white-painted surfaces and dark surfaces. Exploration at Lake Tahoe Airport showed that the frost had penetrated to a depth of 45 inches under the white painted stripe and only 14 inches under the adjacent dark pavement.

When these soils thaw in the spring, they thaw from the top and from the bottom. Generally about two-thirds of the thawing occurs from the surface and one-third from the bottom. Until the total section thaws, that portion above the remaining frost layer is super-saturated because of the melting of the ice lenses. The remaining frozen soil creates an impervious layer so the excess pore water cannot dissipate. This produces a much weaker pavement section during this

period. It is important to determine the depth of frost penetration at the Truckee Tahoe Airport and to develop methods to accommodate the decreased strength of subsoils during spring thaw if necessary.

A general relationship has been developed to indicate the depth of frost penetration as it relates to freezing index. Freezing index is defined as an accumulation of the deviation in degrees Fahrenheit from 32° F for each day. The relationship between freezing index and time for the winter of 2010/11 at the Truckee Tahoe Airport is indicated on Plate No. 2-3 in the Freezing Index graph. Also in Plate No. 2-3 the theoretical depth of frost penetration is indicated for the winter of 2010/11. Theoretical depth of frost penetration has been plotted under the FAA Theoretical Frost Penetration Depth graph.

Experience at other airports in the Sierra Nevada Mountains indicates that frost penetration under a dark colored pavement is significantly less than that indicated by the freezing index; whereas, the frost penetration under a white reflective painted surface can be greater than that indicated by the freezing index. In order to determine the depth of frost penetration at Truckee Tahoe Airport a series of thermocouples were installed at various depths below the pavement surface on a section of Runway 11-29 located west of Taxiway G. Gauges were installed at depths of every 6 inches beginning at the depth of 6 inches and extending to 5 feet below the pavement surface. These gauges were installed on February 9, 2011. When the hole was drilled through the pavement for installation of the gauges, it was noted that there was no frost in any of the subgrade or subsoil materials that existed below a depth of 11 inches from the surface. The existing temperature data at each gauge were recorded hourly starting after installation. The results of these readings are shown on the Runway 11-29 Ground Temperature chart on Plate No. 2-3. Air temperature during that same period was also recorded and is also shown on Plate No. 2-3.

After February 9, 2011, there was never a time when any of the soil or base materials below a depth of 6 inches reached a temperature of 32° F. In several instances during the night the temperature of the soil at a depth of 6 inches approached 32° F but always rose during the daytime.

These data confirm information that the office of Reinard W. Brandley obtained from Lake Tahoe Airport 20 years ago. At the Lake Tahoe Airport the depth of frost penetration under a 10-foot wide solid white reflective painted surface extended to 45 inches. As an experiment a series of 6-inch wide black stripes were painted on this pavement to form a "zebra" pattern of 6-inch white and 6-inch black. Even in the middle of the winter the painting of these black stripes caused the frozen soil to melt and the surface of the runway, which had heaved 12 inches, to settle back to original grade. This research led to F.A.A. adoption of "zebra" striping as a standard for cold climate areas.

While there was no frost penetration under the pavements at Truckee Tahoe Airport after February 9, 2011, there probably will be some frost penetration at

sometime in the winter. These gauges will be left in place through the winter of 2011/12 and depth of frost penetration will be recorded. Mitigation measures will be considered as required, depending on the depth of frost penetration. These mitigation measures could include thickening pavement sections to support the heavy aircraft loadings during the spring thaw or restricting use of the airport by the heavier aircraft during the short period of spring thaw.

The frost penetration data observed during the winters of 2011-2012 and 2012-2013 showed little change from the data included in the original report. During the month of January 2013 there were approximately 20 days that there were freezing temperatures in the base rock 6" below the surface, but the frost never penetrated to the temperature gauge located 12" below the surface. There are no additional updates to the Frost Action section of the report.

TABLE No. 2-1a - Traffic Group Summary

Aircraft		Aircraft	Aircraft 60%	Aircraft	Gear
Group	Aircraft Type	Empty (lbs)	Fuel (lbs)	MTOW (lbs)	Configuration
1	Beech Baron	4,190	4,930	5,424	Single
2	Conquest	6,210	8,439	9,925	Single
	Citation CJ1	6,160	8,704	10,400	Single
	Raytheon Premier I	8,600	10,940	12,500	Single
	King Air 350	10,000	13,000	15,000	Single
3	Citation CJ II Bravo	9,300	12,780	15,100	Single
J	Lear 31	10,250	13,400	15,500	Dual
	Raytheon Hawker 400	10,550	14,000	16,300	Single
	Citation Ultra/Encore	9,900	13,938	16,630	Single
4	Citation Excel	12,550	17,020	20,000	Single
	Lear 45	12,050	16,940	20,200	Dual
5	Citation III	13,500	18,600	22,000	Dual
	Lear 60	14,750	20,000	23,500	Dual
	Gulfstream 150	15,100	21,700	26,100	Dual
6	Raytheon Hawker 800	16,100	23,240	28,000	Dual
Ü	Citation Sovereign	20,800	26,500	30,300	Dual
	Raytheon Hawker 1000	17,220	25,488	31,000	Dual
	Gulfstream 200	21,200	29,390	34,850	Dual
7	Citation X	21,600	30,060	35,700	Dual
	Dessault Falcon 2000	19,700	29,360	35,800	Duai
	Challenger 300	23,800	32,020	37,500	Dual
8	Raytheon Hawker 4000	23,500	33,100	39,500	Dual
١	Dassault Falcon 50 EX	20,200	31,900	39,700	Dual
	Dassault Falcon 2000EX	23,190	34,596	42,200	Dual
	Dassault Falcon 900B	22,610	36,344	45,500	Dual
9	Challenger 605	26,990	39,716	48,200	Dual
9	Dassault Falcon 900EX	24,700	38,860	48,300	Dual
	Legacy	30,000	41,760	49,600	Dual
10	Gulfstream III	38,000	57,020	69,700	Dual
10	Gulfstream IV	43,000	61,120	73,200	Dual
11	Gulfstream V	48,300	73,920	91,000	Dual
''	Bombardier Global Express	52,000	79,600	98,000	Dual

Note: 60% Fuel Weight is the weight of the aircraft with 60% of the total fuel, passengers, and payload allowable.

TABLE No. 2-1 - TRAFFIC SUMMARY

TABLE No. 2-1b - Summary of Traffic Data for Truckee Tahoe Airport

		Aircraft			Annual
	Aircraft	MTOW	Gear	2011	Growth
	Group	(lbs)	Туре	Operations	Rate
	1	5,500	Single	16,746	0.70%
	2	10,000	Single	2,618	2.27%
Small to	3	16,000	Single	2,654	2.90%
Medium	4	20,000	Single	464	4.40%
Aircraft	5	23,000	Dual	312	4.40%
	6	30,000	Dual	192	4.40%
	7	35,700	Dual	416	4.40%
	8	42,000	Dual	58	4.32%
Large	9	49,000	Dual	98	4.27%
Aircraft	10	73,000	Dual	50	3.65%
	11	94,000	Dual	72	3.30%
	Total 2	011 Opera	ations	23.680	

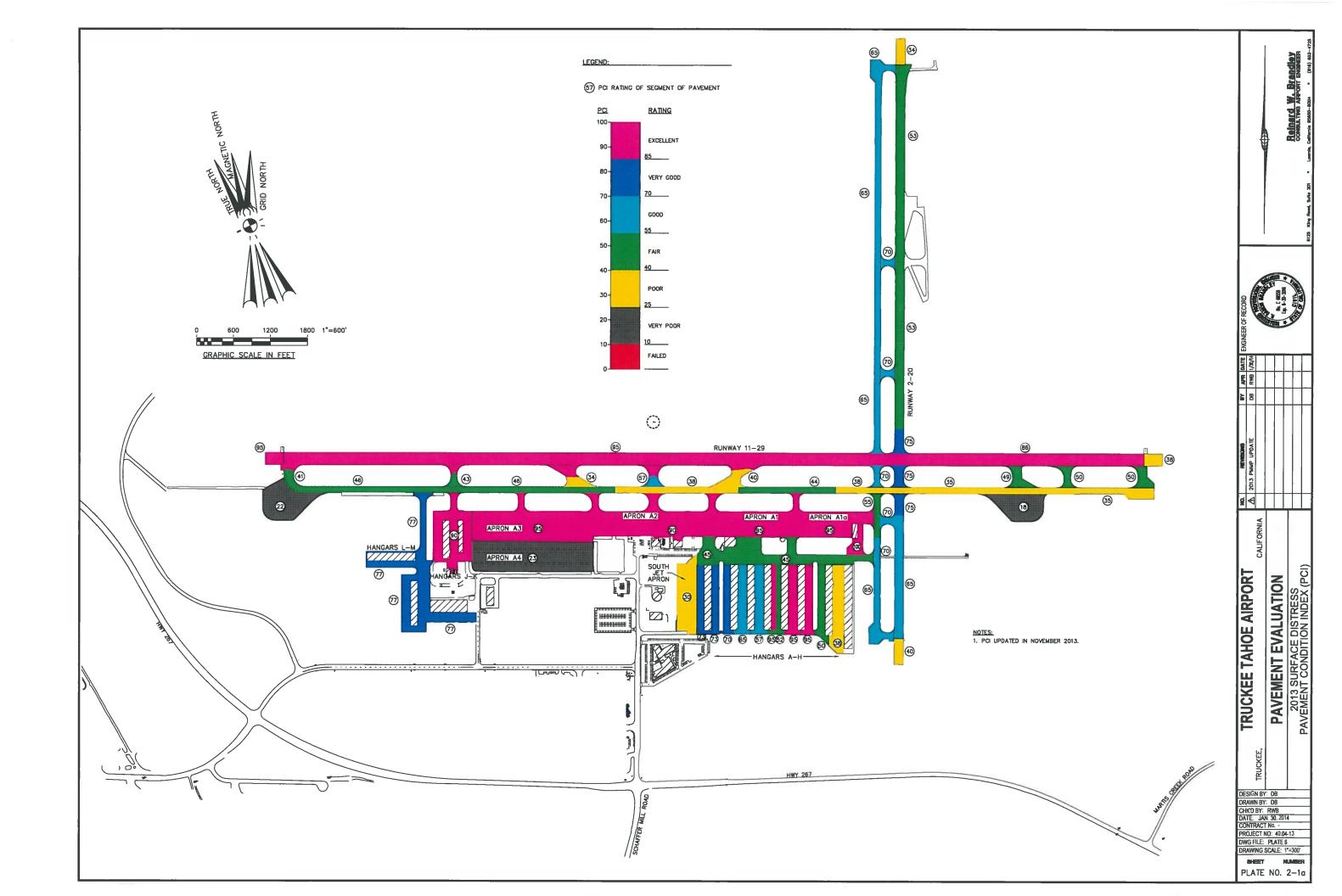
TABLE No. 2-1c - Summary of Traffic Indexes

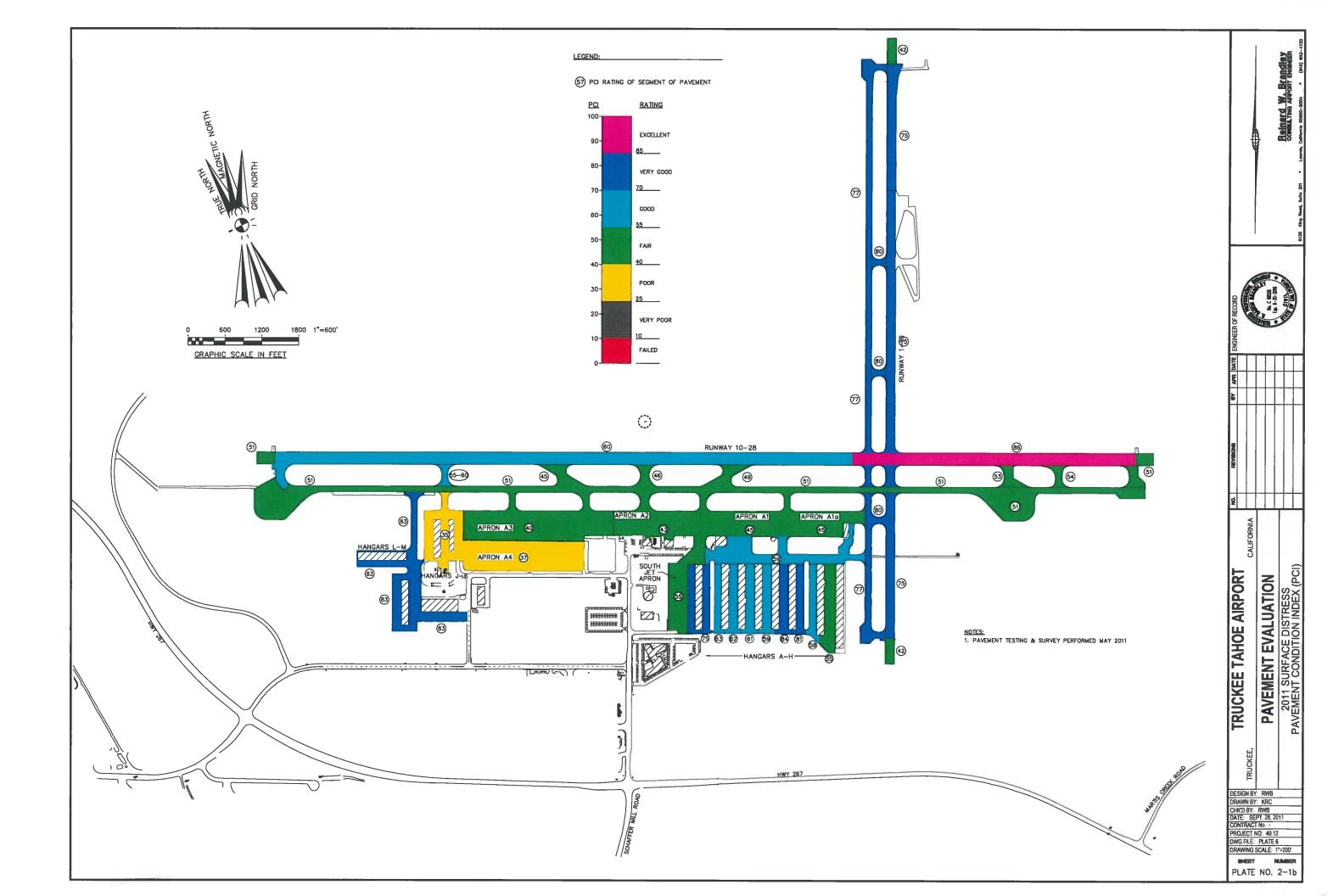
	Aircraft							Traffi	ic Index	(Aircraft Op	erations	in 2011)						
	Group	Α	B	C	D	E	F	G	Н		J	K	L	М	N	0	Р	Q
	1	4,521	8,206	13,732	2,512	6,029	8,708	6,866	3,014	1,507	1,172	5,024	6,698	6,698	5,024	1,675	1,675	3,349
	2	707	1,283	2,147	393	942	1,361	1,073	471	236	183	785	1,047	1,047	785	262	262	524
Small to Medium	3	717	1,300	2,176	398	955	1,380	1,088	478	239	186	796	1,062	1,062	796	265	265	531
Aircraft	4	125	227	380	70	167	241	190	84	42	32	139	186	186	139	46	46	93
raioran	5	84	153	256	47	112	162	128	56	28	22	94	125	125	94	31	31	62
	6	52	94	157	29	69	100	79	35	17	13	58	77	77	58	19	19	38
	7	112	204	341	62	150	216	171	75	37	29	125	166	166	125	42	42	83
	8	31	49	50	21	27	30	24	5	5	3	-	26	53	- [6	-	17
Large Aircraft	9	53	82	85	35	45	51	40	9	9	6	-	44	89	-	10	-	29
Large Alleran	10	27	42	44	18	23	26	21	5	5	3	-	23	46	-	-	-	15
	11	39	60	63	26	33	37	30	6	6	4	-	32	66	-	-	-	22
Total 2011 Oper	ations	6,468	11,700	19,431	3,611	8,552	12,312	9,710	4,238	2,131	1,653	7,021	9,486	9,615	7,021	2,356	2,340	4,763
																		- 41
% Use of Small/Medi		27%	49%	82%	15%	36%	52%	41%	18%	9%	7%	30%	40%	40%	30%	10%	10%	20%
% Use of Large A	Aircraft	54%	84%	87%	36%	46%	52%	41%	9%	9%	6%	0%	45%	91%	0%	10%	0%	30%

TABLE No. 2-1d - Summary of Enhanced Traffic Indexes

	Aircraft				E-	bonood T	undfin Ind	an (Almana	40	Mana in CO	lattata I	Al	- (- (B	i. t it			
								ex (Aircra	iπ Opera	tions in 20	11 With L	arge Aircr	att Operat	ions Dou	pied)			
	Group	A1	B1	C1	D1	E1	F1	G1	H1	<u> </u>	J1	K1	L1	M1	N1	01	P1	Q1
	1	4,521	8,206	13,732	2,512	6,029	8,708	6,866	3,014	1,507	1,172	5,024	6,698	6,698	5,024	1,675	1,675	3,349
	2	707	1,283	2,147	393	942	1,361	1,073	471	236	183	785	1,047	1,047	785	262	262	524
Small to Medium	3	717	1,300	2,176	398	955	1,380	1,088	478	239	186	796	1,062	1,062	796	265	265	531
Aircraft	4	125	227	380	70	167	241	190	84	42	32	139	186	186	139	46	46	93
Allcialt	5	84	153	256	47	112	162	128	56	28	22	94	125	125	94	31	31	62
	6	52	94	157	29	69	100	79	35	17	13	58	77	77	58	19	19	38
	7	112	204	341	62	150	216	171	75	37	29	125	166	166	125	42	42	83
	8	62	98	100	42	54	60	48	10	10	6	-	52	106	-	12	-	34
Large Aircraft	9	106	164	170	70	90	102	80	18	18	12	-	88	178	-	20	-	58
Large Alloran	10	54	84	88	36	46	52	42	10	10	6	-	46	92	-	-	-	30
	11	78	120	126	52	66	74	60	12	12	8	-	64	132	-	-	-	44
Total 2011 Opera	ations	6,618	11,933	19,673	3,711	8,680	12,456	9,825	4,263	2,156	1,669	7,021	9,611	9,869	7,021	2,372	2,340	4,846
% Use of Small/Mediu	ım Aircraft*	27%	49%	82%	15%	36%	52%	41%	18%	9%	7%	30%	40%	40%	30%	10%	10%	20%
% Use of Large Aircraft* 54% 84% 87% 36% 46% 52% 41% 9% 9% 6% 0% 45% 91% 0% 10% 0%									0%	30%								
* - Percent use inidcate	es the perce	ntage of	different a	ircraft grou	ps using a	an analyze	ed paveme	ent eleme	nt.									

G \FWD\Truckee\2011\05 14 35 37 Table 2-1 4-3 Appendix C and D 40_04-13 Truckee Fatigue Analysis Data Tables FAARFIELD Analysis xlsTable 2-1 - Traffic Indexes





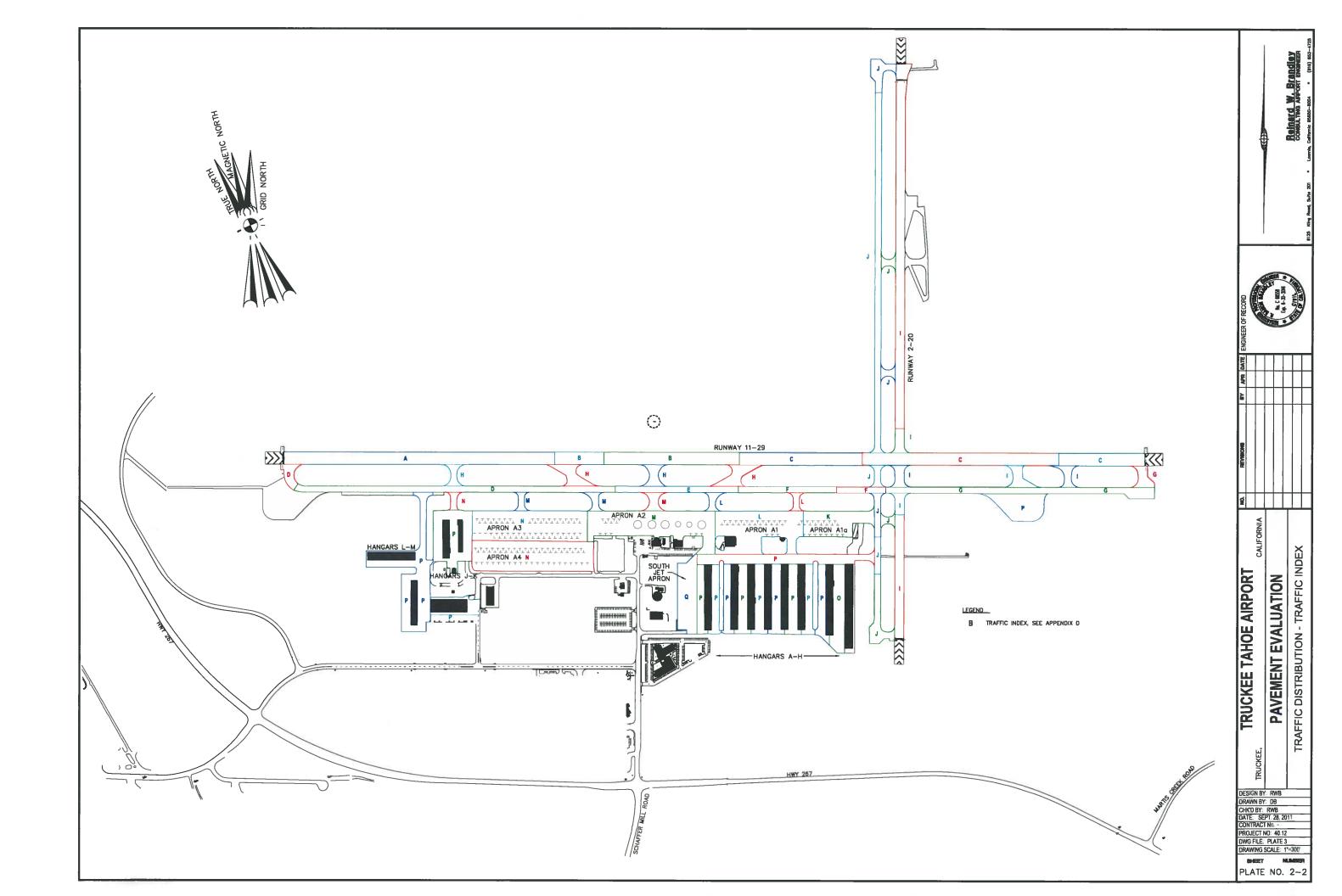
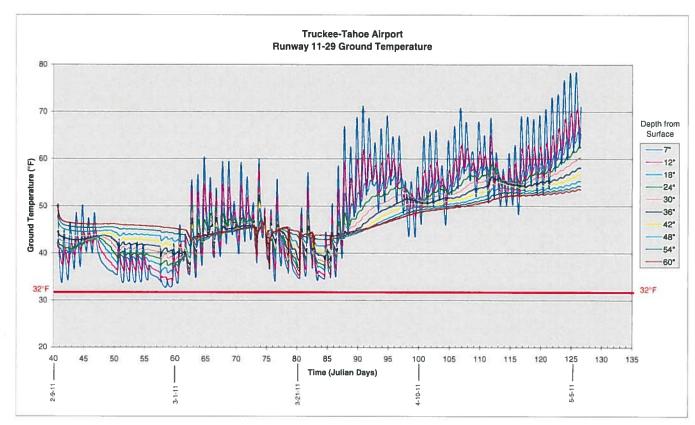
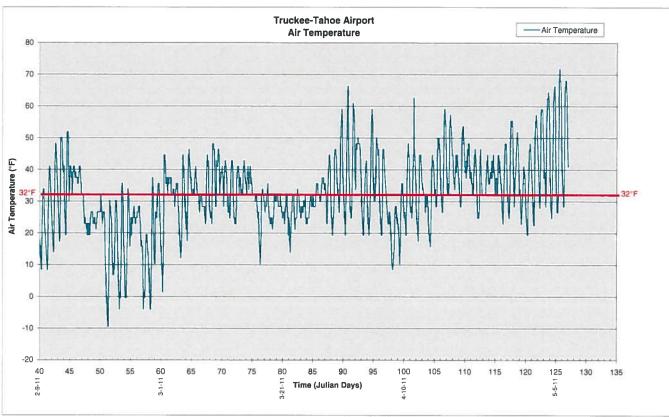
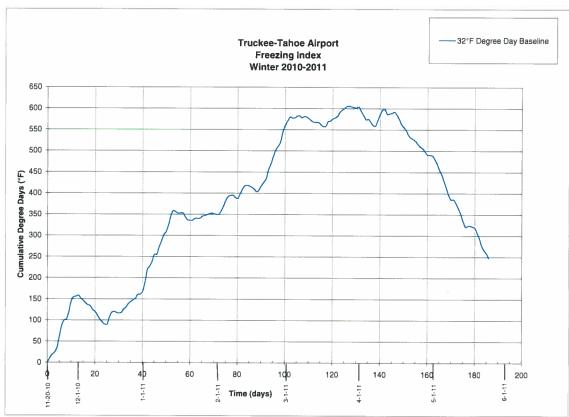


PLATE NO. 2-3 - FROST PENETRATION STUDY

Data Collection: February 9 -May 5, 2011







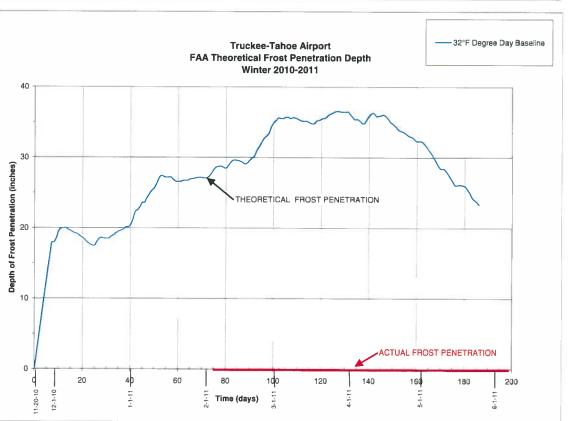


PLATE NO. 2-3 FROST PENETRATION STUDY

CHAPTER 3. ANALYSIS AND EVALUATION

3-1 Distress Mode

There are two major distress types that lead to failure and/or deterioration of an airfield pavement. These are deep-seated distress and surface distress.

Deep-seated distress is distress in the lower sections of the pavement and the subgrade and subsoil beneath the pavement section and is caused by repeated stresses induced by aircraft movement on the surface of the pavement. Deep-seated distress can lead to complete failure of the pavement section, foundation soils, or both.

Surface distress is caused by traffic, age, and environmental factors including temperature, temperature changes, moisture, and frost. Surface distress causes deterioration of the surface pavement layer including cracking, spalling, raveling, bleeding, and shoving.

3-2 Deep-Seated Distress

A pavement does not suddenly fail under load unless it is grossly overloaded. Load limits for infrequent use need to be applied to the pavements to avoid collapse of the aircraft through the pavement section. The failures that generally occur are fatigue-type failures where distresses develop to a point that rutting and accompanying failure of the pavement section occurs. It is important in developing a Pavement Maintenance/Management System (PMMP) to determine the time at which failure of the section caused by deep-seated distress will occur under forecast loadings. Several methods have been developed over the past 60 years for utilizing a Fatigue Analysis methodology to forecast remaining life of pavements under forecast loads. The degree of success has been varied depending on the method used.

3-2.1 Back Calculated Modulus of Elasticity

Prior to the development of the computer, it was not possible to calculate stresses, strains, and deflections at various depths in a section using a multi-layered system. As a result, the early methods of fatigue analysis utilized deflections of pavement surface, subgrade surface, or other locations as the failure criteria. With the development of the computer, it was possible to calculate stresses, strains and deflections at the surface and all depths below a multi-layer system. The basic soils and pavement parameters that were necessary for this computation were Modulus of Elasticity and Poisson's Ratio of each layer in the system.

With the development of the heavy-duty falling weight deflectometer equipment and the heavy-duty vibratory load test equipment, it became possible to measure deflections of the pavement surface and to establish the size and shape of the deflection bowl caused by the applied loads. Using the deflection bowl data and the computer program for multi-layer systems, it is possible to back calculate values of Modulus of Elasticity for each layer of the system. Poisson's Ratio is not a critical parameter and values of Poisson's Ratio can be adequately estimated for each type material in each layer. As a result of this development, full-scale load tests are no longer required and the basic soil parameters can be developed from the results of heavy-duty falling weight deflectometer tests or vibratory load tests.

These data for Modulus of Elasticity and Poisson's Ratio of each layer and the thickness of each layer including the pavement section, the subgrade materials, and various layers of subsoil can be developed and utilized in the Fatigue Analysis.

3-2.2 Forecast Traffic

Forecast traffic, including type aircraft, type gear, operating load, and distribution on the pavement, is a parameter that must be utilized in any fatigue analysis. These data must be converted to coverages, which is the number of wheels per year crossing a given point on the pavement. The forecast traffic at Truckee Tahoe Airport for each pavement section is included as the Traffic Index in Table No. 2-1. These traffic indexes represent the total operations of each category of aircraft on each section of pavement. For input into the Fatigue Analysis methodology, these operations are converted to coverages to represent the distribution of aircraft tires on the pavement section in each segment.

3-2.3 Existing Pavement Sections

Thickness and type of each pavement section and each layer of subgrade and subsoil under the pavement section are important factors to input into any fatigue analysis. These data for each pavement section are included in Appendix C.

3-2.4 Considered Rehabilitation Sections

Fatigue Analysis methodology not only provides a forecast remaining pavement life under forecast traffic for a given pavement section, but can also forecast extended pavement life after different rehabilitation or reconstruction processes have taken place. It is, therefore, important to not only evaluate the existing pavement sections and forecast remaining life, but to apply feasible rehabilitation methods to the existing pavement sections and calculate forecast extended life due to the rehabilitation process. It is important to make this evaluation for different rehabilitation

processes that would be feasible at this airport in order to prepare a costbenefit analysis to evaluate the most acceptable rehabilitation program for the pavement section. A series of rehabilitation processes that are considered feasible for this airport have been prepared and are included in Table No. 3-1. Where applicable, each of these rehabilitation procedures was evaluated using the Fatigue Analysis.

3-2.5 Fatigue Analysis – Deep Seated Distress

3-2.5.1 Brandley Fatigue Analysis – Remaining Life Analysis

In 1948, as research for a doctoral thesis at Harvard University Graduate School of Engineering, Reinard W. Brandley developed the Brandley Fatigue Analysis method of evaluating airfield pavements. This Fatigue Analysis was developed using full-scale load tests conducted by the Corps of Engineers near the end of World War II on various airports for the purpose of developing design criteria for pavements to serve the larger military aircraft that were being developed. The failure criterion that was used in this analysis was limiting subgrade deflection under design load. Deflections were used at that time since the computer had not been developed and stresses and strains in multi-layered systems could not be calculated. This Fatigue Analysis methodology and failure criteria has been utilized on many airports. However, the method of determining deflections of the surface of the subgrade has changed from direct measurement to calculating these deflections using layer thicknesses and Modulus of Elasticity and Poisson's Ratio of each layer, which have been back calculated from the data obtained from the falling weight deflectometer tests. From the Fatigue Analysis, forecasts of remaining pavement life so far as deep-seated distress is concerned were calculated for each airport and each pavement section.

Since the original research was conducted on flexible pavements, it was anticipated that a separate failure criteria would be required for rigid pavement sections. Experience and comparison with actual performance show that the failure criteria used for flexible pavements is the same for rigid pavements and there was no change required in the failure criteria.

A comparison of forecast pavement life and time for failure under the forecast traffic over the past 60 years has shown very good correlation between forecast life and actual time to failure. The forecast life has always been within 90 to 110 percent of the actual life of the section.

3-2.5.2 FAARFIELD Airport Pavement Design – Remaining Life Analysis

Within the last 2 to 3 years the Federal Aviation Administration has developed a fatigue analysis methodology similar to that developed by Reinard W. Brandley called the "FAARFIELD Airport Pavement Design." The FAARFIELD design utilizes the same traffic distribution, forecasts, pavement section thickness, and Modulus of Elasticity and Poisson's Ratio of each layer within the section as are used in the Brandley Fatigue Analysis. The only differences are the method of back calculating Modulus of Elasticity of each layer and the failure criteria. FAARFIELD uses limiting subgrade strain as the failure criteria.

In the Pavement Evaluation Study for the Truckee Tahoe Airport the same input information was used for evaluating each pavement section with the Brandley Fatigue Analysis and with the FAARFIELD design. By this method, direct comparison for forecast remaining life of the section was obtained using the Brandley Fatigue Analysis method and the F.A.A. FAARFIELD method. The actual remaining life of each section using both methods has been prepared and is included in Appendix C, Tables C-1 through C-72. The analyses were conducted for both methods using both the forecast traffic and the modified traffic where the number of operations for the heavier aircraft was doubled. On these tables a side-by-side comparison of remaining pavement life as determined using the Brandley Fatigue Analysis and the FAARFIELD Fatigue Analysis methods has been presented.

Normally, any forecast pavement life that is in excess of 20 years is reported as 20+ years since it is not possible to anticipate all changes in existing pavement conditions resulting from load, weather, maintenance methods, etc. In this report to show a direct comparison the actual calculated extended life has been included. However, for practical purposes forecast life beyond 20 years will require update every 10 years to take into consideration changes that occur.

It will be noted that there are extreme differences in forecast pavement life between the Brandley Fatigue Analysis and FAARFIELD design. In most cases FAARFIELD's forecast pavement life is much less than the Brandley Fatigue Analysis forecast pavement life, but in many instances the FAARFIELD forecast pavement life is significantly greater than the Brandley forecast pavement life. Noting these differences, a comparative study of the two systems was made on some airport pavements

that actually failed after they had been tested. On this analysis the same traffic, pavement section, Modulus of Elasticity values, and Poisson's Ratio values for each layer were used in both the Brandley Fatigue Analysis and the FAARFIELD analysis. At each location Air Traffic Control Tower records indicated that the forecast traffic for aircraft type and operation matched the actual traffic experienced. The results of this study are tabulated below:

Airport	Facility	Forecast Re	Actual Life*	
		Brandley	FAARFIELD	LIIC
Sacramento International Airport	Runway 16L-34R	5	0.25	5.1
Stockton Metropolitan Airport	Runway 11-29	6 to 8	22	7
Nashville International Airport	New Apron Taxiway	3	0.2	3
Truckee-Tahoe Airport	Runway 11-29 Station 40+00	16	1	**

^{*}Number of years to failure.

The FAARFIELD method shows that the major portion of the airport requires rehabilitation within the next 20 years and it would have to be accomplished at an earlier date than that indicated by the Brandley Fatigue Analysis methodology. To demonstrate the difference in predicted performance, Plate No. 3-1 has been prepared, which indicates in color those areas on the airport that would be expected to fail due to deep-seated distress within a 20-year period using the Brandley Fatigue Analysis. The circled numbers at each section indicate the remaining life of each section that is anticipated to fail. Plate No. 3-2 has also been included, which shows those areas that would be expected to fail within 20 years using the FAARFIELD analysis. On this plate the number of years of life remaining in the pavement section are also included in the circled numbers above the item.

It will be noted that FAARFIELD methodology indicates a much larger area on the airport that is expected to fail within the 20 year period and the remaining life of each section is much less than that forecast by the Brandley Fatigue Analysis method.

Due to the long, accurate performance record of the Brandley Fatigue Analysis methodology and the large discrepancies with the FAARFIELD method and short performance record of FAARFIELD, all maintenance

^{**}This section of the runway has performed under forecast loading for the past 8 to 10 years with no sign of deep-seated distress. There is surface cracking of the asphalt pavement due to thermal stresses. According to FAARFIELD it should have failed 7 to 9 years ago.

recommendations in this report are based on data obtained from the Brandley analysis.

Similar fatigue analyses were conducted for each pavement section using the enhanced traffic indexes where the large business jet aircraft operations used were doubled those forecast. A significant decrease in remaining life is indicated with both methods of analysis.

A detailed fatigue analysis was conducted using each type of rehabilitation and overlay considered appropriate and the extended pavement life was calculated. Taking this extended life for each section into account, the recommended pavement maintenance program was prepared. The recommended pavement rehabilitation method used was based on cost-benefit analysis, construction timing and difficulties, and availability of funding.

The rehabilitation plan for the next 20-year period to protect against deepseated distress only is included in Table No. 3-2.

All fatigue analyses referred to in this report were calculated in 2011 and included in the 2011 report. The test data and forecast performance of each section of pavement on the airport is the same as presented in the original 2011 report, except for the sections rehabilitated in 2012 and 2013.

The fatigue analysis methodology was utilized to evaluate and recommend the pavement sections that were used in the maintenance program. The updated estimated remaining life of the rehabilitated section of Runway 11-29 is shown in the corresponding table of each section of pavement. The remaining life of the western two-thirds of Runway 11-29 is now greater than 50 years based on Brandley Fatigue Analysis.

3-3 Surface Distress

3-3.1 Pavement Condition (PCI)

Surface distress in the pavements is not necessarily caused by deep-seated distress, nor does it forecast when the pavement will fail. Surface distress generally is caused by inadequate quality of the pavement materials, and/or environmental factors such as temperature, freezing and thawing, moisture, and temperature changes between day and night and summer and winter. These defects show up as cracking, patching, raveling, weathering, swell, and rutting. Rutting can be caused by deep-seated distress and failure of the section or associated with flushing of an asphalt mix.

The pavement condition is determined by visual inspection of the surface of the pavement as described previously. A Pavement Condition Index

(PCI) can be determined for each segment to indicate the degree of distress. A typical plot of PCI vs. Time is included as Plate No. 3-3. On this plate a typical pavement index plot for asphalt concrete pavement and for Portland cement concrete pavement is shown. In both diagrams the PCI gradually decreases with time and when it reaches a certain point, it decreases at a much faster rate. The gradual decreasing portion of the curve indicates surface distress only. The sharp break off is generally caused by deep-seated distress. There is no way to predict when the deep-seated distress or failure of the section is going to occur and. therefore, it is not possible to predict when major rehabilitation or reconstruction will be required. If one waits until the PCI vs. Time curve shows deep-seated distress by the sharp break off, then failure has already occurred and it is not possible to extend the life of the section by overlays or adding to the surface of the existing pavement section. As a result, the Pavement Condition Index (PCI) cannot be successfully used to predict deep-seated distresses and failures but is effective in determining when surface rehabilitation and repairs are necessary.

Surface distress results in deterioration of the surface course, which at Truckee Tahoe Airport is asphaltic concrete pavement. This distress shows up as cracks in the pavement, including transverse cracks, longitudinal cracks, block cracking, map cracking, secondary cracking, raveling, weathering, patching, or damage to the surface caused by jet blast or oil and chemical spillage. Each of these deficiencies can be treated so as to provide safe operation of the airport, but with time it will become more cost effective to completely rehabilitate or reconstruct the section. The timing of repair of cracks or other defects will be a function of cost benefit and availability of funds.

The typical rehabilitation procedures for surface distress are shown in Table No. 3-3.

The new and old Pavement Condition Index values for each segment of pavement are presented in this report. The results of the updated study not only identify surface defects, but changes in PCI values of each pavement section since the original study. It is noted that the PCI increased dramatically on all sections rehabilitated in 2012 and 2013 and remained the same or decreased somewhat in all other sections.

3-3.2 Thermal Stresses

With airports in the higher altitudes of the Sierra Nevada Mountain Range, large temperature changes occur between night and day and summer and winter. These large temperature changes cause thermal stresses to build up in the asphalt pavement section, which generally results in cracking of the pavements, both longitudinal and transverse. Early cracking will be

transverse cracks at 500 to 800 foot centers. Additional cracks will then form in between and ultimately it will end up with a block cracking at 15 to 20 foot centers. If not sealed, these cracks will become wider each year and in some instances have been observed to be 3 to 5 inches wide.

Recently a polymer-modified asphalt has been developed that provides an asphalt pavement that will withstand or delay thermal cracking. Experience has been limited and has shown no thermal cracking in the pavement after 10 to 12 years from the time that it was placed. All new pavements at Truckee Tahoe Airport should be constructed using the polymer-modified asphalt.

In the 1980s the office of Reinard W. Brandley developed a method of sawing and sealing a joint pattern on airfield pavements in the Sierra Nevada Mountain regions to control the cracking caused by thermal stresses. This joint pattern started out at 25-foot centers, but intermediate cracks developed so the spacing was decreased to 12 to 15-foot centers depending on the location. This has proven to be successful. The main problem with the sawing and sealing of the joint pattern has been that it requires maintenance in the form of resealing the joints every 4 to 6 years. All joints need to be formed with a depth-to-width ratio of 0.5 to 1.0 and have a "band-aid" section on top of the pavement extending 1 inch each side of the joint in order to avoid bond failure of the joint seal.

Many of the pavements at Truckee Tahoe Airport have a joint pattern installed, but the spacing of the joints is 25 to 30-foot centers and in many instances intermediate cracks have developed. These joints are generally ½ to ¼ inch wide and 2 to 3 inches deep. The joints in the pavements placed in 2008 in the West Industrial and Hangar Area project (Hangar Area A3) have opened to a width of 1 to 1½ inches. It is noted that in several areas the seal has broken loose from the adjoining asphalt and that some secondary cracking is occurring adjacent to the joint. It is also noted that there are some intermediate cracks showing up between the joints. It is recommended that when and if the existing joints start to increase in width and the sealant fails, an intermediate joint pattern be established to provide a joint pattern no more than 15 feet by 15 feet and the existing joint seals be maintained in good condition.

In many areas there are no joints in the pavement and extensive cracking has occurred. It is not considered practical to install a joint system at this time in those pavements because of the number and extent of the existing cracking. When new pavements are placed at the airport, polymer-modified asphalt should be used in the mix. Based on experience, this should at least delay the start of any cracking due to thermal stresses, and may eliminate it. Installation of a jointing system is not recommended until cracking of the pavement begins. Careful inspection should be made of

the new pavements each year and when transverse cracks form at regular intervals of 500 feet or less, a 15 x 15 foot joint pattern should be installed using the existing transverse crack as one of the joints. This will eliminate or delay further cracking due to thermal stresses.

Performance of new pavements using polymer-modified asphalt has been limited to 12 to 14 years. It is not known whether or not thermal cracking will occur in these pavements after that time, so in the PMMP an item to install a joint system after 11 to 13 years has been included but will only be used if needed.

In some areas existing cracks are now ¾ to 2 inches wide and in these cases the crack needs to be repaired. The repair should consist of saw cutting and removing the existing asphalt to a minimum width of 1 foot to remove all of the cracked material and then replacing it with polymer-modified asphalt compacted to at least 96 percent relative compaction. Prior to replacing the asphalt, the existing base course materials should be recompacted and a bituminous tack coat applied to the top of the base and the sides of the saw cut joints. To control any additional opening of the joint that may occur, a new joint should be sawed and sealed at the edge of the new crack repair.

In some areas, particularly in the apron tie down area, the surface of the pavement has weathered badly, some raveling has occurred, and there is extensive fine cracking. In these areas surface rehabilitation should consist of milling at least 2 inches, but no less than 75 percent of the thickness of the existing pavement, and replacing it with new polymer-modified asphalt. Consideration should be given to heater remixing the asphalt pavement remaining in place below the milled section to control reflective cracking.

A sealant on the surface of the pavement should be considered when the weathering and development of fine cracks has developed to a point that it has a detrimental effect on the life of the pavement and the surface condition. This sealant can consist of reclamite or an SS1h fog seal or other suitable materials.

3-4 Frost Action

If the frost line penetrates and remains for a significant period of time in a frost-susceptible soil, frostheave will occur, which is caused by the formation of ice lenses at the bottom edge of the frozen layer. This heave can have a serious effect on rideability of the pavement until it melts and the surface returns to approximately the same elevation as before the frost. During the spring thaw the frozen soil and ice lenses will thaw and the soil above the remaining frozen layer will become super-saturated, which will decrease the strength of this material.

Instrumentation installed on February 9, 2011, has shown that there was no frost penetration after that time deeper than 6 inches below the surface of the pavement, which would not cause a serious problem with the strength of the section during spring thaw. No data are available prior to February 9. The sensors will remain in place over the winter of 2011/2012 to monitor depth of frost penetration.

Based on past experience it is expected that frost may penetrate up to depths of 15 inches provided zebra striping is used for all marking. With a 15-inch depth of frost penetration there would be little effect on the strength of the pavement section during the spring thaw. However, if frost penetrates deeper than that, there would be a weakened condition during the spring thaw. If that weakened condition occurs due to depth of frost penetration, then the effect can be mitigated during the spring thaw period by:

- Placing a thicker pavement section, which will support the heavier aircraft, or
- Restricting the size aircraft that can use the airport to those having a maximum gross weight less than 40,000 pounds on dual gear.

The spring thaw would normally be a fairly short period of time. A final determination as to treatment due to frost action should be delayed until data have been accumulated this winter.

It may be advantageous to leave the thermocouple gauge in place and monitor the depth of frost penetration and rate of thawing in the spring if thicker pavement sections are not constructed so the timing of limiting operations of the heavier aircraft can be accurately established.

If the depth of frost penetration never exceeds 16", then no load restrictions would be required on the pavements at any time. If the depth of frost penetration extends below 16", load restrictions should be applied whenever the depth of thawing as measured from the surface of the pavement exceeds 12" and should remain in place until seven days after the thermocouples indicate that all of the frozen sections of pavement and subsoil have completely thawed.

Depth of frost penetration during the winters of 2011-2012 and 2012-2013 at the thermocouple gauges under Runway 11-29 show that the maximum depth of frost penetration was 6 to 10 inches for short durations (20 days or less).

TABLE NO. 3-1

TRUCKEE TAHOE AIRPORT

PAVEMENT REHABILITATION PROCEDURES DEEP-SEATED DISTRESS

Code	Rehabilitation Method	
Α	Pulverize and Remove Pavement Section and Reconstruct	
	New Section - ASB - Pulverized Existing AC & AB	8"
	AB - Crushed Aggregate Base (New)	4"
	AC - Asphalt Pavement (New)	<u>3"</u>
	Total Thickness	15"
	Cost per square foot	\$5.20
В	Rehabilitate Existing Section - Option 1	···
J	New Section - ASB - Pulverize Existing AC & AB & Recompact	10"
	AB - Crushed Aggregate Base (New)	3"
	AC - Asphalt Pavement (New)	<u>3"</u>
	Total Thickness	16"
	Cost per square foot	\$4.05
С	Rehabilitate Existing Section - Option 2	
	New Section - Place 2" Crushed Rock on Existing AC	12"
	Pulverize and Mix New Rock & Existing AC & AB	
	and Recompact	
	AC - Asphalt Pavement (New)	<u>3"</u>
	Total Thickness	15"
	Cost per square foot	\$3.75
D	Remove AC and Reconstruct	
	New Section - Remove Existing AC	
	Scarify and Recompact Existing AB	6"
	AC - Asphalt Pavement (New)	3"
	Total Thickness	9"
	Cost per square foot	\$3.77
E	Strengthen Existing Section	
	New Section - Remove Existing AC	
	Scarify and Recompact Existing AB	8"
	Add AB - Aggregate Base (New)	3"
ĺ	AC - Asphalt Pavement (New)	<u>3"</u>
	Total Thickness	14"
	Cost per square foot	\$4.70
	<u> </u>	

Note:

Costs indicated are based on 2011 prices and do not include any costs other than the pavement section itself.

TABLE NO. 3-2 TRUCKEE TAHOE AIRPORT REHABILITATION PLAN - DEEP-SEATED DISTRESS

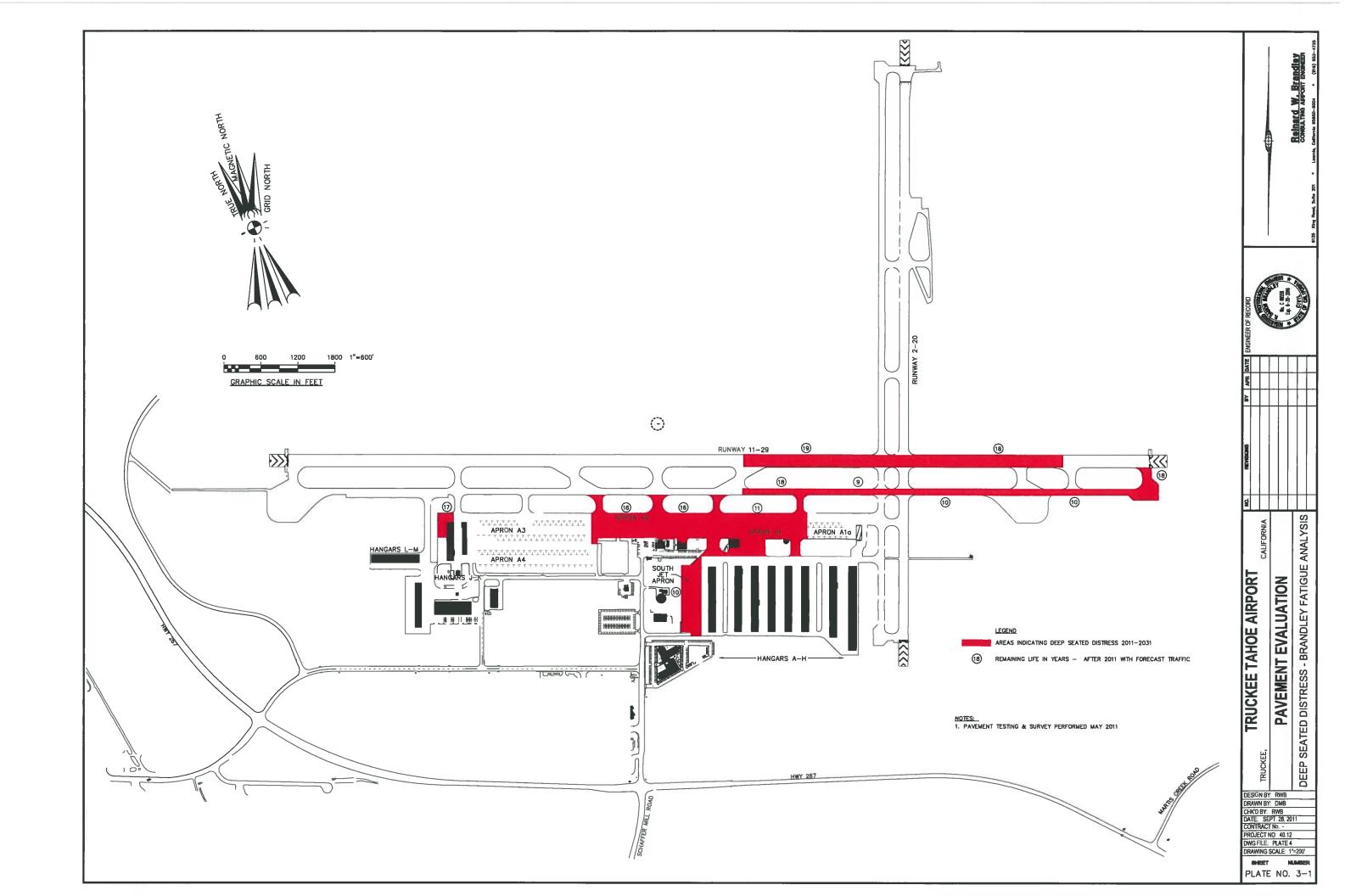
Recommended Rehabilitation	Description	ruct	ove and Reconstruct	k, Pulverize & Reconstruct	η Base, Add 4" AB, 3" AC	ruct - Includes T/W M	ruct	ıstruct	Rehabilitate and Reconstruct - Includes T/Ws A, B, C, D Rehabilitate and Reconstruct - Includes T/Ws A, E, F, H, U, J
Recommende		Remove Existing & Reconstruct	Hump Removal Area - Remove and Reconstruct	Remaining Areas - Add Rock, Pulverize & Reconstruct	Remove 4" AC, Scar/Recomp Base, Add 4" AB, 3" AC	Remove Existing & Reconstruct - Includes T/W M	Remove Existing & Reconstruct	Remove Existing and Reconstruct	Rehabilitate and Reconstruc Rehabilitate and Reconstruc
	Code	A	⋖	ပ	ш	A	A	A	
Estimated Year of	Failure	2028	2029	2029	2029	2022	2027	2021	2042
Remaining Life	(Years)	17	19-30	19-30	18-30	11-38	16-44	10	31-36
	Station		0+00 to 47+00	0+00 to 47+00	47+00 to 70+00				0+00 to 28+00 28+00 to 72+00
	Element	Hangars J-K	Runway 11-29			Apron A1	Apron A2	South Jet Apron	Taxiway A, B, C, D Taxiway A, E, F, H, U, J
	Year	2012	2012		2026	2021	2025	2020	2024 .

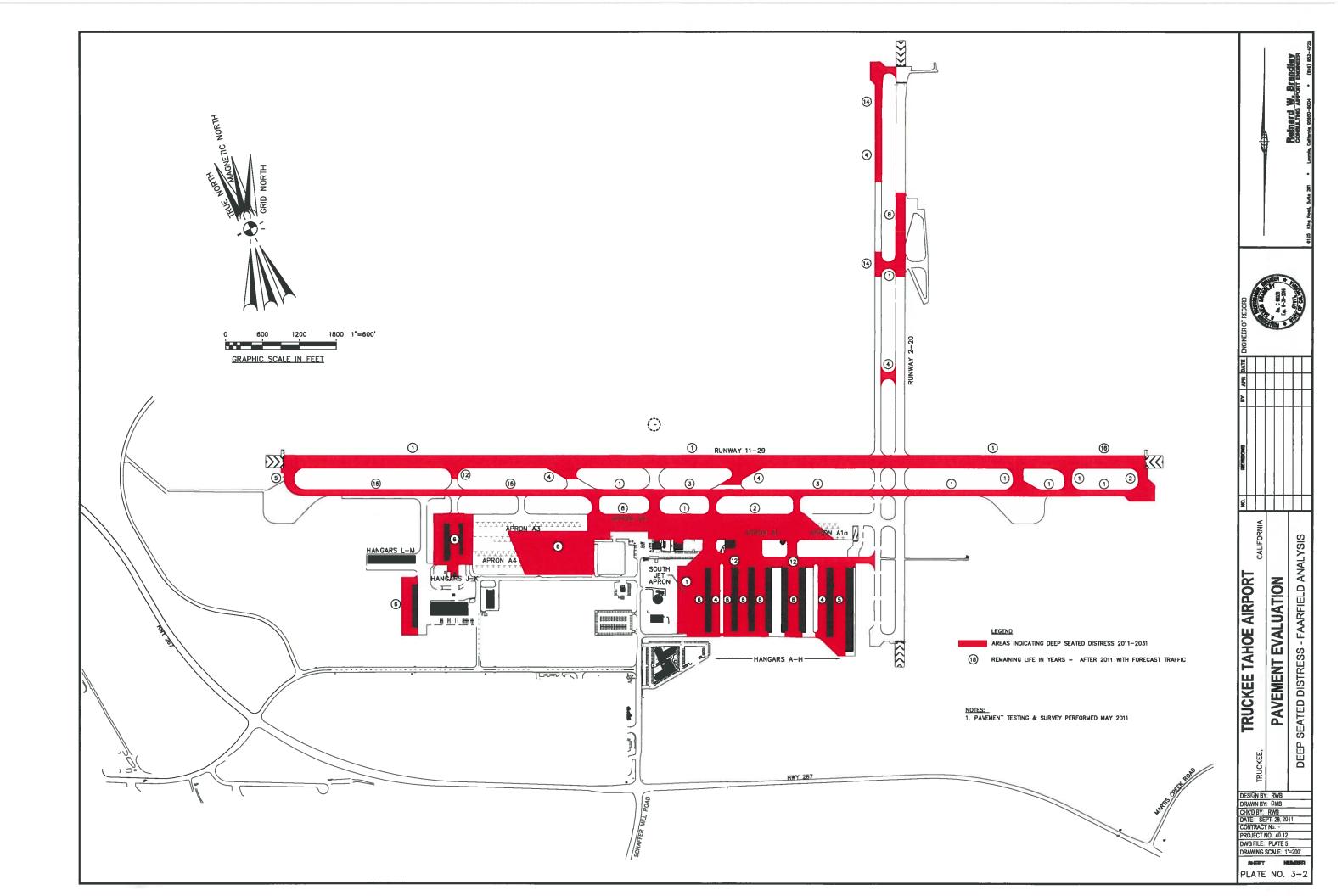
TABLE NO. 3-3

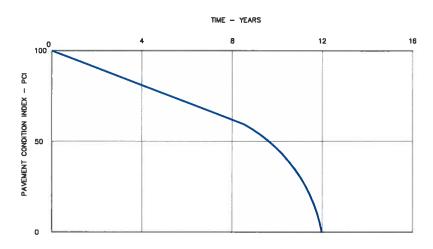
TRUCKEE TAHOE AIRPORT

PAVEMENT REHABILITATION PROCEDURES SURFACE DISTRESS

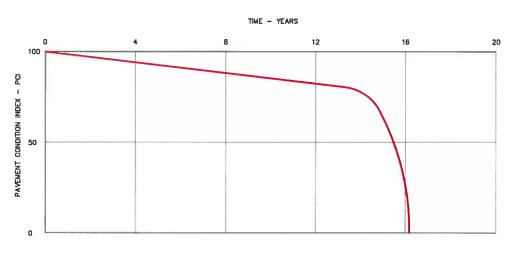
Code	Rehabilitation Method	Estimated Unit Costs
F	Saw & Seal New Joints to Control Thermal Cracking	\$3.50/ln. ft.
G	Crack Repair, Seal Existing Cracks and Joints and/or Remove and Patch AC	\$18/sq. ft. for 3 1/2" AC
Н	New Seal Coat - Fog Seal, Reclamite, etc.	\$1.25/sq. yd.
1	Mill & Fill or Hot Recycle	\$2.60/sq. ft.
J	Remark Pavements	\$1.00/sq. ft.







ASPHALT CONCRETE PAVEMENT SECTION PCI VS. TIME - RELATIONSHIP



PORTLAND CEMENT CONCRETE PAVEMENT SECTION
PCI VS. TIME - RELATIONSHIP

- 3			TRUCKEE TAHOE AIRPORT		IIIO.		EV.	AFR	1	ENGINEER OF RECORD	
- 15	■ [총[취임]컴퓨터()홍[왕]		IRUCKEE IANUE AIRPURT								
lä	WANG PIECE TO BY WANG WANG WANG WANG WANG WANG WANG WANG	TRUCKEE,		CALIFORNIA		I				A STORE A	
- 15	[위투[의결계의]][[DAVEMENT CLASSICAL		П		Г			#F 300	
Ιá	[[[] [[] [] [] [] []		PAVEMENT EVALUATION					П			
- 1:					\blacksquare		г	П	\neg	6 4 4 4 4	Relnard W. Brandley
1 4			PCI vs. TIME				$\overline{}$			7.77	COMMACTIVITY APPEARS IN COMMANDS
٥			. 51 va. 1 livic								400 Dig San, San St. 1 Janes, Garrer, 1980-1986 1 (100) 489-1785

CHAPTER 4. REHABILITATION PLAN AND SCHEDULE

4-1 General

Even with the success of the Brandley Fatigue Analysis methodology in predicting remaining pavement life, pavement performance beyond 20 years cannot be accurately forecast due to unknown factors including weather, traffic, surface defects, and frost action. Even beyond 10 years the forecast performance is somewhat questionable due to the same variables. It is, therefore, recommended that the rehabilitation plan be developed for a 20-year period but that it be updated periodically based on ongoing surveys and analyses. It is recommended that pavement condition surveys, which visually identify surface defects, be conducted annually by a general visual observation of all pavements and every 5 years using a detailed survey and determination of Pavement Condition Index (PCI). It is also recommended that detailed falling weight deflectometer testing and new fatigue analyses be conducted on a 10-year interval and the remaining life of the pavement based on deep-seated distress be evaluated and the rehabilitation program adjusted as necessary.

Rehabilitation of pavements to correct deep-seated distress problems should be performed 1 to 3 years before the forecast life of the pavement has occurred. If one waits until the pavement section has failed due to deep-seated distress, then the strength of the subgrade and subsoils will be decreased and the strength and quality of the base and pavement materials will have decreased. It will not be feasible to strengthen the section and extend the life of the section by the placement of overlays or additional thicknesses of the pavement section. Once a failure has occurred, it will be necessary to reconstruct the entire section.

If the surface distress becomes severe before the forecast remaining life due to deep-seated distress occurs, in many cases it will be more feasible from a cost-benefit analysis, performance, and aesthetic standpoint to rehabilitate or reconstruct the section earlier than forecast due to deep-seated distress.

Rehabilitation of the section to correct surface distress problems can consist of patching, sealing of the cracks, fog sealing, milling and replacement of asphalt. The timing for each of these will be based on cost-benefit analysis, rideability, and aesthetic conditions. The rehabilitation type and schedule to correct problems caused by surface distress is determined by engineering judgment, taking into consideration the cost-benefit, operational problems, and visual perception. The schedule for rehabilitation to correct surface distress issues is flexible, but timing of rehabilitation to correct deep-seated distress must be scheduled to occur no later than 1 to 3 years before the forecast time of failure.

If a pavement section is grossly overloaded, there is a risk that the pavement will be overstressed to a point that the landing gear will punch through the pavement.

To protect against this happening, a load limit should be established, even for infrequent use. A different load limit is required for single wheel gear and for dual wheel gear aircraft.

4-2 Recommended Rehabilitation Schedule

Taking into consideration the timing required for rehabilitation of sections that have a forecast remaining life less than 20 years and requirements to correct surface defects caused by surface distress, a rehabilitation schedule has been prepared for each pavement item. The timing of complete rehabilitation of the section on those areas that are not forecast to fail within the 20-year period due to deep-seated distress was based on engineering judgment. Consideration was made of the requirements to maintain a good operational surface, to be cost effective, and to spread out the work in such a manner as to maintain a reasonably uniform annual cost of rehabilitation. The anticipation of receiving Federal and State grant funding to do major projects was also taken into consideration.

Based on this method of timing of rehabilitation or repair, the recommended rehabilitation schedule has been included in detail in Appendix C, Tables C-1 through C-72 and has been summarized in Table No. 4-1. Using this information a maintenance and rehabilitation schedule has been prepared showing the recommended projects for each year within the next 20 years and is summarized in Table No. 4-2. These maintenance schedules have also been shown on the Rehabilitation Schedule maps, Plates No. 4-1 through 4-5. With each of these schedules assumptions have been made as to when Federal funding would be available, and the maintenance schedule has been adjusted to include these major projects during those periods.

The maintenance work recommended to correct surface distress is based on engineering judgment. The timing should be adjusted each year based on availability of funds and the results of the annual surface inspection. The schedule for rehabilitation and reconstruction required to correct deep-seated distresses must be adhered to since the timing established is 1 to 3 years before failure of the section is anticipated. Rehabilitation at earlier dates is acceptable.

If the volume of the large airplanes increases more than forecast, the Fatigue Analysis indicates that pavements will fail due to deep-seated distress at a much earlier time and that more of the pavements will fail within the 20-year timeframe. If this traffic does increase, then an analysis should be performed to determine forecast remaining life with the new traffic index and the rehabilitation program for correcting deep-seated distress problems adjusted accordingly.

All costs shown in this analysis are construction costs only and are based on 2013 prices. Engineering and administrative costs need to be added and adjustments made for inflation for each year.

In order to minimize the risk of overstressing the existing pavements at Truckee Tahoe Airport to a point where an aircraft gear could punch through the pavement, it is recommended that the following load limits be established for the pavements:

Element	Gear Type	Maximum Load Limit –	Capacity (ole Bearing x 1,000 lbs) - al Departures
	Type	(x 1,000 lbs)	Existing (2011)	Rehabilitated (Future)
Runway 11-29 (West 5,000 ft)	Dual	80	55	80
& Associated Taxiways	Single	50	40	50
Runway 11-29 (East 2,000 ft)	Dual	80	55	80
& Associated Taxiways	Single	50	40	50
Runway 2-20 and Associated	Dual	65	50	80
Taxiways	Single	40	35	50
Aprons	Dual	50	35	80
	Single	35	25	50
Hangar Taxilanes	Dual	50	35	50
	Single	35	25	35

It is recommended that all future rehabilitation projects be designed such that the maximum design load-carrying capacity of all elements matches the anticipated use. Runway 11-29 and associated taxiways, the aprons and any taxilanes anticipated to serve the large business jet aircraft should be designed to support operation of the higher load limits. Runway 2-20 and associated taxiways should be designed to support operations of all general aviation aircraft and the lighter (under 65,000 pounds) business jet aircraft that use this runway during crosswind conditions. The tie down aprons and hangar taxilanes that only serve the light general aviation aircraft can be designed to support only these lighter weight aircraft.

For any new construction or rehabilitation work performed at the airport it is important that the contractor be required to provide quality materials placed in a professional manner. As a guide for specifications for this type of work, the requirements set forth in Exhibit 4-1 should be added to the F.A.A. standard specifications.

As an aid in preparing this report a table entitled, "Summary of Existing Conditions and Rehabilitation Requirements" was prepared. A full-size copy of this table designated Table No. 4-3 is included in the back pocket of this report. This table should be useful to Operations and Maintenance staff.

Disclaimer

The recommendations presented in this report are based on the results of tests conducted. Soil borings were spaced to represent typical subsurface conditions and falling weight deflectometer (FWD) tests were spaced at approximately 200 feet. While it is unlikely, it is possible that significantly different conditions exist between the location of the test holes and FWD test locations that could lead to pavement distress occurring later or earlier than forecast.

Delays in maintenance, changes in traffic, and changes in environmental conditions from those assumed in this study can also have a significant effect on the recommended schedule for maintenance and rehabilitation. It is recommended that visual inspections be conducted annually, detailed pavement condition surveys be conducted every five years, and FWD tests and Fatigue Analysis studies be conducted every 10 years. As a result of these inspections, tests and evaluations, the maintenance and rehabilitation schedule should be adjusted as necessary.

The recommended rehabilitation and maintenance schedule for all sections of pavement at the Truckee Tahoe Airport have been updated based on the rehabilitations that have been performed since the original study in 2011 and the results of the updated pavement condition surveys and studies conducted in 2013.

R. Damon Brandley

			Require	Required for Deep Seated Distress	Seated Dis	itress		
			Estil	Estimated - Surface Distress	ace Distre	SS		A CHARLES
			2011	2013		Recommended Rehabilitation	ш 8 —	Estimated Construction
Year	Element	Station	PCI	PCI	Code	Description	_	Cost
				RUNWAY 11-29 COMPLEX	11-29 COM	IPLEX		
2026	Runway 11-29	0+00 to 47+00	20	98	H,H	Saw & Seal New Joints, Fog Seal	ક્ક	595,000
2031					Ø	Crack Repair, Seal Cracks & Joints	s	275,000
2017	Runway 11-29	47+00 to 70+00	80-85	98	ட	Saw & Seal New Joints - Supplemental	↔	155,000
CCOC					(•	000
7707					5	Crack Repair, Seal Cracks and Joints	₽	156,000
0000							,	
2026					AorE	Reconstruct	↔	1,275,000
2018	Runway 11-29	East Blast Pad	55	38	۵	Remove AC and Reconstruct	8	82,000
2019	T/Ws A, B, C, D	0+00 to 28+00	51	41-46	9	Crack Repair, Seal Cracks	€9	48,000
	(Holding Apron)	(T/W A)						
2024					В	Rehabilitate - Reconstruct	€9	1,256,000
2036					т, Т	Saw & Seal New Joints, Fog Seal	S	1
2016	T/Ws A, F, H, U, J	28+00 to 72+00	51	38-57	В	Rehabilitate - Reconstruct	49	2,000,000
	(Holding Apron)	(T/W A)						
2031					Т Ľ	Saw & Seal New Joints, Fog Seal	↔	145,000
					,			

Note: Pavement Maintenance Remarking Projects are not shown in this table. See Table 4-2

			Require	Required for Deep Seated Distress	Seated Dis	Tess	
			Esti	Estimated - Surface Distress	ace Distre	Ω	The second second
			2011	2013		Recommended Rehabilitation	Estimated Construction
Year	Element	Station	PCI	PCI	Code	Description	Cost
				RUNWAY 2-20 COMPLEX	2-20 COM	, LEX	
2015	Runway 2-20	0+00 to 46+00	75	53-75	H,H	Saw & Seal New Joints - Supplemental, Reclaimite	\$ 270,000
2022					O	Add Rock, Pulverize, Recompact + 3" AC	\$ 1,970,000
2036					Е, Н	Saw & Seal New Joints, Fog Seal	· &
2018	Runway 2-20 Blast Pads		42	34-40	Q	Remove AC and Reconstruct	\$ 142,000
2036					F, H	Saw & Seal New Joints, Fog Seal	· \$
2015	T/Ws G, V, P, Q	0+00 to 46+00	55	55-70	F,H	Saw & Seal New Joints - Supplemental, Reclaimite	\$ 240,000
				ħ			
2022					S	Add Rock, Pulverize, Recompact + 3" AC	\$ 1,480,000
2036					Н, Н	Saw & Seal New Joints, Fog Seal	·

Note: Pavement Maintenance Remarking Projects are not shown in this table. See Table 4-2

			Requir	Required for Deep Seated Distress Estimated - Surface Distress	Seated Dis	tress		
			2011	2013		Recommended Rehabilitation		Estimated Construction
Year	Element	Station	PCI	PCI	Code	Description		Cost
				AF	APRONS			
2023	Apron A1		45	92	٧	Remove and Reconstruct	↔	1,590,000
000					:			
2036					I.	Saw & Seal New Joints, Fog Seal	49	1
2026	Apron A1 (EAA Portion)	EAA Apron		100	н, н	Saw & Seal New Joints, Fog Seal	s	24,000
2031					C	Social Property Control Control	€	000
1007					5	Clack hepail, deal Clacks & Joills	Ð	20,000
2025	Apron A2		40	95	A	Remove and Reconstruct	s	1,465,000
2038					π̈́	Saw & Seal New Joints, Fog Seal		
2015	South Jet Apron		55	30	4	Remove and Reconstruct	()	845,000
2028					π,	Saw & Seal New Joints, Fog Seal	8	86,000
2021	Apron A3		37-40	95	_	Bemove AC and Beconstruct	e	1 207 000
				3			•	200,102,1
2034					Е, Н	Saw & Seal New Joints, Fog Seal	69	1
2014	Apron A4		37-40	23	٥	Remove AC and Reconstruct	49	1,498,000
	(Includes Hangar 1 Apron added by change	-	rder during	order during construction)	(ر			
2028					H H	Saw & Seal New Joints, Fog Seal	49	180,000

Note: Pavement Maintenance Remarking Projects are not shown in this table. See Table 4-2

		inhau.	nonlinear points of the second				
		Esti	Estimated - Surface Distress	ace Distre	SS		
		2011	2013		Recommended Rehabilitation	m S	Estimated Construction
Element	Station	당	PCI	Code	Description		Cost
		HANG	AR TAXILA	INES - HA	HANGAR TAXILANES - HANGARS A-H		
Hangars A-H		59		V	Reconstruct	€9	760,000
Taxilane R					T T T T T T T T T T T T T T T T T T T		
Hangars A-H	0+00 to 6+00	75	73	g	Crack Repair, Seal Cracks & Joints	49	18,750
Row West A							
				G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	8	23,750
				٥	Remove AC and Reconstruct	€9	185,000
Hangars A-H	0+00 to 6+00	75	73	g	Crack Repair, Seal Cracks & Joints	€9	18,750
Row East A							
				G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	8	23,750
				٥	Remove AC and Reconstruct	↔	185,000
Hangars A-H	0+00 to 6+00	63	70	G	Crack Repair, Seal Cracks & Joints	↔	18,750
Row West B							
				G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	49	23,750
				٥	Remove AC and Reconstruct	↔	185,000
Hangars A-H	0+00 to 6+00	63	65		Crack Repair, Seal Cracks & Joints	↔	18,750
Row BC							
				G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	\$	23,750
				۵	Remove AC and Reconstruct	8	185,000

Note: Pavement Maintenance Remarking Projects are not shown in this table. See Table 4-2

Required for Deep Seated Distress Estimated - Surface Distress	Estimated Construction Construction Construction	PCI Code Description	HANGAR TAXILANES - HANGARS A-H	0+00 to 6+00 61 57 D Remove AC and Reconstruct \$ 195,000		F Saw & Seal New Joints \$ 30,000		G Crack Repair, Seal Cracks & Joints &	0+00 to 6+00 57 52-95 D Remove AC and Reconstruct (East Half of Taxilane) \$ 195,000		F Saw & Seal New Joints \$ 30,000	G Crack Repair, Seal Cracks & Joints \$ -	0+00 to 6+00 84 95 F, H Saw & Seal New Joints, Fog Seal \$ 25,000		G Crack Repair, Seal Cracks & Joints \$ 21,000		0+00 to 6+00 81 95 F, H Saw & Seal New Joints, Fog Seal \$ 25,000	€	Gach hepail, Seal Clacks & Jollits	0+00 to 6+00 58 50 D Remove AC and Reconstruct \$ 289,000		F Saw & Seal New Joints \$ 20,000	0+00 to 7+00 55 38 D Remove AC and Reconstruct \$ 578,000		
Required for De Estimated -	2011 2018	PCI	HANGAR TA	61					22				84			,	84			58			55		
		Element		Hangars A-H 0	Row CD				Hangars A-H 0	Row DE			T-	Row EF				HOW East F		Hangars A-H	Row West G		∀-H	Row GH	
		Year		2017		2028	0000	2033	2017		2028	2033	2026		2031		5026	200	200	2015		2027	2015		

Note: Pavement Maintenance Remarking Projects are not shown in this table. See Table 4-2

			Require	Required for Deep Seated Distress	Seated Dis	tress		
			Esti	Estimated - Surface Distress	ace Distre	SS		
			2011	2013		Recommended Rehabilitation	Esti	Estimated Construction
Year	Element	Station	PCI	PCI	Code	Description		Cost
			HANC	AAR TAXILA	NES - HA	HANGAR TAXILANES - HANGARS J-K		
2020	Hangars J-K	0+00 to 4+00	32	06	L	Saw & Seal New Joints - Supplemental	8	20,000
	Row West K							
2026					G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	↔	26,000
2031					G	Crack Repair, Seal Cracks & Joints	€	25,000
2020	Hangars J-K	0+00 to 4+00	32	06	Ł	Saw & Seal New Joints - Supplemental	₩	20,000
	Row JK							
2026					G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	s	26,000
2031					g	Crack Repair, Seal Cracks & Joints	s	25,000
2020	Hangars J-K	0+00 to 4+00	32	06	ட	Saw & Seal New Joints - Supplemental	↔	20,000
	Row East J							
2026					G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	s	26,000
2031					တ	Crack Repair, Seal Cracks & Joints	S)	25,000

Note: Pavement Maintenance Remarking Projects are not shown in this table. See Table 4-2

			Require	Required for Deep Seated Distress Ferimated - Surface Distress	Seated Dis	itress		
			2011	2013		Recommended Rehabilitation	_	Estimated Construction
Year	Element	Station	PCI	PCI	Code	Description		Cost
		HANG	AR TAXIL	ANES - HAI	VGARS L-	GAR TAXILANES - HANGARS L-M - AND WAREHOUSE		
2015	Hangars L-M	0+00 to 11+00	83	77	I	Reclaimite Seal	\$	6,500
	Taxilane T, Row East M							
2018					g	Crack Repair, Seal Cracks & Joints	49	29,000
2000					C	Anial Bonair Conditions	€	000
2020					5	Clack hepail, Seal Clacks & Joins	Ð	73,500
2028					B, H	Crack Repair, Seal Cracks & Joints, Fog Seal	€9	36,250
2015	Hangars L-M	11+00 to 15+50	83	77	I	Reclaimite Seal	49	6.500
	Row West M							
2018					Ø	Crack Repair, Seal Cracks & Joints	€9	29,000
2023					Ø	Crack Repair, Seal Cracks & Joints	49	23.500
2028					G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	49	36,250
2015	Hangars L-M	16+00 to 20+00	83	77	I	Reclaimite Seal	69	6.500
	Row South L							
2018					g	Crack Repair, Seal Cracks & Joints	69	29,000
2023					Ø	Crack Bepair. Seal Cracks & Joints	49	23.500
							-	
2028					G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	49	36,250
2015	South of Warehouse	0+00 to 4+00	83	77	Ŧ	Reclaimite Seal	49	6,500
	Row wh							
2018					g	Crack Repair, Seal Cracks & Joints	€9	29,000
2023					U	Crack Repair, Seal Cracks & Joints	69	23,500
2028					Ω. H	Crack Repair, Seal Cracks & Joints, Fog Seal	49	36.250
							-	0)

Note: Pavement Maintenance Remarking Projects are not shown in this table. See Table 4-2

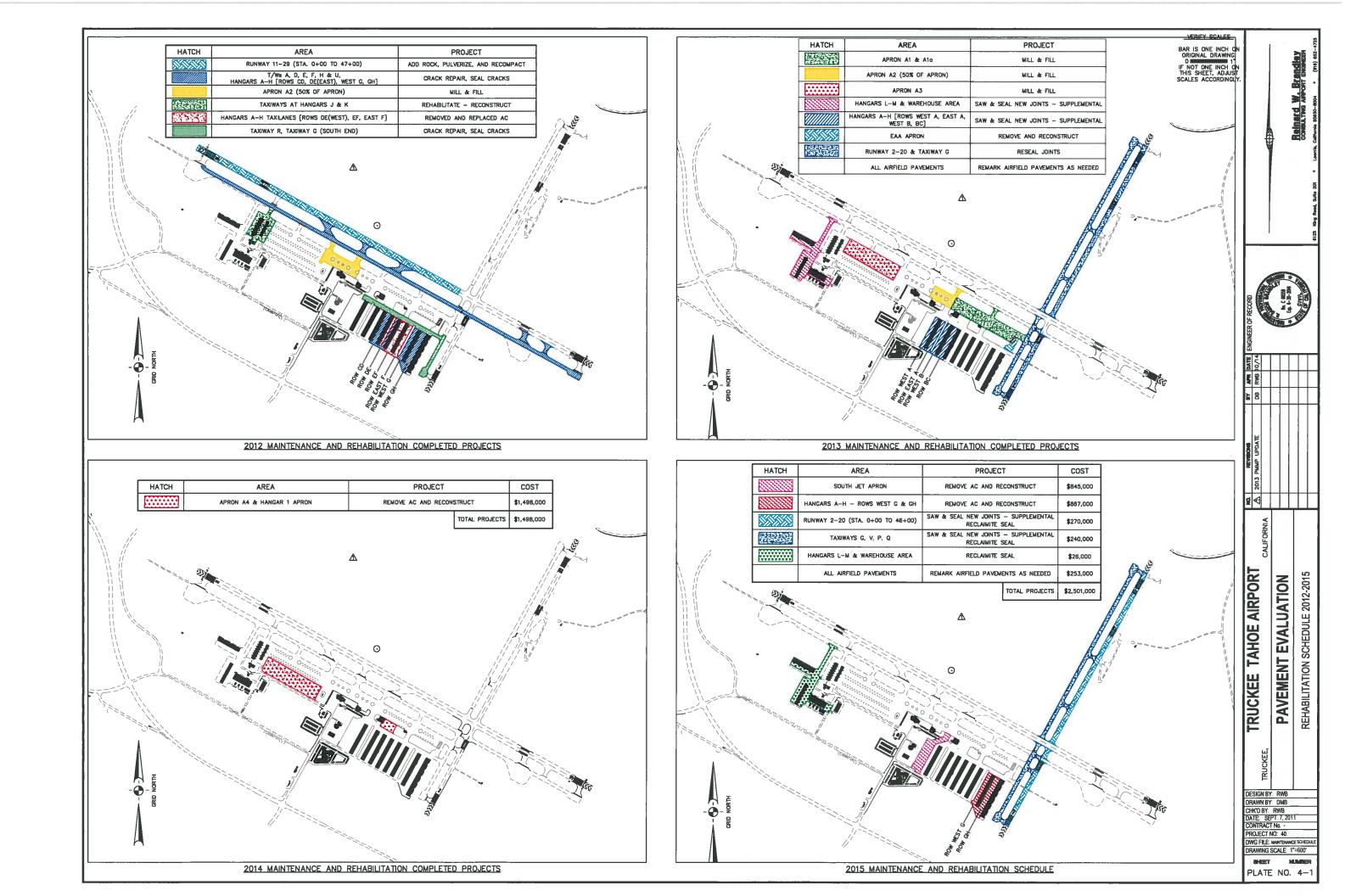
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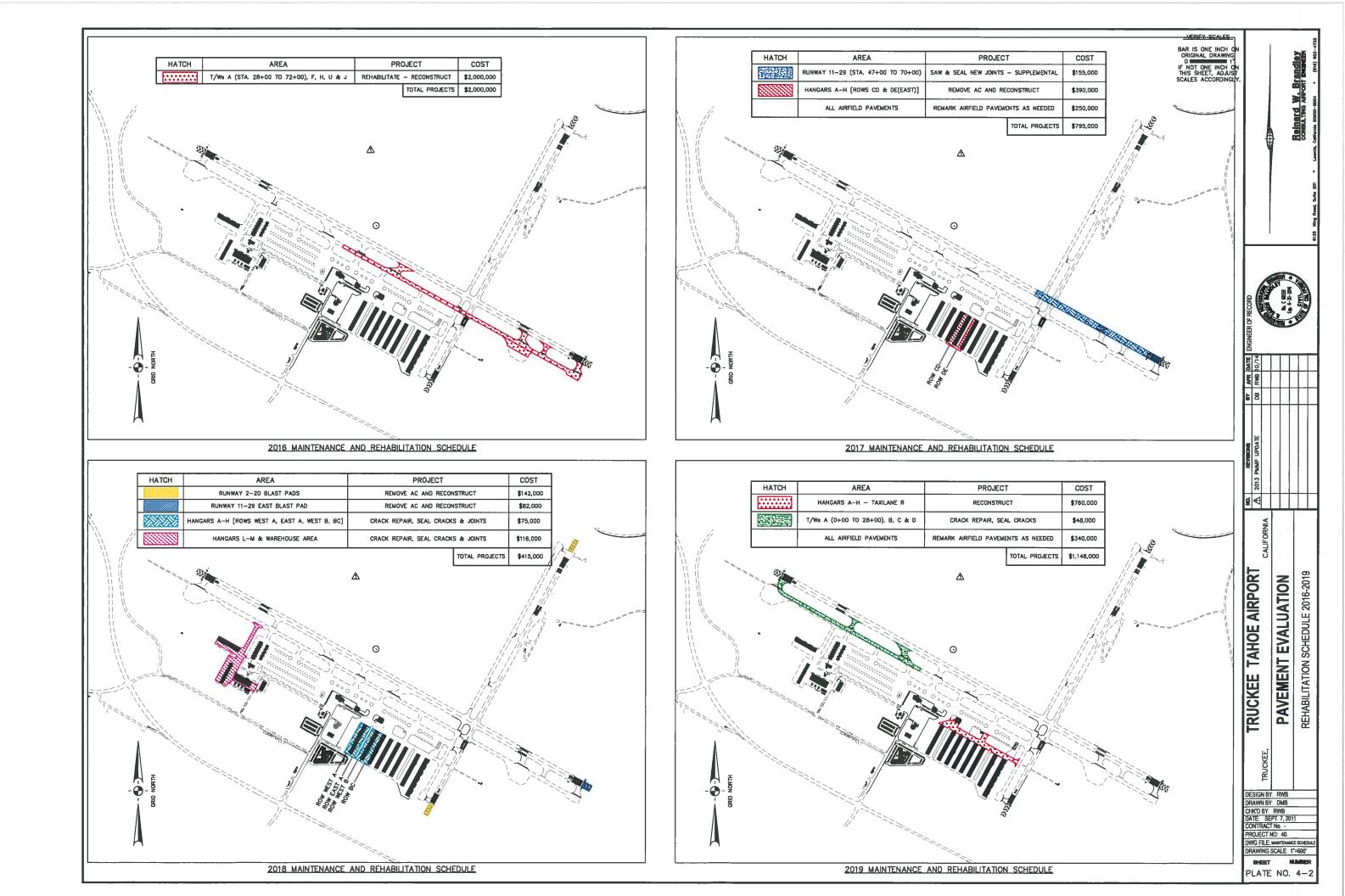
			MAIR	TABLE TRI	NO. 4-2 (UCKEE T,	TABLE NO. 4-2 (2014 PMMP Update) TRUCKEE TAHOE AIRPORT MAINTENANCE AND REHABILITATION SCHEDULE		
	STATE OF THE STATE OF THE STATE OF			Required	for Deep Surfa	Required for Deep Seated Distress Estimated - Surface Distress		
			2011	2013		Recommended Rehabilitation	ال الله الله الله الله الله الله الله ا	Estimated Construction
Year	Element	Station	PCI	PCI	Code	Description		Cost
2014	Apron A4 & Hangar 1 Apron	IIA	37-40	23	۵	Remove AC and Reconstruct	69	1,498,000
100	TOTAL					2014 Total Cost	GLOS AF	1,498,000
	South Jet Apron	All	55	30	A	Remove and Reconstruct	s	845,000
	Hangars A-H - Rows West G, GH	All	55-61	38-50	O	Remove AC and Reconstruct	69	867,000
	Runway 2-20	0+00 to 46+00	75	53-75	H,	Saw and Seal New Joints - Supplemental & Reclaimite	69	270,000
2015	Taxiway G, V, P, Q	All	77	55-70	π, π	Saw and Seal New Joints - Supplemental & Reclaimite	69	240,000
	Hangars L-M & Warehouse Area	All	83	77	I	Reclaimite Seal	69	26,000
	All Airfield Pavements	All				Remark Airfield Pavements as Needed	69	253,000
	The state of the s					2015 Total Cost	59	2,501,000
2016	TWs A, F, H, U, J	28+00 to 72+00	51	38-57	80	Rehabilitate - Reconstruct	49	2,000,000
						2016 Total Cost	lant.	2,000,000
	Runway 11-29	47+00 to 70+00	80-85	98	ш.	Saw & Seal New Joints - Supplemental	69	155,000
2017	Hangars A-H - Rows CD & DE(East)	All	55-61	52-57	۵	Remove AC and Reconstruct	49	390,000
	All Airfield Pavements	All				Remark Airfield Pavements as Needed	69	250,000
		The second secon				2017 Total Cost	49	795,000
	R/W 2-20 Blast Pads	All	42	34-40	Q	Remove AC and Reconstruct	49	142,000
	R/W 11-29 East Blast Pad	All	55	38	O	Remove AC and Reconstruct	69	82,000
2018	Hangars A-H - Rows West A, East A,	Ali	63-75	65-73	G	Crack Repair, Seal Cracks & Joints	69	75,000
	Hangars L-M & Warehouse Area	Ali	83	77	H,	Crack Repair, Seal Cracks & Joints, Fog Seal	49	116,000
					D THE R	2018 Total Cost	69	415,000
	Hangars A-H - Taxilane R	Ail	29	45	<	Reconstruct	€9	760,000
2019	T/Ws A, B, C, D	0+00 to 28+00	51	41-46	g	Crack Repair, Seal Cracks	69	48,000
	All Airlield Pavements	All				Remark Airlield Pavements as Needed	69	340,000
	and the second s					2019 Total Cost	49	1,148,000
2020	Hangars J-K	₩	35	06	u.	Saw and Seal New Joints - Supplemental	ક્ક	000'09
						2020 Total Cost	District B	000'09

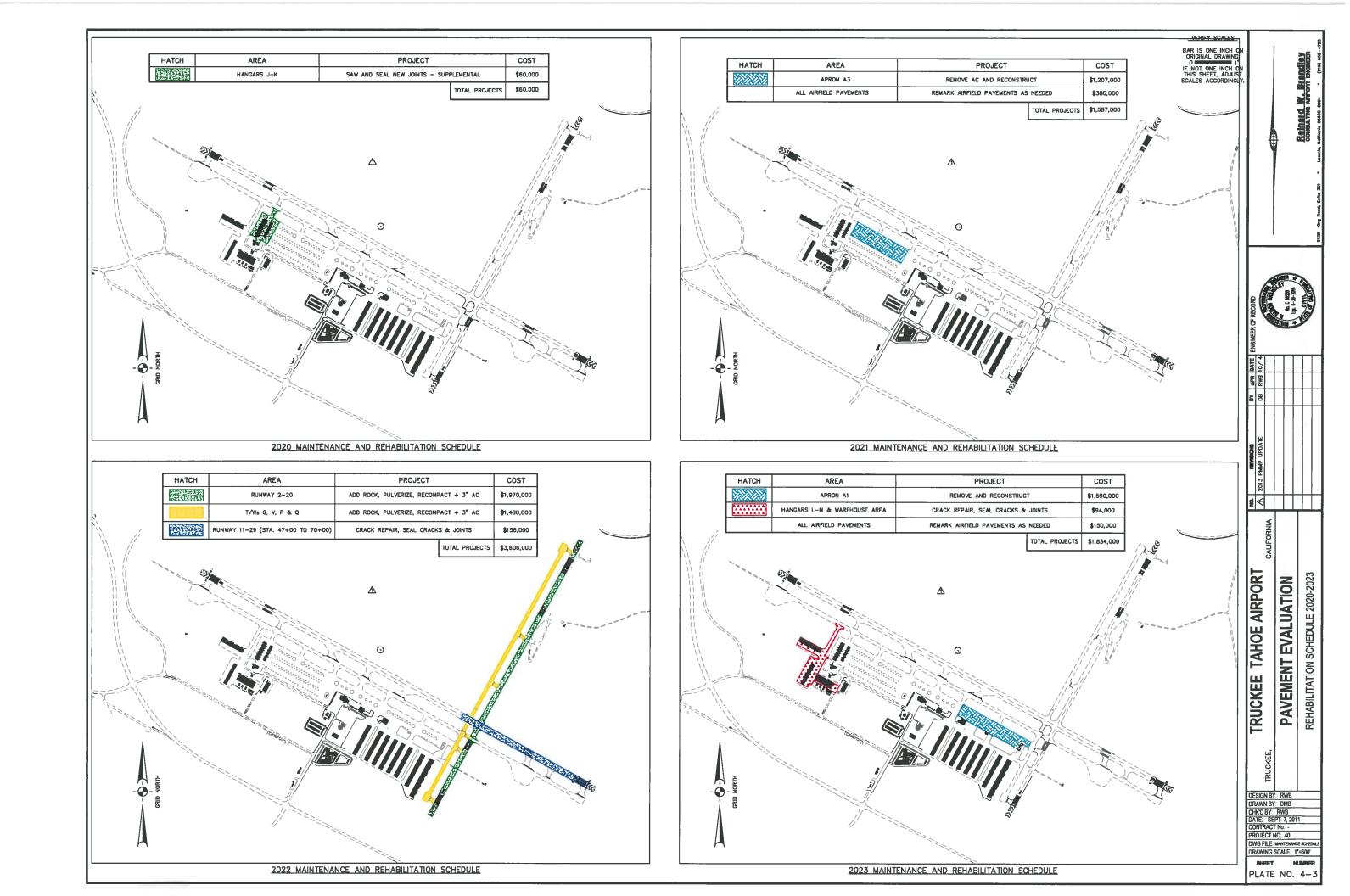
			MAIL	TABLE TR TENANC	NO. 4-2 (UCKEE T E AND RE	TABLE NO. 4-2 (2014 PMMP Update) TRUCKEE TAHOE AIRPORT MAINTENANCE AND REHABILITATION SCHEDULE		
			No.	Required	for Deep	Required for Deep Seated Distress Estimated - Surface Distress		
			2011	2013		Recommended Behabilitation	ш 8	Estimated
Year	Element	Station	PCI	집	Code	Description		Cost
	Apron A3	All	37-40	92	D	Remove AC and Reconstruct	69	1,207,000
2021	All Airlield Pavements	W				Remark Airlield Pavements as Needed	ь	380.000
						2021 Total Cost		1.587,000
	Runway 2-20	All	75	53-75	O	Add Rock, Pulverize, Recompact + 3" AC		1,970,000
2022	Taxiway G, V, P, Q	All	55	55-70	O	Add Rock, Pulverize, Recompact + 3" AC	49	1,480,000
	Runway 11-29	47+00 to 70+00	80-85	86	g	Crack Repair, Seal Cracks & Joints	69	156,000
						2022 Total Cost		3,606,000
	Apron A1	All	45	95	A	Remove and Reconstruct	49	1,590,000
2023	Hangars L-M & Warehouse Area	All	83	77	5	Crack Repair, Seal Cracks & Joints	69	94,000
	All Airfield Pavements	All				Remark Airfield Pavements as Needed	69	150,000
						2023 Total Cost	\$	1,834,000
	T/Ws A, B, C, D	0+00 to 28+00	51	41-46	В	Rehabilitate - Reconstruct	69	1,256,000
2024	Hangars A-H - Rows West A, East A,	All	63-75	65-73	E,E	Crack Repair, Seal Cracks & Joints, Fog Seal	69	95,000
	West B, and BC					2024 Total Cost	S	1,351,000
	Apron A2	All	40	95	A	Remove and Reconstruct	49	1,465,000
2025	All Airlield Pavements	All				Remark Airlield Pavements as Needed	69	340,000
						2025 Total Cost	4	1,805,000
	Runway 11-29	0+00 to 47+00	20	95	Ξ	Saw and Seal New Joints, Fog Seal	49	295,000
	Runway 11-29	47+00 to 70+00	80-85	98	AorE	Reconstruct	69	1,275,000
2026	Apron A1 (EAA Portion)	EAA Apron		100	H,	Saw and Seal New Joints, Fog Seal	69	24,000
	Hangars A-H - Rows EF, East F	All	55-84	95	H,	Saw and Seal New Joints, Fog Seal	49	50,000
	Hangars J-K	All	35	90	G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	()	78,000
						2026 Total Cost		2,022,000
	Hangars A-H - Rows West G, GH	All	55-58	38-50	ш	Saw & Seal New Joints	69	000'09
2027	All Airlieid Pavements	All				Remark Airlield Pavements as Needed	69	120,000
						2027 Total Cost	49	180,000

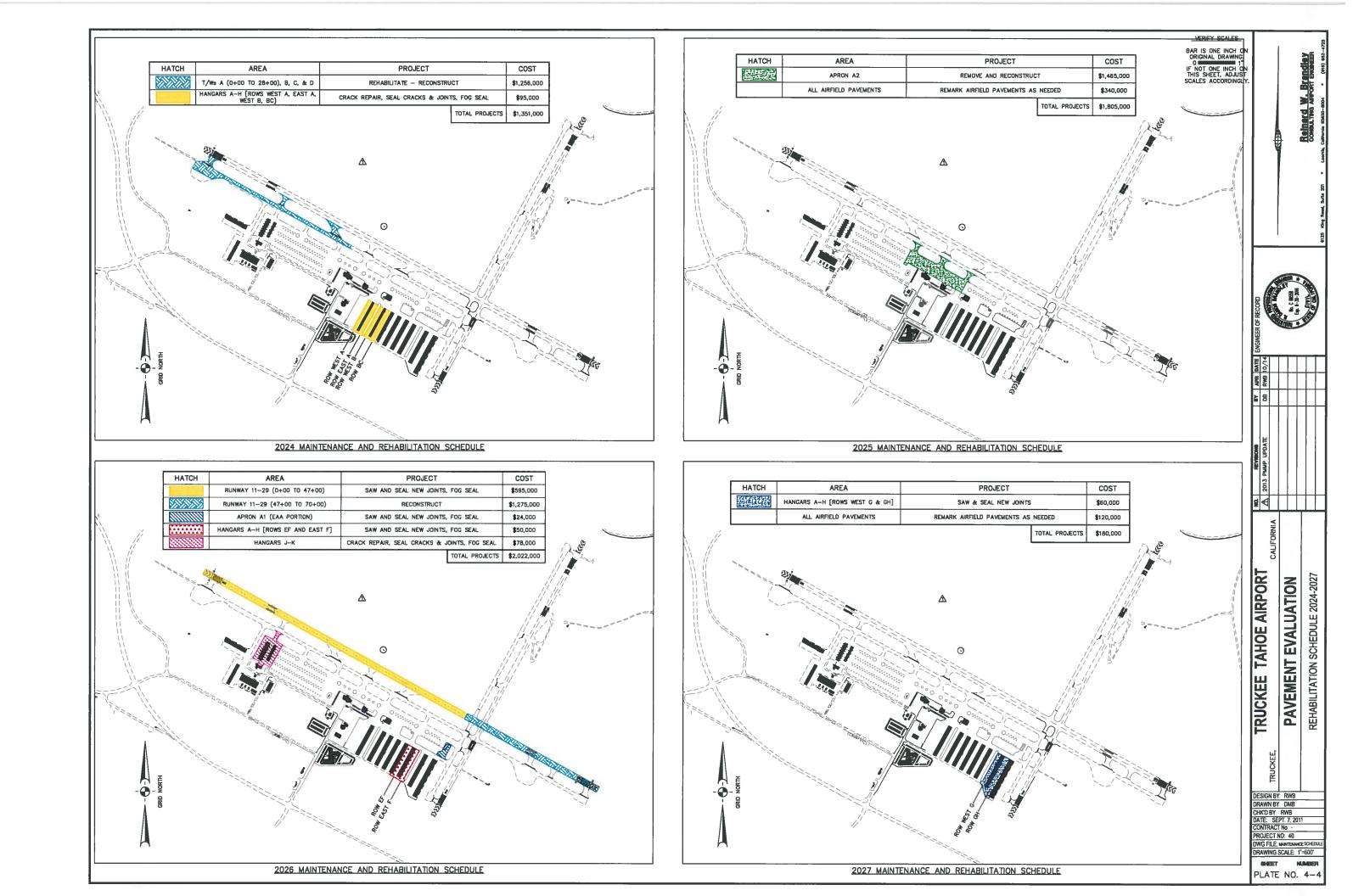
				TABLE	NO. 4-2 (TABLE NO. 4-2 (2014 PMMP Update) TRUCKEF TAHOF AIRPORT		
			MAIN	TENANCI	E AND RE	MAINTENANCE AND REHABILITATION SCHEDULE		
				Required	for Deep	Required for Deep Seated Distress		
				Estime	ited - Surf	Estimated - Surface Distress		
			2011	2013		acibetilidaded behanamened	غ نتا	Estimated
Year	Element	Station	25	- E	Code	Description	₹ T	Cost
	South Jet Apron	W	55	30	H,H	Saw and Seal New Joints, Fog Seal	49	86,000
	Apron A4	IIA	37-40	23	H,	Saw and Seal New Joints, Fog Seal	€	180,000
2028	Hangars A-H - Rows CD, DE	ΙΝ	57-61	52-57	Ł	Saw and Seal New Joints	49	60,000
	Hangars L-M & Warehouse Area	₩	83	77	G, H	Crack Repair, Seal Cracks & Joints, Fog Seal	()	145,000
						2028 Total Cost	st \$	471,000
2020	All Airfield Pavements	All				Remark Airlield Pavements as Needed	69	360,000
3						2029 Total Cost \$	st \$	360,000
2030	Hangars A-H - Rows West A, East A,	All	63-75	65-73	D	Remove AC and Reconstruct	69	740,000
3	West B, and BC					2030 Total Cost	st \$	740,000
	Runway 11-29	0+00 to 47+00	50	95	9	Crack Repair, Seal Cracks & Joints	69	275,000
	T/Ws A, F, H, U, J	28+00 to 72+00	51	38-57	H,H	Saw and Seal New Joints, Fog Seal	69	145,000
	Apron A1 (EAA Portion)	EAA Apron		100	0	Crack Repair, Seal Cracks & Joints	69	20,000
2031	Hangars A-H - Rows EF, East F	All	55-84	95	5	Crack Repair, Seal Cracks & Joints	69	42,000
	Hangars J-K	All	35	90	ŋ	Crack Repair, Seal Cracks & Joints	69	75,000
	All Airlield Pavements	All				Remark Airlield Pavements as Needed	69	240,000
						2031 Total Cost \$	st \$	797,000

			Con	struction Dates	2	2011 - FWD Da	ata			2011 - Ex	xisting Paveme	nt Section -	2013 - E	Existing Paver		- 2011	Existing M	lodulus of Ele	asticity (E) -		2011 20	Brandley	2013	FAARF	TELD 2011		Recommended Rehabi	litation and Maintenance		
Pavement Segment						Deflection			2013 Pavement	********	inches			inches				ksi		2011 Traffic	Subgrade Sub Distress Dis	grade Subgrad stress Distress	le Subgrade s Distress	Subgrade Distress	Subgrade Distress				2027 0004	Florest
ID C1	Element Runway 11-29	Station West Blast Pad	 	Reconstruct Overlay		Range (mils)		PCI PCI	Rating	AC A	B ASB S	ibgrade Subsoil	AC .	AB ASB	Subgrade Su	absoil AC	AB	ASB Subg	grade Subsoil	Index	Std. Traffic Std.	Traffic 2x 40k Je	ets 2x 40k Jets	Std. Traffic	2x 40k Jets	2014-2016	2017-2021	2022-2026 2026 - New Joints, Fog Seal	2027-2031 2031 - Crack Repair	Runway 11-29
	(West Blast Pad)				25	42.88	75			4 9		48 51	3	14 -	48 5	S.I. 150	40	- 10	0 25	Ι	36 1	17 25	85	0.2	0.2			2026 - New Joints, Fog Seal	2031 - Crack Repair	(West Blast Pad) Runway 11-29
C2	Runway 11-29	0+00 to 22+00		1986, 2012 1986, 2012	25	43-88 56-71	75	60 95 60 95	Excellent Excellent	4 8		48 S.I.		14 -	48 3			- 10		_ ^		17 25 87 17	63	0.2	0.2			2026 - New Joints, Fog Seal	2031 - Crack Repair	Runway 11-29
C3 C4	Runway 11-29	22+00 to 26+00 26+00 to 37+00		1986, 2012 1986, 2012	25	63-93	75 80	60 95 60 95	Excellent Excellent	4 8		48 S.I.		14 -	48 8		-		0 25	В		87 17	59	1.0	0.4			2026 - New Joints, Fog Seal	2031 - Crack Repair 2031 - Crack Repair	Runway 11-29
													-				-	- 10		C		70 12		1.0	0.5			2026 - New Joints, Fog Seal	2031 - Crack Repair	Runway 11-29
C5 C6	Runway 11-29 Runway 11-29	37+00 to 47+00 47+00 to 63+00	1963	1986, 2012 1986, 2008	25	57-82 37-68	65	60 95 86 86	Excellent	4 8		48 S.I.		8 -	48 5		-	- 10		C	19	70 12	J2	1.0	0.5	2017 - Supplemental Joints	2022 - Crack Repair, Fog Seal	2026 - New Joints, Fog Seal	2001 - Grack Nepail	Runway 11-29
										4 6			-				+	- ''			30			1.5	0.0			2026 - Reconstruct		Runway 11-29
C7	Runway 11-29 Runway 11-29	63+00 to 70+00	1971	1986, 2008	25	37-63	52	86 86 55 38	Excellent	4 8	-	48 S.I.	4	8 -	48	S.I. 250	35	- 1	7 25		30	23		10	9	2017 - Supplemental Joints 2018 - Replace AC	2022 - Crack Repair, Fog Seal	2026 - Reconstruct 2026 - Reconstruct		Runway 11-29
C8	(East Blast Pad)	0+00 to 2+00							Poor	_	_								-	 	31					2018 - Replace AC	2040 Ozadi Baraia	2026 - Reconstruct		(East Blast Pad) Taxiway A
C9a	Taxiway A	(Taxiway B) Taxiway B	1963	1986	20	50-60	56	51 41	Fair	3 8		48 S.I.		8 -	48 3		30	- 1:	5 30	D	31	21		5	3		2019 - Crack Repair			Taxiway A
С9ь	Taxiway A	Holding Apron	1963	1986				X 22	Very Poor	3 8		48 S.I.		8 -	48 \$					 							2019 - Crack Repair	2024 - Reconstruct		
C10	Taxiway A	2+00 to 28+00	1963	1986	20	35-41	41	51 46	Fair	3 8		48 S.i.		8 -	48 3			- 1:		D	36	24		15	8		2019 - Crack Repair	2024 - Reconstruct		Taxiway A
C11	Taxiway A	28+00 ot 38+00	1963	1986	20	48-56	56	51 38	Poor	3 8	8 -	48 S.I.	3	8 -	48 3				5 30	E	21	15		4	2	2016 - Reconstruct			2031 - New Joints, Fog Seal	Taxiway A
C12	Taxiway A	38+00 to 46+00	1963	1986	20	45-56	56	51 44	Fair	3 8	8 -	48 S.I.	3	8 -	48		-	- 1	5 30	F	18	13		4	2	2016 - Reconstruct			2031 - New Joints, Fog Seal	Taxiway A
C13	Taxiway A	46+00 to 50+00	1963	1986	20	55-65	65	51 38	Poor	3 8	8 -	48 S.I.	3	8 -	48 3	S.I. 250	40	- g	9 25	F	9	6		0.5	0.2	2016 - Reconstruct			2031 - New Joints, Fog Seal	Taxiway A
C14	Taxiway A	50+00 to 72+00	1963, 1971	1986	20	45-80	65	51 35	Poor	3 8	8 -	48 S.I.	3	8 -	48	S.I. 250	40	- 9	9 25	G	10	7		0.6	0.3	2016 - Reconstruct			2031 - New Joints, Fog Seal	Taxiway A
C15a	Taxiway C	0+00 to 0+50	1963	1995, 2012	20	50-52	52	60 95	Excellent	4 8	8 -	48 S.I.	3	8 -	48	S.I. 250	40	- 1	0 25	н	45	37		13	7	The state of the s		2026 - New Joints, Fog Seal	2031 - Crack Repair	Taxiway C
C15b	Taxiway C	0+50 to 2+00	1963	1995	20	50-52	52	60 43	Fair	4 8	8 -	48 S.I.	4	8 -	48	S.I. 250	40	- 1	0 25	н	45	37		13	7		2019 - Crack Repair	2024 - Reconstruct		Taxiway C
C16	Taxiway C	2+00 to 3+50 T/W to Hangar H2	1963	1995 2012	20	38-41	41	55 90	Excellent	4 8	8 -	48 S.I.	3	12 -	48	S.I. 350	60	- 1:	2 25	н	65	53		65	41		2020 - New Joints, Fog Seal	2026 - Crack Repair, Fog Seal	2031 - Crack Repair	Taxiway C
C17a	Taxiway D	0+00 to 1+20	1963	1986, 2012	20	42-64	62	45 95	Excellent	3 8	8 -	48 S.I.	3	8 -	48	S.I. 250	30	- 1	1 25	н	30	25		4	2			2026 - New Joints, Fog Seal	2031 - Crack Repair	Taxiway D
C17b	Taxiway D	1+20 to 3+50	1963	1986	20	42-64	62	45 34	Poor	3 8	8 -	48 S.I.	3	8 -	48	S.I. 250	30	- 1	1 25	Н	30	25		4	2		2019 - Crack Repair	2024 - Reconstruct		Taxiway D
C18	Taxiway D	1+50 to 4+50 T/W to Apron A2		1986 2012	20	35-39	39	45 93	Excellent	3 8	8 -	48 S.I.	3	8 -	48	S.I. 350	80	- 1	5 25	н	66	54		92	59			2025 - Reconstruct		Taxiway D
C19a	Taxiway E	0+00 to 0+80	1963	1986, 2012	20	31-39	39	46 95	Excellent	3 8	8 -	48 S.I.	3	8 -	48	S.I. 350	80	- 1	5 25	н	66	54		92	59					Taxiway E
C19b	Taxiway E	0+80 to 2+80	1963	1986	20	31-39	39	46 57	Good	3 8	8 -	48 S.I.	3	8 -	48	S.I. 350	80	- 1	5 25	Н	66	54		92	59					Taxiway E
C20a	Taxiway F	0+00 to 0+30	1963	1986, 2012	20	51-63	62	49 95	Excellent	3 8	8 -	48 S.I.	3	8 -	48	S.I. 250	30	- 1	1 25	Н	30	25		4	2			2026 - New Joints, Fog Seal	2031 - Crack Repair	Taxiway F
C20b	Taxiway F	0+30 to 3+50	1963	1986	20	51-63	62	49 40		3 8		48 S.I.	3	8 -	48		-	- 1	1 25	Н	30	25		4	2	2016 - Reconstruct			2031 - New Joints, Fog Seal	Taxiway F
C21	Taxiway F	3+50 to 4+50		1986 2012		40-42	42	49 95	Excellent	3 5		48 S.I.		8 -	48			•	5 25	Н н	59	49		57	36			2025 - Reconstruct		Taxiway F
C22	Taxiway H	0+00 to 2+50	1963	1986	20	65-72	71	53 49	Fair	3 4	8 -	48 S.I.	1	8 -	48		++	_	9 25	1	32	24	+	1.4	0.7	2016 - Reconstruct			2031 - New Joints, Fog Seal	Taxiway H
			1963		20	91-115	111			3 8	8	48 S.I.		8 -	48		-	- 6		' P	21	24		0.6	0.6	2016 - Reconstruct			2031 - New Joints, Fog Seal	Taxiway H
C23	Taxiway H	Holding Apron							Very Poor					_							31				J.U	2016 - Reconstruct			2031 - New Joints, Fog Seal	Taxiway H
C24	Taxiway H	Holding Apron	1963	4000	20	62-81	81		Very Poor	3 8		48 S.I.	-	8 -	48		+	- 6		+	 ••	31	+	4	0.7				2031 - New Joints, Fog Seal 2031 - New Joints, Fog Seal	Taxiway H Taxiway U
C25	Taxiway U	0+00 to 1+75	1971	1986	20	60-71	72	54 50	Fair	3 8	8 -	48 S.I.	3	8 -	48		-		9 25		32	24	_	1.4		2016 - Reconstruct				
C26	Taxiway J Runway 2-20	0+00 to 1+75	1971	1986	20	49-58	58	51 50	Fair	3 8	8 -	48 S.I.	3	8 -	48	S.I. 250	40	- 1	25	G	16	12		2.2	1.1	2016 - Reconstruct			2031 - New Joints, Fog Seal	Taxiway J Runway 2-20
C27	(South Blast Pad)	South Blast Pad				45-70		42 40	Poor																	2018 - Replace AC		2022 - Reconstruct		(South Blast Pad)
C28	Runway 2-20	0+00 to 10+00	1973	1994	20	25-45	41	75 65	Good	6 6	6 -	48 S.I.	6	6 -	48	S.I. 250	40	- 1	25	1	145	114		58	36	2015 - Supplemental Joints, Reclamite		2022 - Reconstruct		Runway 2-20
C29	Runway 2-20	10+00 to 17+00	1965	1994, 2008	20	40-60	55	75 75	Very Good	6 6	6 -	48 S.I.	6	6 -	48	S.I. 250	25	- 8	8 25	l l	87	68		8	5	2015 - Supplemental Joints, Reclamite		2022 - Reconstruct		Runway 2-20
C30	Runway 2-20	17+00 to 46+00	1965	1994	20	30-44	41	75 53	Fair	5 5	5 -	48 S.I.	5	5 -	48	S.I. 350	70	- 1	11 25	1	93	73		34	20	2015 - Supplemental Joints, Reclamite		2022 - Reconstruct		Runway 2-20
C31	Runway 2-20 (North Blast Pad)	North Blast Pad				50-60		42 34	Poor																	2018 - Replace AC		2022 - Reconstruct		Runway 2-20 (North Blast Pad)
C32	Taxiway G	0+00 to 6+00	1972	1994	20	30-51	51	77 65	Good	6 6	6 -	48 S.I.	6	6 -	48	S.I. 250	30	- 8	8 25	J	59	45		14	8	2015 - Supplemental Joints, Reclamite		2022 - Reconstruct		Taxiway G
C33	Taxiway G	6+00 to 9+00	1972	1994	20	62-66	66	77 70	Good	6 6	6 -	48 S.I.	6	6 -	48	S.I. 150	20	- 8	8 25	J	46	36		4	2	2015 - Supplemental Joints, Reclamite		2022 - Reconstruct		Taxiway G
C34	Taxiway G	9+00 to 15+00	1972	1994	20	20-39	39	77 55	Fair	6 (6 -	48 S.I.	6	6 -	48	S.I. 250	40	- 1	12 25	J	97	76		76	49	2015 - Supplemental Joints, Reclamite		2022 - Reconstruct		Taxiway G
C35	Taxiway G	15+00 to 16+00	1972	1994, 2008	20	48-51	51	77 70	Good	6 (6 -	48 S.I.	6	6 -	48	S.I. 250	20	- 8	8 25	J	59	45		14	8	2015 - Supplemental Joints, Reclamite		2022 - Reconstruct		Taxiway G
C36	Taxiway G	16+00 to 45+00	1984	1994	20	19-30	28	77 65	Good	5 5	5 -	48 S.I.	5	5 -	48	S.I. 350	100	- 2	20 25	J	122	97		359	246	2015 - Supplemental Joints, Reclamite		2022 - Reconstruct		Taxiway G
C37	Taxiway G	45+00 to 48+00	1984	1994	20	28-40	39	77 65	Good	6 6	6 -	48 S.I.	6	6 -	48	S.I. 250	40	- 1	12 25	J	97	76		76	49	2015 - Supplemental Joints, Reclamite		2022 - Reconstruct		Taxiway G
C38	Taxiway P	0+00 to 1+15		1994	20	52-59	58	80 70	Good	3 (6 -	48 S.I.	3	6 -	48	S.I. 250	30	- 6	6 25	J	25	18		4	2	2015 - Supplemental Joints, Reclamite		2022 - Reconstruct		Taxiway P
C39	Taxiway V	0+00 to 1+15		1994	20	77-80	80	80 70	Good	3 (6 -	48 S.I.	3	6 -	48	S.I. 100	20	- 7	7 25	J	21	15		0.9	0.4	2015 - Supplemental Joints, Reclamite		2022 - Reconstruct		Taxiway V
C40	Taxiway Q	Rowa&b	1973	1999	20	<55	55	80 70	Good	3 (6 -	48 S.I.	3	6 -	48		-	- 1	15 25	K	46	46		21	21	2015 - Supplemental Joints, Reclamite		2022 - Reconstruct		Taxiway Q
C41a	Apron A1a	Row a & b	1973	1999 2013		<55	55	45 95	-	3 (6 -	48 S.I.	3-4	6 -	48			- 1	15 25	K	46	46	+	21	21			2023 - Reconstruct		Apron A1a
C41b	Apron A1a	Row a & b	1973	1999 2013		55 - 70	1	45 95		3 (48 S.I.	-	6 -	48				10 25	-	24	24		2	2			2023 - Reconstruct		Apron A1a
			1973	2013	20	33-70	"	X 100				48 S.I.		3 8		S.I			20	'`				-	-			2026 - New Joints, Fog Seal	2031 - Crack Repair	Apron A1a
C41c	Apron A1a	EAA Apron	1000				10		1				 				70		20 05	 	39		-	15	8				2031 - Grack Nepali	
C42	Apron A1	Row a & b	1973	1999 2013		<40	40	45 95			6 -	48 S.I.		6 -	48				20 25	<u> </u>		29						2023 - Reconstruct		Apron A1
C43	Apron A1	Rowa&b	1973	1999 2013		40 - 55	55	45 95		3 (6 -	48 S.I.		6 -	48		-		15 25	_	23	16		1.5	0.8			2023 - Reconstruct		Apron A1
C44	Apron A1	Row a & b	1973	1999 2013		55 - 70	70	45 95	+	3 (48 S.I.	 	6 -	48		-		10 25	-	11	8		0.1	0.1			2023 - Reconstruct		Apron A1
C45	Apron A2	Row a & b		1999 2012, 20		<32	32	43 90		3 (6 -	48 S.I.		6 -	48				25 30		44	31		38	23			2025 - Reconstruct		Apron A2
C46	Apron A2	Row a & b		1999 2012, 20		32 - 40	40	43 90	Excellent	3 (6 -	48 S.I.	3-4	6 -	48	S.I. 250			20 25	М	28	19		8	4			2025 - Reconstruct		Apron A2
C47	Apron A2	Row a & b		1999 2012, 20	- 	40 - 55	55	43 90	Excellent	3 (48 S.I.	 	6 -	48				15 25		16	11		0.7	0.4			2025 - Reconstruct		Apron A2
C48	Apron A3	Row a, b, n, o		1999 2013		<32	32	40 95	Excellent	3 (6 -	48 S.I.	2-3	6 -	48			- 2	25 30	N	112	112		587	587		2021 - Reconstruct			Apron A3
C49	Apron A3	Row a, b, n, o		1999 2013	20	32 - 40	40	40 95	Excellent	3 (6 -	48 S.I.	2-3	6 -	48	S.I. 250	70	- 2	20 25	N	75	75		114	114		2021 - Reconstruct			Apron A3
C50	Apron A3	Row a, b, n, o		1999 2013	20	40 - 55	55	40 95	Excellent	3 (6 -	48 S.I.	2-3	6 -	48	S.I. 250	40	- 1	15 25	N	46	46		21	21		2021 - Reconstruct			Apron A3
C51	Apron A3	Row a, b, n, o		1999 2013	20	55 - 70	70	40 95	Excellent	3 (6 -	48 S.I.	2-3	6 -	48	S.I. 250	30	- 1	10 25	N	24	24		2	2		2021 - Reconstruct			Apron A3
C52	Apron A4	Row n, o	1965	1999	20	<40	40	37 23	Very Poor	3 (6 -	48 S.I.	3	6 -	48	S.I. 250	70	- 2	20 25	N	75	75		114	114	2014 - Reconstruct			2028 - New Joints, Fog Seal	Apron A4
C53	Apron A4	Row n, o	1965	1999	20	40 - 55	55	37 23	Very Poor	3 (6 -	48 S.I.	3	6 -	48	S.I. 250	40	- 1	15 25	N	46	46		21	21	2014 - Reconstruct			2028 - New Joints, Fog Seal	Apron A4
C54	Apron A4	Row n, o	1965	1999	20	56 - 65	65	37 23	Very Poor	3 (6 -	48 S.I.	3	6 -	48	S.I. 250	23	- 1	15 25	N	39	39		13	13	2014 - Reconstruct			2028 - New Joints, Fog Seal	Apron A4
C55	South Jet Apron	Taxilane R Sta. 16+00 - 20+00		1991	20	50-60	60	55 30	Poor	4	6 -	48 S.I.	4	6 -	48	S.I. 250	30	- 1	10 25	Q	10	7		0.8	0.4	2015 - Reconstruct			2028 - New Joints, Fog Seal	South Jet Apron
C56	Hangars A-H	Taxilane R		1994	20	50-62	62	59 45	Fair	3	8	48 S.I.	3	8 0	48	S.I. 250	30	- 1	11 25	0	52	47		27	23		2019 - Reconstruct			Hangars A-H
C57	Hangars A-H	Taxilane R		1994	20	65-72	71	59 45	Fair	3	8	48 S.I.	3	8 0	48	S.I. 250	30	,	9 25	0	41	36		12	11		2019 - Reconstruct			Hangars A-H
C58	Hangars A-H	Row West A		2001	20	42-81	70	75 73	Very Good	3 (6 -	48 S.I.	3	6 -	48	S.I. 250	70	- 2	20 25	P	28	28		6	6		2018 - Crack Repair	2024 - Crack Repair, Fog Seal	2030 - Reconstruct	Hangars A-H
C59	Hangars A-H	Row East A		2001	20	70-92	80	75 73	Very Good	3	6 -	48 S.I.	3	6 -	48	S.I. 250	20	- 1	10 25	Р	24	24		4	4		2018 - Crack Repair	2024 - Crack Repair, Fog Seal	2030 - Reconstruct	Hangars A-H
C60	Hangars A-H	Row West B	 	2001	20	58-81	70	63 70		3 (48 S.I.	3	6 -	48	S.I. 250	70	- 2	20 25	P	28	28		6	6		2018 - Crack Repair	2024 - Crack Repair, Fog Seal	2030 - Reconstruct	Hangars A-H
C61	Hangars A-H	Row BC		1999	20	39-75	70	63 65				48 S.I.		6 -	48				20 25	_	28	28		6	6		2018 - Crack Repair	2024 - Crack Repair, Fog Seal	2030 - Reconstruct	Hangars A-H
C62	Hangars A-H	Row CD		1999	20	55-90	70	61 57			6 -	48 S.I.		6 -	48				20 25	-	28	28		6	6		2017 - Reconstruct		2028 - New Joints	Hangars A-H
C62	Hangars A-H	Row DE (West)		1982, 2012	20	40-60	60		Excellent	3		48 S.I.	-	6 -	48				15 25	Р.	47	47		35	35			2026 - New Joints, Fog Seal	2031 - Crack Repair	Hangars A-H
		Row DE (West) Row DE (East)		1982, 2012		40-60	60	57 95		3		48 S.I.	-	6 -	48				15 25		47	47		35	35		2017 - Reconstruct	Samo, Fog Geal	2028 - New Joints	Hangars A-H
C63b	Hangars A-H				20												-										2017 - NGCONSTRUCT	2026 Navy Isiate Fee Co. 1	2028 - New Joints 2031 - Crack Repair	_
C64	Hangars A-H	Row EF		1982, 2012	20	40-75	70		Excellent			48 S.I.	-		48				20 25		28	28		6	6			2026 - New Joints, Fog Seal		Hangars A-H
C65	Hangars A-H	Row East F		1986, 2012	20	40-58	60		Excellent			48 S.I.			48				15 25		47	47		35	35			2026 - New Joints, Fog Seal	2031 - Crack Repair	Hangars A-H
C66	Hangars A-H	Row West G		1986	20	58-80	80	58 50				48 S.I.	-	6 -	48				10 25		24	24		4	4	2015 - Reconstruct			2027 - New Joints	Hangars A-H
C67	Hangars A-H	Row GH		1999	20	50-72	70	55 38				48 S.I.		6 -	48				10 25		24	21		5	4	2015 - Reconstruct			2027 - New Joints	Hangars A-H
C68	Hangars J-K	Row East J		2012	20	57-70	70	35 90	Excellent	3 1	12 -	48 S.I.	3	12 -	48	S.I. 250	30	- 1	10 25	P	28	28		6	6		2020 - New Joints, Fog Seal	2026 - Crack Repair, Fog Seal	2031 - Crack Repair	Hangars J-K
C69	Hangars J-K	Row JK		2012	20	70-80	80	35 90	Excellent	3 1	12 -	48 S.I.	3	12 -	48	S.I. 250	20	- 1	10 25	P	24	24		4	4		2020 - New Joints, Fog Seal	2026 - Crack Repair, Fog Seal	2031 - Crack Repair	Hangars J-K
C70	Hangars J-K	Row West K		2012	20	80-90	90	35 90	Excellent	3 1	12 -	48 S.I.	3	12 -	48	S.I. 250	20	-	8 25	Р	17	17		1.2	1.2		2020 - New Joints, Fog Seal	2026 - Crack Repair, Fog Seal	2031 - Crack Repair	Hangars J-K
C71	Hangars L-M	Taxilane T	2004		20	20-49	45	83 77	Very Good	4 1	10 -	48 S.I.	4	10 -	48	S.I. 250	40	- 1	12 25	Р	157	157		345	345	2015 - Reclamite	2018 - Crack Repair, Fog Seal	2023 - Crack Repair	2028 - Crack Repair, Fog Seal	Hangars L-M
C72	Hangars L-M	Taxilane T	2004		20	50-75	70	83 77	Very Good	3	6 -	48 S.I.	3	6 -	48	S.I. 250	30	- 1	10 25	P	28	28		6	6	2015 - Reclamite	2018 - Crack Repair, Fog Seal	2023 - Crack Repair	2028 - Crack Repair, Fog Seal	Hangars L-M
				l		L														1										









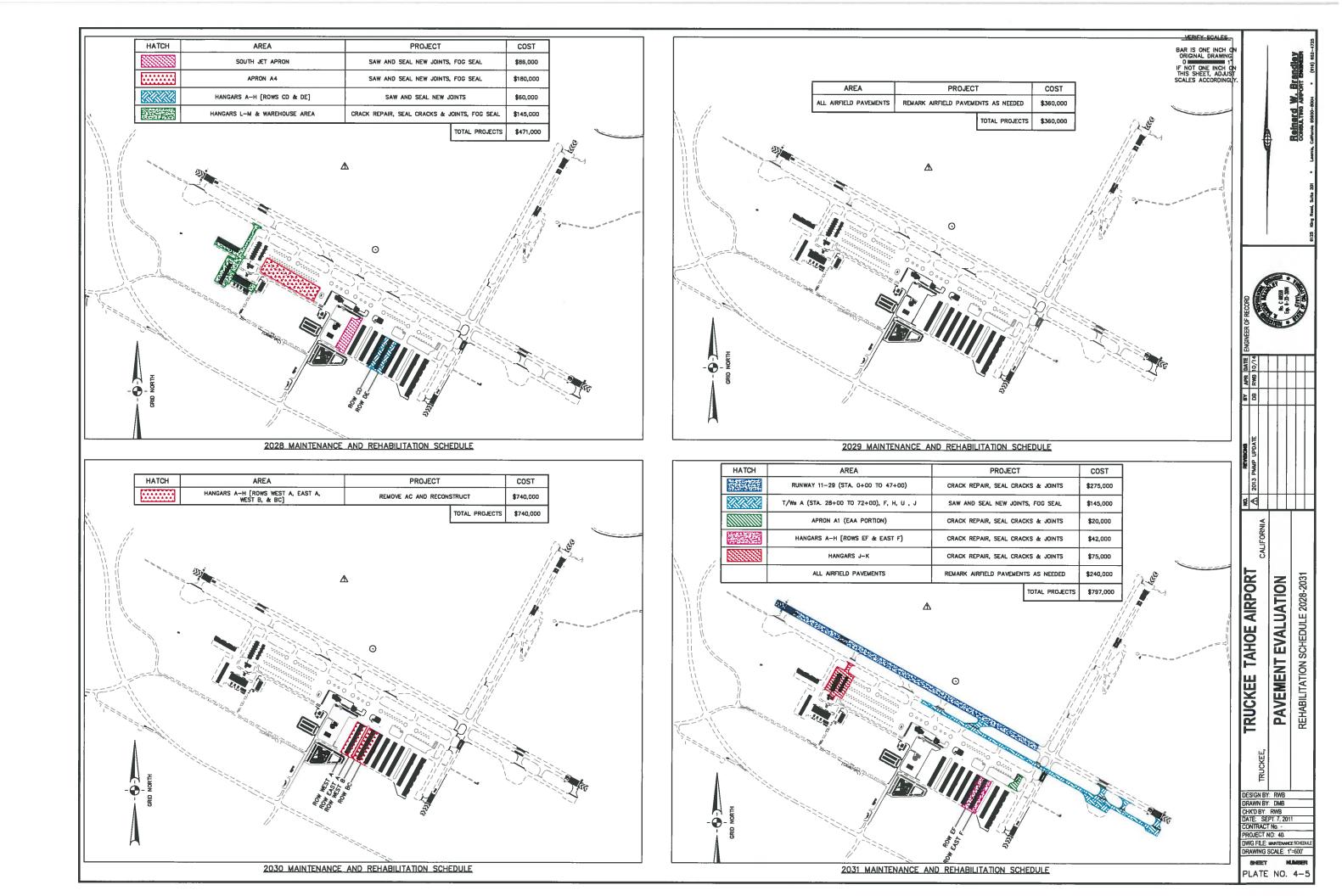


EXHIBIT 4-1

TRUCKEE TAHOE AIRPORT PAVEMENT MAINTENANCE/MANAGEMENT PLAN

NEW CONSTRUCTION/REHABILITATION WORK ENHANCED SPECIFICATION REQUIREMENTS

For any new construction or rehabilitation work performed at the airport it is important that the contractor be required to provide quality materials placed in a professional manner. As a guide for specifications for this type of work, the requirements set forth below should be added to the F.A.A. standard specifications.

A. Pulverize Existing Asphaltic Concrete (AC) and Aggregate Base (AB) and Reuse as Aggregate Subbase

Pulverize all materials a maximum size of 1½ inch. Gradation requirements for the pulverized material shall be as follows:

Sieve Designation	Percent by Weight
(Square Openings)	Passing Sieve
1½ inch	100
¾-inch	80 – 100
No. 4	20 – 60
No. 50	10 – 40
No. 200	0 – 8

Compact pulverized AC and AB to a maximum dry density of 95 percent based on ASTM D 1557.

B. Pulverize AC and AB and Crushed Rock Additive for use as Aggregate Base Course.

Prior to pulverizing, the specified quantity of crushed rock ranging in size from 1 inch to No. 8 shall be uniformly placed on top of the existing AC. The existing rock, AC, and AB materials shall be pulverized and thoroughly mixed to a maximum size of 1½ inch. The gradation of the pulverized material shall be as shown in the following table:

Sieve Designation	Percent by Weight
(Square Openings)	Passing Sieve
1½ inch	100
1 inch	60-100
½ inch	40-80
No. 4	30-55
No. 16	15-35
No. 50	5-20
No. 200	2-8

Pulverized material shall be compacted to at least 100 percent of maximum dry density as determined by ASTM D 1557. The California Bearing Ratio (CBR) of the pulverized material, when compacted to 100% relative compaction and soaked, shall be no less than 70.

C. New Aggregate Base Course

Aggregate base course shall consist of crushed rock or crushed gravel and shall have at least 90 percent by weight of particles with at least 2 fractured faces and 97 percent by weight with at least one fractured face. If additional fines are required, they shall consist of material produced in the crushing operation. Crushed aggregate shall have a percent wear of not more than 45 at 500 revolutions as determined by ASTM C 131. Crushed aggregate, when compacted to a relative compaction of 100 percent of maximum dry density as determined by ASTM D 1557 Method D, shall have a California Bearing Ratio as determined by ASTM D 1883, compacted and soaked, of not less than 100 at 0.1 to 0.5 penetration inclusive. The gradation for crushed aggregate base shall be as follows

Sieve Designation	Percent by Weight
(Square Openings)	Passing Sieve
1½ inch	100
1 inch	70-95
1/2 inch	40-65
No. 4	23-43
No. 8	15-32
No. 30	9-20
No. 200	2-4

The portion of base course aggregate, including any blended material, passing the No. 4 sieve shall have a liquid limit of not more than 25 and a plasticity index of not more than 4 when tested in accordance with ASTM D 4318.

D. Plant Mix Bituminous Pavements

Bituminous material shall be polymer-modified PG64-28 PM conforming to the requirements of State of California Department of Transportation specifications, ASTM D 6373, and AASHTO M 320.

Coarse Aggregate. Coarse aggregate shall consist of sound, tough, durable particles, free from adherent films of matter that would prevent thorough coating and bonding with the bituminous material and be free from organic matter and other deleterious substances. The percentage of wear shall not be greater than 40 percent when tested in accordance with ASTM C 131. Sodium sulfate soundness loss shall not exceed 10 percent, or the magnesium sulfate soundness loss shall not exceed 13 percent, after five cycles, when tested in accordance with ASTM C 88.

Aggregate shall contain at least 70 percent by weight of individual pieces having two or more fractured faces and 95 percent having at least one fractured face. The area of each face shall be equal to at least 75 percent of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between planes of fractures shall be at least 30 degrees to count as two fractured faces. Fractured faces shall be obtained by crushing.

Aggregate shall not contain more than 8 percent, by weight, of flat or elongated pieces, when tested in accordance with ASTM D 4791.

Fine Aggregate. Fine aggregate shall consist of clean, sound, durable, angular shaped particles produced by crushing stone or gravel that meets requirements for wear and soundness specified for coarse aggregate. The aggregate particles shall be free from coatings of clay, silt, or other objectionable matter and shall contain no clay balls. Fine aggregate, including any blended material for the fine aggregate, shall have a plasticity index of not more than 6 and a liquid limit of not more than 25 when tested in accordance with ASTM D 4318.

Natural (non-manufactured) sand may be used to obtain gradation of aggregate blend or to improve the workability of the mix. The amount of sand to be added will be adjusted to produce mixtures conforming to requirements of this specification. The fine aggregate shall not contain more than 10 percent natural sand by weight of total aggregates.

The aggregate shall have sand equivalent values of 35 or greater when tested in accordance with ASTM D 2419.

Composition of the mixture. The bituminous plant mix shall be composed of a mixture of at least three well-graded aggregates, filler if required, and bituminous material. The several aggregate fractions shall

be sized, handled in separate size groups, and combined in such proportions that the resulting mixture meets grading requirements. The combined gradation of the aggregates shall be as shown in the following table:

Size	Percentage by Weight Passing Sieves
1-1/4 inch	
1 inch	100
3/4 inch	90-100
1/2 inch	74-86
3/8 inch	63-75
No. 4	41-55
No. 8	30-38
No. 16	18-30
No. 30	12-18
No. 50	8-14
No. 100	6-11
No. 200	3-6
Bitumen percent:	
Airfield Pavements	4.5-7.0

The combined gradation when plotted on the 0.45 power plot shown in Figure 1 shall fall to the right (coarser than) of the curve shown in Figure 1 for the 1 or ¾-inch maximum size aggregate mix.

Deviations from final approved mix design for bitumen content and gradation of aggregate shall be within the limits specified below:

Sieve Size	Job Mix Formula
1 inch 3/4 inch 1/2 inch 3/8 inch No. 4 No. 16 No. 50	0 ±6% ±6% ±6% ±5% ±3%
No. 200 Asphalt Content	±2% ±0.45%

The bituminous mixture shall be designed using procedures contained in Chapter 5, Marshall Method of Mix Design of the Asphalt Institute Manual

Series No. 2 (MS-2), current edition, and shall meet the requirements of the table shown below.

MARSHALL DESIGN	N CRITERIA
Test Property	Design Criteria
Number of Blows	75
Stability, Minimum Pounds	2,150
Flow, 0.01 in.	8-16
Percent Air Voids Surface	2-5
Voids, Filled with Bitumen, Percent	70-80
Percent Voids in Mineral Aggregate, Minimum	14
Stability/Flow Ratio – Minimum	200

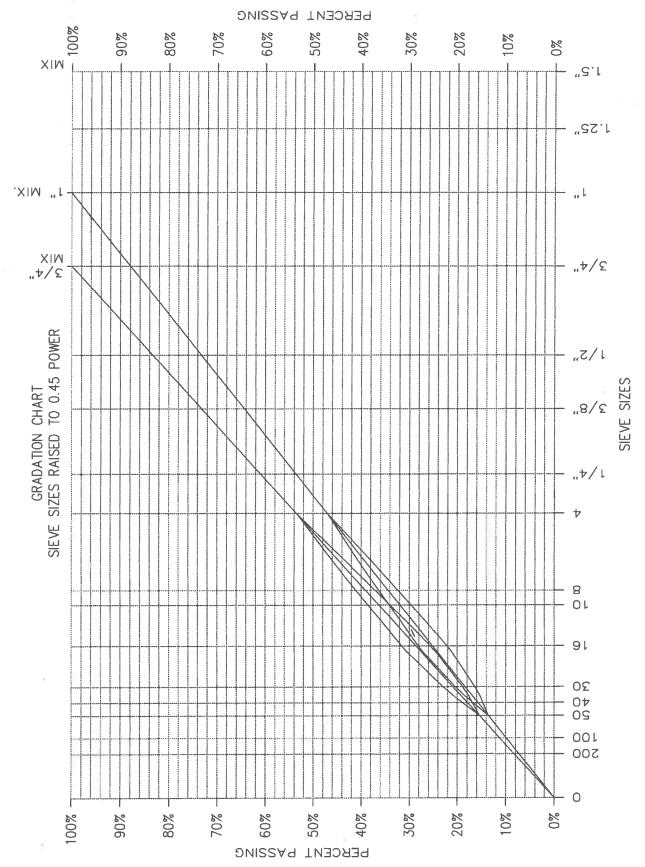


Exhibit 4-1 - Figure 1

TRUCKEE TAHOE AIRPORT PAVEMENT EVALUATION STUDY PAVEMENT MAINTENANCE/MANAGEMENT PLAN

Appendix A Geotechnical Data

A series of soil (geotechnical) studies were conducted by the office of Reinard W. Brandley, Consulting Airport Engineer in 1971 and by Stantec in 2007 for the development of the Truckee Tahoe Airport. These studies consisted of drilling a series of exploratory test holes and test pits, obtaining undisturbed soil samples and bulk soil samples from these test holes and test pits, and conducting a series of laboratory tests on the samples obtained. The data obtained from these test borings and test pits are valuable and have been used in this Pavement Evaluation Study. The results of these studies have been summarized in this Appendix, as follows:

<u>Plates</u>

Brandley Test Hole & Pit Plan & Soil Profiles

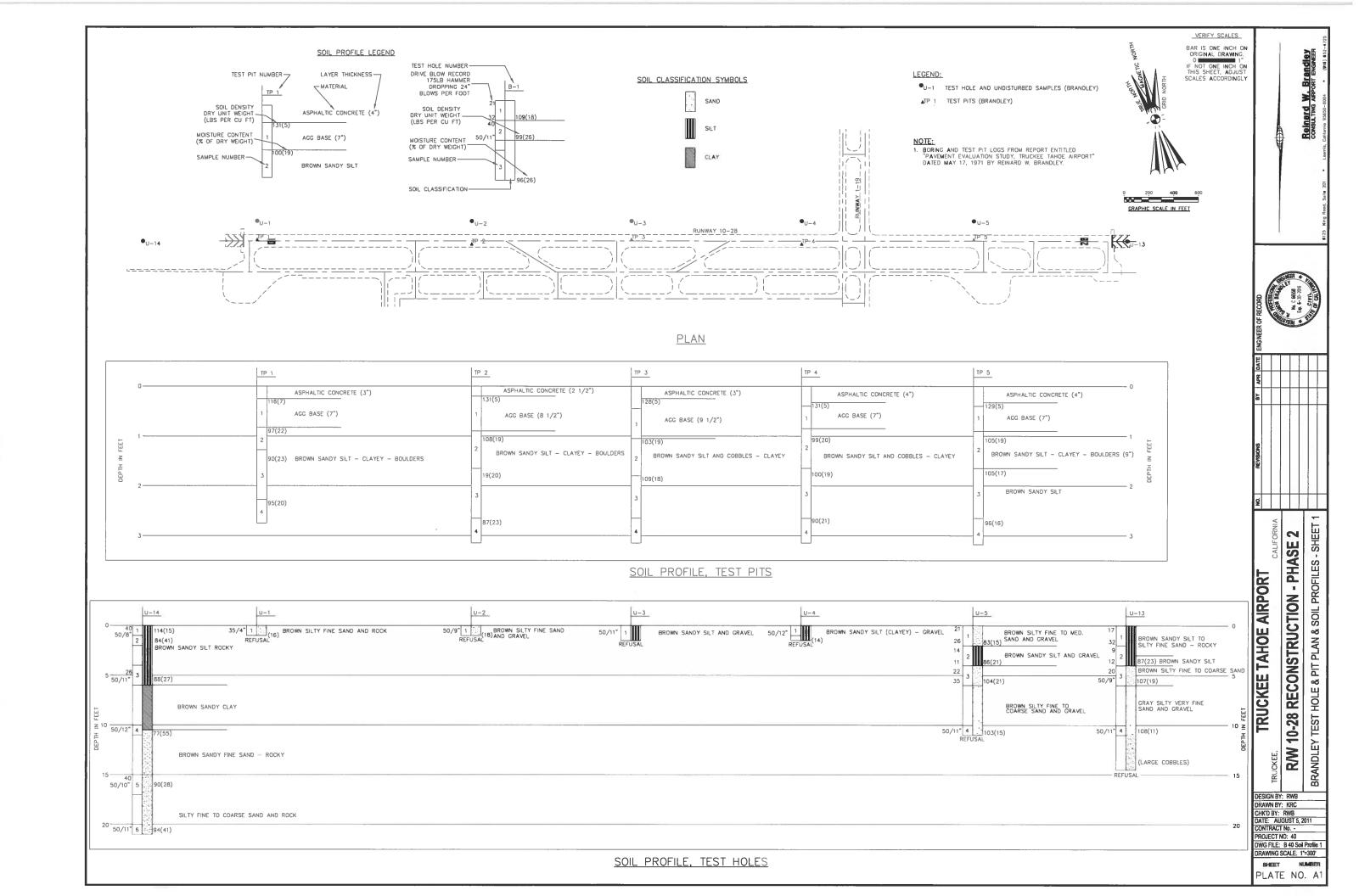
Plates No. A4-A7	Stantec Test Hole & Pit Plan & Soil Profiles						
	<u>Tables</u>						
Table No. A1	Summary of Test Results (Brandley)						
Table No. A2	Atterberg Limit Test Results (Brandley)						
Table No. A3	Grading Analyses (Brandley)						
Table No. A4	Index Test Results/Mechanical Analysis (Stantec)						

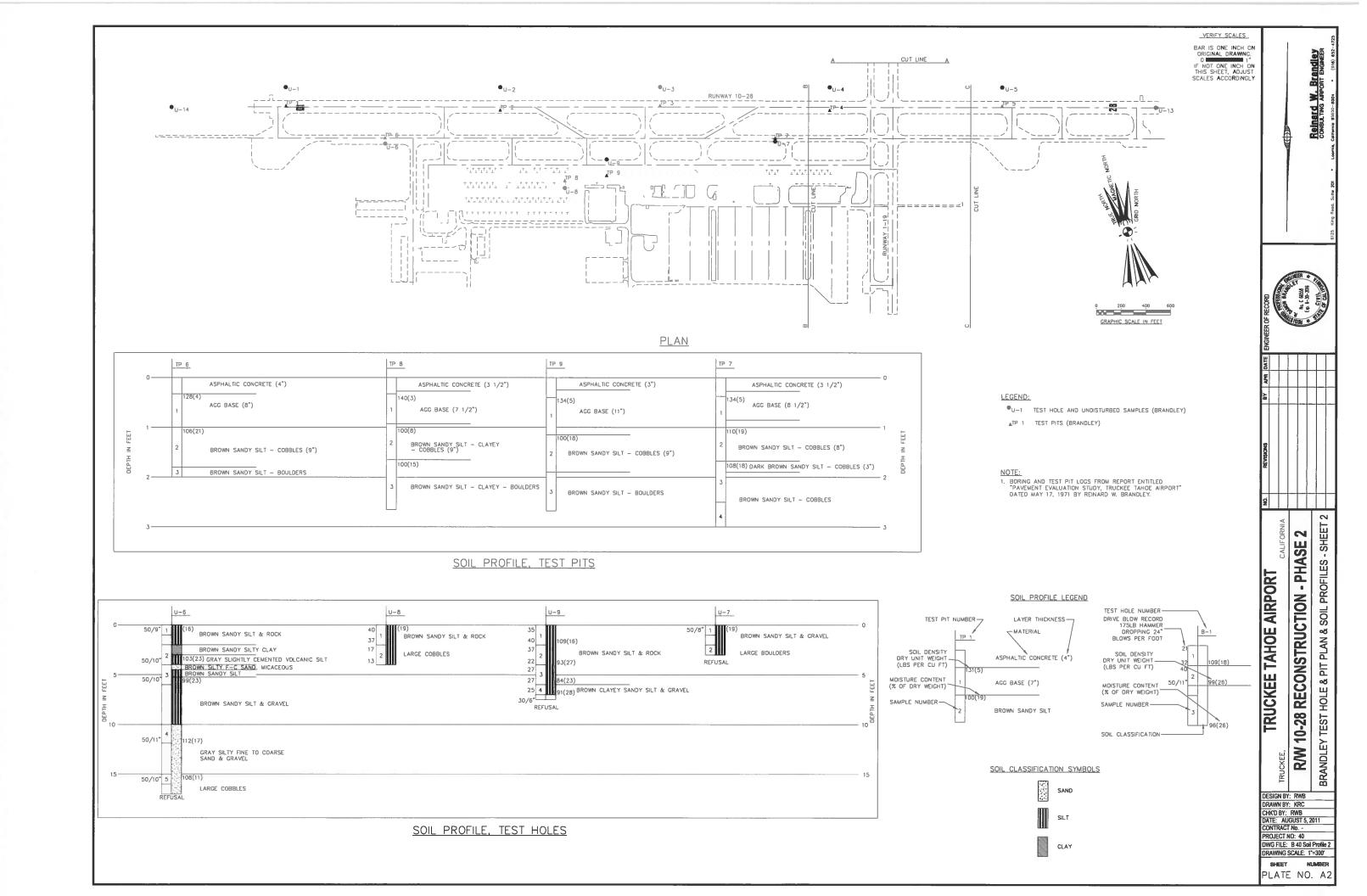
Plates No. A1-A3

Stantec Soil Profiles were presented as one test hole soil profile per sheet and one test hole location map. These data were combined and replotted on the Test Hole and Pit Plan & Soil Profiles included as Plates A4 through A7.

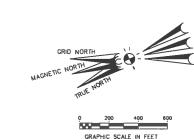
There is significant difference in the soil descriptions between the Brandley Soil Profiles and the Stantec Soil Profiles, but when the laboratory test results are compared, it is evident that they are the same soils in both sets of tests. Stantec identified the soils based mainly on sieve analysis test results. Brandley identified the soils based mainly on Atterberg limit test results, which more accurately identify the performance and strength of the soils under load.

Runway numbers changed from 10-28 to 11-29 and 01-19 to 02-20 in 2012. Appendix A contains tables and plates with the old runway numbering shown. No additional soil studies were conducted with the 2013 Update.

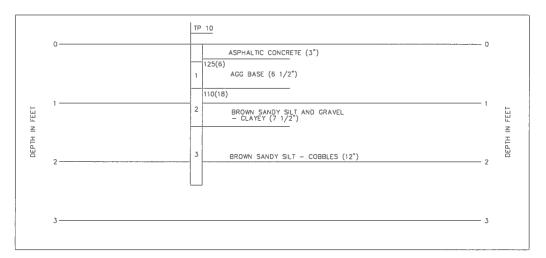




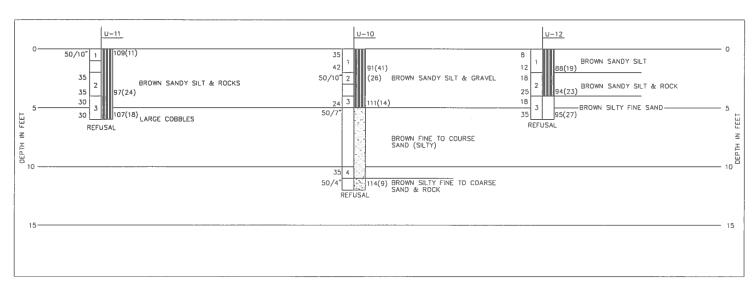
Reinard W. Brandley consulting ARPORT ENGINEER



PLAN



SOIL PROFILE, TEST PITS



SOIL PROFILE, TEST HOLES

LEGEND:

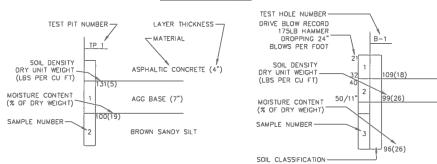
●U-1 TEST HOLE AND UNDISTURBED SAMPLES (BRANDLEY)

▲TP 1 TEST PITS (BRANDLEY)

NOTE:

1. BORING AND TEST PIT LOGS FROM REPORT ENTITLED
"PAVEMENT EVALUATION STUDY, TRUCKEE TAHOE AIRPORT"
DATED MAY 17, 1971 BY REINARD W. BRANDLEY.

SOIL PROFILE LEGEND



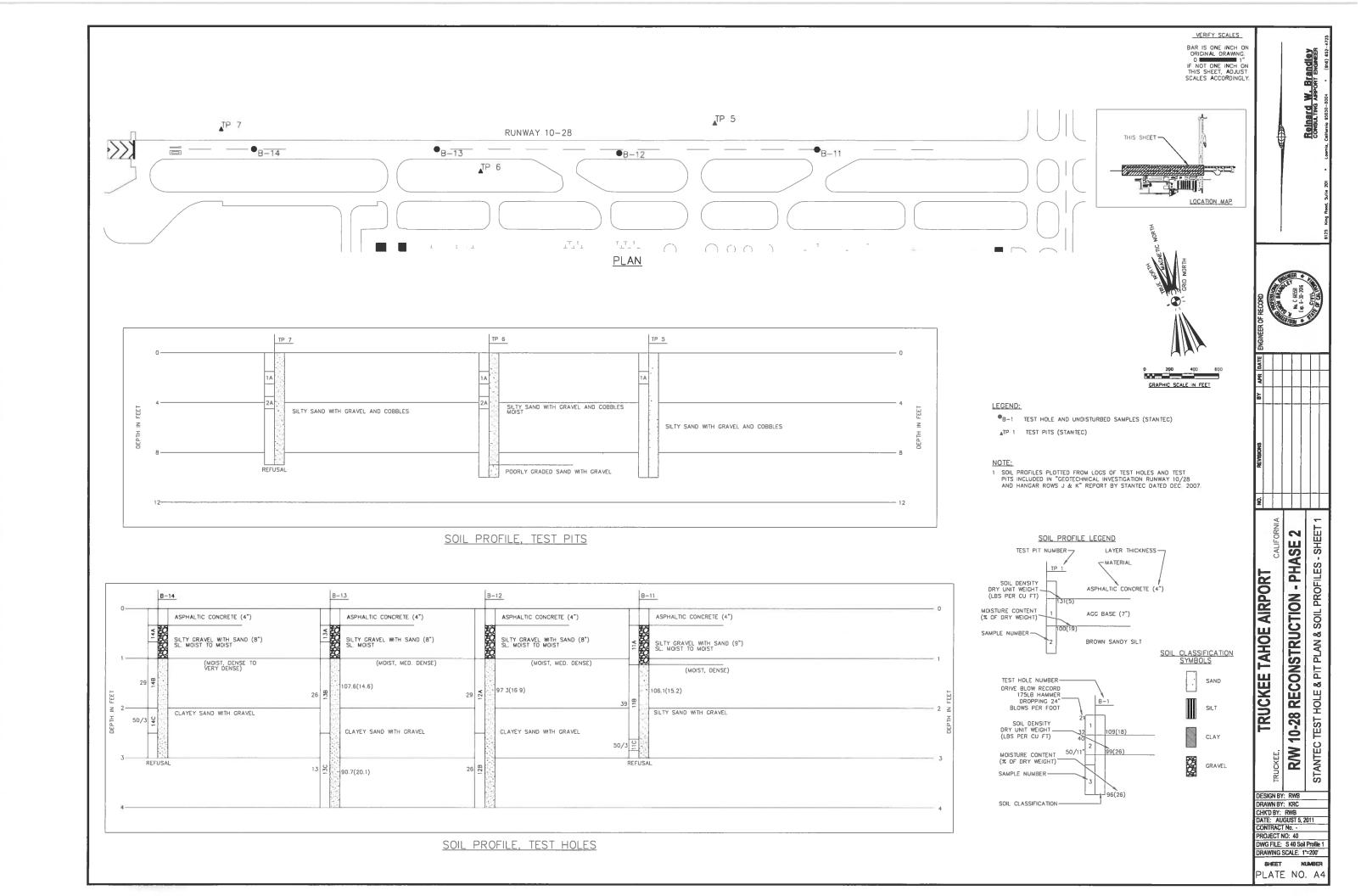
SOIL CLASSIFICATION SYMBOLS

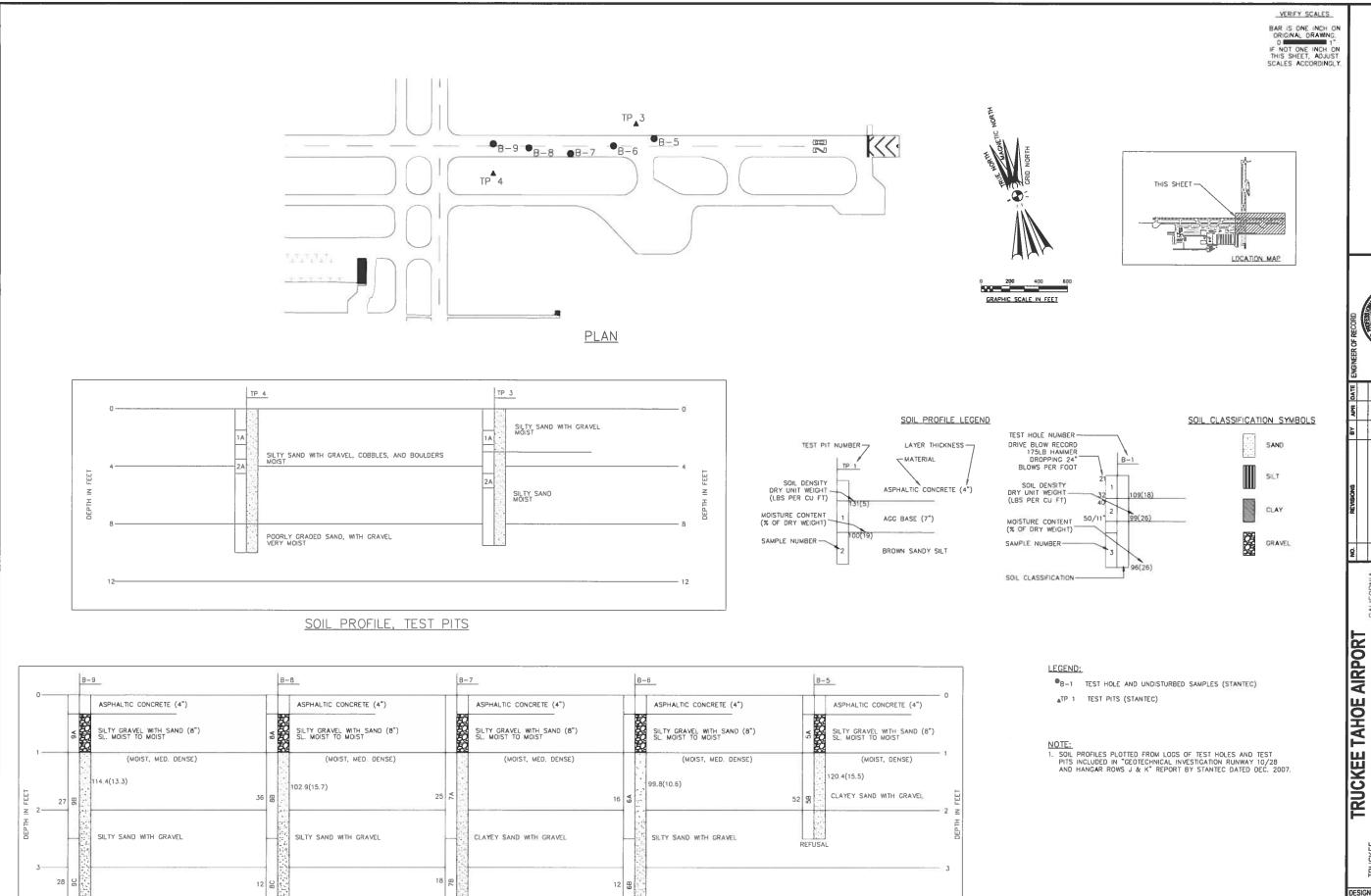


BRANDLEY TEST HOLE & PIT PLAN & SOIL PROFILES - SHEET 3 RW 10-28 RECONSTRUCTION - PHASE 2 TRUCKEE TAHOE AIRPORT

DESIGN BY: RWB DRAWN BY: KRC CHK'D BY: RWB
DATE: AUGUST 5, 2011
CONTRACT No. -PROJECT NO: 40
DWG FILE: B 40 Soil Profile 3

DRAWING SCALE: 1"=300" SHEET NUMBER PLATE NO. A3





SOIL PROFILE, TEST HOLES

TRUCKEE TAHOE AIRPORT

CALIFORNIA

RAW 10-28 RECONSTRUCTION - PHASE 2

STANTEC TEST HOLE & PIT PLAN & SOIL PROFILES - SHEET 2

Reinard W. Brandley consulting Amport Engineer

DRAWN BY: KRC
CHKD BY: RWB
DATE: AUGUST 5, 2011
CONTRACT No. PROJECT NO: 40
DWG FILE: \$40 Soil Profile 2

DRAWING SCALE: 11=200'

SHEET NUMBER
PLATE NO. A5

Reinard W. Brandley CONSULTING ARPORT ENGNEER

BAR IS ONE INCH ON ORIGINAL DRAWING.

0 11 17
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

Reinard W. Brandley consulting Ampoint Engineer

STANTEC TEST HOLE & PIT PLAN & SOIL PROFILES - SHEET 4 R/W 10-28 RECONSTRUCTION - PHASE 2

TRUCKEE TAHOE AIRPORT

DESIGN BY: RWB DRAWN BY: KRC CHK'D BY: RWB DATE: AUGUST 5, 2011 CONTRACT No. -PROJECT NO: 40 DWG FILE: S 40 Soil Profile 4 DRAWING SCALE: 1"=200"

SHEET PLATE NO. A7

THIS SHEET -

NOTE:

1. SOIL PROFILES PLOTTED FROM LOGS OF TEST HOLES AND TEST PITS INCLUDED IN "GEOTECHNICAL INVESTIGATION RUNWAY 10/28 AND HANGAR ROWS J & K" REPORT BY STANTEC DATED DEC. 2007.

GRAPHIC SCALE IN FEET

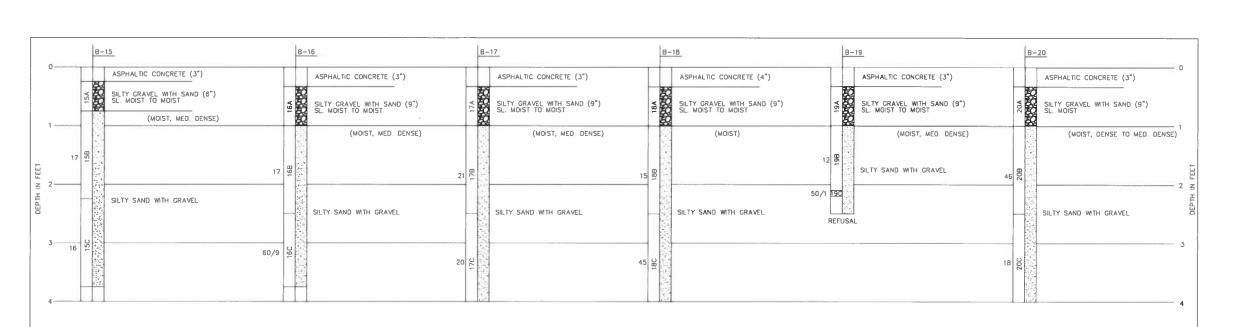
SOIL PROFILE LEGEND SOIL CLASSIFICATION SYMBOLS TEST HOLE NUMBER-DRIVE BLOW RECORD 175LB HAMMER TEST PIT NUMBER -LAYER THICKNESS-MATERIAL BLOWS PER FOOT LEGEND: SOIL DENSITY DRY UNIT WEIGHT -(LBS PER CU FT) SOIL DENSITY DRY UNIT WEIGHT -(LBS PER CU FT) ASPHALTIC CONCRETE (4") ■B-1 TEST HOLE AND UNDISTURBED SAMPLES (STANTEC) ATP 1 TEST PITS (STANTEC) MOISTURE CONTENT (% OF DRY WEIGHT) AGG BASE (7") 99(26) MOISTURE CONTENT (% OF DRY WEIGHT) CLAY BROWN SANDY SILT GRAVEL SOIL CLASSIFICATION-

<u>PLAN</u>

RUNWAY 10-28

 $\overset{\tau}{B} \overset{\tau}{-} \overset{\tau}{1} \overset{\tau}{-} \overset{\tau$

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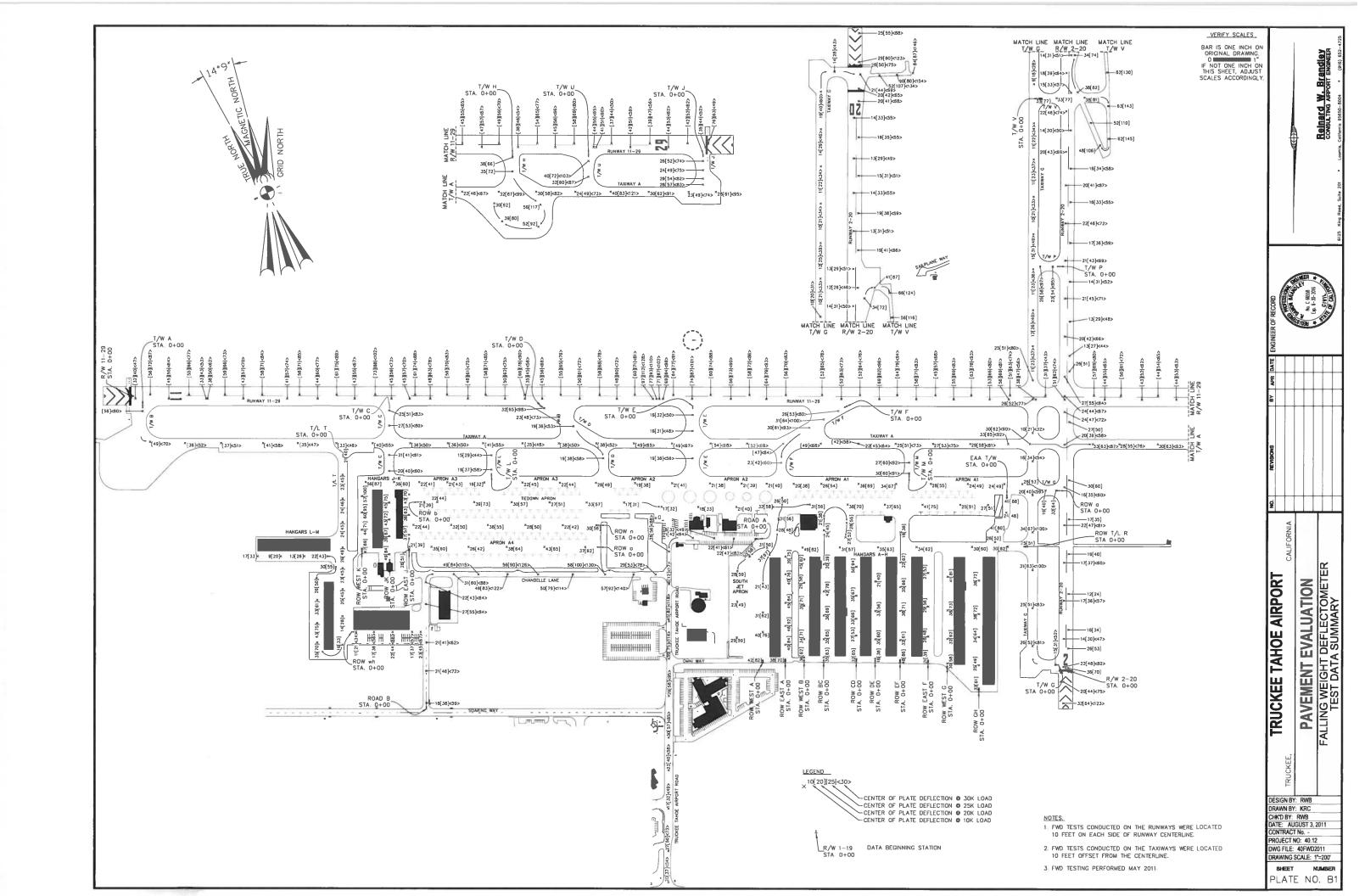


TABLE NO. A1 SUMMARY OF TEST RESULTS: (BRANDLEY) TRUCKEE-TAHOE AIRPORT TRUCKEE CALLEGENIA BACK

		TEST			F.A.A.	AVERAGE DEPTH OF	AVERAGE				IN PLACE		MAXIMUM	1	DEL ATT					z 📗 e e i Newythia i 🦠 🦠	PERCENT		
											DRY	MOISTURE		1	RELATIVE				RETAINED	PASSING	PASSING	MAXIMUM	내 보다라면 이 불교회가 되고 있으셨습니다.
			TEST		CLASSIFI-	TEST BELOW					DENSITY	CONTENT	the second of th	1	COMPACTION		LIQUID	PLASTICITY	NO. 10	NO.40	NO.200	SIZE	
CATION	STATION	NO.	NO.	MATERIAL	CATION	PAVEMENT	INCHES	FIELD		LAB C.B.R.	PCF	PERCENT	PCF **	PERCENT	PERCENT	EQUIVALENT	LIMIT	INDEX	SIEVE	SEVE	SIEVE	INCHES	REMARKS
		-				INCHES		10.1	0.2	95% 100%)												
ay 10-28	23+04	1 1		Asphaltic Concrete			3	 +		20 100													
P.4	(25'N)	1,,	+ = -	Aggregate Base	E1				33	98 123	116	1 7	130	9.1	90	72		N.P.	63	20	3.6	1 1/2	
		+	1 2	Brown Sandy Silt-Clayey-Boulders	E4	10	6	-7	7		9.7	22	120		81		28	3	52	32	11 .	3	Boulders in subgrade to 18"
11			$\frac{1}{1}$		E4_	16	12	+	13		90	23					30	5					
11		<u>''</u>	4	H H H H H	E4	28	6	13	14		95	20											
av 10-28	38+30	1		And a lad a Command			2 1/2																
ay 10-20		1 - 2	+;	Asphaltic Concrete			2 1/2				1												
11	(25's)	+	1 1	Aggregate Base	E1	2 1/2	8 1/2	+	76		131	5	130	9.1	101			N.P.	57	25	4.1	1 1/2	
		1	1 2	Brown Sandy Silt-Clayey-Boulders	E4_	11	9	+	20		108	19	120		90		31	6	26	50	20,	2	Boulders in subgrade
11			3		E4	20	12	13	12		96	20											
**	 	11	4	H U U U	F.4	32	6	12	1.2		87	23	118		75		29	4					
av 10-28	53+22	1		Asphaltic Concrete			3																
0	(25'N)	1 11	1 1			5 1/2	9 1/2	60	-,		120	1	1 7 1		200					 			
11	1 (4) 18)	11	1 2	Aggregate Base	E1	$\frac{5}{12} \frac{1/2}{1/2}$	10	+	11		128)	131		98			N.P.	61	20	1.9	2	
11		 	1 2	Brown Sandy Silt & Cobbles-Clayey	E4	12 1/2		 	16		103	19	126		82								Rocks to 6" diameter
11		+	1-3		E4	21 1/2	10 1/2			42 79	109	18	120	17	91		31	6	26	50	21	2	Rocks to 6" diameter
			4		E4 _	32	6	9	1.0								30	5					
av 10-28	66+71	4		Asphaltic Concrete			4																
**	(25'S)	11	1,	Aggregate Base	E.2	5	7	59	74		131	2	120		101								
· ·	1123.02	- 51	7	Brown Sandy Silt & Cobbles-Clayey	E4	111	0	0	0		99	20	130		101			N.P.	62	19	5.5	1 1/2	
11		† ,,	1 2	II II II II II II	1 E4	30	12	8	7		+		122		83		31	7	51	35	15	2 1/2	
11		1,,	1 ,	ii ii ii ii ii	+ E4	20 32	4.	4	-		100	19	124		83								Rocks to 4" diameter
			+ *		124		<u> </u>	•			90	2.1	122		74		29	5					Rocks to 4" diameter
ay 10-28	80+62	5		Asphaltic Concrete			4							er orannarra varia analas								<u> </u>	
	(25'N)	ii ,	1	Aggregate Base	E2	5	7	85	71		129	ς	131		98			NT Th	+-,-	 			
		11	2	Brown Sandy Silt-Clayey-Boulders	E4	11	9		16		1.05	19	122			n inner on annual a		N.P.	64	22	3.6	1 1/2	
		11	13	Brown Sandy Silt	E4	20	12		13		105	$\begin{pmatrix} \frac{1}{17} \end{pmatrix}$	121		86		30						Rocks to 8" diameter
**************************************		11	1.	11 11 11	1 L4	32	۵-	6	4		96	+			87		32	6	14	55	30	1	Very little rock
						1	0	0,	0		30	16	124	on order to the statement of the last	77								
vay "A"	30+65	6		Asphaltic Concrete			4							<u> </u>									
11		14	1	Aggregate Base	El	4 1/2	8	76	96		128	4	130		97			17 %	1		<u> </u>		
<u> </u>		11	2	Brown Sandy Silt-Cobbles	E5	1.2	q [†]		22		106	21	124					N.P.	68	16		1, 1/2	
11		11	3	Brown Sandy Silt - Boulders	E5	21	3		$\frac{22}{17}$		100	<u> </u>	124		85			6	40	43	24	2	
				MIOWIN DENTAL DOGLACES		** / ₂		23	1/								30	5					Too many large rocks for F.D. test.
ay "A"	60+98	7		Asphaltic Concrete			3 1/2																Excavated to 24". Boulders to 24"
11		11	1	Aggregate Base	E1	4 1/2	8 1/2	41	50		1 34	5	138		98			N.P.	62	10	-		
11 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		11	2	Brown Sandy Silt-Cobbles	E5	12	8		16		110	19	121		0.1		20	N.F.	02	19	5.5	1 1/2	
11		11	3	Dark Brown Sandy Silt-Cobbles	E5	20	10	25	31		108	18	120	- John San State of S	91		29						Rocks to 6" diameter
11		78	1 4	Brown Sandy Silt-Cobbles	1 15	30	- LU		24			10	140	-	90		30	6	42	42	23	2	Pocks to 4" diameter
		1		erous cand stre-condes	+	30	<u> </u>	24	24		Territoria de la companio della comp												Focks to 6" diameter. Unable to fi
											1	<u> </u>									1		space to take F.D. test betweer rock

																							TRUCKEE, CALIFORNIA PAGE 2
					AVERAGE	AVERAGE					IN PLACE	FIELD	MAXIMUM	OPTIMUM					PERCENT	PERCENT	PERCENT		
		TEST		F.A.A.	DEPTH OF	LAYER						MOISTURE	DRY	MOISTURE	RELATIVE				RETAINED	PASSING	PASSING	MAXIMUM	
		PIT TEST		CLASSIFI-							DENSITY			•	COMPACTION	SAND	LIQUID	FLASTICITY	NO.10	NO.40	NO.200	SIZE	
LOCATION	STATION	NO. NO.	MATERIAL	CATION	PAVEMENT	INCHES	FIELD	C.B.R.	LAB			PERCENT			PERCENT	I		INDEX	SIEVE	SIEVE	SIEVE	INCHES	REMARKS
					INCHES			0.2"					in in the second										
Terminal Apron	44+83	8	Asphaltic Concrete			3 1/2																	
11	(583'S)	" 1	Aggregate Base	E1	4.	7_1/2	95		117	265	140	3	138	9.0	100+	74		N.P.	71	13	2.7	1 1/2	
11		'' 2	Brown Sandy Silt-Clayey-Cobbles	E4	11	9	56	65			100	8	122		82		30	6	51	35	15	3	Very rocky
11 11		3	Brown Sandy Silt-Clayey-Boulders	E4	20.	12	<i>5</i> 9	8			100	15	125		80		31	7					Very rocky, boulders to 24" diameter
Terminal Apron	48+78	9	Asphaltic Concrete			3																	
	(539'S)	1	Aggregate Base	E1	5	11	84	91			134	5	138		97			N.P.	77	11	2.9	1 1/2	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		'' 2	Brown Sandy Silt-Cobbles	E5_	14	9	20	22			100	18	120		83		30	6	42	42	23	3	Rocks to 6" diameter
"		" 3	Brown Sandy Silt-Boulders	E5	23	9	18	19									3 0	5					Rocks to 12" diameter
11 11 11 11 11 11 11 11 11 11 11 11 11		" 4	Brown Sandy Silt-Boulders		32																		Too rocky to run CBR's & Plate Bearing
						marin, marining in terms of particular and an artist of	1	 													1 1 2 3 7		TOURS TO THE OBY O'VITAGE DOGITING
Runway 1-19	21+03	lo l	Asphaltic Concrete			1 3	<u> </u>																
11 11	managa Grad	11 1	Aggregate Base	E1	3 1/2	6 1/2	31	4.2	70	205	125	6	132	0 =	95			N.P.	65	1.0	3.5	,	
11 15		11 9	Brown Sandy Silt & Gravel-Clayey		9 1/2	7 1/2	$\frac{31}{21}$	28	77	114	110	18	116	9.5			.,,	N.F.			1 .	1 1 1 2	Rocks to 3" diameter
11 11		" 2	Brown Sandy Silt & Graver-Clayey Brown Sandy Silt-Cobbles	+ E4		12	13	15			110		110	14.5	90	 	31	1 8	48	38	18	+1-1/2	· [문화 사고 사람이 얼마나 하는 것 같은 사고 있는 사람이 하면 경기를 하는 것 같은 사고 있다. 기계
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	office of the second as the se	3		E4	17	1.2	1.3	1.)									29						Rocks to 8" diameter. Unable to run F.
		4	Brown Sandy Silt-Cobbles		29									And the second second									& CBR.
							ļ																
							ļ															+	
																					1		
	*Maximum	Density cu	rves adjusted for +3/4" material on agg	regate bas	ses, and fe	r +No. 4	materi	als fo	r fine	graine	d soils.								t i jete jesji u				
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TABLE NO. A2

TRUCKEE-TAHOE AIRPORT TRUCKEE, CALIFORNIA

ATTERBERG LIMIT TEST RESULTS

Test Pit	Sample Depth - In.	(BRANDLEY) Material	Liquid Limit	Plasticity Index
1	3	Aggregate Base	N.P.	N.P.
1	10	Brown Sandy Silt, Clayey, Boulders	28	3
1	16	Brown Sandy Silt, Clayey, Boulders	30	5
2	2-1/2	Aggregate Base	N.P.	N.P.
2	11	Brown Sandy Silt, Clayey, Boulders	31	6
2	32	Brown Sandy Silt, Clayey, Boulders	29	4
3	5-1/2	Aggregate Base	N.P.	N.P.
3	21	Brown Sandy Silt & Cobbles, Clayey	31	6
3	32	Brown Sandy Silt & Cobbles, Clayey	30	5
4	5	Aggregate Base	N.P.	N.P.
4	11	Brown Sandy Silt & Cobbles, Clayey	31	7
4	32	Brown Sandy Silt & Cobbles, Clayey	29	5
5	5	Aggregate Base	N.P.	N.P.
5	11	Brown Sandy Silt, Clayey, Boulders	30	5
5	20	Brown Sandy Silt	32	6
6	4-1/2	Aggregate Base	N.P.	N.P.
6	12	Brown Sandy Silt - Cobbles	31	6
6	21	Brown Sandy Silt Boulders	30	5
7	4-1/2	Aggregate Base	N.P.	N.P.
7	12	Brown Sandy Silt - Cobbles	29	5
7	20	Brown Sandy Silt - Cobbles	30	6
8	Z _ŧ	Aggregate Base	N.P.	N.P.

. Page 2

TABLE NO. A2

TRUCKEE-TAHOE AIRPORT TRUCKEE, CALIFORNIA

ATTERBERG LIMIT TEST RESULTS (BRANDLEY)

Test <u>Pit</u>	Sample Depth - In.	Material	Liquid Limit	Plasticity Index
8	11	Brown Sandy Silt, Clayey, Cobbles	30	6
8	20	Brown Sandy Silt, Clayey, Boulders	31	7
9	5	Aggregate Base	N.P.	N.P.
9	14	Brown Sandy Silt - Cobbles	30	6
9	23	Brown Sandy Silt - Boulders	30	5
10	3-1/2	Aggregate Base	N.P.	N.P.
10	9-1/2	Brown Sandy Silt, Gravel, Clayey	31	8
10	17	Brown Sandy Silt - Cobbles	29	5 *

TABLE NO. A3

TRUCKEE-TAHOE AIRPORT TRUCKEE, CALIFORNIA

GRADING ANALYSES - Percent Passing

Test	Pit I	erl	r-1	2	2	ю г)	63	7	7	5	5	7 9	6 1	7 2
Sample	Depth Inches	60	70	2 1/2	11	5 1/2	21 1/2	5	11	2	20	4 1/2	12	4 1/2
	Material	Aggr. Base	Brn.Sandy Silt, Clayey-Boulders	Aggr. Base	Brn.Sandy Silt, Clayey	Aggr. Base	Brn.Sandy Silt & Cobbles-Clayey	Aggr. Base	Brn.Sandy Silt & Cobbles-Clayey	Aggr. Base	Brn. Sandy Silt	Aggr. Base	Brn.Sandy Silt, Cobbles	Aggr. Base
	3"		100						100				ž	
	2"		4.46	*	100	100	100		06				100	
5	1 1/2"	100	93	100	96	84	76	100	83	100		100	97	100
(BRANDLEY)	11	84	co co	85	93	78	76	98	79	83	100	75	92	85
EY)	3/4"	74	84	78	91	70	92	75	74	74	7.66	63	06	92
	1/2"	61	92	99	88	61	68	65	69	61	98.3	53	84	99
	3/8"	54	71	09	98	56	87	58	65	54	96.8	20	79	09
	No. 4	45	56	21	80	47	81	50	50	45	91.5	42	. 59	50
	No. 10	37	48	43	74	39	74	38	65	36	86.3	32	09	38
	No. 40	20	32	25	50	20	50	19	. 32	22	55	16	43	19
	No. 80	8.5	20	11	33	7.5	34	10	21	10	41	6.7	32	9.5
	Wash No. 200	3.6	11	4.1	20	0°-T	21	5.5	15	3.6	30	2.9	24	5.5

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TABLE NO. A3

TRUCKEE-TAHOE AIRPORT TRUCKEE, CALIFORNIA

GRADING ANALYSES - Percent Passing

	Wash No. 200	23	2.7	15	2.9	23	3.5	18
*	No. 80 h	31	5.7	23		30	5.5	27
	No. 40	42	13	35	11	42	10	. 38
	No. 10	53	29	69	23	58	35	52
	No. 4	99	38	52	32	63	20	58
	3/8"	ေဝ	44	79	41	78	19	80
	1/2"	85		68	45	85	29	36
EX)	3/4"	90.1	57	74	99	16	78	93
(BRANDLEY)	=	91.4	72	78	71	63	85	97
	1 1/2" 1	97.3	100	82	100	96	66	100
	2"	100	9	89			100	
	311			100		100		
	Material	Uk.Brn.Sandy Silt, Cobbles	Aggr. Base	Brn.Sandy Silt - Clayey-Cobbles	Aggr. Base .	Brn.Sandy Silt, Cobbles	Aggr. Base	Brn.Sandy Silt & Gravel - Clayey
Test Sample	Depth Inches	20	3 1/2	11	2	14	3 1/2	9 1/2
Test	Pit No.	_	œ	∞	6	6	10	10

<u>SAMPLE NUMBER</u> <u>B1A</u> <u>B4A (1)</u> <u>B6A</u> <u>B8A</u> <u>B10A (1)</u> <u>B15A/19A(1)</u> <u>B4B</u> Combined

PERCENT PASSING BY WEIGHT

SIEVE S	IZE
---------	-----

3 inch 2 Inch 1 Inch 3/4 Inch 1/2 Inch 3/8 Inch No. 4 No. 10 No. 40 No. 100 No. 200 **Liquid Limit** Plastic Index **Moisture Content (%)** Soil Class (USCS) R-Value

	100	100	100	100	100	
100	89	94	95	90	74	100
97	88	92	87	86	65	98
91	79	77	86	80	57	95
89	73	71	85	73	54	92
79	58	64	82	60	47	86
59	38	58	76	49	35	77
36	16	40	56	28	18	50
38	11	29	45	14	9	39
24.1	3.5	24.4	39.0	8.7	_ 6.4	23.1
34	NV (2)	22	29	NV (2)	NV (2)	31
12	NP (3)	2	6	NP (3)	NP (3)	7
14,3	5.3	10.6	16.4	4.2	3.0	16.1
SC	SP	SM	SM	SP-SM	GM	SM

NOTES:

- (1) Base course material
- (2) No Value
- (3) Non-Plastic



INDEX TEST RESULTS MECHANICAL ANALYSIS

TRUCKEE/TAHOE AIRPORT DISTRICT

RUNWAY 10-28 AND HANGARS 19 & 20

TABLE NO. A4

PROJECT NO. 180550900

TRUCKEE TAHOE AIRPORT PAVEMENT EVALUATION STUDY PAVEMENT MAINTENANCE/MANAGEMENT PLAN

Appendix B Falling Weight Deflectometer Test Data

Falling Weight Deflectometer (FWD) tests were conducted on all pavements on the airport in 2011. No additional FWD tests were conducted in the 2013 Update. On the runways two rows of FWD tests were conducted, one on each side of the runway centerline, at a distance of approximately 10 feet from the centerline. These tests were located at a spacing of approximately 200 feet, which provided general longitudinal spacing of 100 feet between tests. FWD tests were also conducted on all taxiways and taxilanes at a distance of 10 feet from centerline and at longitudinal spacing of approximately 200 feet. On all aprons FWD tests were conducted on an approximate 200 by 200 foot grid.

The Falling Weight Deflectometer tests are generally conducted at two different loadings and the applied load is measured by load cells. As a result of variations in resistance, the applied load varies somewhat from the anticipated load. In order to provide comparable test results, all data were normalized to standard loads of 10, 20, 25 and/or 30 kips.

The location of the test, starting point of the test, and location of Station 0+00 for each row of tests are shown on Plate B1. The FWD data for the center deflections under applied load are indicated on these drawings for each test location. The location of Station 0+00 at the start of each row of tests and the direction of test are reflected in the plots as Station 0+00 in Plates No. B2 through B41.

For each row of FWD tests on each segment of pavement a graph showing the center plate deflection at each station has been prepared and is shown on Plates B2 through B41. These data show the uniformity of strength as reflected by deflection of the pavement sections and identify the hard spots and the soft spots. For calculation purposes, to back calculate Modulus of Elasticity critical values of deflection for each fairly uniform section has been indicated by horizontal lines.

The results of these studies have been submitted in this Appendix, as follows:

Plates

Plate No. B1

Falling Weight Deflectometer Test Data Summary - Half Size (A full size copy of Plate No. B1 is included in the pocket in the back cover of this report.)

TRUCKEE TAHOE AIRPORT PAVEMENT EVALUATION STUDY PAVEMENT MAINTENANCE/MANAGEMENT PLAN

Appendix B Falling Weight Deflectometer Test Data

Plates (Continued)

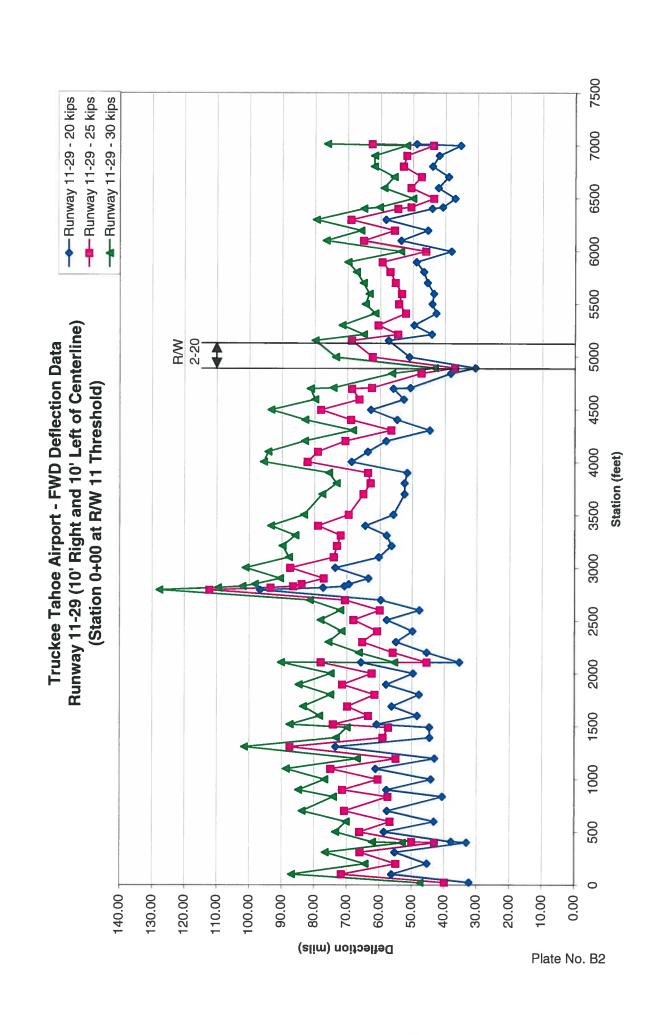
Plates B2 through B41 Plate No. B2 Plate No. B3 Plate No. B4	- FWD Deflection Data Runway 11-29 Runway 11-29 - North of Centerline Runway 11-29 - South of Centerline
Plate No. B5 Plate No. B6 Plate No. B7 Plate No. B8 Plate No. B9 Plate No. B10 Plate No. B11 Plate No. B12	Taxiway A Taxiway C Taxiway D Taxiway E Taxiway F Taxiway H Taxiway U Taxiway J
Plate No. B13 Plate No. B14 Plate No. B15 Plate No. B16 Plate No. B17 Plate No. B18	Runway 2-20 Taxiway G Taxiway P Taxiway V Taxiway L Taxiway M
Plate No. B19 Plate No. B20 Plate No. B21 Plate No. B22 Plate No. B23	EAA Hangar Row A – Aircraft Parking Apron Lane 1 Row B - Aircraft Parking Apron Lane 2 Row N - Aircraft Parking Apron Lane 3 Row O - Aircraft Parking Apron Lane 4
Plate No. B24 Plate No. B25 Plate No. B26 Plate No. B27 Plate No. B28 Plate No. B29 Plate No. B30	T/L R - Taxilane North of Hangars A thru H Row West A - West Side of Hangar A Row East A - East Side of Hangar A Row West B - West Side of Hangar B Row BC - Between Hangars B & C Row CD - Between Hangars C & D Row DE - Between Hangars D & E

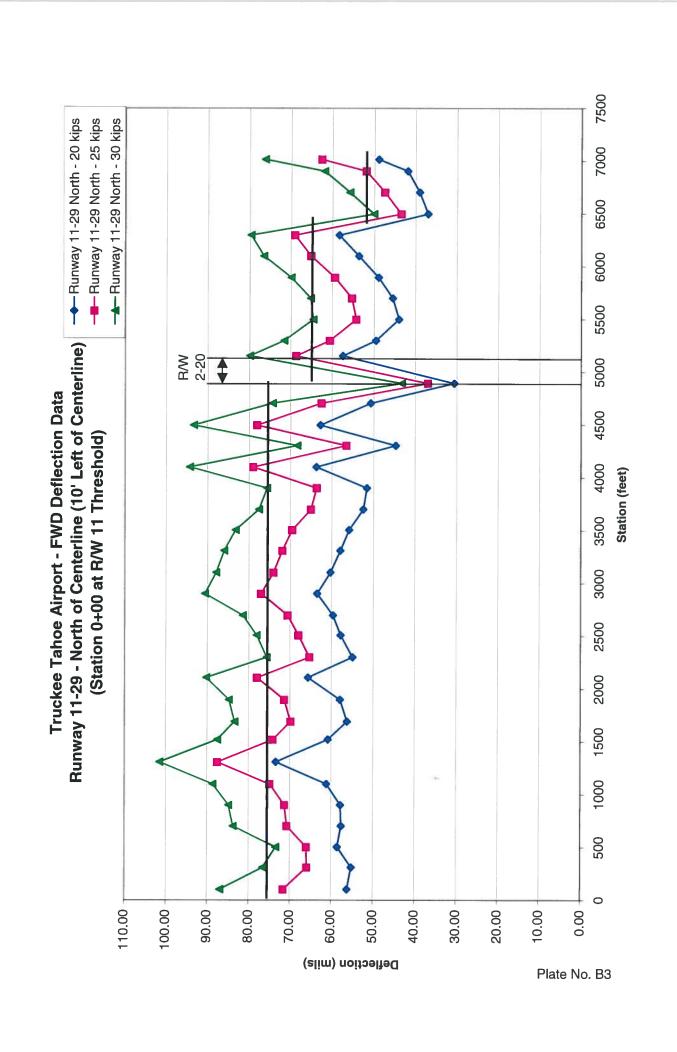
TRUCKEE TAHOE AIRPORT PAVEMENT EVALUATION STUDY PAVEMENT MAINTENANCE/MANAGEMENT PLAN

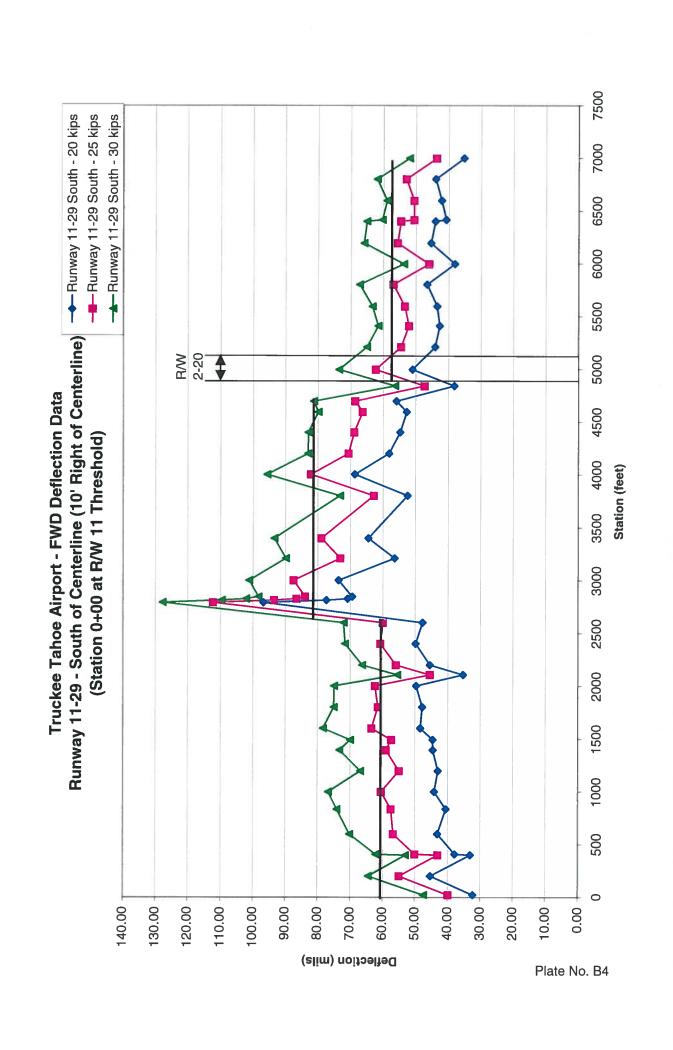
Appendix B Falling Weight Deflectometer Test Data

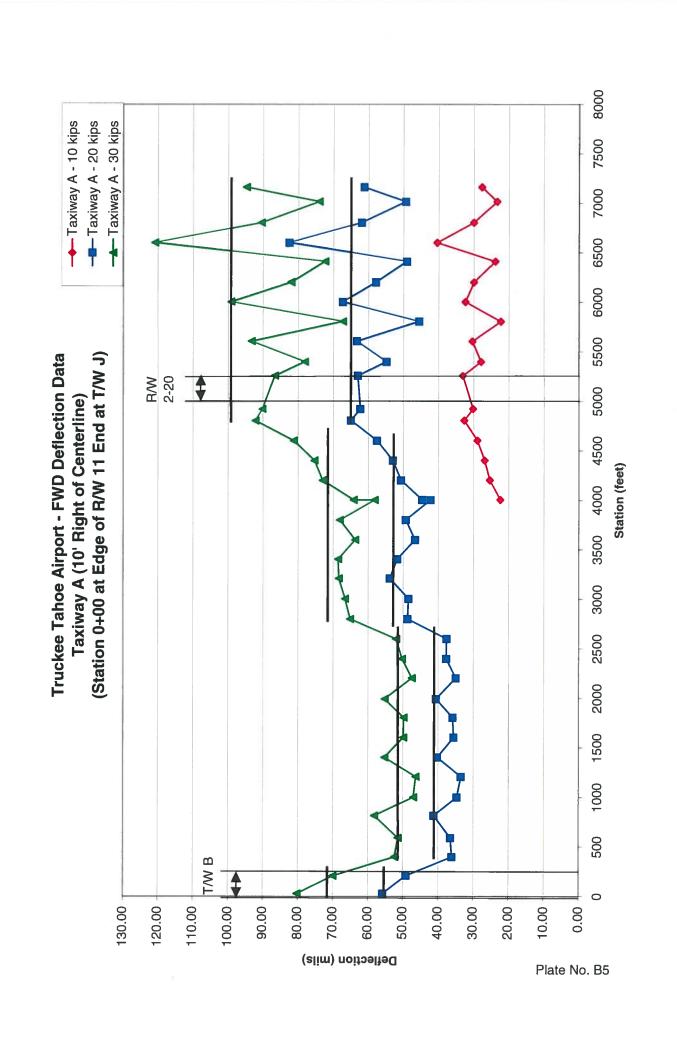
Plates (Continued)

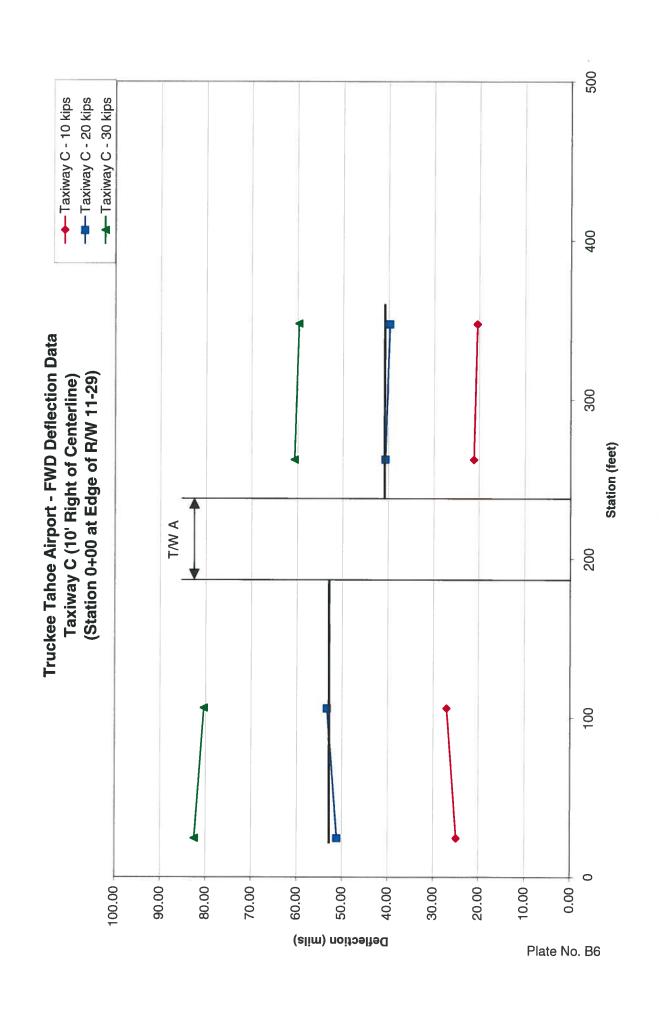
Plates B2 through B41 Plate No. B31 Plate No. B32 Plate No. B33 Plate No. B34	 FWD Deflection Data (Continued) Row EF - Between Hangars E & F Row East F - East Side of Hangar F Row West G - West Side of Hangar G Row GH - Between Hangars G & H
Plate No. B35	Row East J – East Side of Hangar J
Plate No. B36	Row JK – Between Hangars J & K
Plate No. B37	Row West K – West Side of Hangar J
Plate No. B38	Taxilane T & Hangars L-M
Plate No. B39	Warehouse Area
Plate No. B40	Road A
Plate No. B41	Road B

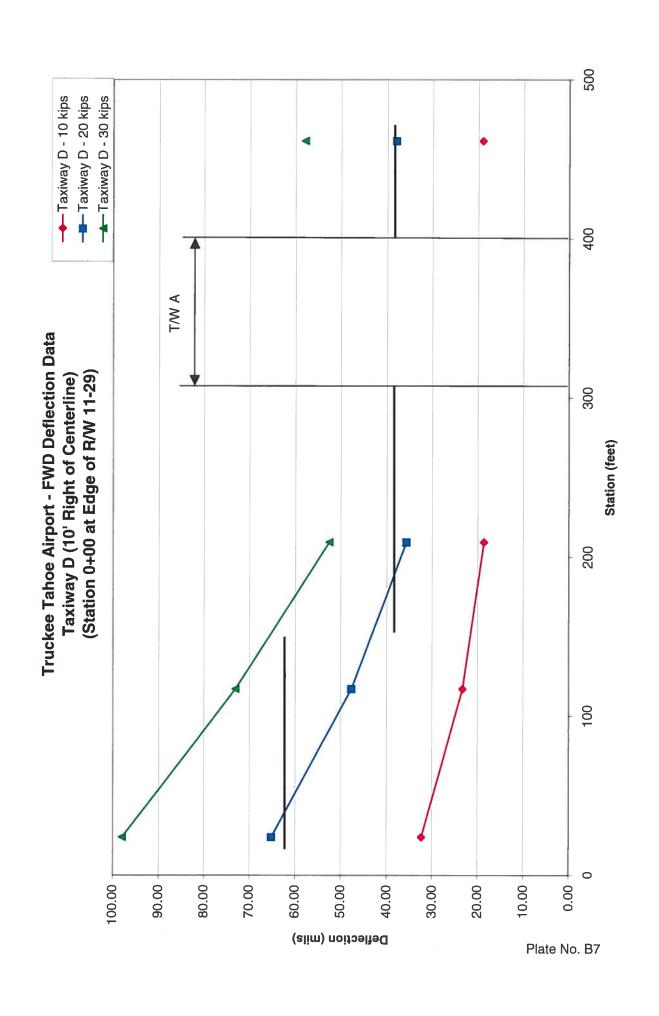


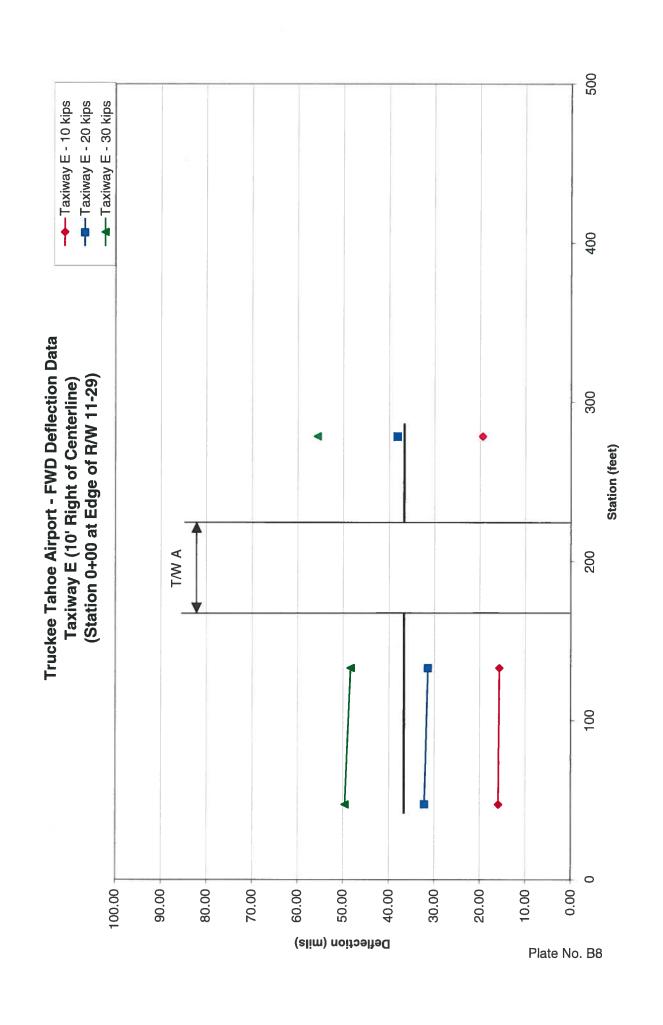


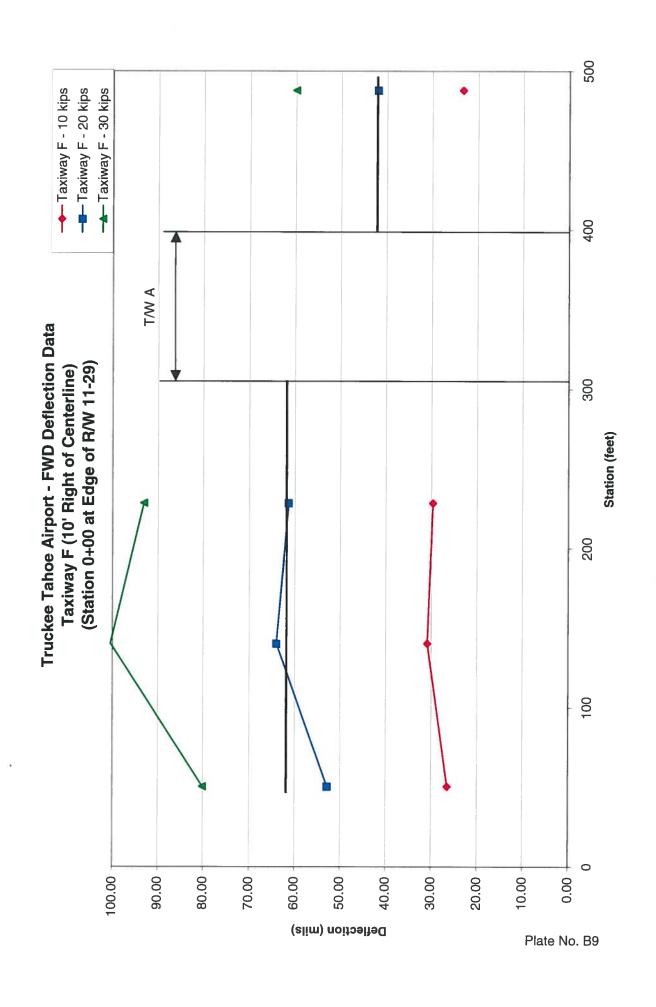


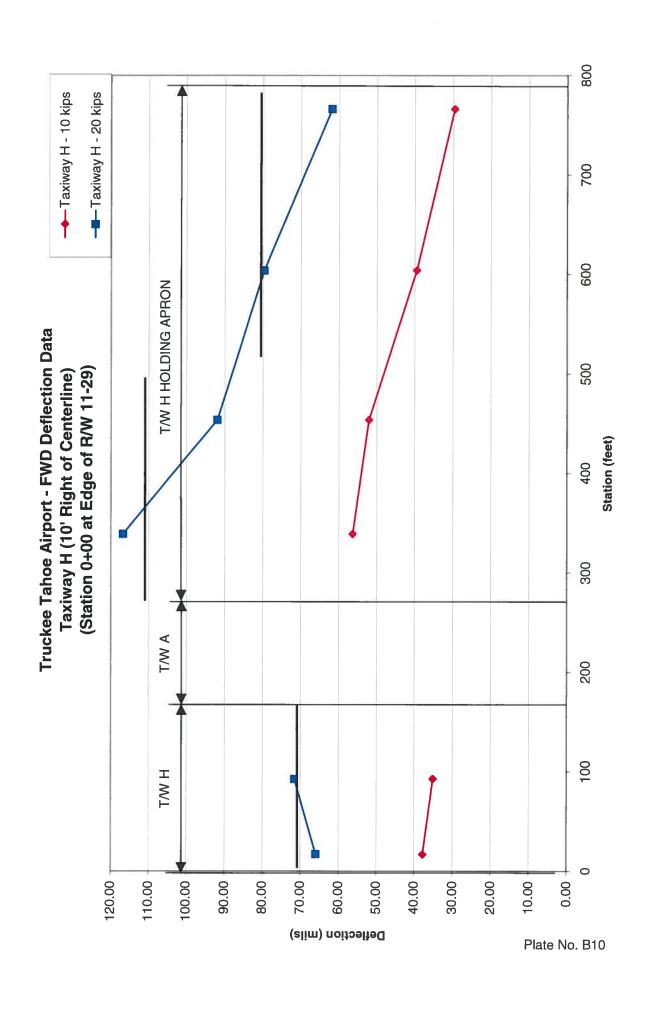


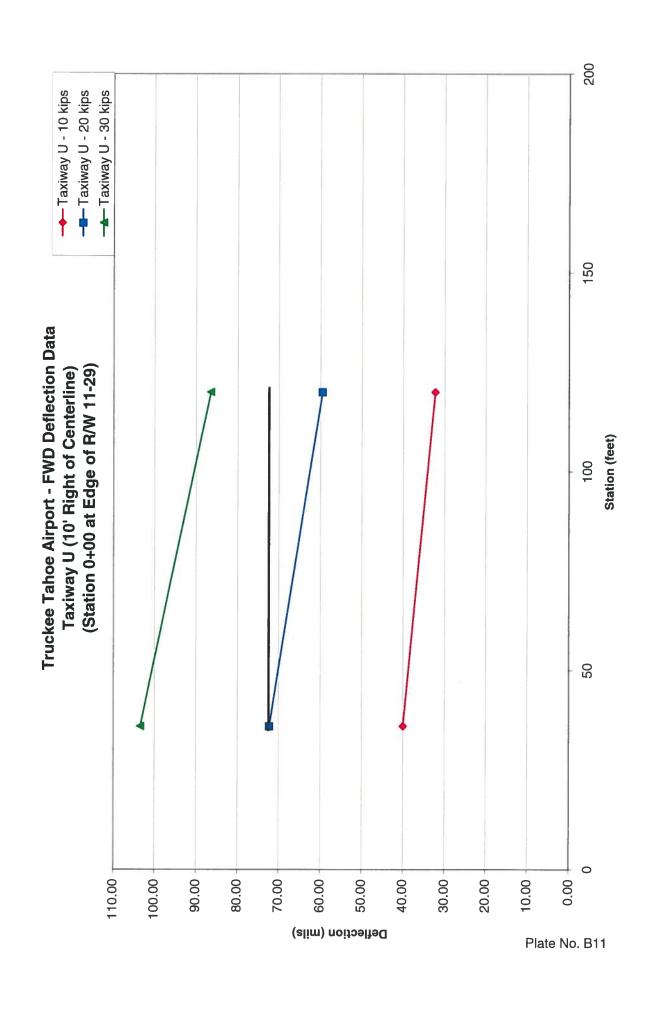


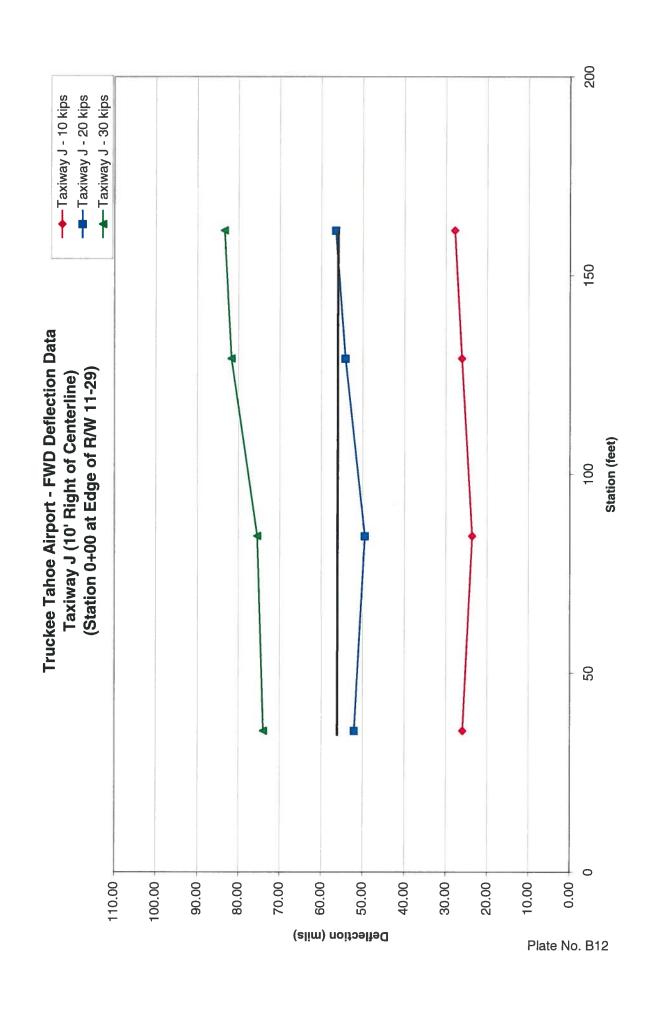


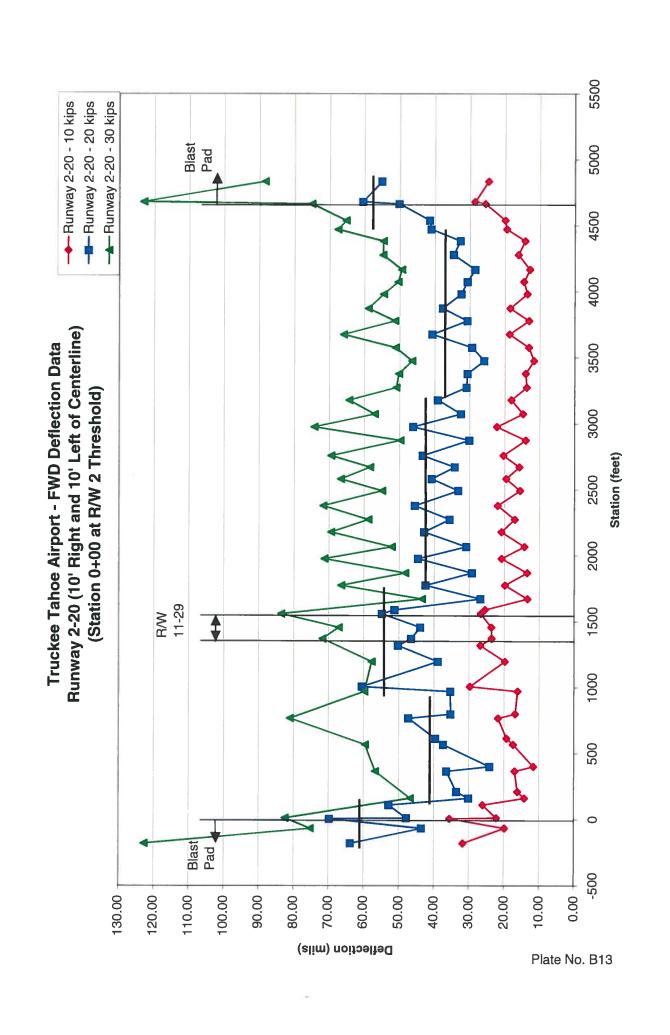


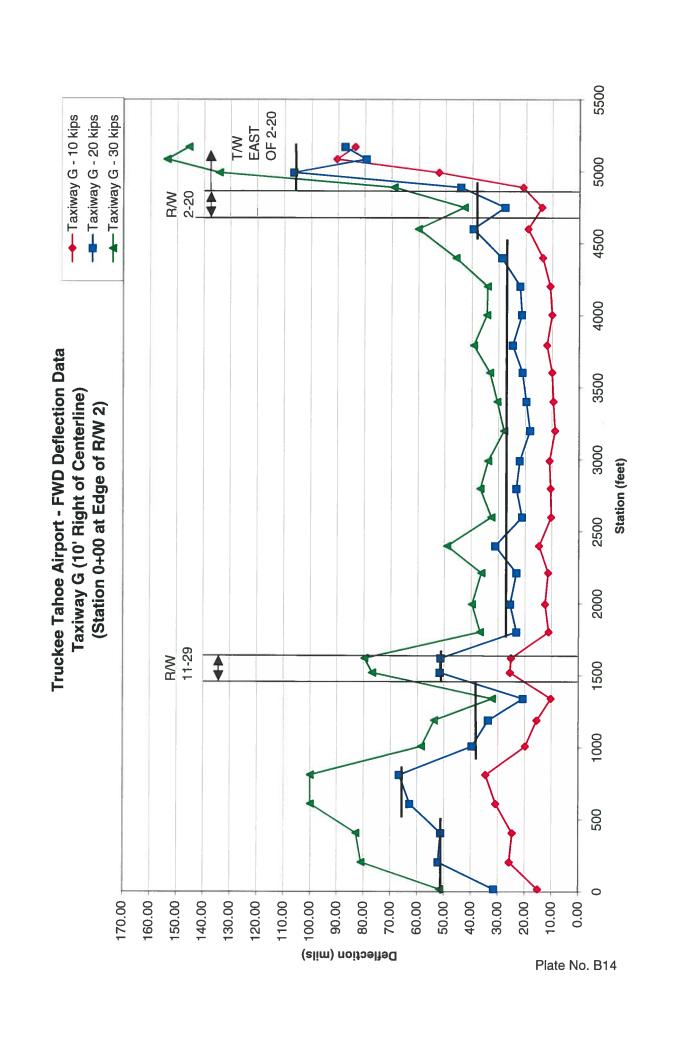


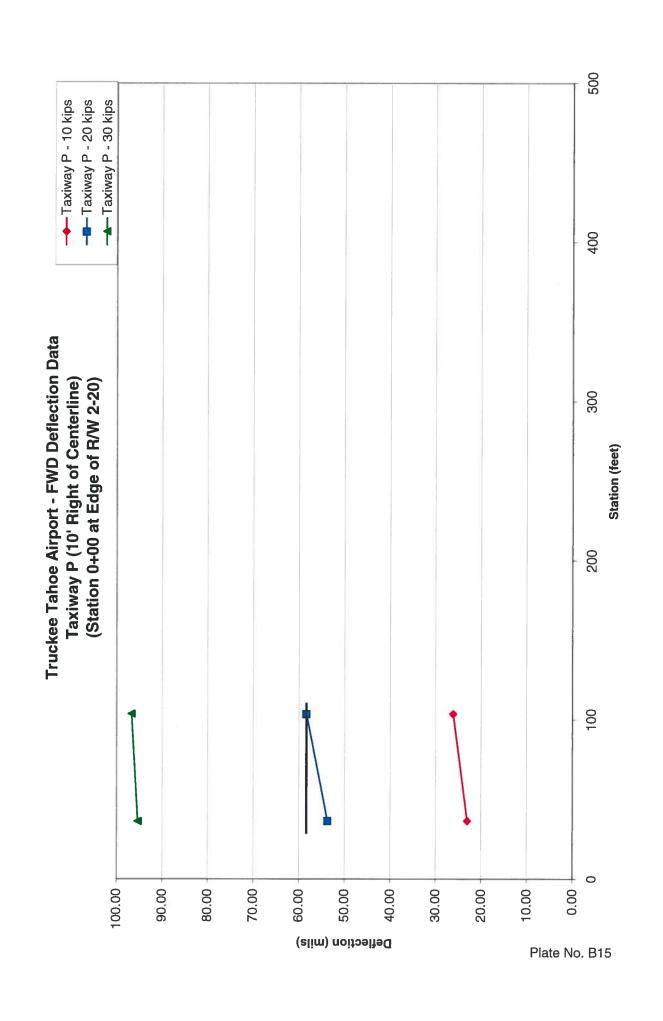


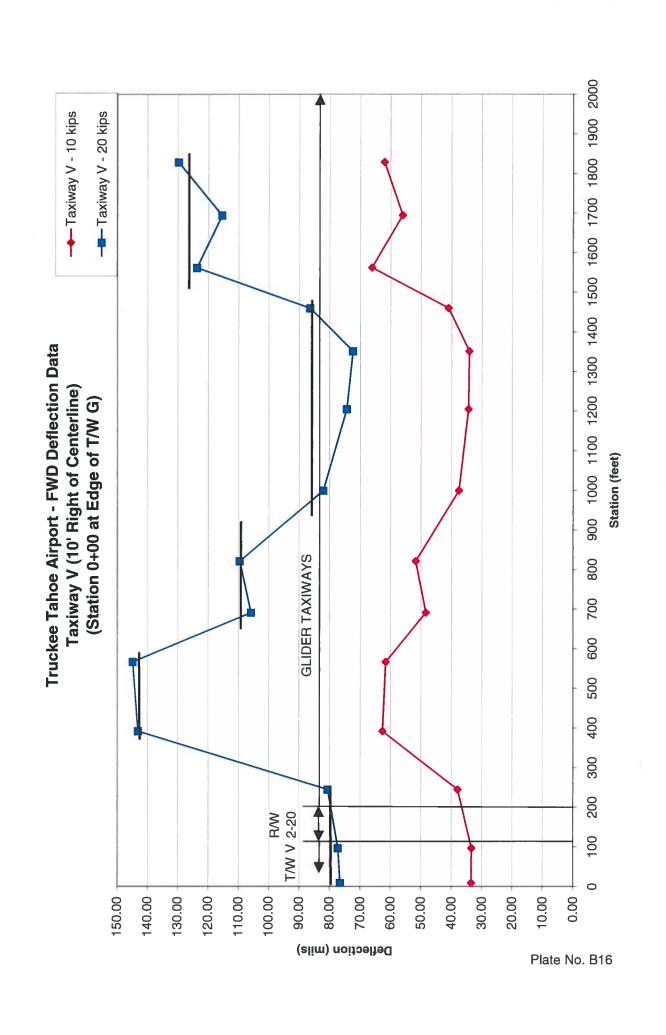


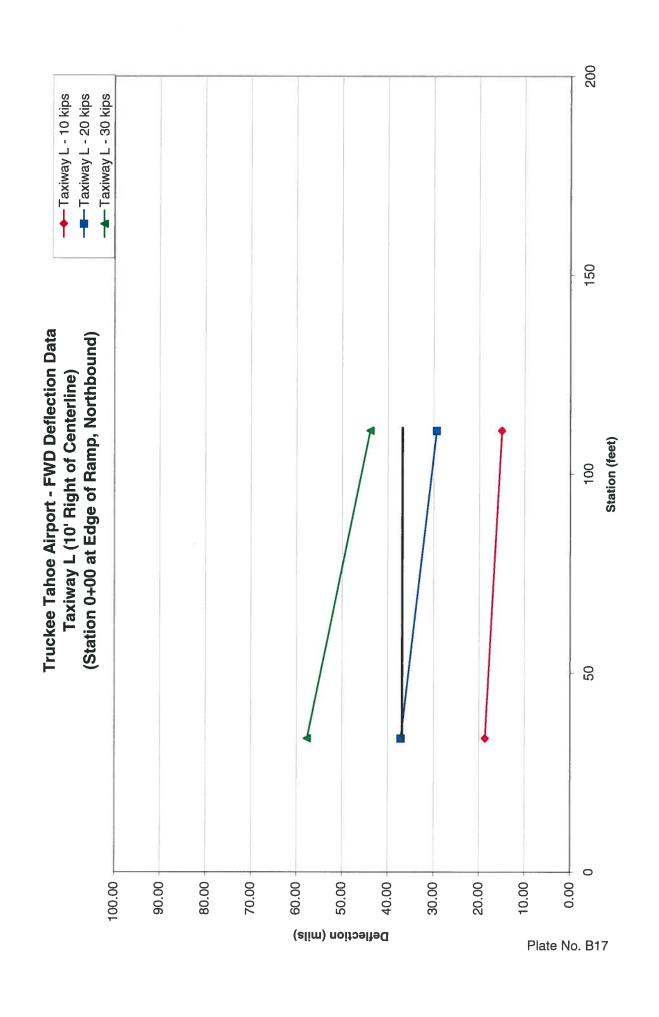


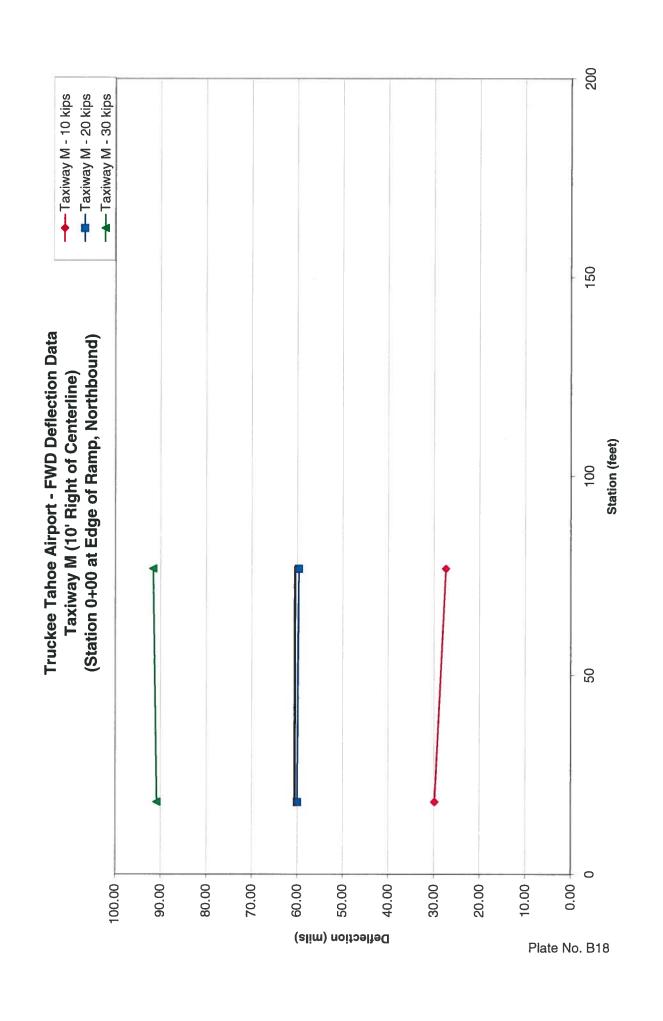


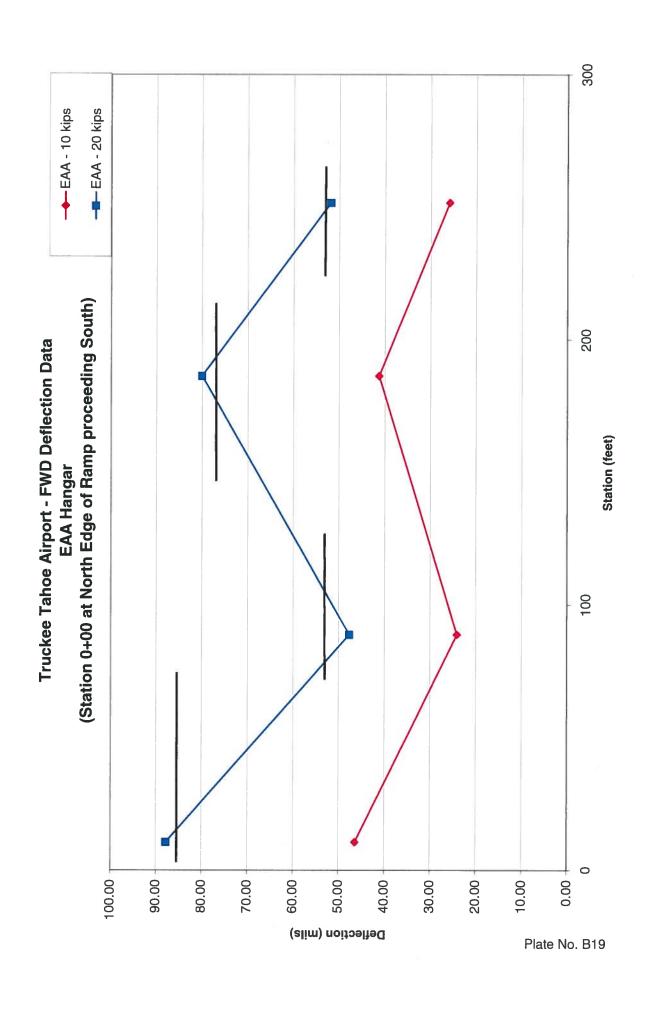


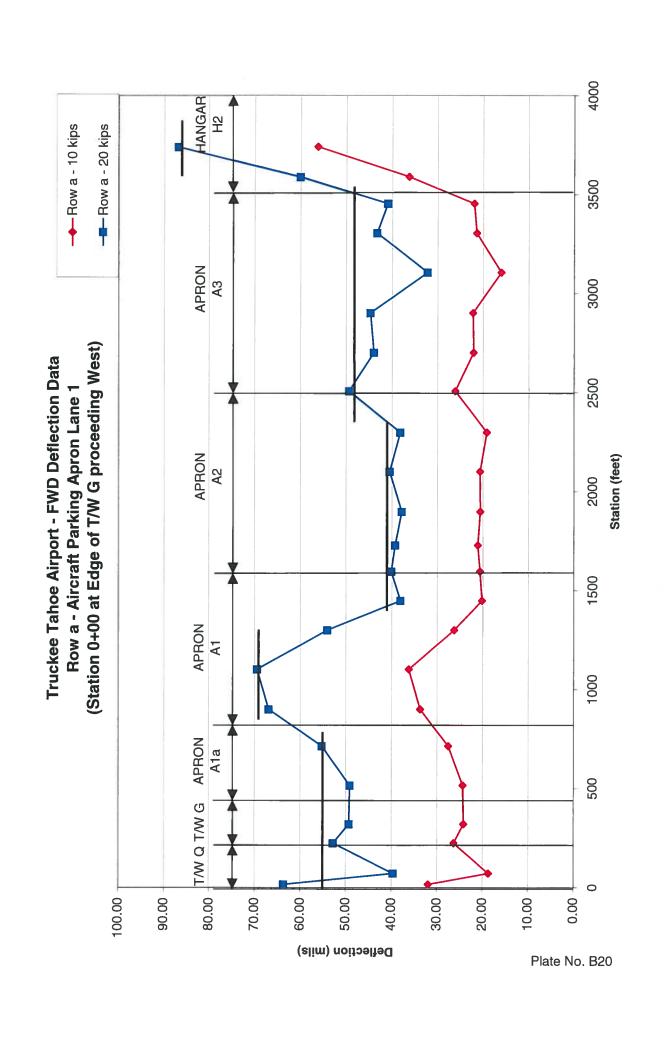


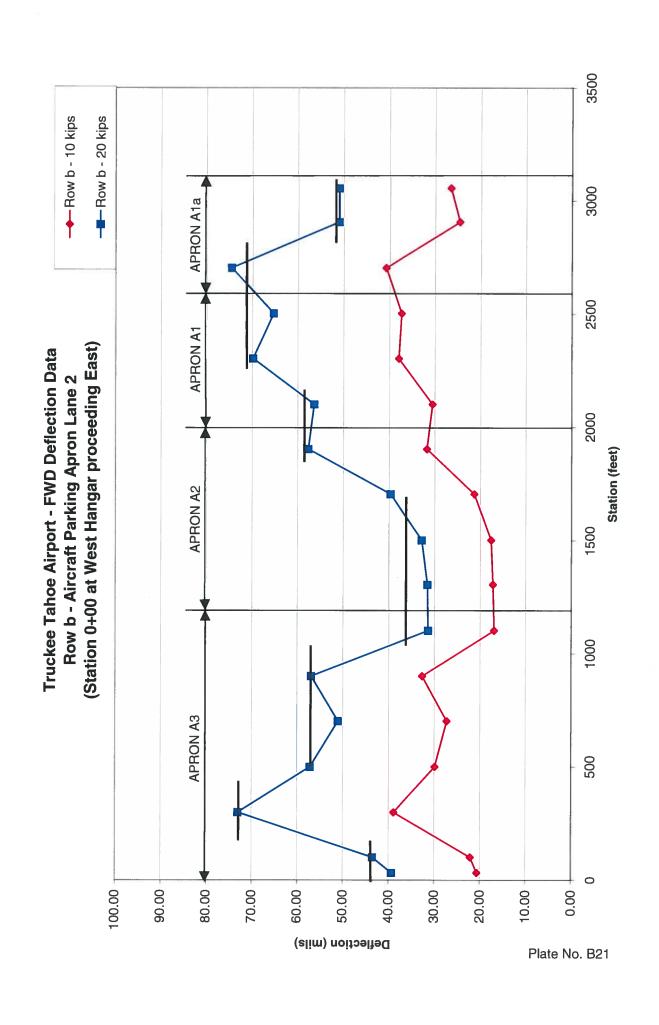


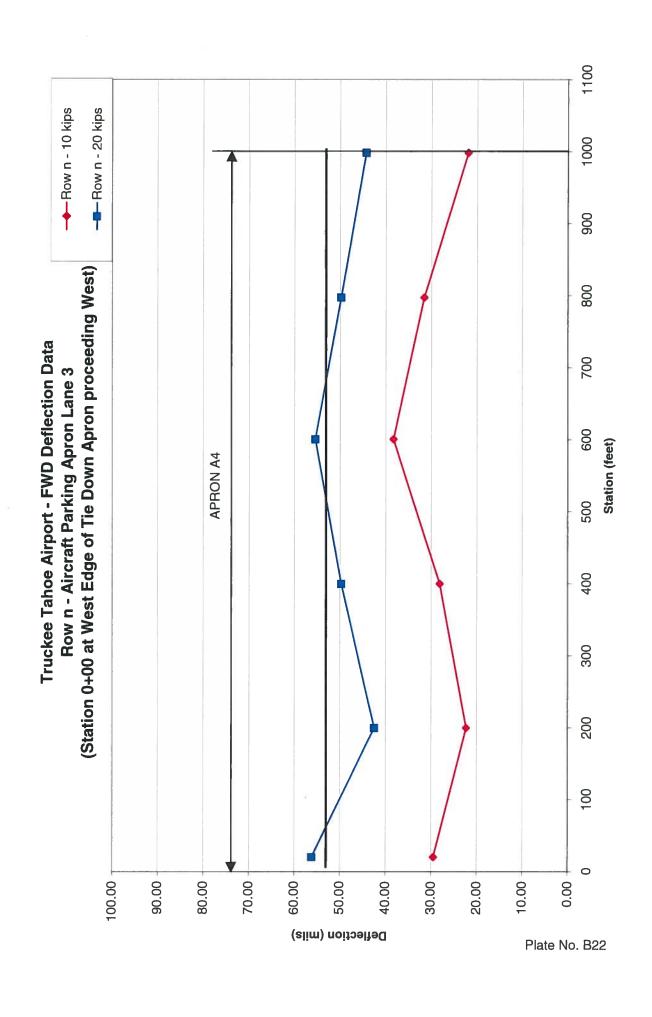


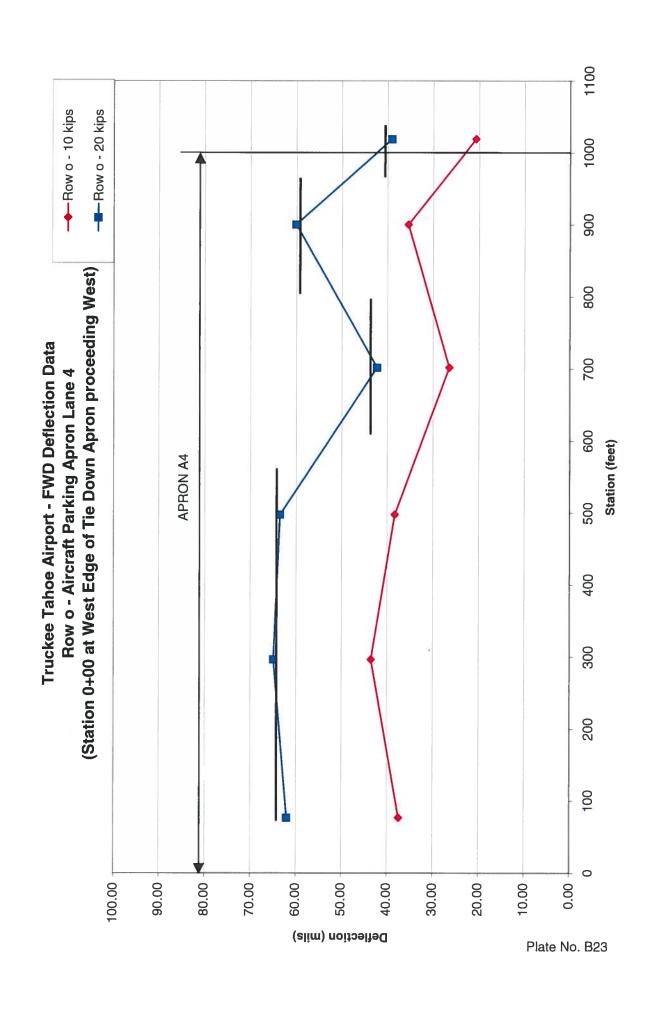


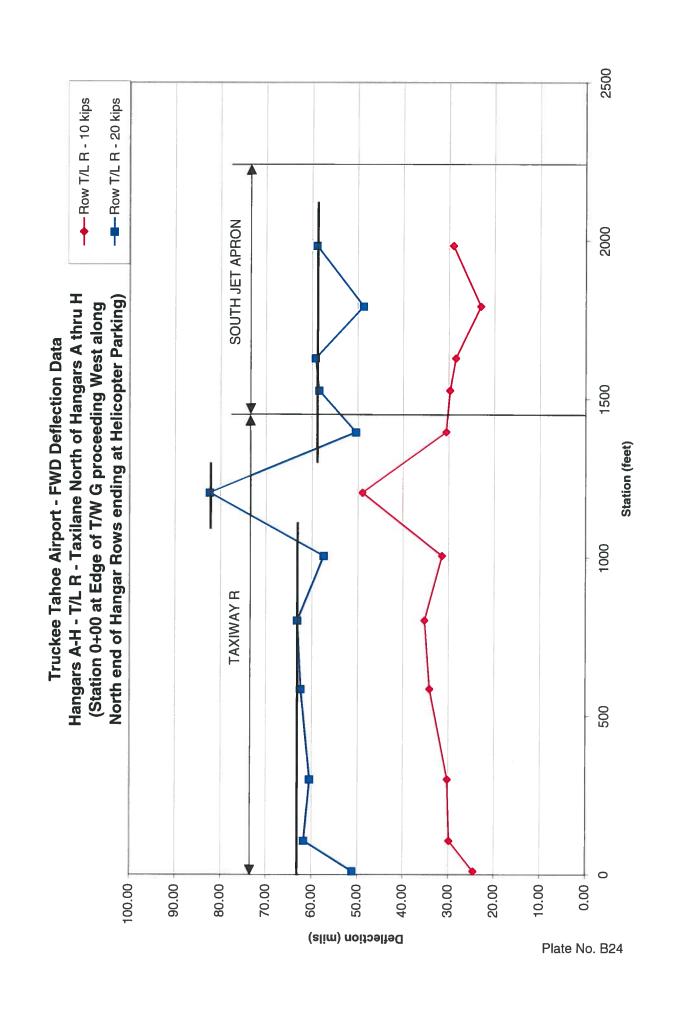


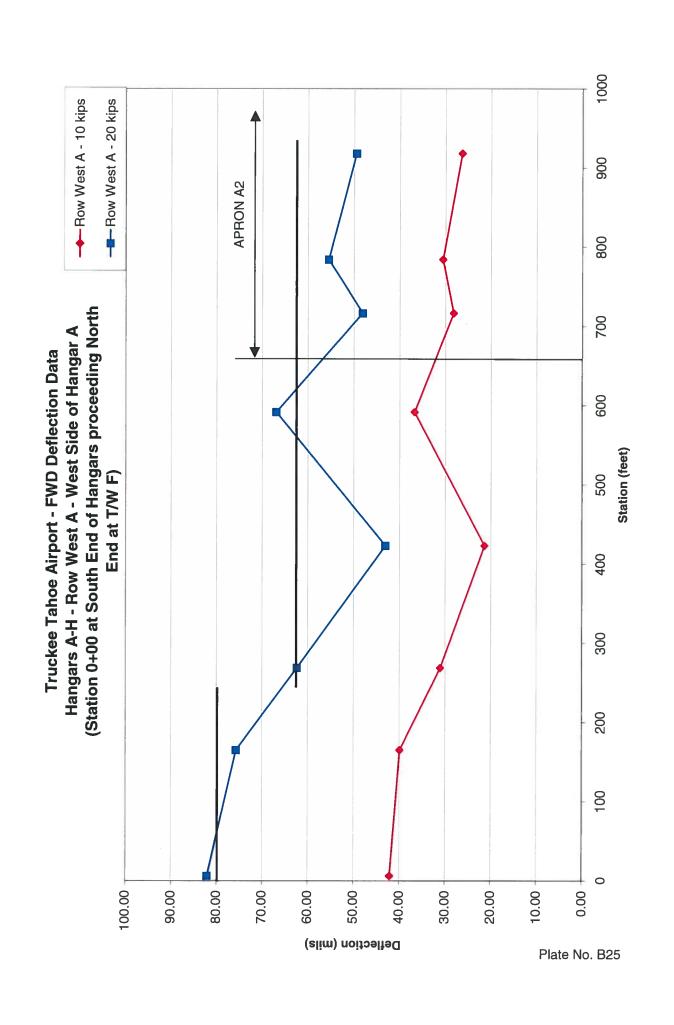


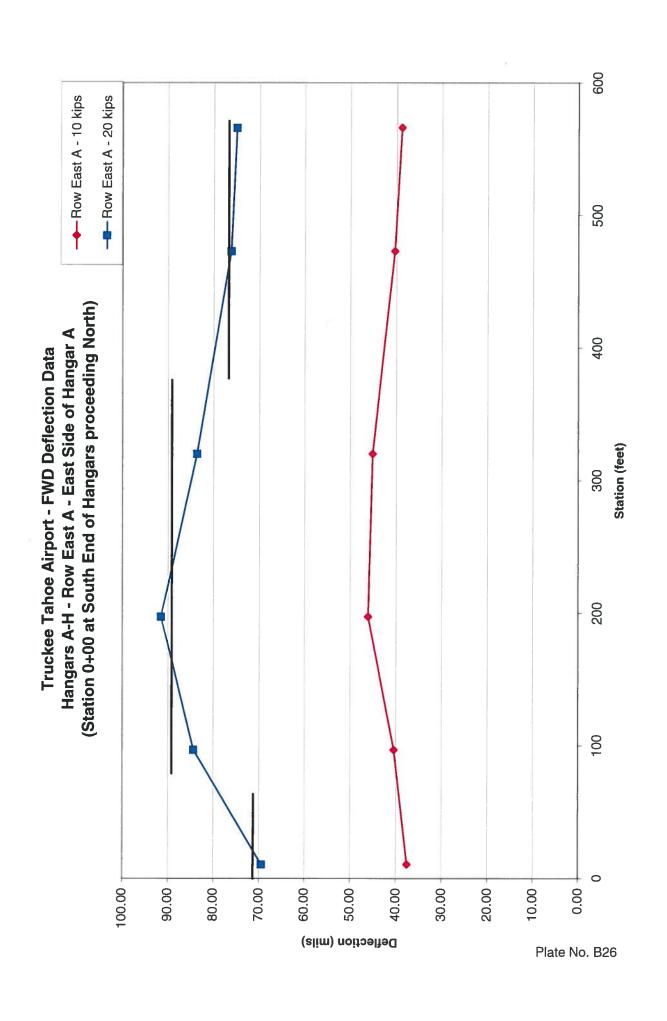


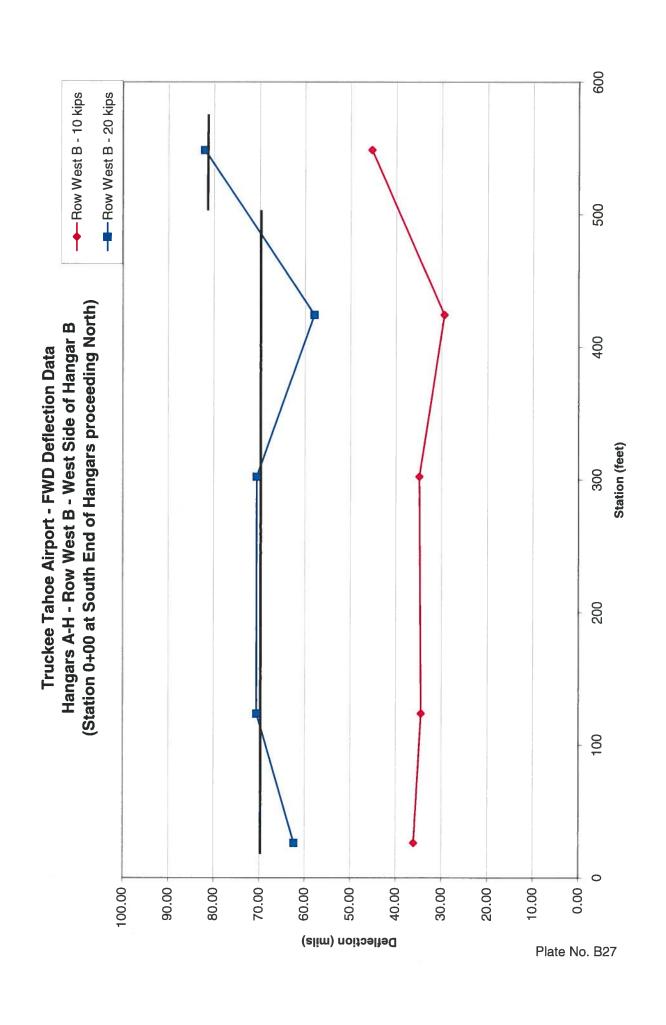


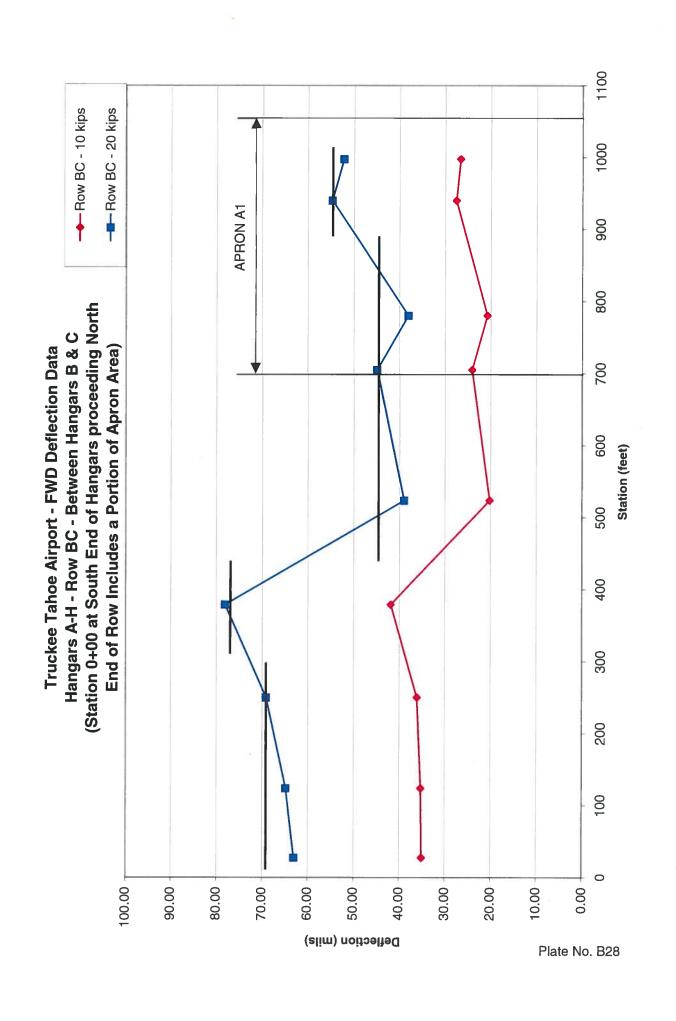


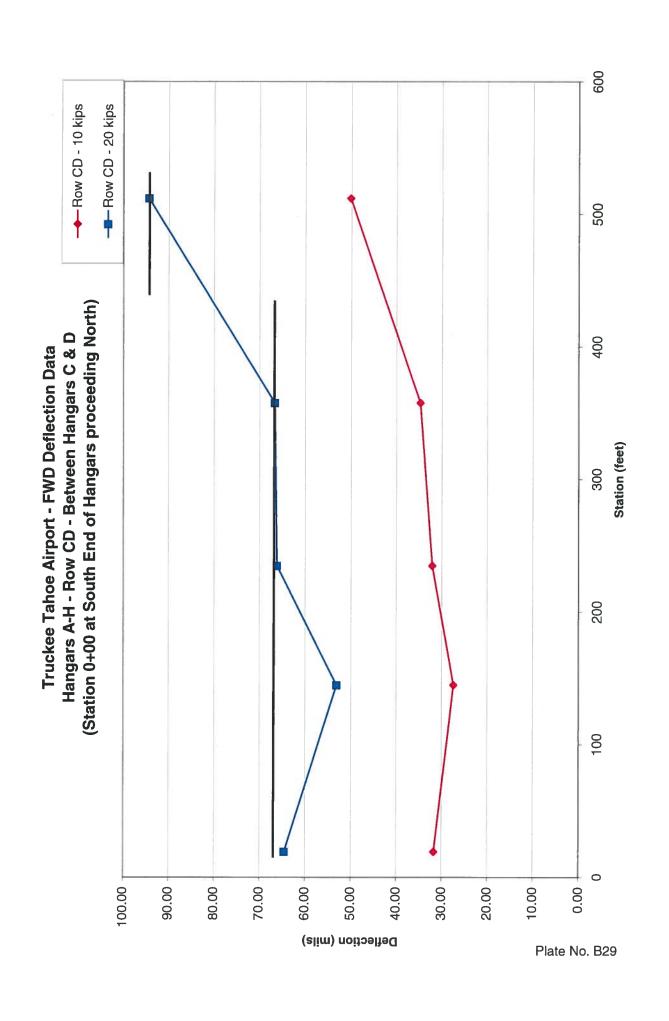


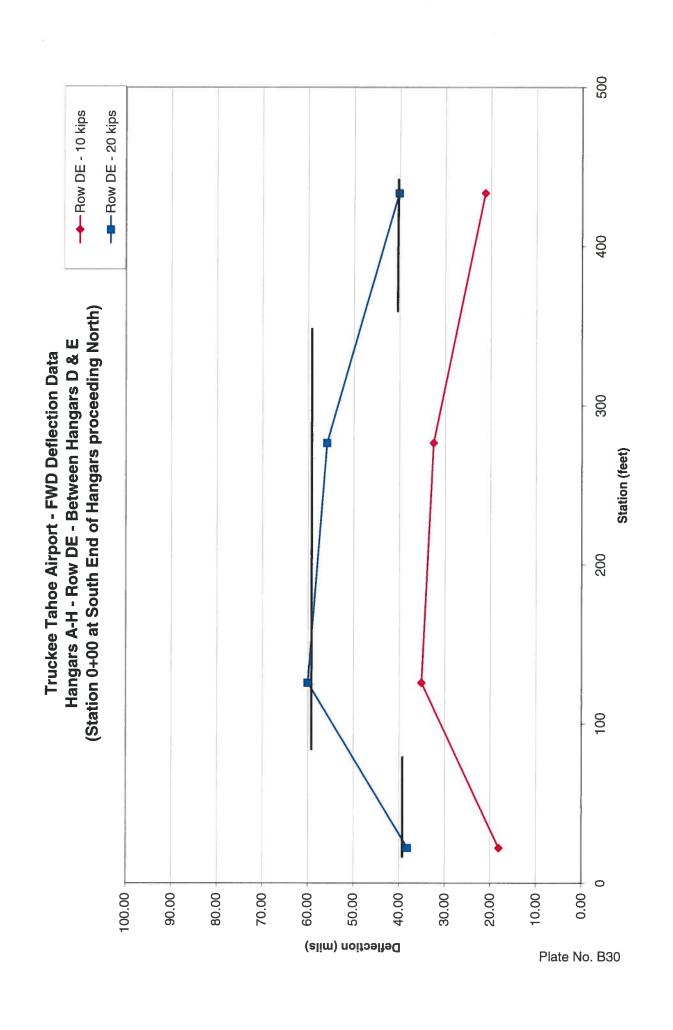


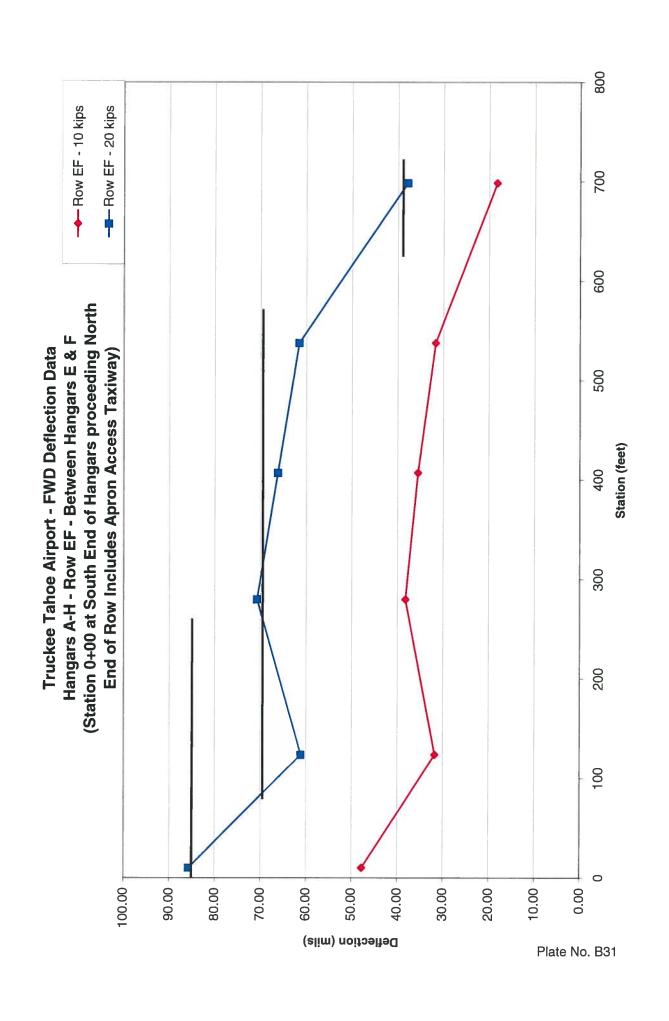


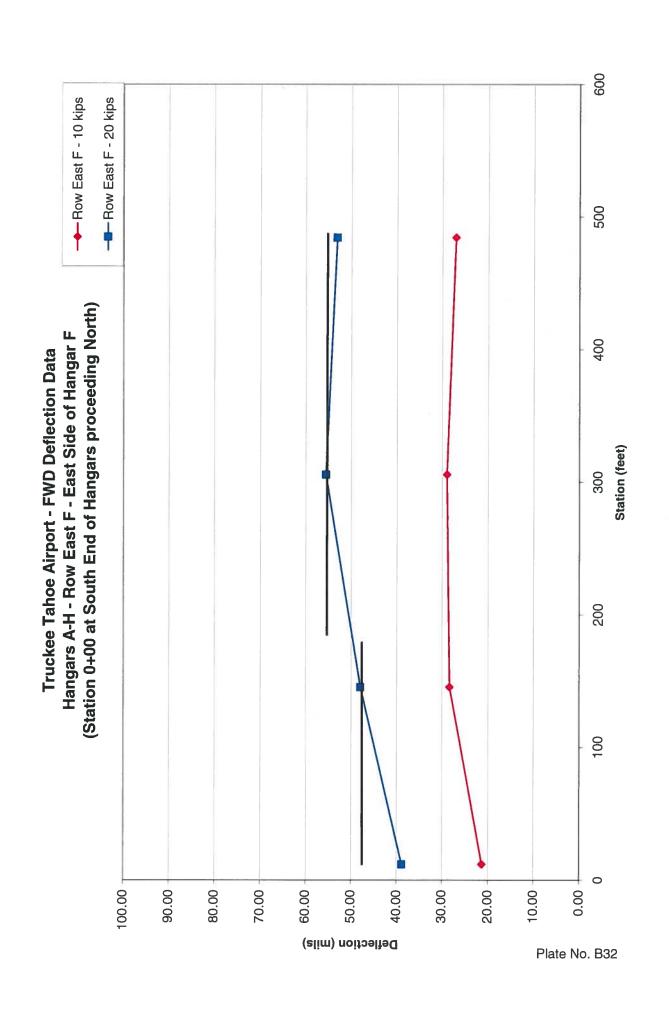


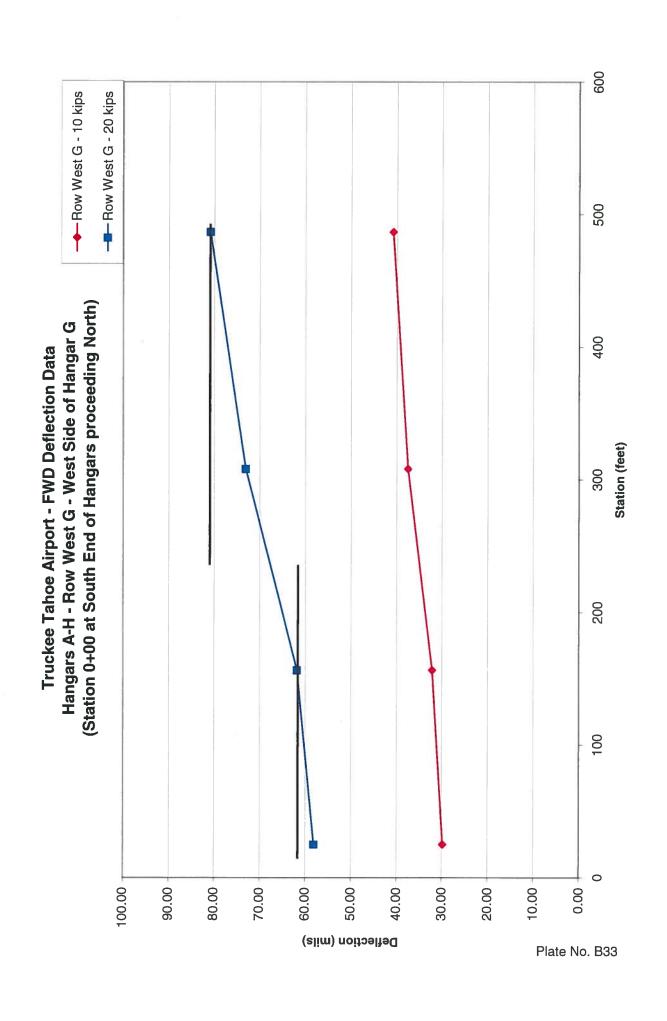


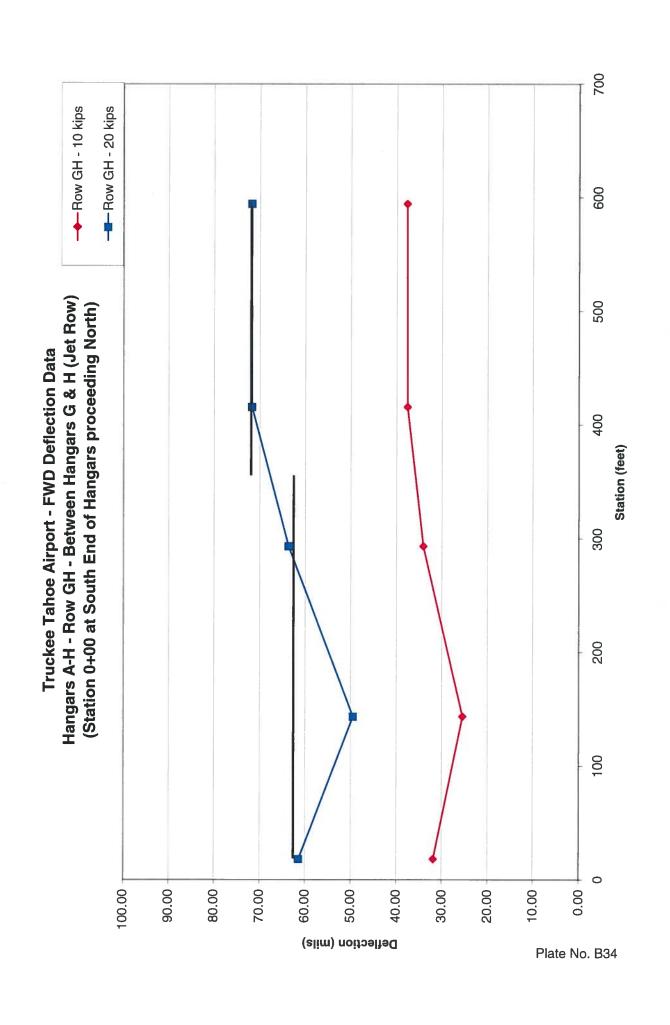


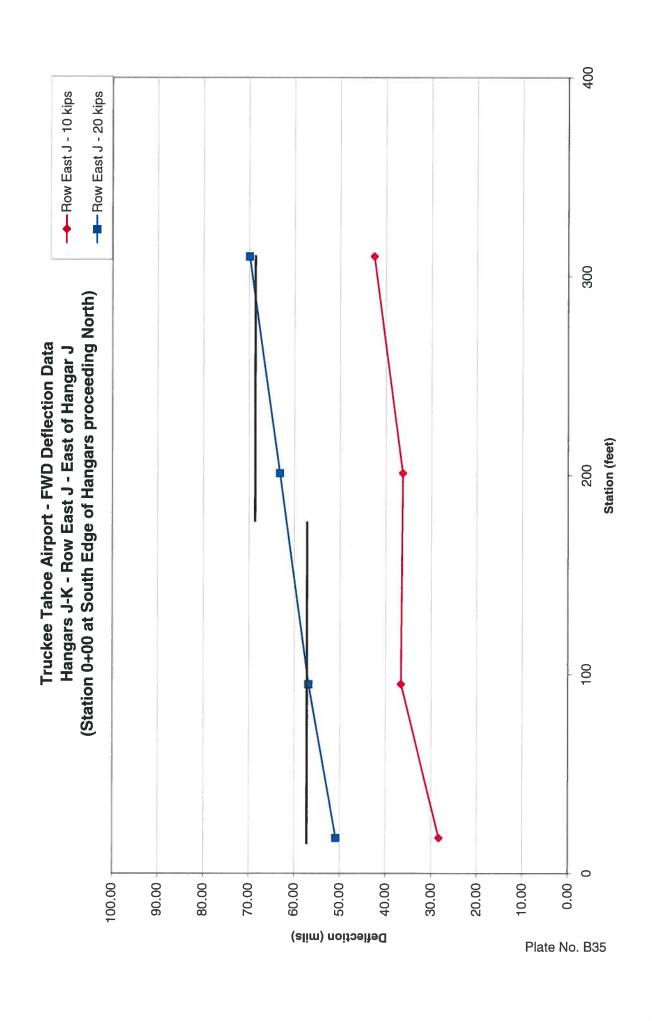


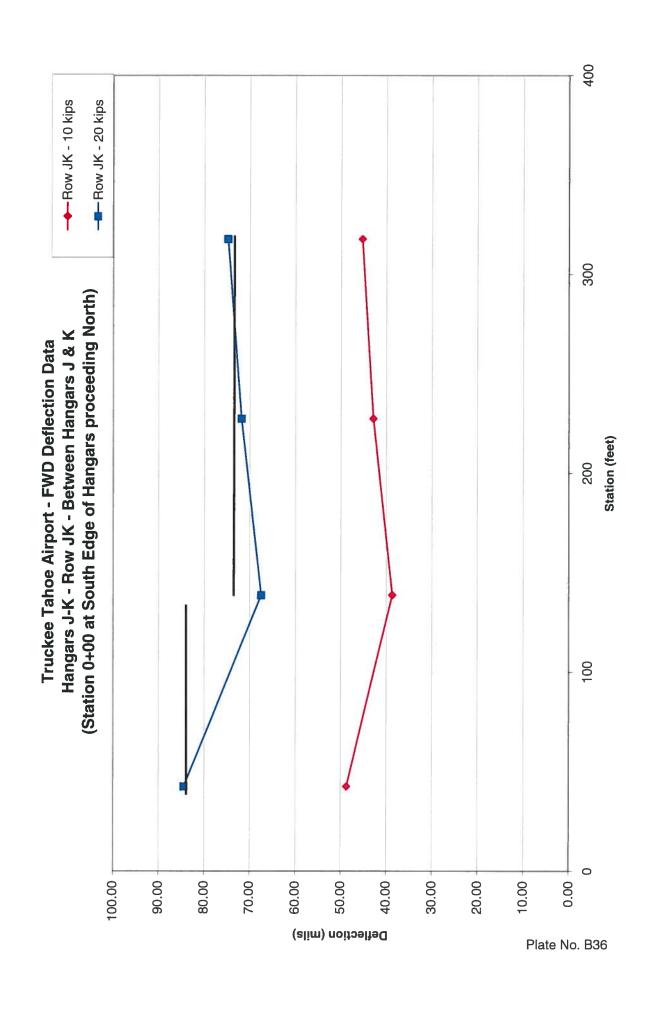


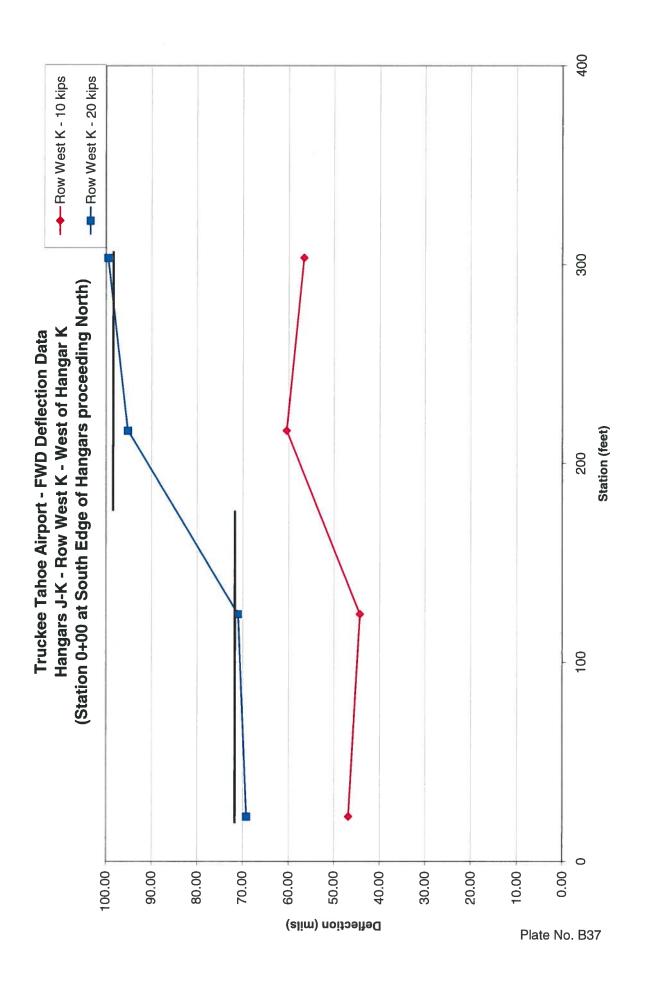


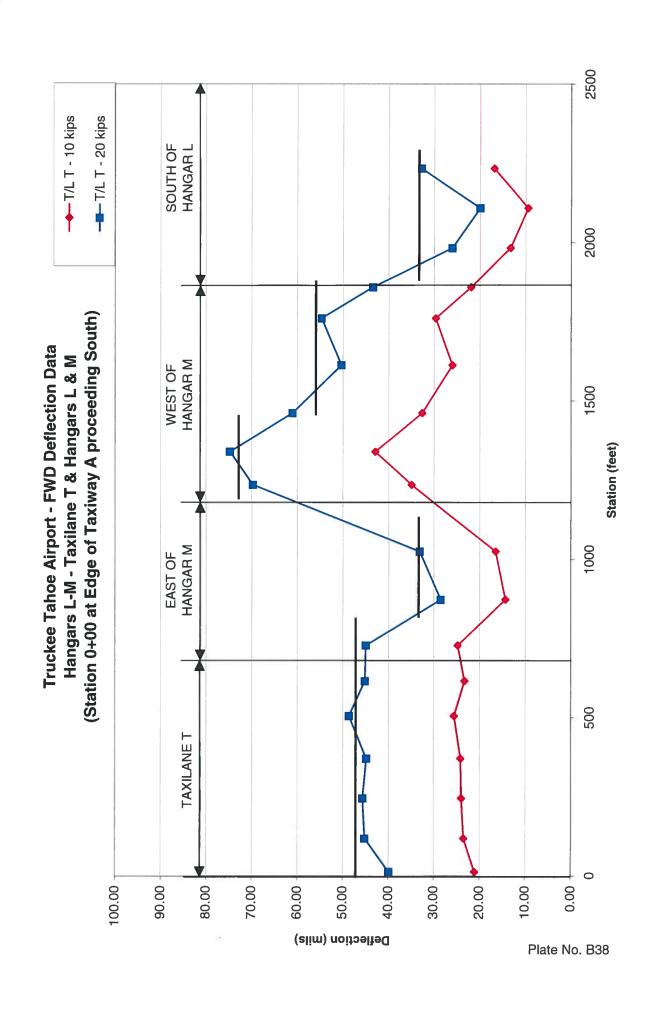


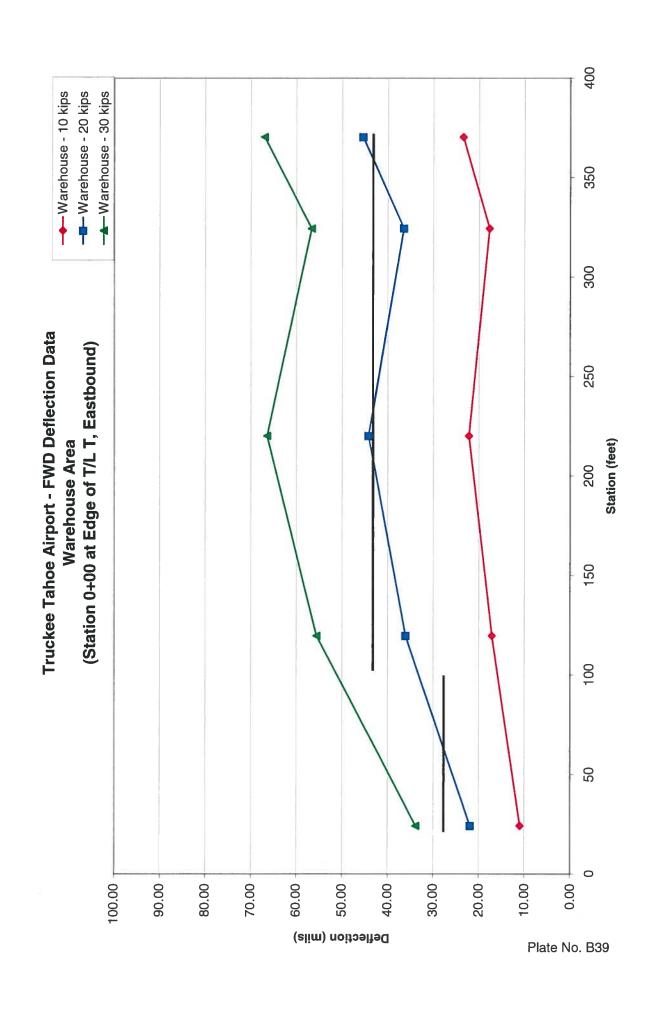


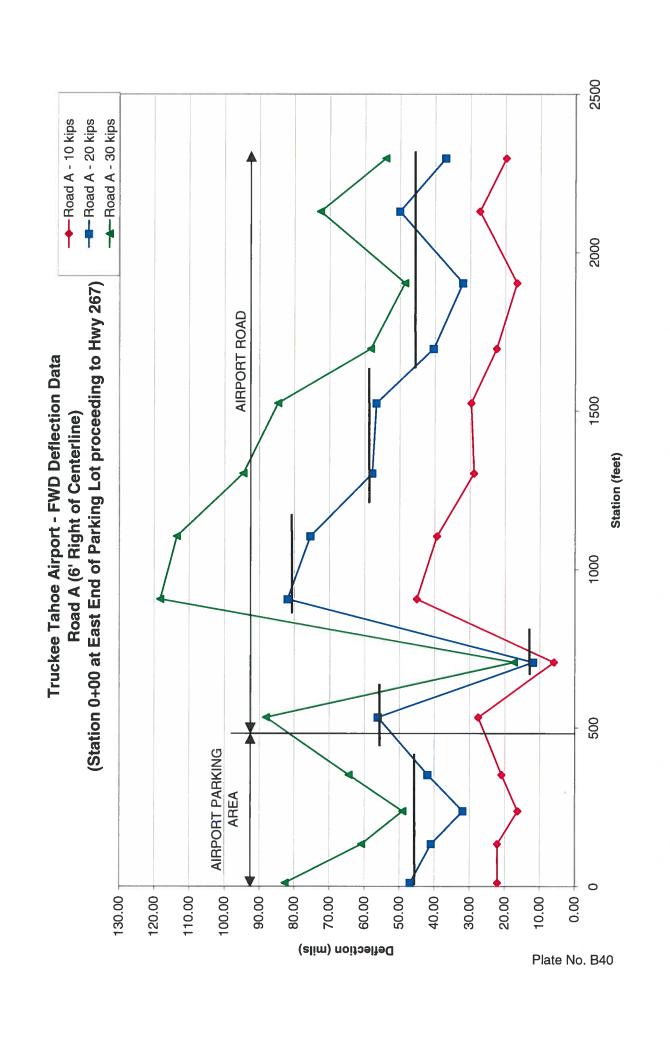


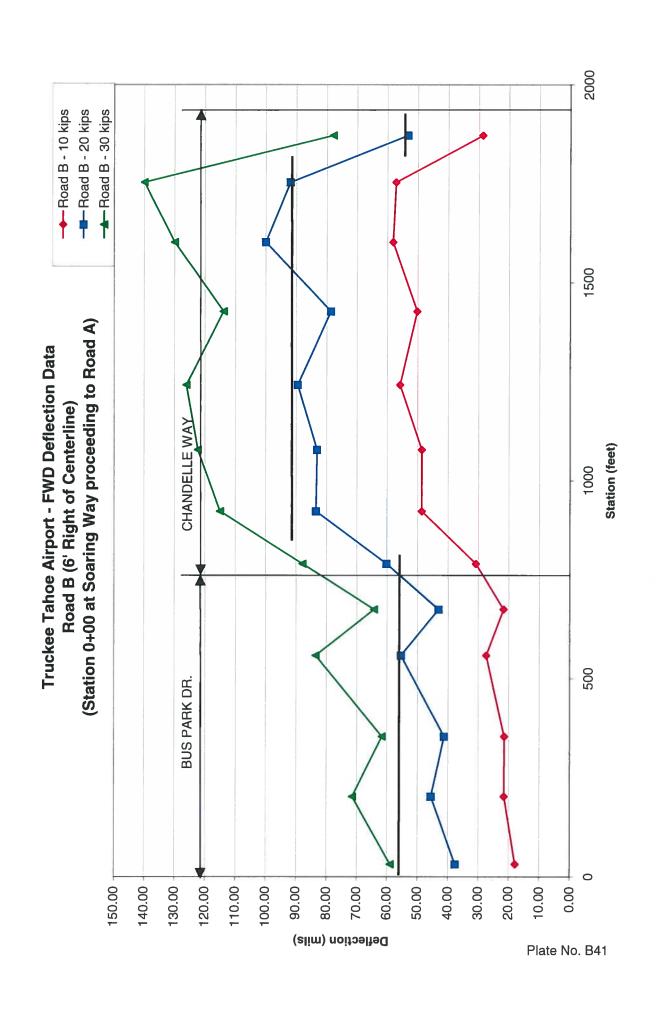












TRUCKEE TAHOE AIRPORT PAVEMENT EVALUATION STUDY PAVEMENT MAINTENANCE/MANAGEMENT PLAN

Appendix C Pavement Condition Survey

As an aid in determining the performance to date of the existing pavements and to provide a guide for the test program to be conducted in this study a detailed condition survey of all existing pavements was made. This survey consisted of visually observing all pavements and noting deficiencies in areas of distress. A copy of the drawing identifying the pavements surveyed is included in this appendix as Sheet No. C1.

The Pavement Condition Survey and Rehabilitation Schedules shown in Tables C1 through C72 include the following information for each pavement segment evaluated, if available:

- F.A.A. Pavement Strength Survey
- F.A.A. Existing Pavement Section, FAA Form 5335
- Date constructed
- Rehabilitation record
- Pavement condition including Pavement Condition Index (PCI)
- Pavement evaluation
- Pavement remaining life analysis
- Recommended rehabilitation.

Routine remarking of the pavements is required every 2 to 3 years. The scheduled remarking is not shown in Appendix C or Table 4-3 due to space limitations, but it is included in the rehabilitation and maintenance schedules.

The results of the new Pavement Condition Survey conducted in the 2013 Update have been added to this report and show the changes in pavement conditions resulting from rehabilitation of some sections and the effect of 2 more years of use and weathering on all pavements.

A table of contents of this appendix is shown below:

Plates

Plate No. C1

Pavement Segment Identification

Tables - Pavement Condition Survey and Rehabilitation Schedule

Tables No. C1 through C8

Runway 11-29

TRUCKEE TAHOE AIRPORT PAVEMENT EVALUATION STUDY PAVEMENT MAINTENANCE/MANAGEMENT PLAN

Appendix C Pavement Condition Survey

<u>Tables – Pavement Condition Survey and Rehabilitation Schedule</u> (Continued)

Tables No. C9a through C14 Tables No. C15a through C16 Tables No. C17a through C18 Table No. C19a through 19b Tables No. C20a through C21 Tables No. C22 through C24 Table No. C25 Table No. C26	Taxiway A Taxiway C Taxiway D Taxiway E Taxiway F Taxiway H Taxiway U Taxiway J
Tables No. C27 through C31 Tables No. C32 through C37 Table No. C38 Table No. C39 Table No. C40	Runway 2-20 Taxiway G Taxiway P Taxiway V Taxiway Q
Tables No. C41a through C41c Tables No. C42 through C44 Tables No. C45 through C47 Tables No. C48 through C51 Tables No. C52 through C54 Table No. C55	Apron A1a & EAA Apron A1 Apron A2 Apron A3 Apron A4 South Jet Apron
Tables No. C56 through C67 Tables No. C68 through C70 Tables No. C71 through C72	Hangars A-H Hangars J-K Hangars L-M

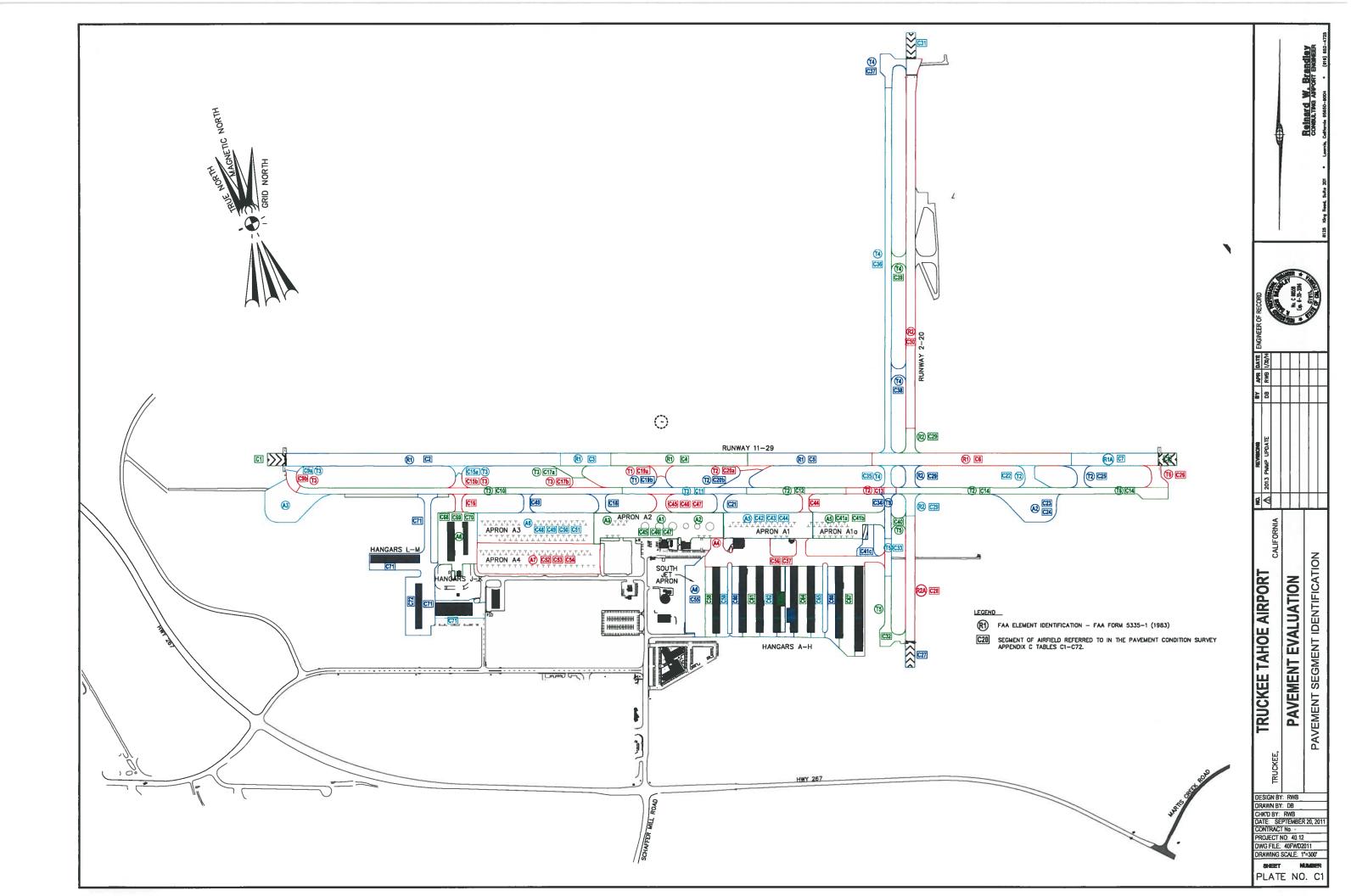


TABLE	NO. C1 - PA	AVEMENT CON	IDITION SURVE	Y AND	REHABILI	TATION SCH	IEDULE
					Date of		§ 6, 2011
Airport:		Truckee-Tah	oe Airport		Survey:		013 Update
Element:	Runway 11	-29					·
Station:	West Blast	Pad - Sta1+5	0 to 0+00			**	
Dimensions:	100' x 150'						
FAA Pavemen	_	•	None				
Element Ident	ification (Fo						
			s - inches		ksi	μ	Remarks
	DEC	2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC	No Data					
Section:	AC						
	AB						
	ASB						
	Subgrade						
	Sub-soil						
Date Construc	ted:				HELIAN		
Rehabilitation	Record:	Date			Туре		
		1986, 2012	2012 - Reconst	ruction (Add 2" Roo	ck, Pulverize,	+ 3"AC)
Pavement Cor	ndition:	No Grooves, Jo	oints, or Cracks				
Weathering - L							
No Rutting, She	oving, or Ra		·				2011 PCI = 60
		Pavement Rati					2013 PCI = 95
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis		ARFIELD
Traffic Index			Maintenan	ce Equipr	ment	Maintenand	e Equipment
		ion - 20 K Load					
		ing Life - Years					
		Year of Failure					
Recommende		ation:					
	Rehab.						
Date	Code			Descri	•	Moran Mark	
2026	F, H				Joints, Fog		
2031	G		Crack Re	pair, Sea	l Cracks &	Joints	
				-			
					···		-
Damaria	Otation In		atad at Down	al al ala	الماماء		
Remarks:	199.4		ated at Runway				ISÍ.
			e for section - Se				0.00
	For Traffic I	naex see Appe	ndix D. For Reh	abilitatio	n Code se	e Tables 3-1	& 3-3.

Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 013 Update		
Element:	Runway 11	-29							
Station:	0+00 to 22-	+00							
Dimensions:	100' x 2200)'			I.				
FAA Pavemer			R1 Single	Gear - 60) kins				
Element Ident		•		iear - 100					
	74 May 10 M	Thicknes	s - inches		ksi	μ	Remarks		
		2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC								
Section:	AC	4	3	150	350	0.35			
	AB	8	14	40	40	0.35			
	ASB	-	<u> </u>						
	Subgrade	48	48	10	10	0.35			
	Sub-soil	S.I.	S.I.	25	25	0.35			
Date Constru	cted:	1963							
Rehabilitation	Record:	Date	Туре						
		1986, 2012 2012 - Reconstruction (Add 2" Rock, Pulverize, + 3"AC)							
			2012 - 11600118	illuction (Aug 2 Hou	ck, Pulverize,	+ 3"AC)		
			2012 - Necons	arucuon (Add 2 Hot	ck, Pulverize,	+ 3"AC)		
<u> </u>	100					ck, Pulverize,	+ 3"AC)		
Pavement Co	ndition:	Grooved (center				ck, Pulverize,	+ 3"AC)		
Pavement Co	ndition:					ck, Pulverize,	+ 3"AC)		
Pavement Co						ck, Pulverize,	+ 3"AC)		
Weathering - L	ight	Grooved (center							
Weathering - L	ight	Grooved (cente	er 80'), no joints				2011 PCI = 60		
Weathering - L No Rutting, Sh	ight oving, or Ra	Grooved (center) velling Pavement Rati	er 80'), no joints	s, no crac	ks.		2011 PCI = 6(2013 PCI = 9		
Weathering - L No Rutting, Sh	ight oving, or Ra	Grooved (cente	er 80'), no joints	s, no crac	ks.		2011 PCI = 60		
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F	ight oving, or Ra Remaining L	velling Pavement Rati	er 80'), no joints ng = Excellent Brandley - F	atigue A	ks.	FAA - FA	2011 PCI = 6 2013 PCI = 9 ARFIELD		
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Stru	ight oving, or Ra Remaining L Plate Deflecticture Remain	velling Pavement Rati Life Analysis ion - 25 K Load ing Life - Years	er 80'), no joints ng = Excellent Brandley - F	atigue A	ks. nalysis	FAA - FA	2011 PCI = 6 2013 PCI = 9 ARFIELD A1		
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Stru	ight oving, or Ra Remaining L Plate Deflecticture Remain	velling Pavement Rati	er 80'), no joints ng = Excellent Brandley - F A 43-88 (75)	atigue A	nalysis A1 88 (75)	FAA - FA A 43-88 (75)	2011 PCI = 6 2013 PCI = 9 ARFIELD A1 43-88 (75)		
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Struct Pavement Struct 2013 U	ight oving, or Ra Remaining L Plate Deflecti cture Remain cture Estimate	velling Pavement Rati Life Analysis ion - 25 K Load ing Life - Years e Year of Failure ining Life - Years	er 80'), no joints ng = Excellent Brandley - F A 43-88 (75) 36	atigue A	nalysis A1 88 (75)	FAA - FA A 43-88 (75) 0.2	2011 PCI = 6 2013 PCI = 9 ARFIELD A1 43-88 (75) 0.2		
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Strue Pavement Strue 2013 Up	ight oving, or Ra Remaining L Plate Deflecti cture Remain cture Estimate pdated Remai date Estimate	velling Pavement Rati Life Analysis ion - 25 K Load ing Life - Years e Year of Failure ining Life - Years d Year of Failure	er 80'), no joints ng = Excellent Brandley - F A 43-88 (75) 36 2047	atigue A	nalysis A1 88 (75) 25	FAA - FA A 43-88 (75) 0.2	2011 PCI = 6 2013 PCI = 9 ARFIELD A1 43-88 (75) 0.2		
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Strue Pavement Strue 2013 Up	ight oving, or Ra Remaining L Plate Deflecti cture Remain cture Estimate odated Remai date Estimate d Rehabilita	velling Pavement Rati Life Analysis ion - 25 K Load ing Life - Years e Year of Failure ining Life - Years d Year of Failure	ng = Excellent Brandley - F A 43-88 (75) 36 2047 117	atigue A	nalysis A1 88 (75) 25 036 85	FAA - FA A 43-88 (75) 0.2	2011 PCI = 60 2013 PCI = 99 ARFIELD A1 43-88 (75) 0.2		
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Strue Pavement Strue 2013 Up 2013 Up Recommende	ight oving, or Ra Remaining L Plate Deflecti cture Remain cture Estimate pdated Remai date Estimate d Rehabilita Rehab.	velling Pavement Rati Life Analysis ion - 25 K Load ing Life - Years e Year of Failure ining Life - Years d Year of Failure	ng = Excellent Brandley - F A 43-88 (75) 36 2047 117	atigue A	nalysis A1 88 (75) 25 036 85 098	FAA - FA A 43-88 (75) 0.2	2011 PCI = 60 2013 PCI = 99 ARFIELD A1 43-88 (75) 0.2		
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Struct 2013 Up 2013 Up Recommende Date	ight oving, or Ra Remaining L Plate Deflection of the Estimate of the Estima	velling Pavement Rati Life Analysis ion - 25 K Load ing Life - Years e Year of Failure ining Life - Years d Year of Failure	er 80'), no joints ng = Excellent Brandley - F A 43-88 (75) 36 2047 117 2130	atigue A 43-8	nalysis A1 88 (75) 25 036 85 098	FAA - FA A 43-88 (75) 0.2 2011	2011 PCI = 60 2013 PCI = 99 ARFIELD A1 43-88 (75) 0.2		
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Strue 2013 Up 2013 Up Recommende Date 2026	ight oving, or Ra Remaining L Plate Deflecticure Remain cture Estimate odated Remain date Estimate d Rehabilita Rehab. Code F, H	velling Pavement Rati Life Analysis ion - 25 K Load ing Life - Years e Year of Failure ining Life - Years d Year of Failure	er 80'), no joints ng = Excellent Brandley - F A 43-88 (75) 36 2047 117 2130	atigue A 43-8 20 Descri Seal New	ks. nalysis A1 88 (75) 25 036 85 098 ption Joints, Fog	FAA - FA A 43-88 (75) 0.2 2011 - -	2011 PCI = 60 2013 PCI = 99 ARFIELD A1 43-88 (75) 0.2		
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Struct 2013 Up 2013 Up Recommende Date	ight oving, or Ra Remaining L Plate Deflection of the Estimate of the Estima	velling Pavement Rati Life Analysis ion - 25 K Load ing Life - Years e Year of Failure ining Life - Years d Year of Failure	er 80'), no joints ng = Excellent Brandley - F A 43-88 (75) 36 2047 117 2130	atigue A 43-8 20 Descri Seal New	nalysis A1 88 (75) 25 036 85 098	FAA - FA A 43-88 (75) 0.2 2011 - -	2011 PCI = 6 2013 PCI = 9 ARFIELD A1 43-88 (75) 0.2		
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Strue 2013 Up 2013 Up Recommende Date 2026	ight oving, or Ra Remaining L Plate Deflecticure Remain cture Estimate odated Remain date Estimate d Rehabilita Rehab. Code F, H	velling Pavement Rati Life Analysis ion - 25 K Load ing Life - Years e Year of Failure ining Life - Years d Year of Failure	er 80'), no joints ng = Excellent Brandley - F A 43-88 (75) 36 2047 117 2130	atigue A 43-8 20 Descri Seal New	ks. nalysis A1 88 (75) 25 036 85 098 ption Joints, Fog	FAA - FA A 43-88 (75) 0.2 2011 - -	2011 PCI = 6 2013 PCI = 9 ARFIELD A1 43-88 (75) 0.2		
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Struct 2013 Up 2013 Up Recommende Date 2026 2031	ight oving, or Ra Remaining L Plate Deflective Remaining ture Estimate Deflective Remaining ture Remaining tu	velling Pavement Rati Life Analysis ion - 25 K Load ing Life - Years e Year of Failure ining Life - Years d Year of Failure ation:	er 80'), no joints ng = Excellent Brandley - F A 43-88 (75) 36 2047 117 2130 Saw & Crack R	Patigue A 43-8 20 Descri Seal New epair, Sea	ks. nalysis A1 88 (75) 25 036 85 098 ption Joints, Fog	FAA - FA A 43-88 (75) 0.2 2011 - -	2011 PCI = 6 2013 PCI = 9 ARFIELD A1 43-88 (75) 0.2 2011		
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Strue 2013 Up 2013 Up Recommende Date 2026	ight oving, or Ra Remaining L Plate Deflection of the Estimate of Rehabilitate of Rehabilita	velling Pavement Rati Life Analysis ion - 25 K Load ing Life - Years e Year of Failure ining Life - Years d Year of Failure	er 80'), no joints ng = Excellent Brandley - F A 43-88 (75) 36 2047 117 2130 Saw & Crack R	atigue A 43-8 20 Descri Seal New epair, Sea	ks. nalysis A1 88 (75) 25 036 85 098 ption Joints, Fog	FAA - FA A 43-88 (75) 0.2 2011 Seal Joints	2011 PCI = 6 2013 PCI = 9 ARFIELD A1 43-88 (75) 0.2 2011		

TABLE	NO. C3 - PA	AVEMENT CON	IDITION SURVI	EY AND	REHABILI	TATION SCH	EDULE		
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 013 Update		
Element:	Runway 11	-29							
Station:	22+00 to 26	6+00							
Dimensions:	100' x 400'						····		
FAA Pavemer		Survey -	R1 Single	Gear - 60) kins				
Element Ident	_	-		ear - 100					
		Thicknes	s - inches		ksi	μ	Remarks		
Milk Things	difficient	2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC								
Section:	AC	4	3	150	350	0.35			
	AB	8	14	40	40	0.35			
	ASB		-						
	Subgrade	48	48	10	10	0.35			
	Sub-soil	S.I.	S.I.	25	25	0.35			
Date Constru	cted:	1963					January 1985		
Rehabilitation Record: Date					Туре				
		1986, 2012	2012 - Recons	truction (Add 2" Ro	ck, Pulverize,	+ 3"AC)		
Weathering - L No Rutting, Sh							2011 PCI = 60		
0011 Davis	Damaining I	Pavement Rati					2013 PCI = 95		
	Remaining L	ife Analysis					ARFIELD		
Traffic Index	Plate Deflect	ion - 25 K Load	B 56-71 (75)		B1 '1 (75)	B 56-71 (75)	B1 56-71 (75)		
		ing Life - Years	25		17	0.9	0.4		
		Year of Failure	2036		028	2012	2011		
2013 U	odated Remai	ining Life - Years	87		63	-	•		
		d Year of Failure	2100		076	-	-		
Recommende	d Rehabilita	ation:							
- 10	Rehab.	Espision Harbard		No.					
Date	Code			Descri	ption				
2026	F, H								
2031	G		Crack R	epair, Sea	l Cracks &	Joints			
			·						
Damas Iss	Obediesel	-10-0-	-4-1-15		L . L.L				
Remarks:		ed on Sta. 0 loc					St.		
		was mean value					9 2 2		
	FOI ITAIIIC I	ndex see Apper	IUIX D. FOT HET	iabilitatio	n Code se	e rabies 3-1	α J-J.		

Airport: Element: Station: Dimensions: FAA Pavemen Element Ident	Runway 11 26+00 to 37		oe Airport		Date of	May 5	2 6 2011
Station: Dimensions: FAA Pavemen	26+00 to 37	20	Truckee-Tahoe Airport				& 6, 2011 013 Update
Dimensions: FAA Pavemen		-29					
FAA Pavemen		7+00					
FAA Pavemen	1100' x 1100)*					·
			R1 Single	 Gear - 60) kins		
	_	•		ear - 100			
Land Street Line		Thicknes	s - inches		ksi	μ	Remarks
		2011	2013	2011	2013		de visitatina
Existing	PFC						
Pavement	PCC						
Section:	AC	4	3	250	350	0.35	
	AB	8	14	30	40	0.35	
	ASB		-				
	Subgrade	48	48	10	10	0.35	
	Sub-soil	S.I.	S.I.	20	20	0.35	
Date Construc	ted:	1963					
Rehabilitation	Record:	Date			Type	The Market of the	
		1986, 2012	2012 - Reconst	truction (Add 2" Ro	ck, Pulverize,	+ 3"AC)
Pavement Cor Weathering - L No Rutting, Sho	ight	velling	er 80'), no joints	, no crac	ks.		2011 PCI = 60
2011 Bayament	Pomoining I	Pavement Ration In Indian Ind		ations A	a a braia		2013 PCI = 95
Traffic Index	nemaining L	Ile Allalysis	Bianuley - r		naiysis 31	B FAA - FA	ARFIELD B1
	late Deflecti	ion - 25 K Load	63-93 (80)		3 (80)	63-93 (80)	63-93 (80)
		ing Life - Years	23		16	1.0	0.5
Pavement Struc	ture Estimate	Year of Failure	2034		027	2012	2012
2013 Ur	dated Remai	ning Life - Years	81		59	-	-
2013 Upo	late Estimate	d Year of Failure	2094	20	072	-	
Recommende	d Rehabilita	ation:					
	Rehab.						
Date	Code			Descri	ption		
2026	F, H				Joints, Fog		
2031	G		Crack Re	epair, Sea	Cracks &	Joints	
Remarks:	Station hose	ad on Sta Alas	ated at Bunuar	11 +6+00	hold and	roooding	ot .
tellial No.		ed on Sta. 0 loc was mean value					ા .
		ndex see Apper					8. 3-3

		AVENIENT CON	DITION SURV	EY AND	REHABILI	TATION SCH	IEDULE					
Airport:		Truckee-Tah	oe Airport		Date of Survey:							
Element:	Runway 11	-29										
Station:	37+00 to 47	7+00										
Dimensions:	100' x 1000)'	· · · · · · · · · · · · · · · · · · ·									
FAA Pavemen			R1 Single	Gear - 60) kips							
Element Ident				ear - 100								
	Sub-Mind and	Thicknes	s - inches	E	ksi	μ	Remarks					
		2011	2013	2011	2013							
Existing	PFC											
Pavement	PCC											
Section:	AC	4	3	250	350	0.35						
	AB	8	14	30	40	0.35						
	ASB		-									
	Subgrade	48	48	10	10	0.35						
	Sub-soil	S.I.	S.I.	20	20	0.35						
Date Constru		1963										
Rehabilitation	Record:	Date			Туре							
		1986, 2012	2012 - Recons	truction (Add 2" Ro	ck, Pulverize,	+ 3"AC)					
				1000; 2012 2012 11000Hotraction (Flag 2 1100H, Faironzo, Forto)								
Pavement Co	ndition:	Grooved (cente	er 80'), no ioints	s. no crac	ks.							
Weathering - L No Rutting, Sh	ight			s, no crac	ks.							
Weathering - L No Rutting, Sh	ight oving, or Ra	velling Pavement Rati	ng = Excellent				2011 PCI = 60 2013 PCI = 95					
Weathering - L No Rutting, Sh 2011 Pavement	ight oving, or Ra	velling	ng = Excellent Brandley - F	atigue A	nalysis		2013 PCI = 95 ARFIELD					
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index	ight oving, or Ra Remaining I	velling Pavement Rati Life Analysis	ng = Excellent Brandley - F C	atigue A	nalysis	С	2013 PCI = 95 AARFIELD C1					
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F	ight oving, or Ra Remaining I	velling Pavement Rati	ng = Excellent Brandley - F C 57-82 (80)	-atigue A	nalysis C1 32 (80)	C 57-82 (80)	2013 PCI = 95 ARFIELD C1 57-82 (80)					
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Stru	ight oving, or Ra Remaining I Plate Deflect cture Remain	velling Pavement Ration ife Analysis ion - 25 K Load	ng = Excellent Brandley - F C	-atigue A	nalysis	С	2013 PCI = 95 AARFIELD C1					
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Structure	ight oving, or Ra Remaining I Plate Deflect cture Remain	velling Pavement Rati ife Analysis ion - 25 K Load ing Life - Years	ng = Excellent Brandley - F C 57-82 (80) 19 2030	-atigue A 57-8	nalysis C1 32 (80) 12	C 57-82 (80) 1.0	2013 PCI = 95 ARFIELD C1 57-82 (80) 0.5					
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Struct Pavement Struct 2013 U	ight oving, or Ra Remaining L Plate Deflect cture Remain cture Estimate	velling Pavement Ration Paveme	ng = Excellent Brandley - F C 57-82 (80) 19	-atigue A 57-8	nalysis C1 32 (80)	C 57-82 (80) 1.0	2013 PCI = 95 ARFIELD C1 57-82 (80) 0.5					
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Strue Pavement Strue 2013 Up	ight oving, or Ra Remaining I Plate Deflect cture Remain cture Estimate odate Estimate	velling Pavement Ration Paveme	ng = Excellent Brandley - F C 57-82 (80) 19 2030 70	-atigue A 57-8	nalysis C1 32 (80) 12 023	C 57-82 (80) 1.0	2013 PCI = 95 ARFIELD C1 57-82 (80) 0.5					
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Strue Pavement Strue 2013 Up	ight oving, or Ra Remaining I Plate Deflect cture Remain cture Estimate odate Estimate	velling Pavement Ration Paveme	ng = Excellent Brandley - F C 57-82 (80) 19 2030 70	-atigue A 57-8	nalysis C1 32 (80) 12 023	C 57-82 (80) 1.0	2013 PCI = 95 ARFIELD C1 57-82 (80) 0.5					
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Strue Pavement Strue 2013 Up	ight oving, or Ra Remaining L Plate Deflect cture Remain cture Estimate odated Remain date Estimate d Rehabilita	velling Pavement Ration Paveme	ng = Excellent Brandley - F C 57-82 (80) 19 2030 70	-atigue A 57-8	nalysis C1 32 (80) 12 023 52 065	C 57-82 (80) 1.0	2013 PCI = 95 ARFIELD C1 57-82 (80) 0.5					
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Struct 2013 Up 2013 Up Recommende Date 2026	ight oving, or Ra Remaining L Plate Deflect cture Remain cture Estimate odated Remai date Estimate d Rehabilita Rehab. Code F, H	velling Pavement Ration Paveme	ng = Excellent Brandley - F C 57-82 (80) 19 2030 70 2083	Seal New	nalysis C1 32 (80) 12 023 52 065	C 57-82 (80) 1.0 2012 - -	2013 PCI = 95 ARFIELD C1 57-82 (80) 0.5					
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Struct 2013 Up 2013 Up Recommende Date	ight oving, or Ra Remaining I Plate Deflect cture Remain cture Estimate odated Remain date Estimate d Rehabilita Rehab. Code	velling Pavement Ration Paveme	ng = Excellent Brandley - F C 57-82 (80) 19 2030 70 2083	Seal New	nalysis C1 32 (80) 12 023 52 065	C 57-82 (80) 1.0 2012 - -	2013 PCI = 95 ARFIELD C1 57-82 (80) 0.5					
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Struct 2013 Up 2013 Up Recommende Date 2026	ight oving, or Ra Remaining L Plate Deflect cture Remain cture Estimate odated Remai date Estimate d Rehabilita Rehab. Code F, H	velling Pavement Ration Paveme	ng = Excellent Brandley - F C 57-82 (80) 19 2030 70 2083	Seal New	nalysis C1 32 (80) 12 023 52 065	C 57-82 (80) 1.0 2012 - -	2013 PCI = 95 ARFIELD C1 57-82 (80) 0.5					
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Struct 2013 Up 2013 Up Recommende Date 2026 2031	Remaining L Plate Deflect cture Remain cture Estimate date Estimate date Estimate Rehab. Code F, H G	velling Pavement Rati Life Analysis ion - 25 K Load ling Life - Years Year of Failure lining Life - Years d Year of Failure ation:	ng = Excellent Brandley - F C 57-82 (80) 19 2030 70 2083 Saw & Crack R	Descri Seal New epair, Sea	nalysis C1 32 (80) 12 023 52 065 iption Joints, Fog	C 57-82 (80) 1.0 2012 - - - Seal Joints	2013 PCI = 95 ARFIELD C1 57-82 (80) 0.5 2012 -					
Weathering - L No Rutting, Sh 2011 Pavement Traffic Index FWD Center F Pavement Struct 2013 Up 2013 Up Recommende Date 2026	ight oving, or Ra Remaining I Plate Deflect cture Remain cture Estimate date Estimate date Estimate date Estimate Grand Gran	velling Pavement Ration Paveme	ng = Excellent Brandley - F C 57-82 (80) 19 2030 70 2083 Saw & Crack R	Descri Seal New epair, Sea	nalysis C1 32 (80) 12 023 52 065 iption Joints, Fog	C 57-82 (80) 1.0 2012 - - Seal Joints	2013 PCI = 95 ARFIELD C1 57-82 (80) 0.5 2012 -					

TABLE	NO. C6 - PA	VEMENT CON	IDITION SURVI	EY AND	REHABILI	TATION SCH	EDULE	
Airport:		Truckee-Tah	noe Airport		Date of Survey:		k 6, 2011 013 Update	
Element:	Runway 11	-29						
Station:	47+00 to 63	3+00						
Dimensions:	100' x 1600	t						
FAA Pavemen	t Strength	Survey -	R1 Single	Gear - 60) kips			
Element Ident	ification (Fo	orm 5335-1):		ear - 100				
		Thicknes	s - inches		ksi	μ	Remarks	
	S. Park	2011	2013	2011	2013			
Existing	PFC			'				
Pavement	PCC							
Section:	AC	4	4	250		0.35		
	AB	8	8	40		0.35		
	ASB		-	1			· .	
	Subgrade	48	48	10		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construe	cted:	1963			THE A ST			
Rehabilitation	Record:	Date	The second		Туре			
		1986, 2008	2008 - Remove	and Rei		ement Section		
		,						
								
Pavement Co	ndition:	Grooved, Seale	ed. Jointed - 1/	4"-1/2" - :	25'x25' - S	ealed (no ban	d-aid).	
Cracks - Longi	tudinal - Nor	ie						
-Tran	sverse - Non	е						
Weathering - L								
No Rutting, Sh	oving, or Ra	velling					2011 PCI = 86	
		Pavement Rati					2013 PCI = 86	
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	ARFIELD	
Traffic Index			С		C1	С	C1	
		on - 25 K Load			68 (65)	37-68 (65)	37-68 (65)	
		ing Life - Years	18		14	1.5	0.8	
		Year of Failure	2029	2	025	2013	2012	
Recommende		ition:						
Deta	Rehab.			Desir				
Date	Code		0 0	Descri		Carl		
2017	F G	Saw & Seal New Joints, Fog Seal						
2022		Crack Repair, Seal Cracks and Joints Reconstruct						
2026	A or E			necon	Struct			
					···			
Remarks:	Station has	ed on Sta. 0 loc	ated at Runway	/ 11 thres	shold and r	roceeding ea	st.	
	FWD used	was mean value	e for section - S	ee FWD	Graphs A	ppendix B		

Element: Runway 11-29	TABLE	NO. C7 - PA	AVEMENT CON	DITION SURVE	Y AND	REHABILI	TATION SCH	EDULE	
Station: 63+00 to 70+00	Airport:		Truckee-Tah	oe Airport			-	-	
Dimensions: 100' x 700' FAA Pavement Strength Survey - R1A	Element:	Runway 11	-29						
R1A Single Gear - 75 kips Dual Gear - 120 kips	Station:	63+00 to 70	0+00						
R1A Single Gear - 75 kips Dual Gear - 120 kips	Dimensions:	100' x 700'						-	
Dual Gear - 120 kips Dual Gear - 120 kips			Survey -	R1A Single (5 kips			
Proc	Element ident	ification (Fo	orm 5335-1):			<u> </u>			
PFC			Thicknes				μ	Remarks	
Pavement Section: PCC			2011	2013	2011	2013			
AC	Existing	PFC							
AB	Pavement	PCC							
ASB	Section:	AC	4	4	250		0.35		
Subgrade		AB	8	8	35		0.35		
Sub-soil S.I. S.I. 25 0.35		ASB		-					
Date Constructed: 1971	ı	Subgrade	48	48	17		0.35		
Date Type		Sub-soil	S.I.	S.I.	25		0.35		
Pavement Condition: Grooved, Sealed. Jointed - 1/4"-1/2" - 25'x25' - Sealed (no band-aid). Cracks - Longitudinal - None -Transverse - None Weathering - Light No Rutting, Shoving, or Ravelling Pavement Remaining Life Analysis Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index C C1 C1 C C1 FWD Center Plate Deflection - 25 K Load Pavement Structure Remaining Life - Years Pavement Structure Estimate Year of Failure Pavement Structure Estimate Year of Failure Pavement Gehabilitation: Rehab. Code Description 2017 F Saw & Seal New Joints, Fog Seal Crack Repair, Seal Cracks and Joints Pacement Structure Stimate Seal Ocaced at Runway 11 threshold and proceeding east. FWD used was mean value for section - See FWD Graphs, Appendix B	Date Construc	cted:	1971					Tel May 9	
Pavement Condition: Grooved, Sealed. Jointed - 1/4"-1/2" - 25'x25' - Sealed (no band-aid). Cracks - Longitudinal - None -Transverse - None Weathering - Light No Rutting, Shoving, or Ravelling Pavement Rating = Excellent Pavement Remaining Life Analysis Pandley - Fatigue Analysis FAA - FAARFIELD Traffic Index C C1 C C1 FWD Center Plate Deflection - 25 K Load 37-63 (52) 37-63 (52) 37-63 (52) 37-63 (52) Pavement Structure Remaining Life - Years 30 23 16 9 Pavement Structure Estimate Year of Failure 2041 2034 2027 2020 Recommended Rehabilitation: Rehab. Code Description 2017 F Saw & Seal New Joints, Fog Seal 2022 G Crack Repair, Seal Cracks and Joints 2026 A or E Reconstruct Remarks: Station based on Sta. 0 located at Runway 11 threshold and proceeding east. FWD used was mean value for section - See FWD Graphs, Appendix B	Rehabilitation	Record:	Date			Туре		Activities and the	
Cracks - Longitudinal - None			1986, 2008	008 2008 - Remove and Replace Pavement Section					
Cracks - Longitudinal - None									
Cracks - Longitudinal - None									
-Transverse - None Weathering - Light No Rutting, Shoving, or Ravelling Pavement Rating = Excellent Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index C C C1 C FWD Center Plate Deflection - 25 K Load 37-63 (52) Pavement Structure Remaining Life - Years 30 23 16 9 Pavement Structure Estimate Year of Failure 2041 2034 2027 2020 Recommended Rehabilitation: Rehab. Code Description 2017 F Saw & Seal New Joints, Fog Seal 2022 G Crack Repair, Seal Cracks and Joints 2026 A or E Remarks: Station based on Sta. 0 located at Runway 11 threshold and proceeding east. FWD used was mean value for section - See FWD Graphs, Appendix B				ed. Jointed - 1/4	1"-1/2" -	25'x25' - S	ealed (no bar	ıd-aid).	
Weathering - Light No Rutting, Shoving, or Ravelling Pavement Rating = Excellent Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index C C1 C1 C C1 FWD Center Plate Deflection - 25 K Load C37-63 (52) C3									
No Rutting, Shoving, or Ravelling			ie						
Pavement Rating = Excellent 2013 PCI = 86 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index C C1 FWD Center Plate Deflection - 25 K Load 37-63 (52) Pavement Structure Remaining Life - Years 30 23 16 9 Pavement Structure Estimate Year of Failure 2041 2034 2027 2020 Recommended Rehabilitation: Rehab. Code Description 2017 F Saw & Seal New Joints, Fog Seal 2022 G Crack Repair, Seal Cracks and Joints 2026 A or E Remarks: Station based on Sta. 0 located at Runway 11 threshold and proceeding east. FWD used was mean value for section - See FWD Graphs, Appendix B			volling					0011 DOL 96	
Traffic Index C C C1 C C1 FWD Center Plate Deflection - 25 K Load 37-63 (52) 37-63 (52) 37-63 (52) 37-63 (52) Pavement Structure Remaining Life - Years 30 23 16 9 Pavement Structure Estimate Year of Failure 2041 2034 2027 2020 Recommended Rehabilitation: Rehab. Code Description	No hulling, Sir	oving, or ha		ng – Evcellent					
Traffic Index	2011 Pavement	Remaining I	ife Analysis	Brandley - F	atique A	nalveie			
Pavement Structure Remaining Life - Years 30 23 16 9 Pavement Structure Estimate Year of Failure 2041 2034 2027 2020 Recommended Rehabilitation: Rehab. Date Code Description 2017 F Saw & Seal New Joints, Fog Seal 2022 G Crack Repair, Seal Cracks and Joints 2026 A or E Remarks: Station based on Sta. 0 located at Runway 11 threshold and proceeding east. FWD used was mean value for section - See FWD Graphs, Appendix B		Tiemaning i	inc Analysis						
Pavement Structure Remaining Life - Years 30 23 16 9 Pavement Structure Estimate Year of Failure 2041 2034 2027 2020 Recommended Rehabilitation: Rehab. Description		Plate Deflect	ion - 25 K Load						
Recommended Rehabilitation: Rehab. Date Code Description				, .					
Recommended Rehabilitation: Rehab. Code Description 2017 F Saw & Seal New Joints, Fog Seal Crack Repair, Seal Cracks and Joints 2026 A or E Reconstruct Remarks: Station based on Sta. 0 located at Runway 11 threshold and proceeding east. FWD used was mean value for section - See FWD Graphs, Appendix B	Pavement Struc	cture Estimate	Year of Failure		2	034		2020	
Date Code Description 2017 F Saw & Seal New Joints, Fog Seal 2022 G Crack Repair, Seal Cracks and Joints 2026 A or E Reconstruct Remarks: Station based on Sta. 0 located at Runway 11 threshold and proceeding east. FWD used was mean value for section - See FWD Graphs, Appendix B	Recommende	d Rehabilita	ation:		-				
2017 F Saw & Seal New Joints, Fog Seal 2022 G Crack Repair, Seal Cracks and Joints 2026 A or E Reconstruct Remarks: Station based on Sta. 0 located at Runway 11 threshold and proceeding east. FWD used was mean value for section - See FWD Graphs, Appendix B		Rehab.							
2022 G Crack Repair, Seal Cracks and Joints 2026 A or E Reconstruct Remarks: Station based on Sta. 0 located at Runway 11 threshold and proceeding east. FWD used was mean value for section - See FWD Graphs, Appendix B	Date	Code			Descri	iption			
Remarks: Station based on Sta. 0 located at Runway 11 threshold and proceeding east. FWD used was mean value for section - See FWD Graphs, Appendix B		-			·				
Remarks: Station based on Sta. 0 located at Runway 11 threshold and proceeding east. FWD used was mean value for section - See FWD Graphs, Appendix B				Crack Rep			Joints		
FWD used was mean value for section - See FWD Graphs, Appendix B	2026	AorE			Recon	struct			
FWD used was mean value for section - See FWD Graphs, Appendix B			.:						
FWD used was mean value for section - See FWD Graphs, Appendix B									
FWD used was mean value for section - See FWD Graphs, Appendix B	Pemarks:	Station has	ed on Sta Oloo	ated at Punyay	11 thros	shold and s	roceeding on	et	
	i temarks.								
THE LIGHTER OF ADDRESS OF COMPANIES OF THE COMPANIES OF T								& 3-3	

TABLE	NO. C8 - PA	VEMENT CON	DITION SURVE	Y AND	REHABILI	TATION SCH	EDULE		
Airport:		Truckee-Tah	oe Airport		Date of Survey:	•	& 6, 2011 013 Update		
Element:	Runway 11	-29							
Station:	East Blast F	Pad							
Dimensions:	100' x 150'								
FAA Pavemen			None						
Element Ident	ification (Fo								
			s - inches		ksi	μ	Remarks		
	DEO	2011	2013	2011	2013				
Existing	PFC	N 5 .							
Pavement	PCC	No Data							
Section:	AC								
	AB								
	ASB								
	Subgrade								
	Sub-soil								
Date Construc									
Rehabilitation	Record:	Date	Туре						
		1986							
		2013	Marking change	ed to zeb	ra striped	markings.			
Pavement Cor			- 25'x25' - Seale	d.					
		e-Severe (90%).							
		erate, Sealed.	Moderate Alligat	or Crack	king, Some	Depressions			
Weathering - M									
No Rutting, She	oving. Mino						2011 PCI = 55		
		Pavement Rati					2013 PCI = 38		
2011 Pavement	Hemaining L	.ite Analysis	Brandley - F				ARFIELD		
Traffic Index	lata Daffaati	00 1/ 11	Maintenan	ce Equipr	ment	Maintenand	e Equipment		
Pavement Stru	<u>rlate Dellecti</u> cture Remain	on - 20 K Load							
Pavement Struc									
Recommende									
recommende	Rehab.	ttioii.							
Date	Code			Descri	intion				
2018	D		Remo		d Reconstru	ıct			
2026	A or E		· · · - · · · · · · · · · · · · ·			= -			
2020	7, 0, 2	or E Reconstruct with Runway Project							
Remarks:	Station base	ed on Sta. 0 loc	ed on Sta. 0 located at Runway 11 threshold and proceeding east.						
			for section - Se						
			ndix D. For Reh				& 3-3.		

Airport:							
		Truckee-Tah	oe Airport		Date of Survey:		k 6, 2011 013 Update
Element:	Taxiway A						
Station:	0+00 to 2+0	00 (Taxiway B)					
Dimensions:	50' x 200'		.,				
FAA Pavemen		Survey -	T3 Single (Gear - 60) kips		
Element Ident	ification (Fo	orm 5335-1):		ear - 100			
		Thicknes	s - inches		ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC				-		
Pavement	PCC						
Section:	AC	3	3	250		0.35	
	AB	8	8	30		0.35	
	ASB		-				-
	Subgrade	48	48	15		0.35	
	Sub-soil	S.I.	S.I.	30		0.35	
Date Construc	ted:	1963					
Rehabilitation	Record:	Date		TO THE	Туре		
		1986					- "
		2011, 2012	AC Patch Repa	irs			
		4 7					
Pavement Cor			ry Sealed, AC P	atches.			
		lerate (Paving L					
			0' Spacing - 3/4'			(21, 21)	
			Pavement dama	age from	snow plov		
No Rutting, She	oving, or Ha						2011 PCI = 51
2011 Dayament	Demoining I	Pavement Rati		-A: A	- e li vei e		2013 PCI = 41
Traffic Index	Remaining L	.iie Anaiysis	Brandley - F				ARFIELD
	Plate Deflecti	on - 20 K Load	D 50-60 (56)		D1 60 (56)	D 50-60 (56)	D1 50-60 (56)
		ing Life - Years	31		21	5	3
		Year of Failure	2042		032	2016	2014
Recommende			2012		002	2010	2014
	Rehab.						
Date	Code			Descri	ption		
2019	G		Crac		Seal Crack	S	
2024	В				Reconstruc		
2036	F, H		Saw & S	Seal New	Joints, Fog	Seal	
Remarks:			ated at Edge of for section - Se				eding east.
	For Traffic I	ndex see Appe	ndix D. For Reh	abilitatio	n Code se	e Tables 3-1	& 3-3.

TABLE	NO. C9b - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SC	HEDULE	
Airport:		Truckee-Tah	oe Airport		Date of Survey:	•	& 6, 2011 2013 Update	
Element:	Taxiway A							
Station:	Taxiway B	Holding /	Apron					
Dimensions:		<u> </u>		·				
FAA Pavemen		Survey -	T3 Single	Gear - 60) kins			
Element Ident	_	•		ear - 100				
		Thicknes	s - inches		ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC							
Section:	AC	3	3	0		0.35		
	AB	8	8	0		0.35		
1	ASB		-					
1	Subgrade	48	48	0		0.35		
	Sub-soil	S.I.	S.I.	0		0.35		
Date Construc	cted:	1963						
Rehabilitation	Record:	Date						
		1986	<u> </u>					
Pavement Cor		No Joints						
		% has 10' bloc	k cracking, 50%	has 30'	block cracl	king)		
Slurry Seal is r								
Severe Alligato								
No Rutting or S	Shoving. We	eathering - Mode				-	2011 PCI = X	
		Pavement Rati					2013 PCI = 22	
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - F	AARFIELD	
Traffic Index	N. 1. D. (1. 12	20.14.1						
		on - 20 K Load ing Life - Years						
		Year of Failure				·		
Recommende								
riecommenae	Rehab.	ttion.			- 15 - 1 - 1 - 1			
Date	Code			Descri	ntion			
2019	G		Crac		Seal Crack	<u>*************************************</u>		
2024	В				Reconstruc			
2036	F, H				Joints, Fog			
							·	
						-		
Remarks:		ed on Sta. 0 loc					eding east.	
		was mean value					0.00	
	FOR I PATTIC I	ndex see Apper	alx D. For Her	nabilitatio	n Code se	e Lables 3-1	& 3-3.	

TABLE I	NO. C10 - P	AVEMENT CO	NDITION SURV	EY AND	REHABIL	ITATION SCH	IEDULE
Airport:		Truckee-Tah	oe Airport		Date of Survey:		6, 2011 013 Update
Element:	Taxiway A						
Station:	2+00 to 28+	⊦ 00					
Dimensions:	50' x 2600'						
FAA Pavemen	t Strength S	Survey -	T3 Single	Gear - 60) kips		
Element Ident	ification (Fo	orm 5335-1):		ear - 100			
		Thicknes	s - inches	E	ksi	μ	Remarks
		2011	2013	2011	2013		and the late of
Existing	PFC						
Pavement	PCC						
Section:	AC	3	3	350	!	0.35	
	AB	8	8	50		0.35	
	ASB		-				
	Subgrade	48	48	15		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Construc	cted:	1963					
Rehabilitation	Record:	Date		N. John	Туре		
		1986					
		2011, 2012	AC Patch Repa	irs			
Pavement Cor	adition	No lointe Slur	l ry Sealed, AC P	latabas			
			Joints) - Sealed,		wheelnat	h - Sealed	
			ks 50' long. Sea		ı wilecipat	II - Sealeu.	
Weathering - N		iorate de craei	No oo long. Oct	aicu			
No Rutting, Sh		vellina					2011 PCI = 51
g,	- · · · · · · · · · · · · · · · · · · ·	Pavement Rati	ng = Fair				2013 PCI = 46
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis		ARFIELD
Traffic Index			D		D1	D	D1
		ion - 20 K Load	35-41 (41)	35-4	11 (41)	35-41 (41)	35-41 (41)
		ing Life - Years	36		24	15	8
		Year of Failure	2047	2	035	2026	2019
Recommende		ation:					
	Rehab.						
Date	Code			Descri			
2019 2024	G B				Seal Crack		
2024	F, H				Reconstruction Joints, Fog		
2030	Г, П		Saw a s	beal New	Joints, rog	Seai	
Remarks:	Station bas	ed on Sta. 0 loc	ated at Edge of	Runway	11 at Tax	iway B proce	eding east.
			e for section - S				
	For Traffic I	ndex see Appe	ndix D. For Reh	nabilitatio	n Code se	e Tables 3-1	& 3-3.

TABLE	NO. C11 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE
Airport:		Truckee-Tah	oe Airport	Date of Survey:		May 5 & 6, 2011 October 2013 Update	
Element:	Taxiway A						
Station:	28+00 ot 38	3+00					
Dimensions:	50' x 1000'					· ···	<u>.</u>
FAA Pavemen		Survey -	T3 Single	Gear - 60) kips		
Element Ident		•		ear - 100	•		
		Thicknes	s - inches		ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC						
Section:	AC	3	3	250		0.35	,,,
1	AB	8	8	30		0.35	
	ASB		-				
	Subgrade	48	48	15		0.35	
	Sub-soil	S.I.	S.I.	30	-	0.35	
Date Construc	cted:	1963	Balaki, je julije				
Rehabilitation Record: Date Type							
	1986						
2011, 2012 AC Patch Repairs							
Pavement Cor			ry Sealed, AC P	atches.			
Cracks - Longi	tudinal - Mod	derate (Paving J	Joints) - Sealed				
			30' to 60' Spaci			<u></u>	
Weathering - N			igator Cracking	- 100'x5'			
No Rutting, Sh	oving, or Ra						2011 PCI = 51
0044 D	D	Pavement Rati					2013 PCI = 38
	Remaining L	lite Analysis	Brandley - F				ARFIELD
Traffic Index	Deta Deflect	00 1/ 1 and	E 48 56 (56)		E1	E 48.56 (56)	E1
Pavement Stru	cture Remain	on - 20 K Load ing Life - Years			6 (56)	48-56 (56)	48-56 (56)
		Year of Failure	21 2032		15	2015	2012
Recommende			2032		026	2015	2013
	Rehab.						
Date	Code			Descri	ption		
2016	В		Reh		Reconstruc	ot .	
2031	F, H		Saw & S	Seal New	Joints, Fog	Seal	
		-					
Domentes	Ctation has	nd on Oto Oto	atad at Educat	D	44		a alfa a
Remarks:			ated at Edge of				eding east.
			e for section - Se				9 0 0
	rui Hailic I	nuex see Appe	ndix D. For Reh	olibilliubi	ii Code se	e rabies 3-1	α 3-3.

Station: Dimensions: FAA Pavement Element Identi Existing Pavement Section:	PFC PCC AC AB ASB Subgrade Sub-soil	Survey - orm 5335-1):	T2 Single (Dual Gos - inches 2013	Gear - 60 ear - 100 E 2011			Remarks	
Station: Dimensions: FAA Pavement Element Identi Existing Pavement Section:	38+00 to 46 50' x 800' t Strength S fication (Fo	Survey - orm 5335-1): Thicknes 2011	Dual Gos - inches 2013	ear - 100 E	kips ksi	μ	Remarks	
Dimensions: FAA Pavement Element Identi Existing Pavement Section:	50' x 800' t Strength S ification (Formal PFC PCC AC AB ASB Subgrade Sub-soil	Survey - orm 5335-1): Thicknes 2011	Dual Gos - inches 2013	ear - 100 E	kips ksi	μ	Remarks	
Existing Pavement Section:	PFC PCC AC AB ASB Subgrade Sub-soil	7 Thicknes 2011	Dual Gos - inches 2013	ear - 100 E	kips ksi	μ	Remarks	
Existing Pavement Section:	PFC PCC AC AB ASB Subgrade Sub-soil	7 Thicknes 2011	Dual Gos - inches 2013	ear - 100 E	kips ksi	μ	Remarks	
Existing Pavement Section:	PFC PCC AC AB ASB Subgrade Sub-soil	7 Thicknes 2011	Dual Gos - inches 2013	ear - 100 E	kips ksi	μ	Remarks	
Existing Pavement Section:	PFC PCC AC AB ASB Subgrade Sub-soil	Thicknes 2011 3	s - inches 2013	Е	ksi	μ	Remarks	
Pavement Section:	PCC AC AB ASB Subgrade Sub-soil	3		2011	2013			
Pavement Section:	PCC AC AB ASB Subgrade Sub-soil							
Pavement Section:	AC AB ASB Subgrade Sub-soil							
	AB ASB Subgrade Sub-soil							
	ASB Subgrade Sub-soil	8	3	250		0.35		
	Subgrade Sub-soil		8	30		0.35		
	Sub-soil		-					
	Sub-soil	48	48	15		0.35		
	ted:	S.I.	S.I.	30		0.35		
Date Construct	icu.	1963						
Rehabilitation	Record:	Date	Туре					
		1986						
2011, 2012 AC Patch Repairs								
Pavement Con		· · · · · · · · · · · · · · · · · · ·	ry Sealed, AC P	atches.				
Cracks - Longitu				- 011 01	la al			
- rans Weathering - M			0' Spacing - 1" t					
No Shoving, or		Some rutting in	racking - South	em 12 0	Taxiway		2011 PCI = 51	
ivo Shoving, or	naveiling.	Pavement Rati					2011 PCI = 51 2013 PCI = 44	
2011 Pavement I	Remaining L			atique A	nalvsis		ARFIELD	
Traffic Index	3	•	F	F1		F	F1	
FWD Center Pl	late Deflecti	on - 20 K Load	45-56 (56)	1	6 (56)	45-56 (56)	45-56 (56)	
Pavement Struc	cture Remain	ing Life - Years	18		13	4	2	
Pavement Struct	ture Estimate	Year of Failure	2029	20	024	2015	2013	
Recommended	d Rehabilita	ition:						
	Rehab.							
Date	Code			Descri				
2016	В	Rehabilitate - Reconstruct						
2031	F, H		Saw & S	Seal New	Joints, Fog	Seal		
						·- ··		
Remarks:	Station base	ed on Sta 0 loc	ated at Edge of	Runway	11 at Taxi	way Bi proced	eding east	
			e for section - Se				Janig Jaot.	
			ndix D. For Ref					

Dimensions: FAA Pavement	Taxiway A 46+00 to 50	Truckee-Tah	oe Airport		Date of	May 5.8	6 2011			
Station: Dimensions: FAA Pavement					Date of May 5 & 6, 2011 Survey: October 2013 Update					
Dimensions: FAA Pavement	46+00 to 50	Taxiway A								
FAA Pavement	46+00 to 50+00									
FAA Pavement	50' x 400'				· · · · · · · · · · · · · · · · · · ·		·			
		Survey -	T2 Single	Gear - 60) kips					
Element Identi	_	orm 5335-1):		ear - 100						
		Thicknes	s - inches		ksi	μ	Remarks			
		2011	2013	2011	2013					
Existing	PFC									
Pavement	PCC									
Section:	AC	3	3	250		0.35				
Ì	AB	8	8	40		0.35				
	ASB		-							
ľ	Subgrade	48	48	9		0.35				
	Sub-soil	S.I.	S.I.	25		0.35				
Date Construc		1963				9.00				
Rehabilitation Record: Date Type										
	1986									
	2011, 2012 AC Patch Repairs									
Pavement Con	dition:	No Joints, Slur	ry Sealed, AC P	atches.						
Cracks - Longit										
		erate to Severe	e - 30' to 60' Spa	acing - 1'	' to 2" Sea	led				
Weathering - M										
No Shoving, or	Ravelling.		wheelpath with	alligator	cracking.		2011 PCI = 51			
		Pavement Rati					2013 PCI = 38			
2011 Pavement	Remaining L	ife Analysis	Brandley - F				ARFIELD			
Traffic Index	5		F		F1	F	F1			
FWD Center P Pavement Struc	late Deflecti	on - 20 K Load		55-6	65 (65)	55-65 (65)	55-65 (65)			
Pavement Struc		-	9		6	0.5	0.2			
			2020	2	017	2012	2011			
Recommended	Rehab.	ition:			MILLION CO.					
Data				Donosi						
Date 2016	B	Code Description B Rehabilitate - Reconstruct								
2016	F, H		· · · · · · · · · · · · · · · · · · ·		Joints, Fog					
2031	1,11		Saw a c	bear ivew	Joints, Fog	Seai				
			<u></u>							
					· · · · · · · · · · · · · · · · · · ·					
Remarks:	Station base	ed on Sta. 0 loc	ated at Edge of	Runwav	11 at Tax	iway B procee	eding east.			
			e for section - Se	<u>_</u>			<u> </u>			
		_	ndix D. For Reh				& 3-3.			

TABLE	NO. C14 - P	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE	
Airport:		Truckee-Tah	oe Airport		Date of May 5 & 6, 2011 Survey: October 2013 Update			
Element:	Taxiway A							
Station:	50+00 to 72	2+00						
Dimensions:	50' x 2200'							
FAA Pavemen		Survey -	T2 Single	Gear - 60) kine			
Element Ident		•		ear - 100				
	No. Vision		s - inches		ksi	μ Remark		
		2011	2013	2011 2013		μ		
Existing	PFC						<u></u>	
Pavement	PCC							
Section:	AC	3	3	250		0.35		
	AB	8	8	40		0.35		
	ASB	<u> </u>	-	10		0.00		
	Subgrade	48	48	9		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construc		1963, 1971	0	20		0.00		
Rehabilitation Record: Date Type								
		1986			A second			
			AC Patch Repa	irs				
2 8 8								
Pavement Cor			ry Sealed, AC P					
			e (Paving Joints			oressions - Se	ealed	
		lerate - 30' to 6	0' Spacing - 1" t	o 2" Seal	led			
Weathering - M								
No Shoving, or	Ravelling.		or cracking in w	heelpath	s.		2011 PCI = 51	
~~:-		Pavement Rati					2013 PCI = 35	
	Remaining L	ife Analysis	Brandley - F				ARFIELD	
Traffic Index	Nata Datia di	00.161	G		G1	G	G1	
		on - 20 K Load ing Life - Years			7 (65)	45-80 (65)	45-80 (65)	
		Year of Failure	10 2021		018	0.6	0.3	
Recommende			2021		016	2012	2011	
ricoommenae	Rehab.	ation.						
Date	Code			Descri	ption			
2016	В		Reh		Reconstruc	ot .		
2031	F, H	Saw & Seal New Joints, Fog Seal						
Remarks:	Station base	ed on Sta. 0 loc	ated at Edge of	Runway	11 at Tax	iway B proce	eding east.	
	FWD used	was mean value	e for section - Se	ee FWD	Graphs, A	ppendix B		
			ndix D. For Reh				& 3-3.	

TABLE	IO. C15a - P	AVEMENT CO	NDITION SURV	EY AND	REHABII	LITATION SCI	HEDULE		
Airport:		Truckee-Tah	oe Airport	Date of May 5 & 6, 2011 Survey: October 2013 Upd					
Element:	Taxiway C								
Station:	0+00 to 0+5	50							
Dimensions:	50' x 50'					·			
FAA Pavemen		Survey -	T3/T6 Single	 Gear - 60) kips				
Element Ident	ification (Fo	orm 5335-1):		ear - 100					
			s - inches		ksi	μ	Remarks		
		2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC	1 =							
Section:	AC	4	3	250		0.35			
	AB	8	8	40		0.35			
	ASB		69						
	Subgrade	48	48	10		0.35			
	Sub-soil	S.I.	S.I.	25		0.35			
Date Construc	cted:	1963							
Rehabilitation	Record:	Date	Туре						
		1995, 2012	2012 Reconstruction with Runway 11-29						
Pavement Cor Weathering - L No Rutting, Sh	ight						2011 PCI = 60		
0011 D	Damainian I	Pavement Rati		' . L' A			2013 PCI = 95		
	Remaining L	.ite Analysis	Brandley - F				ARFIELD		
Traffic Index	Plata Deflect	on - 20 K Load	H 50-52 (52)		H1 52 (52)	H 50-52 (52)	H1 50-52 (52)		
		ing Life - Years	45		37	13	7		
		Year of Failure	2056		048	2024	2018		
Recommende			2000		040	2024	2010		
	Rehab.	maio so as	U. Huy Task						
Date	Code			Descri	iption				
2026	F, H		Saw & S		Joints, Fog	Seal			
2031	G	Crack Repair, Seal Cracks & Joints							
Remarks:			ated at Edge of				٦.		
			e for section - Se			<u> </u>			
	For i rattic I	naex see Appe	ndix D. For Reh	abilitatio	n Code se	e rabies 3-1	<u>& 3-3.</u>		

TABLE	IO. C15b - F	AVEMENT CO	NDITION SURV	EY AND	REHABII	LITATION SC	HEDULE	
Airport:		Truckee-Tah	oe Airport		Date of May 5 & 6, 2011 Survey: October 2013 Update			
Element:	Taxiway C							
Station:	0+50 to 2+0	00						
Dimensions:	50' x 150'							
FAA Pavemen		Survev -	T3/T6 Single) kins			
Element Ident	_	-		ear - 100				
		Thicknes	s - inches		ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC							
Section:	AC	4	4	250		0.35		
	AB	8	8	40		0.35		
	ASB		-			0.00		
	Subgrade	48	48	10		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construc		1963				0.00		
Rehabilitation Record: Date Type								
		1995			Туро			
		2011, 2012	AC Patch Repairs					
		,						
Pavement Cor	ndition:	No Joints						
Cracks - Block	- Moderate	- Sealed - 20' pa	attern.					
Patches - Few								
Weathering - N			icking - Light 10	'x20'				
No Rutting, Sh	oving, or Ra	velling					2011 PCI = 60	
		Pavement Rati					2013 PCI = 43	
	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	ARFIELD	
Traffic Index			H		- 11	Н	H1	
		on - 20 K Load			2 (52)	50-52 (52)	50-52 (52)	
		ing Life - Years	45		37	13	7	
		Year of Failure	2056	2	048	2024	2018	
Recommende		ition:						
Data	Rehab.			Docasi	ntion			
Date 2019	Code		0	Descri				
2019	G B				Seal Crack Reconstruc			
2024	F, H				Joints, Fog			
2000	1,11		Saw & S	Jeal NEW	Joints, Fug	Jeal		
							<u>-</u> .	
Remarks:	Station base	ed on Sta. 0 loc	ated at Edge of	Runway	11-29 pro	ceeding Sout	h.	
			e for section - Se					
	For Traffic I	ndex see Appe	ndix D. For Reh	abilitatio	n Code se	e Tables 3-1	& 3-3.	

TABLE I	NO. C16 - P.	AVEMENT CO	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE		
Airport:		Truckee-Tah	oe Airport	Date of May 5 & 6, 2011 Survey: October 2013 Update					
Element:	Taxiway C	•							
Station:	2+00 to 3+5	50 T/W to H	langar H2						
Dimensions:	50' x 150'								
FAA Pavemen	t Strength S	Survey -	T3/T6 Single	 Gear - 60) kips				
Element Ident	ification (Fo	orm 5335-1):		ear - 100					
Carried and an		Thicknes	s - inches	E	ksi	μ	Remarks		
		2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC								
Section:	AC	4	3	350		0.35			
	AB	8	12	60		0.35	СТВ		
	ASB		-						
	Subgrade	48	48	12		0.35			
	Sub-soil	S.I.	S.I.	25		0.35			
Date Construc	ted:	1963							
Rehabilitation	Record:	Date		MANGET TO	Туре	THE WAY THE			
		1995							
2012 Reconstruction									
D 10	4***	1:: 05!							
Pavement Cor	ndition:	Joints - 25' sea	lled, no band-ai	<u> </u>					
Slurry Sealed									
Weathering - L	iaht								
No Rutting, Sh		velling					2011 PCI = 55		
rio riatting, en	oving, or ria	Pavement Rati	ng = Excellent				2013 PCI = 90		
2011 Pavement	Remaining L	ife Analysis		atique A	nalvsis	FAA - FA	AARFIELD		
Traffic Index		•	Н		H1	Н	H1		
FWD Center F		on - 20 K Load	38-41 (41)		1 (41)	38-41 (41)	38-41 (41)		
		ing Life - Years	65		53	65	41		
Pavement Struc	ture Estimate	Year of Failure	2076	2	064	2076	2052		
Recommende	d Rehabilita	ition:							
	Rehab.		A SHALL MAN			Title III			
Date	Code			Descri					
2020	F		'		nts - Supple				
2026	G, H	Crack Repair, Seal Cracks & Joints, Fog Seal Crack Repair, Seal Cracks & Joints							
2031	G		Crack R	epair, Sea	i Cracks &	Joints			
							·		
Remarks:	Station base	ed on Sta. 0 loc	ated at Edge of	Runway	11-29 pro	ceeding Sout			
			e for section - S	-					
			ndix D. For Rel				& 3-3		

TABLE I	NO. C17a - F	AVEMENT CO	NDITION SUR	/EY AND	REHABIL	ITATION SC	HEDULE		
Airport:		Truckee-Tahoe Airport				•	& 6, 2011 013 Update		
Element:	Taxiway D								
Station:	0+00 to 1+2	20							
Dimensions:	50' x 120'						<u></u>		
FAA Pavemer		Survev -	T3 Single	Gear - 60) kins		· · · · · · · · · · · · · · · · · · ·		
Element Iden	_	•		ear - 100					
		Thicknes	s - inches		ksi	μ	Remarks		
		2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC								
Section:	AC	3	3 3 250 0.35						
	AB	8	8	30		0.35			
	ASB		-						
ı	Subgrade	48	48	11		0.35			
	Sub-soil	S.I.	S.I.	25		0.35			
Date Constru	cted:	1963							
Rehabilitation	n Record:	Date		Туре		W. Davids			
		1986, 2012	2012 Reconstr	uction wi	th Runway	11-29			
Pavement Co	naition:	No Grooves, jo	ints, or cracks.						
Weathering - L	iaht								
No Rutting, Sh		velling					2011 PCI = 45		
140 Hatting, Cr	ioving, or ma	Pavement Rati	ng = Excellent			· · · · · · · · · · · · · · · · · · ·	2013 PCI = 95		
2011 Pavement	Remaining I		Brandley - F	atique A	nalvsis		ARFIELD		
Traffic Index			Н		H1	Н	H1		
FWD Center I	Plate Deflect	ion - 20 K Load	42-64 (62)	42-6	64 (62)	42-64 (62)	42-64 (62)		
		ing Life - Years	30		25	4	2		
Pavement Stru	cture Estimate	te Year of Failure 2041 2036 2015 2013							
Recommende	d Rehabilita	ation:							
	Rehab.								
Date	Code			Descri	4				
2026	F, H				Joints, Fog				
2031	G		Crack R	epair, Sea	I Cracks &	Joints			
Remarks:	Station has	ed on Sta O loc	ated at Edge of	Runway	11-29 nro	ceeding Sout			
	J.C.C.O.I DUO		are Lago of						
	FWD used	was mean value	e for section - S	ee FWD	Graphs A	ppendix R			

TABLE N	IO. C17b - P	AVEMENT CO	NDITION SURV	EY AND	REHABIL	LITATION SC	HEDULE		
Airport:		Truckee-Tahoe Airport Date of Survey: October 2013 Upo							
Element:	Taxiway D								
Station:	1+20 to 3+5	50							
Dimensions:	50' x 230'		£.						
FAA Pavemen		Survey -	T3 Single	Gear - 60) kips				
Element ident	_	•		ear - 100					
		Thicknes	s - inches		ksi	μ	Remarks		
		2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC								
Section:	AC	3	3	250		0.35			
	AB	8	8	30		0.35			
	ASB		-						
	Subgrade	48	48	11		0.35			
	Sub-soil	S.I.	S.I.	25		0.35			
Date Construc	cted:	1963							
Rehabilitation Record: Date Type									
		1986							
Pavement Co			ry Seal (ravelling	g).					
		30'x30' pattern	- Sealed						
Alligator Crack		80'x5'							
Weathering - N									
No Rutting, Sh	oving.	Day same ant Dati	D				2011 PCI = 45		
2011 Boyomont	Pomoining I	Pavement Rati		otious A	nelvoje		2013 PCI = 34		
Traffic Index	Remaining L	.iie Alialysis	Brandley - F H	ĭ	H1		ARFIELD H1		
	Plate Deflecti	on - 20 K Load			64 (62)	H 42-64 (62)	42-64 (62)		
		ing Life - Years	30	1	25	4	2		
		Year of Failure	2041		036	2015	2013		
Recommende	d Rehabilita	ition:			000	2010	2010		
	Rehab.								
Date	Code			Descri	iption				
2019	G		Crac		Seal Crack	s	***************************************		
2024	В				Reconstruc				
2036	F, H		Saw & S	Seal New	Joints, Fog	Seal			
Remarks:			ated at Edge of e for section - Se				h.		
			ndix D. For Rel				& 3-3.		

Station: 1+50 to 4+50 T/W to Apron A2	TABLE	NO. C18 - P	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCH	IEDULE	
Station:	Airport:		I ruckee- I anoe Airbort						
Dimensions: 50' x 300' FAA Pavement Strength Survey - T3 Single Gear - 60 kips Dual Gear - 100 kips Dual Gear - 100 kips Thickness - inches E ksi μ Remark 2011 2013 2011 2013 2011 2013 Existing PCC AC 3 3 350 0.35 AB 8 8 8 8 0 0.35 ASB Sub-soil S.I. S.I. 25 0.35 Date Constructed: Rehabilitation Record: Date Type 1986 2012 Mill and Fill Pavement Condition: No Joints or cracks. Weathering - Light No Rutting, Shoving, or Ravelling Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index H H H H H H FWD Center Plate Deflection - 20 K Load 35-39 (39) 35-39 (39) 35-39 (39) 35-39 (39) Recomment Structure Remaining Life - Years 66 54 92 59 Pavement Structure Estimate Year of Failure 2077 2065 2103 2070 Recommended Rehabilitation: Rehab Rehab Rehab Rehab Remarks Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South.	Element:	Taxiway D	kiway D						
Dimensions: 50' x 300' FAA Pavement Strength Survey - T3	Station:	1+50 to 4+5	50 T/W to A	pron A2					
Table Tab	Dimensions:	50' x 300'							
Dual Gear - 100 kips Remark		4	Survey -	T3 Single	 Gear - 60) kips			
PFC	Element ident	ification (Fo	orm 5335-1):			•			
PFC		BASELTA	Thicknes	s - inches	E	ksi	μ	Remarks	
Pavement Section: AC			2011	2013	2011	2013			
AC 3 3 350 0.35 AB 8 8 8 80 0.35 ASB -	_								
AB	Pavement	PCC							
ASB	Section:	AC	3	3	350		0.35		
Subgrade 48			8	8	80		0.35		
Sub-soil S.I. S.I. 25 0.35		ASB		-					
Date Constructed: Rehabilitation Record: Date 1986 2012 Mill and Fill		Subgrade	48	48	15		0.35		
Date		Sub-soil	S.I.	S.I.	25		0.35		
1986									
Mill and Fill	Rehabilitation	Record:	Date			Туре			
Pavement Condition: No Joints or cracks. Weathering - Light No Rutting, Shoving, or Ravelling Pavement Rating = Excellent 2011 PCI = Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index H H1 H1 H1 FWD Center Plate Deflection - 20 K Load Pavement Structure Remaining Life - Years 66 54 92 59 Pavement Structure Estimate Year of Failure 2077 2065 2103 2070 Recommended Rehabilitation: Rehab. Date Code Description 2025 A Remove and Reconstruct 2038 F, H Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South.			1986						
Weathering - Light No Rutting, Shoving, or Ravelling Pavement Rating = Excellent Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index H H1 H1 H H1 FWD Center Plate Deflection - 20 K Load Pavement Structure Remaining Life - Years Pavement Structure Estimate Year of Failure Pavement Struct			2012	Mill and Fill					
Weathering - Light No Rutting, Shoving, or Ravelling Pavement Rating = Excellent Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index H H1 H1 H1 H H1 FWD Center Plate Deflection - 20 K Load Pavement Structure Remaining Life - Years Favement Structure Estimate Year of Failure Pavement Str	D	1141	NI. Istata an an	1					
No Rutting, Shoving, or Ravelling	Pavement Col	naition:	NO JOINTS OF CR	acks.					
No Rutting, Shoving, or Ravelling									
No Rutting, Shoving, or Ravelling	Weathering - I	ight							
Pavement Rating = Excellent 2013 PCI = 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index H H1 H H1 FWD Center Plate Deflection - 20 K Load 35-39 (39)			vellina					2011 PCI = 45	
Traffic Index				na = Excellent				2013 PCI = 93	
Traffic Index H H1 H H1 FWD Center Plate Deflection - 20 K Load 35-39 (39)	2011 Pavement	Remaining L			atigue A	nalysis			
Pavement Structure Remaining Life - Years 66 54 92 59 Pavement Structure Estimate Year of Failure 2077 2065 2103 2070 Recommended Rehabilitation: Rehab. Code Description	Traffic Index						Н	H1	
Pavement Structure Estimate Year of Failure 2077 2065 2103 2070 Recommended Rehabilitation: Rehab. Code Description				35-39 (39)	35-3	39 (39)	35-39 (39)	35-39 (39)	
Recommended Rehabilitation: Rehab. Description				66		54	92	59	
Date Code Description 2025 A Remove and Reconstruct 2038 F, H Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South.	Pavement Strue	cture Estimate	Year of Failure	2077	2	065	2103	2070	
Date Code Description 2025 A Remove and Reconstruct 2038 F, H Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South.	Recommende	d Rehabilita	ition:						
2025 A Remove and Reconstruct 2038 F, H Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South.		Rehab.							
2038 F, H Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South.		Code							
Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South.									
	2038	F, H		Saw & S	Seal New	Joints, Fog	Seal		
<u> </u>					<u> </u>				
<u> </u>									
<u> </u>	Remarke:	Station has	ed on Sta O loc	ated at Edge of	Runway	11-29 pro	reeding South	<u> </u>	
1 44 D used was mean value for section - See I 44 D Graphs, Appendix 5	isiidiks.							1.	
For Traffic Index see Appendix D. For Rehabilitation Code see Tables 3-1 & 3-3.								શ્ર ૩- ૩	

TABLE N	NO. C19a - F	AVEMENT CO	NDITION SURV	EY AND	REHABIL	LITATION SCI	HEDULE		
Airport:		Truckee-Tah	noe Airport		Date of Survey:		k 6, 2011 013 Update		
Element:	Taxiway E								
Station:	0+00 to 0+8	30							
Dimensions:	50' x 80'								
FAA Pavemer		Survey -	T1 Single	Gear - 60) kips				
Element Ident	tification (Fo	orm 5335-1):		ear - 100					
			s - inches		ksi	μ	Remarks		
		2011	2013	2011	2013	الكالجال أنفعونا			
Existing	PFC								
Pavement	PCC	1							
Section:	AC	3	3 350 0.35						
	AB	8	8	80		0.35			
	ASB		-						
	Subgrade	48	48	15		0.35			
	Sub-soil	S.I.	S.I.	25		0.35			
Date Constru	cted:	1963							
Rehabilitation	Record:	Date			Туре				
		1986, 2012							
Pavement Co	ight		ints, or cracks.						
No Rutting, Sh	oving, or Ra						2011 PCI = 46		
2011 Pavement	Demoining	Pavement Rati		- Al A	na lunia		2013 PCI = 95		
Traffic Index	nemaining i	.iie Analysis	Brandley - F				ARFIELD		
	Plate Deflect	on - 20 K Load	H 31-39 (39)		H1 39 (39)	H 31-39 (39)	H1 31-39 (39)		
Pavement Stru	cture Remain	ing Life - Years	66		54	92	59		
		Year of Failure	2077		065	2103	2070		
Recommende	d Rehabilita	ition:	2011		000	2100	2010		
	Rehab.		perates N.						
Date	Code			Descri	ption				
			To be re		per Master I	Plan.			
							-		
Remarks:			ated at Edge of				١.		
			e for section - Se						
	For Traffic !	ndex see Appe	ndix D. For Reh	nabilitatio	n Code se	e Tables 3-1	& 3-3.		

TABLE N	IO. C19b - F	AVEMENT CO	NDITION SUR	VEY AND	REHABI	LITATION SC	HEDULE	
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 013 Update	
Element:	Taxiway E							
Station:	0+80 to 2+8	30						
Dimensions:	50' x 200'							
FAA Pavemen	t Strength S	Survey -	T1 Single	Gear - 60) kips			
Element Ident	ification (Fo			ear - 100	kips			
		Thicknes	s - inches	E	ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC	-						
Pavement	PCC							
Section:	AC	3	3	350		0.35		
	AB	8	8	80		0.35		
	ASB		-					
	Subgrade	48	48	15	·	0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construc	For Forest and State Sta	1963				0.00		
Rehabilitation		Date			Туре		del verblance	
	1986							
		2011, 2012 AC Patch Repairs						
					<u> </u>	 -		
Pavement Coi	ndition:	Joints - 50' Nor	th of Apron - Se	ealed. Slu	ırrv Seale	d - Ravelling		
Cracks - Block	- Light to Mo	oderate, 1" to 2'		•		<u> </u>		
AC Patches		····						
Weathering - N	Moderate					···		
No Rutting, Sh							2011 PCI = 46	
		Pavement Rati	ng = Good				2013 PCI = 57	
2011 Pavement	Remaining L		Brandley - F	atigue A	nalysis		ARFIELD	
Traffic Index			Н		H1	Н	H1	
		on - 20 K Load	31-39 (39)	31-3	9 (39)	31-39 (39)	31-39 (39)	
		ing Life - Years	66		54	92	59	
		Year of Failure	2077	2	065	2103	2070	
Recommende	d Rehabilita	ition:						
	Rehab.			THE		S ISSUE TO VE	THE REPORT OF	
Date	Code			Descri	ption			
			To be r	emoved, p	er Master I	Plan.		
				<u>.</u>				
Remarks:			ated at Edge of				١.	
			e for section - S					
	For Traffic I	ndex see Appei	ndix D. For Rel	nabilitatio	n Code se	e Tables 3-1	<u>& 3-3.</u>	

TABLE I	NO. C20a - F	PAVEMENT CO	NDITION SUR	VEY AND	REHABI	LITATION SC	HEDULE		
Airport:		Truckee-Tahoe Airport					& 6, 2011 2013 Update		
Element:	Taxiway F								
Station:	0+00 to 0+	30							
Dimensions:	50' x 30'	·					-		
FAA Pavemer		Survev -	T2 Single	Gear - 60) kins				
Element Iden	_	•		ear - 100					
		Thicknes	s - inches		ksi	μ	Remarks		
		2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC								
Section:	AC	3	3	250		0.35			
	AB	8	8	30		0.35			
	ASB		-						
	Subgrade	48	48	· 11		0.35			
	Sub-soil	S.I.	S.I.	25		0.35			
Date Constru	cted:	1963							
Rehabilitation	Record:	Date			Туре				
		1986, 2012							
Pavement Co Weathering - L No Rutting, Sh	_ight	velling	oints, or cracks.	-			2011 PCI = 49		
		Pavement Rati				·	2013 PCI = 95		
	Remaining L	ite Analysis	Brandley - F				ARFIELD		
Traffic Index	Doto Doffeet	ion 00 K l and	H 51 62 (62)		11	H	H1		
		ion - 20 K Load ing Life - Years	51-63 (62) 30	1	3 (62) 25	51-63 (62) 4	51-63 (62) 2		
		Year of Failure	2041		23 036	2015			
Recommende			2041		J30	2015	2013		
	Rehab.	Description of the No.				ongo is the state of			
Date	Code			Descri	ption				
2026	F, H		Saw &		Joints, Fog	Seal			
2031	G		Crack R	epair, Sea	Cracks &	Joints			
	1								
Remarks:			ated at Edge of e for section - S				h.		

TABLE N	NO. C20b - F	PAVEMENT CO	NDITION SUR	EY AND	REHABI	LITATION SC	HEDULE
Airport:		Truckee-Tahoe Airport Date of Survey: October 2013 Up					
Element:	Taxiway F						
Station:	0+30 to 3+5	50					
Dimensions:	50' x 320'				•		
FAA Pavemer		Survey -	T2 Single	Gear - 60) kips		
Element Ident	-	•		ear - 100		·	
		Thicknes	s - inches		ksi	μ	Remarks
		2011	2013	2011	2013		Market Tird
Existing	PFC						
Pavement	PCC						
Section:	AC	3	3	250		0.35	
	AB	8	8	30		0.35	
	ASB		-				
	Subgrade	48	48	11		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Construe	cted:	1963					
Rehabilitation Record: Date Type							
		1986					
		2011, 2012	AC Patch Repa	ıir			
-	11.1	<u> </u>					
Pavement Co		No Joints, Slur	ry Sealed				
		derate - Sealed	til to Oil. Cooled	1			
			1" to 2" - Sealed Sealed, Alliga		ro Modo	roto Only 201	
Weathering - N			ing, Shoving, or			ate 20 x30	2011 PCI = 49
weathering - it	noderate	Pavement Rati		Taveilli	y		2011 PCI = 49 2013 PCI = 40
2011 Pavement	Remaining L		Brandley - F	atique A	nalvsis		ARFIELD
Traffic Index			Н		H1	Н	H1
FWD Center F	Plate Deflect	on - 20 K Load	51-63 (62)	51-6	3 (62)	51-63 (62)	51-63 (62)
		ing Life - Years	30	2	25	4	2
		Year of Failure	2041	20	036	2015	2013
Recommende	· · · · · · · · · · · · · · · · · · ·	ition:					
	Rehab.						
Date	Code			Descri			
2016	В				Reconstruc		
2031	F, H		Saw & S	Seal New	Joints, Fog	Seal	

		<u></u>				-	
Remarks:	Station has	ed on Sta. 0 loc	ated at Edge of	Runway	11-29 nro	ceeding Sout	h.
			e for section - Se				•
			ndix D. For Reh				<u> </u>

Airport:	<u> </u>	Truckee-Tah	noe Airport		Date of	•	3 6, 2011	
Airport.			Truckee-Tahoe Airport Survey: October 2013 l					
Element:	Taxiway F							
Station:	3+50 to 4+5	50 T/W to A	pron A2					
Dimensions:	50' x 100'							
FAA Pavemen	_		None					
Element Identi	ification (Fo							
			s - inches		ksi	μ	Remarks	
		2011	2013	2011	2013		OF STARS	
Existing	PFC							
Pavement	PCC							
Section:	AC	3	3	350		0.35		
	AB	8	8	60		0.35		
	ASB		-					
	Subgrade	48	48	15		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construc								
Rehabilitation	Record:							
		1986						
		2012	Mill and Fill					
Pavement Con	alitia a .	No Joints or cr						
Pavement Con	idition:	INO JOINES OF CE	acks.				-	
Weathering - Li	iaht							
No Rutting, Sho		vellina					2011 PCI = 49	
, , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , ,	Pavement Rati	na = Excellent				2013 PCI = 95	
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	ARFIELD	
Traffic Index			Н		H1	Н	H1	
		on - 20 K Load	40-42 (42)	40-4	12 (42)	40-42 (42)	40-42 (42)	
Pavement Struc			59		49	57	36	
Pavement Struc	ture Estimate	Year of Failure	2070	2	060	2068	2047	
Recommended		ation:						
	Rehab.	PROPERTY.		THE REAL PROPERTY.				
Date	Code			Descri				
	Α				Reconstruc			
2025			Saw & 9	Seal New	Joints, Fog	Seal		
2025 2038	F, H		Out a v					
	F, H		ouw a v					
	F, H		oaw a v					
	F, H		ouw a v					
2038		ed on Sta 0 loc		Runway	11-29 pro	ceeding Sout	h	
2038 Remarks:	Station base		eated at Edge of		<u>·</u>		h.	

TABLE	NO. C22 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCH	IEDULE		
Airport:		Truckee-Tah	noe Airport		Date of Survey:	1 .	k 6, 2011 013 Update		
Element:	Taxiway H	ay H							
Station:	0+00 to 2+5	50					-		
Dimensions:	50' x 250'								
FAA Pavemen	<u> </u>	Survey -	T2 Single	Gear - 60) kips				
Element ident				ear - 100					
		Thicknes	s - inches		ksi	μ	Remarks		
		2011	2013	2011	2013				
Existing	PFC				1	· -			
Pavement	PCC								
Section:	AC	3	3 250 0.35						
	AB	8	8	30		0.35			
	ASB		-						
	Subgrade	48	48	9		0.35			
	Sub-soil	S.I.	S.I.	25		0.35			
Date Construc	cted:	1963			PRESIDE				
Rehabilitation	Record:	Date	Туре						
		1986							
		2011, 2012	AC Patch Repa	irs					
D	1***			111					
Pavement Cor			ry Sealed - Rav	elling					
Cracks - Longi			Oll to Oll Cools						
			2" to 3" - Seale						
			0' Triangular Se No Rutting, Sho		Davalling		2011 PCI = 53		
Weathering - N	noderate-Se	Pavement Rati		virig, or	naveiling		2011 PCI = 53 2013 PCI = 49		
2011 Pavement	Remaining I	ife Analysis		atique A	nalveie		ARFIELD		
Traffic Index	riomanning :	ine Anarysis	Dianaley - I		11	1 777 - 17	I1		
	Plate Deflecti	ion - 20 K Load	65-72 (71)		72 (71)	65-72 (71)	65-72 (71)		
		ing Life - Years	32		24	1.4	0.7		
Pavement Struc	cture Estimate	Year of Failure	2043	2	035	2012	2012		
Recommende	d Rehabilita	ation:							
	Rehab.	americal delication							
Date	Code			Descr	iption				
2016	В		Reh	abilitate -	Reconstru	ot			
2031	F, H		Saw & S	Seal New	Joints, Fog	Seal			
									
Remarks:	Station has	ed on Sta 10 loc	ated at Edge of	Runway	11-29 pro	ceeding South	<u> </u>		
			e for section - Se				1.		
			ndix D. For Ref				& 3-3		
	. o. mamor	ack ooo hppo		.میر	0000 30				

TABLE	NO. C23 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	LITATION SCI	HEDULE	
Airport:		Truckee-Tah	oe Airport		Date of Survey:	1 "	& 6, 2011 013 Update	
Element:	Taxiway H							
Station:	Holding Ap	ron	-					
Dimensions:	220' x 330'							
FAA Pavemen	_		A2 Single	Gear - 55	s kips		····	
Element Ident	ification (Fo			ear - 95 I				
			s - inches		ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC							
Section:	AC	3	3	150		0.35		
	AB	8	8	20		0.35		
	ASB		-					
	Subgrade	48	48	6		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construc		1963						
Rehabilitation	Record:	Date			Туре			
D 10	10.0	.						
Pavement Co			Slurry Sealed - S			elamination	<u> </u>	
Cracks - Block			Grass grov	ving in cr	acks.			
Weathering - N		30%-40% of ap	oron)		·			
No Rutting, Sh		<u>severe</u>					2011 PCI = 53	
ino natting, on	Oving	Pavement Rati	ng = Very Poor				2011 PCI = 53 2013 PCI = 18	
2011 Pavement	Remaining L		Brandley - F	atique A	nalveis	FAA F	ARFIELD	
Traffic Index		ino Analysis	P		P1	P	P1	
·	Plate Deflecti	on - 20 K Load			5 (111)	91-115 (111)	91-115 (111)	
		ing Life - Years	21	\vdash	21	0.6	0.6	
Pavement Struc	cture Estimate	Year of Failure	2032	2	032	2012	2012	
Recommende	d Rehabilita	ition:						
	Rehab.				71.1921.44	All was a little of the		
Date	Code			Descri	ption			
2016	В		Reh	abilitate -	Reconstru	ct		
2031	F, H		Saw & S	Seal New	Joints, Fog	Seal		
		II.	-					
						·		
			····	_				
Remarks:			ated at Edge of		· · · · · · · · · · · · · · · · · · ·		h	
			for section - Se					
	⊢or I raffic I	ndex see Appei	ndix D. For Reh	nabilitatio	n Code se	ee Tables 3-1	& 3-3.	

Airport: Truckee-Tahoe Airport	TABLE	NO. C24 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCH	IEDULE		
Station: Holding Apron	Airport:		Truckee-Tanoe Airport							
Dimensions: 220' x 330' FAA Pavement Strength Survey - Element Identification (Form 5335-1): Dual Gear - 95 kips Dual Gear - 95 kips Eksit μ Remarks Eksit μ Remarks Eksit μ Remarks Eksit μ Remarks Eksit	Element:	Taxiway H								
A2	Station:	Holding Apı	ron				<u>-</u>			
A2	Dimensions:	220' x 330'								
Parametrication (Form 5335-1): Dual Gear - 95 kips Parametrication (Form 5335-1): Dual Gear - 95 kips Parametrication (Form 5335-1): Parametrication (Fo			Survey -	A2 Single	Gear - 55	kips				
Existing PFC PCC	Element Ident	ification (Fo	orm 5335-1):							
PFC			Thicknes	s - inches	E	ksi	μ	Remarks		
Pavement Section: AC			2011	2013	2011	2013				
AC 3 3 250 0.35 AB 8 8 8 35 0.35 Subgrade 48 48 6 0.35 Sub-soil S.I. S.I. 25 0.35 Date Constructed:	Existing									
AB	Pavement	PCC								
ASB	Section:	AC	3	3	250		0.35			
Subgrade 48		AB	8	8 8 35 0.35						
Sub-soil S.I. S.I. 25 0.35	7	ASB		-						
Sub-soil S.I. S.I. 25 0.35		Subgrade	48	48	6		0.35			
Date			S.I.	S.I.	25		0.35			
Pavement Condition: No Joints. Slurry Sealed - Severe Ravelling/Delamination Cracks - Block - Severe, 1" to 3" - Sealed Grass growing in cracks. - Alligator - Severe (30%-40% of apron) Weathering - Moderate to Severe No Rutting, Shoving 2011 PCI = 51 Pavement Rating = Very Poor 2013 PCI = 18 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index P P P1 P P1 FWD Center Plate Deflection - 20 K Load 62-81 (81) 62-81 (81) 62-81 (81) 62-81 (81) Pavement Structure Remaining Life - Years 31 31 4 4 4 Pavement Structure Estimate Year of Failure 2042 2042 2015 2015 Recommended Rehabilitation: Rehab. Code Description 2016 B Rehabilitate - Reconstruct 2031 F, H Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South. FWD used was mean value for section - See FWD Graphs, Appendix B	Date Construc	cted:	1963		/ P 1 T 24					
Pavement Condition: No Joints. Slurry Sealed - Severe Ravelling/Delamination Cracks - Block - Severe, 1" to 3" - Sealed Grass growing in cracks. - Alligator - Severe (30%-40% of apron) Weathering - Moderate to Severe No Rutting, Shoving Pavement Rating = Very Poor 2013 PCI = 18 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index P P1 P1 FWD Center Plate Deflection - 20 K Load 62-81 (81) 62-81	Rehabilitation	Record:	Date	TOTAL STREET		Type		THE PERSON		
Cracks - Block - Severe, 1" to 3" - Sealed Grass growing in cracks. - Alligator - Severe (30%-40% of apron) Weathering - Moderate to Severe No Rutting, Shoving 2011 PCI = 51 Pavement Rating = Very Poor 2013 PCI = 18 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index P P1 P1 P P1 FWD Center Plate Deflection - 20 K Load 62-81 (81) 62-81 (81) 62-81 (81) 62-81 (81) Pavement Structure Remaining Life - Years 31 31 4 4 Pavement Structure Estimate Year of Failure 2042 2042 2015 2015 Recommended Rehabilitation: Rehab. Date Code Description 2016 B Rehabilitate - Reconstruct 2031 F, H Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South. FWD used was mean value for section - See FWD Graphs, Appendix B	Pavement Cor	ndition:	No Joints.	Slurrv Sealed - S	Severe P	lavelling/D	elamination			
- Alligator - Severe (30%-40% of apron) Weathering - Moderate to Severe No Rutting, Shoving Pavement Rating = Very Poor 2013 PCI = 18 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index P P1 P1 P P1 FWD Center Plate Deflection - 20 K Load 62-81 (81) Pavement Structure Remaining Life - Years 31 31 4 4 4 Pavement Structure Estimate Year of Failure 2042 2042 2015 Recommended Rehabilitation: Rehab. Code Description 2016 B Rehabilitate - Reconstruct 2031 F, H Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South. FWD used was mean value for section - See FWD Graphs, Appendix B	Cracks - Block	- Severe, 1"								
Weathering - Moderate to Severe No Rutting, Shoving Pavement Rating = Very Poor 2013 PCI = 18 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index P P1 FWD Center Plate Deflection - 20 K Load 62-81 (81) 62-81 (81) 62-81 (81) 62-81 (81) Pavement Structure Remaining Life - Years 31 31 4 4 Pavement Structure Estimate Year of Failure 2042 2042 2015 2015 Recommended Rehabilitation: Rehab. Code Description 2016 B Rehabilitate - Reconstruct 2031 F, H Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South. FWD used was mean value for section - See FWD Graphs, Appendix B			 .							
Pavement Rating = Very Poor 2013 PCI = 18 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index P P1 P P1 FWD Center Plate Deflection - 20 K Load 62-81 (81)										
Pavement Rating = Very Poor 2013 PCI = 18 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index P P1 P P1 FWD Center Plate Deflection - 20 K Load 62-81 (81)							·	2011 PCI = 51		
Traffic Index P P1 P1 P1 FWD Center Plate Deflection - 20 K Load 62-81 (81) 62-81 (81) 62-81 (81) 62-81 (81) Pavement Structure Remaining Life - Years 31 31 4 4 Pavement Structure Estimate Year of Failure 2042 2042 2015 2015 Recommended Rehabilitation: Rehab. Code Description			Pavement Rati	ng = Very Poor				2013 PCI = 18		
PWD Center Plate Deflection - 20 K Load 62-81 (81) 62-81 (81) 62-81 (81) 62-81 (81) Pavement Structure Remaining Life - Years 31 31 4 4 4 Pavement Structure Estimate Year of Failure 2042 2042 2015 2015 2015 Pate Code Description 2016 B Rehab. Code Patential Rehabilitation: 2031 F, H Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South. FWD used was mean value for section - See FWD Graphs, Appendix B	2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	ARFIELD		
Pavement Structure Remaining Life - Years 31 31 4 4 Pavement Structure Estimate Year of Failure 2042 2042 2015 2015 Recommended Rehabilitation: Rehab. Code Description				·		P1	Р	P1		
Pavement Structure Estimate Year of Failure 2042 2042 2015 2015 Recommended Rehabilitation: Rehab.				62-81 (81)	62-8	1 (81)	62-81 (81)	62-81 (81)		
Rehab. Date Code Description 2016 B Rehabilitate - Reconstruct 2031 F, H Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South. FWD used was mean value for section - See FWD Graphs, Appendix B			-	31	,	31	4	4		
Rehab. Code Description 2016 B Rehabilitate - Reconstruct Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South. FWD used was mean value for section - See FWD Graphs, Appendix B				2042	2	042	2015	2015		
Date Code Description 2016 B Rehabilitate - Reconstruct 2031 F, H Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South. FWD used was mean value for section - See FWD Graphs, Appendix B	Recommende		ition:							
2016 B Rehabilitate - Reconstruct 2031 F, H Saw & Seal New Joints, Fog Seal Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South. FWD used was mean value for section - See FWD Graphs, Appendix B	Date				Descri	ption				
Remarks: Station based on Sta. 0 located at Edge of Runway 11-29 proceeding South. FWD used was mean value for section - See FWD Graphs, Appendix B	2016	В		Reh			ct			
FWD used was mean value for section - See FWD Graphs, Appendix B	2031	F, H		Saw & S	Seal New	Joints, Fog	Seal			
FWD used was mean value for section - See FWD Graphs, Appendix B										
FWD used was mean value for section - See FWD Graphs, Appendix B										
FWD used was mean value for section - See FWD Graphs, Appendix B										
FWD used was mean value for section - See FWD Graphs, Appendix B	Remarks:	Station base	ed on Sta. 0 loc	ated at Edge of	Runwav	11-29 pro	ceedina Soutl			
								& 3-3.		

TABLE	NO. C25 - P.	AVEMENT CO	NDITION SURV	EY AND	REHABIL	ITATION SCH	IEDULE	
Airport:		Truckee-Tah	oe Airport		Date of Survey:	1	k 6, 2011 013 Update	
Element:	Taxiway U							
Station:	0+00 to 1+7	75						
Dimensions:	50' x 175'							
FAA Pavemen	1	Survey -	T2 Single	Gear - 60) kins			
Element Ident	_	•		ear - 100				
		Thicknes	s - inches		ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC							
Section:	AC	3	3	250 0.35 30 0.35				
	AB	8	8					
	ASB	•	**					
	Subgrade	48	48	9		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construc	cted:	1971						
Rehabilitation	Record:	Date			Туре			
		1986						
		2011, 2012	AC Patch Repa	irs				
	44.4							
Pavement Cor		No Joints, Slur	*					
Cracks - Block	- Moderate	to Severe - Sea	lea					
Weathering - N	Moderate							
No Rutting, Sh		velling					2011 PCI = 54	
140 Hatting, On	oving, or ria	Pavement Rati	ng = Fair				2011 PCI = 54 2013 PCI = 50	
2011 Pavement	Remaining L		Brandley - F	atique A	nalysis		ARFIELD	
Traffic Index	<u> </u>				11	ı	11	
FWD Center F	Plate Deflecti	on - 20 K Load	60-71 (72)	60-7	1 (72)	60-71 (72)	60-71 (72)	
		ing Life - Years	32		24	1.4	0.7	
Pavement Struc	ture Estimate	Year of Failure	2043	2	035	2012	2012	
Recommende	d Rehabilita	tion:						
	Rehab.		1015/1907/15					
Date	Code			Descri		1,191,512,140	H. Salania L. Cont.	
2016	В				Reconstruc	_		
2031	F, H		Saw & S	Seal New	Joints, Fog	Seal	_	
			·				····	
_						<u></u>		
Remarks:	Station base	ed on Sta. 0 loc	ated at Edge of	Runway	11-29 pro	ceeding South	n.	
			e for section - Se				-	
			ndix D. For Ref				& 3-3	

TABLE	NO. C26 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE		
Airport:		Truckee-Tahoe Airport Date of Survey: May 5 & 6, 2011 Survey: October 2013 Update							
Element:	Taxiway J				·	•			
Station:	0+00 to 1+7	75					····		
Dimensions:	50' x 175'								
FAA Pavemen		Survey -	T6 Single	Gear - 75	kine				
Element Ident	_	•		ear - 120					
(Calipaxa)			s - inches		ksi	μ	Remarks		
		2011	2013	2011	2013	μ	Hemane		
Existing	PFC				2010				
Pavement	PCC								
Section:	AC	3	3 3 250 0.35						
oconon.	AB	8	8	40		0.35			
	ASB	0		40		0.33			
	Subgrade	48	48	12		0.35			
	Sub-soil S.I. S.I. 25 0.35								
Date Construc		1971	5.1.	25		0.35			
	tion Record: Date Type								
Renabilitation	necora:	1986			туре				
	2011, 2012 AC Patch Repairs								
Pavement Coi	ndition:	No Joints							
Cracks - Block	- Light to Mo	oderate - Seale	d				<u> </u>		
Patches - Few	(old and dep	ressed at edge	es of patch)						
Weathering - N					1				
No Rutting, Sh	oving, or Ra	velling	¥	_			2011 PCI = 51		
		Pavement Rati					2013 PCI = 50		
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	ARFIELD		
Traffic Index			G		G1	G	G1		
		on - 20 K Load			8 (58)	49-58 (58)	49-58 (58)		
		ng Life - Years	16		12	2.2	1.1		
		Year of Failure	2027	20	023	2013	2012		
Recommende		tion:							
	Rehab.								
Date	Code			Descri	-				
2016	В				Reconstruc				
2031	F, H		Saw & S	seal New	Joints, Fog	Seal			
						·			
Remarks:	Station has	od on Sta Oles	atad at Edga of	Duning	11 00 ===	acadina Caus	<u> </u>		
nemarks:			ated at Edge of				n		
	For Troffic !	was mean value	e for section - Se	e FWD	Grapns, A	ppenaix B	9 0 0		
	TOT HAIRCE	nuex see Appel	ndix D. For Reh	iavilitatio	n Code se	e radies 3-1	α ა-ა .		

TABLE I	NO. C27 - P	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE	
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 013 Update	
Element:	Runway 2-2	20						
Station:	South Blast	Pad						
Dimensions:	75' x 200'							
FAA Pavemen		Survey -	None	· · · · · · · · · · · · · · · · · · ·				
Element Ident	_	-						
		Thicknes	s - inches	E	ksi	μ	Remarks	
Maria Evolução		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC	No Data						
Section:	AC		0					
	AB		0					
	ASB		0					
	Subgrade		0					
	Sub-soil		0					
Date Construc	ted:							
Rehabilitation	Record:	Date		TOUR TOUR	Type		WINDOWS III	
		2011 AC Patch Repair						
	^	2013 Updated to Zebra Striped Markings						
Pavement Cor	_		5' - Secondary (Cracks ar	nd Spailing			
Cracks - Block	- Light, Corr	ner Cracks						
AC Patches - S		acks at edges						
Weathering - M								
No Rutting, She	oving, or Ra						2011 PCI = 42	
		Pavement Rati					2013 PCI = 40	
2011 Pavement	Remaining L	ife Analysis	Brandley - F				ARFIELD	
Traffic Index			Maintenan				e Equipment	
		on - 20 K Load	45-70 ()	45-	70 ()	45-70 ()	45-70 ()	
		ing Life - Years Year of Failure						
								
Recommende		luon:	National State of the Asset of				-	
Data	Rehab.			Decemb	ntion			
Date 2018	Code D		Dam	Descri	ρτιοπ d Reconstru	ıot		
2022	С	٨٨٨	Rock, Pulverize, F				niget	
2036	F, H	Add			Joints, Fog		ojeci	
2000	1,11		Jaw & C	Joan New (Jointa, Fug	CGAI		
	<u> </u>							
Remarks:	Station base	ed on Sta. 0 loc	ated at Runway	02 thres	hold and n	roceedina No	orth.	
			e for section - S					
			ndix D. For Rel				& 3-3.	

TABLE	NO. C28 - P	AVEMENT CO	NDITION SURV	FY AND	RFHARII	ITATION SC	HEDIII E		
		AVEIDENT OO	ADMINISTRAÇÃO	- AND					
Airport:		Truckee-Tah	noe Airport		Date of Survey:		& 6, 2011 2013 Update		
Element:	Runway 2-2	20				<u> </u>			
Station:	0+00 to 10-	+00							
Dimensions:						_			
FAA Pavemen		•	R2A Single	Gear - 30) kips				
Element Ident	ification (Fo					1			
			s - inches		ksi	μ	Remarks		
Falls	IDEO	2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC		1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2						
Section:	AC	6	6 250 0.35						
	AB	6	6	40		0.35			
	ASB		~						
	Subgrade	48	48	12		0.35			
	Sub-soil	S.I.	S.I.	25		0.35			
Date Construc		1973		Le Kill					
Rehabilitation	Record:	Date			Type				
		1994	3" AC Hot in PI	ace Recy	/cle				
	2011 Reclamite								
		2013	Seal Joints, No						
Pavement Cor			25' - 1/2" to 1.5"			of Runway 1	1.5" wide)		
Cracks - Corne			Depressions			·			
- Long	itudinal (25'	each) - Several	(8 on west 1/3,	28 on ce	nter 1/3, 1	1 on east 1/3) - Sealed		
			light, 50% mod						
Weathering - N	loderate-Se		Rutting, Shoving	g. Minor	Ravelling	<u> </u>	2011 PCI = 75		
0011 Davismont	Daniel III	Pavement Rati					2013 PCI = 65		
2011 Pavement	Remaining L	ite Analysis	Brandley - F			FAA - FA	ARFIELD		
Traffic Index	Note Deflect	ion - 20 K Load	05 45 (41)		[1]	05 45 (44)	11		
		ing Life - Years			5 (41)	25-45 (41)	25-45 (41)		
		Year of Failure	145	-	14	58	36		
Recommended Rehabilitation:									
	Rehab.								
Date	Code			Descri	ntion				
2015	F, H		Saw & Seal New			al Reclamite			
2022	C		Add Rock, F	_					
2036	F, H				Joints, Fog				
Remarks:	Station has	ed on Sta 10 loc	ated at Runway	02 three	hold and r	roceeding No	orth		
			e for section - Se				<u> </u>		
			ndix D. For Reh				& ፯- ፯		
			D. 1 OI 1101	Somulatio	0000 30	0 1 ubios 0*1	u 0 0,		

TABLE	NO. C29 - P	AVEMENT CO	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE		
Airport:		Truckee-Tah	noe Airport		Date of Survey:		& 6, 2011 013 Update		
Element:	Runway 2-2	20							
Station:	10+00 to 1	7+00	"						
Dimensions:	75' x 700'								
FAA Pavemer	•	•	R2 Single	Gear - 60) kips				
Element Ident	tification (F								
			s - inches		ksi	μ	Remarks		
		2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC								
Section:	AC	6	6	250		0.35			
	AB	6	6	25		0.35			
	ASB		-						
	Subgrade	48	48	8		0.35			
	Sub-soil S.I. S.I. 25 0.35								
Date Constru	cted:	1965							
Rehabilitation	Record:								
		1994, 2008 3" AC Hot In Place Recycle, '08 Reconstruct with R/W 11-29							
	2011 Reclamite								
		2013	Seal Joints, No	n-Precisi	on Markin	g			
Pavement Co	ndition:	Jointed - 25' x	25' - 1/4" to 1/2"	- Sealed	ł				
No Cracking.					·				
Weathering - L	ight N		ving, or Ravellin				2011 PCI = 75		
		Pavement Rati	ng = Very Good				2013 PCI = 75		
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	ARFIELD		
Traffic Index			l .		11	1	11		
FWD Center F	<u>Plate Deflecti</u>	on - 20 K Load	40-60 (55)		0 (55)	40-60 (55)	40-60 (55)		
		ing Life - Years	87		38	8	5		
		Year of Failure	2098	20	079	2019	2016		
Recommende		ition:							
	Rehab.								
Date	Code			Descri					
2015	F, H		Saw & Seal New						
2022	C		Add Rock, F	<u>-</u>	<u> </u>				
2036	F, H		Saw & S	Seal New	Joints, Fog	Seal			
									
Domester:	Otatian I	ad an Otic Ot	-1-1-15	00 ::	1 11 1				
Remarks:			ated at Runway				orth.		
			for section - Se						
	For Traffic I	naex see Appei	ndix D. For Reh	abilitatio	n Code se	e Lables 3-1	<u>& 3-3.</u>		

TABLE	NO. C30 - P	AVEMENT CO	NDITION SURV	EY AND	REHABIL	ITATION SC	HEDULE	
Airport:		Truckee-Tah	noe Airport		Date of Survey:	1	& 6, 2011 2013 Update	
Element:	Runway 2-2	20						
Station:	17+00 to 46	6+00						
Dimensions:	75' x 2900'					-		
FAA Pavemen	t Strength \$	Survey -	R2 Single	Gear - 60) kips			
Element Ident								
		Thicknes	s - inches	Е	ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC							
Section:	AC	5	5	350		0.35		
	AB	5	5	70		0.35		
	ASB		-					
Subgrade 48 48 11 0.35								
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construc		1965						
Rehabilitation	Record:	Date			Туре			
		1994	3" AC Hot In Pl	ace Recy	/cle			
	2011 Reclamite 2013 Seal Joints, Non-Precision Marking							
Pavement Cor	adition	2013					I = ; - - \	
Cracks - Corne			25' - 1/2" to 1.5" Depressions			oi Runway	i.5 wide)	
			35 on west 1/3,			26 on east 1/3	N - Spaled	
			ight, 50% mode		11101 170, 2	O OH Cast 1/C	n) - Gealed	
			Rutting, Shoving		Ravelling		2011 PCI = 75	
		Pavement Rati		,			2013 PCI = 53	
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	AARFIELD	
Traffic Index			1		l1	l l	11	
		on - 20 K Load			4 (41)	30-44 (41)	30-44 (41)	
		ing Life - Years Year of Failure	93		73	34	20	
			2104	20	084	2045	2031	
Recommende	Rehab.	iuon:						
Date	Code			Descri	ntion			
2015	F, H		Saw & Seal New			al Reclamito		
2022	C		Add Rock, F					
2036	F, H				Joints, Fog			
					, ,			
Remarks:			ated at Runway				orth.	
			e for section - Se					
<u> </u>	For Traffic I	ndex see Appe	ndix D. For Reh	abilitatio	n Code se	e Tables 3-1	& 3-3.	

					D : 1	NA E 4	2 C CO11
Airport:		Truckee-Tah	oe Airport		Date of Survey:	-	& 6, 2011 013 Update
Element:	Runway 2-2	20					
Station:	North Blast	Pad					
Dimensions:	75' x 200'						
FAA Pavemen		•	None				
Element Identi	ification (Fo						
			s - inches		ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC						
	PCC	No Data		=			
Section:	AC		0				
	AB		0				
	ASB		0				
	Subgrade		0				
	Sub-soil		0				
Date Construc	ted:		the later of				
Rehabilitation	Record:	Date			Туре		
		2011	AC Patch Repa	air			
		2013	Updated to Zeb	ra Stripe	d Marking	S	
				Ì.			
Pavement Con	dition:	Joints - 25' x 25	5' - Secondary (Cracks ar	nd Spalling		
Cracks - Block	- Moderate	- 1" to 3" width					
Weathering - M							
No Rutting, Sho	oving, or Ra						2011 PCI = 42
		Pavement Rati					2013 PCI = 34
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	ARFIELD
Traffic Index			Maintenan				e Equipment
		on - 20 K Load	50-60 ()	50-	60 ()	50-60 ()	50-60 ()
Pavement Struc							-
Pavement Struc			<u> </u>	<u> </u>			
Recommended		ition:			No contract that		
	Rehab.						
Date	Code	Birth Street		Descri			
2018	D	A _1 1 1			d Reconstru		
2022	С	Add	Rock, Pulverize, f				рјест
2036	F, H		Saw & S	bear inew	Joints, Fog	oeai .	
	1						<u>.</u>
Remarks:	Station has	ed on Sta O loc	ated at Runway	02 three	hold and a	roceeding No	orth
			ated at Runway e for section - S				orth.

Airport:		Truckee-Tahoe Airport Date of May 5 & 6, 2011 Survey: October 2013 Update							
Element:	Taxiway G						-		
Station:	0+00 to 6+0	00			· · · · · · · · · · · · · · · · · · ·				
Dimensions:	50' x 600'					·			
FAA Pavemen		Survey -	T5 Single	Gear - 30) kins		·		
Element Ident	_								
		Thicknes	s - inches	E	ksi	μ	Remarks		
		2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC								
Section:	AC	6	6	250 0.35					
	AB	6	6	30		0.35			
	ASB -								
	Subgrade	48	48	8	·	0.35			
	Sub-soil	S.I.	S.I.	25		0.35			
Date Construc		1972							
Rehabilitation	Record:	Date		O Branch	Туре				
		1994	3" AC Hot In Pl						
	2011 Reclamite, 2012 AC Patches								
Daviement Oc		2013	Seal Joints	011 - 1		1 1	<u> </u>		
Pavement Cor			25' - 1/2" to 1" (st eage, wi	in depression	s) - Sealed		
			1 10' from West 25') - Sealed.		don Crook	a an E00/ of	lainta		
		derate - Sealed		Second	dary Crack	S 011 50% 01 J	onis.		
Weathering - N			Shoving, or Ra	velling	a		2011 PCI = 77		
- rouning n		Pavement Rati		¥OIIII1g			2013 PCI = 65		
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atique A	nalvsis		ARFIELD		
Traffic Index			J		J1	J	J1		
		on - 20 K Load	30-51 (51)	30-5	1 (51)	30-51 (51)	30-51 (51)		
		ing Life - Years	59		45	14	8		
		Year of Failure	2070	20	056	2025	2019		
Recommende	T	ation:							
Det	Rehab.								
Date	Code		O 0 O N	Descri		1.0			
2015 2022	F, H C		Saw & Seal New						
2022	F, H		Add Rock, F		Hecompac Joints, Fog				
	1,11	_	Saw & S	Jeal NEW	ooniis, rug	Jeai	<u> </u>		
Remarks:	Station base	ed on Sta. 0 loc	ated at Runway	02 edne	south end	and proceed	ing North		
Remarks:			ated at Runway				ing North.		

					Date of	May 5	& 6, 2011		
Airport:	i.	Truckee-Tah	Truckee-Tahoe Airport Survey: October 2013 Update						
Element:	Taxiway G	-		· .					
Station:	6+00 to 9+0	00							
Dimensions:	50' x 300'								
FAA Pavemer	_		T5 Single	Gear - 30) kips				
Element Iden	tification (Fo								
111111111111111111111111111111111111111			s - inches		ksi	μ	Remarks		
		2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC								
Section:	AC								
	AB								
	ASB		-						
	Subgrade	48	48	8		0.35			
	Sub-soil	S.I.	S.I.	25		0.35			
Date Constru		1972							
Rehabilitation	Record:	Date		Water Street	Туре				
		1994	3" AC Hot In PI	ace Recy	ycle				
	2011 Reclamite								
Pavement Co	n aliti a m	2013	Seal Joints	DII - 4		Ale al annual and an	-> 01 - 1		
			25' - 1/2" to 1" (2 t 10' from West		st eage, wi	tn depression	s) - Sealed		
			25') - Sealed.		dony Crook	10 on E09/ of	lointo		
	er - Few - Se		B 20) - Sealeu.	Second	Jary Crack	S 011 50 % 01 t	JOINS.		
Weathering - N			Shoving, or Ra	/elling			2011 PCI = 77		
rrodaom.ig	, io do i dio	Pavement Rati		rolling			2013 PCI = 70		
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atique A	nalvsis	FAA - FA	ARFIELD		
Traffic Index			J		J1	J	J1		
		on - 20 K Load	62-66 (66)	62-6	66 (66)	62-66 (66)	62-66 (66)		
		ing Life - Years	46		36	4	2		
		Year of Failure	2057	20	047	2015	2013		
Recommende		ition:							
	Rehab.								
Date	Code			Descri					
2015	F, H		Saw & Seal New						
2022	С		Add Rock, F		 -				
2036	F, H		Saw & S	eai New	Joints, Fog	Seal			
									
Remarks:	Station base	ed on Sta. 0 loc	ated at Runway	02 edge	south end	d and proceed	ling North.		
							<u> </u>		
	FWD used	was mean value	e for section - Se	erwo	Graphs, A	ppenaix B			

	T			The same of the sa		NA 5 /	2.0.0014		
Airport:		Truckee-Tah	Truckee-Tahoe Airport Date of May 5 & 6, 2011 Survey: October 2013 Update						
Element:	Taxiway G								
Station:	9+00 to 15-	-00							
Dimensions:	50' x 600'		-						
FAA Pavemer	_	•	T5 Single	Gear - 30) kips				
Element Iden	tification (Fo								
			s - inches	E	ksi	μ	Remarks		
		2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC								
Section:	AC	6	6 250 0.35						
	AB	6	6	40		0.35			
	ASB		-						
	Subgrade	48	48	12	_	0.35			
	Sub-soil	S.I.	S.I.	25		0.35			
Date Constru	cted:	1972							
Rehabilitation	Record:								
		1994	3" AC Hot In PI	ace Recy	/cle				
	2011 Reclamite								
		2013	Seal Joints						
Pavement Co			25' - 3/4" to 1" (2		t edge, wi	th depression	s) - Sealed		
			10' from West						
			25') - Sealed.				loints.		
			@ Apron A1a 7		west edge)			
Weathering - N	/loderate		Shoving, or Ra	velling			2011 PCI = 77		
		Pavement Rati	ng = Fair				2013 PCI = 55		
2011 Pavement	Remaining L	ife Analysis	Brandley - F			FAA - FA	ARFIELD		
Traffic Index			J		J1	J	J1		
		on - 20 K Load	20-39 (39)		9 (39)	20-39 (39)	20-39 (39)		
		ing Life - Years Year of Failure	97		76	76	49		
			2108	20	087	2087	2060		
Recommende		ition:							
Date	Rehab.			Decari	ndlan				
2015	Code		Cow 9 Co-1 N	Descri		al Desley "			
2015	F, H C		Saw & Seal New Add Rock, F						
2022	F, H				Hecompac Joints, Fog				
2000	1,11		Saw & S	Jeal NEW		Ocai_			
Domonlos	Station has	nd on Ct- Ols-	ated at Runway	00!	- حلفرو		llings Alexate		
		an nn 5(2 11100	AIDU AL MIDWAY	בחחם ענו	SOUTH AND	i and proceed	แกด เงเดศก		
Remarks:			e for section - Se				ing Horan.		

Airport: Truckee-Tahoe Airport	TABLE	NO. C35 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SC	HEDULE		
Station: 15+00 to 16+00				Truckee-Tanoe Airport						
Dimensions: 50' x 100' FAA Pavement Strength Survey - Element Identification (Form 5335-1):	Element:	Taxiway G				_				
T4	Station:	15+00 to 16	6+00							
Processory Pr	Dimensions:	50' x 100'								
Thickness - Inches		_	•	T4 Single	Gear - 60) kips				
Pack PFC	Element Ident	ification (Fo								
PFC							μ	Remarks		
Pavement Section:			2011	2013	2011	2013		A CHANGE SHALL		
AC	_	N. C. Control of Contr						1		
AB			<u> </u>							
ASB	Section:		6							
Subgrade 48			6	6	20		0.35			
Sub-soil S.I. S.I. 25 0.35		ASB		-						
Date Constructed: 1972 Rehabilitation Record: Date Type 1994, 2008 3" AC Hot In Place Recycle 2011 Reclamite 2013 Seal Joints Pavement Condition: Jointed - 25' x 25' - 3/4" to 1" (2" at west edge, with depressions) - Sea Cracks - Longitudinal - Few - Sealed, Joint 10' from West Edge. - Transverse - Few, Moderate - Sealed. Secondary Cracks on 60% of Joints. - Corner - Few - Sealed. Weathering - Moderate No Rutting, Shoving, or Ravelling 2011 PC		Subgrade	48	48	8		0.35			
Date		Sub-soil	S.I.	S.I.	25		0.35			
1994, 2008 3" AC Hot In Place Recycle 2011 Reclamite 2013 Seal Joints	Date Construc	ted:	1972							
2011 Reclamite 2013 Seal Joints	Rehabilitation	Record:	Date	THE BEST OF		Туре				
2011 Reclamite 2013 Seal Joints										
Pavement Condition: Jointed - 25' x 25' - 3/4" to 1" (2" at west edge, with depressions) - Sea Cracks - Longitudinal - Few - Sealed, Joint 10' from West Edge Transverse - Few, Moderate - Sealed. Secondary Cracks on 60% of Joints Corner - Few - Sealed. Weathering - Moderate										
Cracks - Longitudinal - Few - Sealed, Joint 10' from West Edge. - Transverse - Few, Moderate - Sealed. Secondary Cracks on 60% of Joints. - Corner - Few - Sealed. Weathering - Moderate			2013	Seal Joints						
- Transverse - Few, Moderate - Sealed. Secondary Cracks on 60% of Joints Corner - Few - Sealed. Weathering - Moderate No Rutting, Shoving, or Ravelling 2011 PC Pavement Rating = Good 2013 PC 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIEL Traffic Index J J J1 J J FWD Center Plate Deflection - 20 K Load 48-51 (51) 48-51 (51) 48-51 (51) 48-51 Pavement Structure Remaining Life - Years 59 45 14 8 Pavement Structure Estimate Year of Failure 2070 2056 2025 20- Recommended Rehabilitation: Rehab. Date Code Description 2015 F, H Saw & Seal New Joints - Supplemental, Reclamite 2022 C Add Rock, Pulverize, Recompact + 3" AC	Pavement Cor	ndition:	Jointed - 25' x	25' - 3/4" to 1" (2" at wes	t edge, wi	th depression	s) - Sealed		
- Corner - Few - Sealed. Weathering - Moderate										
Weathering - Moderate No Rutting, Shoving, or Ravelling 2011 PC Pavement Rating = Good 2013 PC 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIEL Traffic Index J J1 J <td>- Trans</td> <td>sverse - Few</td> <td>, Moderate - Se</td> <td>ealed. Seconda</td> <td>ary Crack</td> <td>s on 60%</td> <td>of Joints.</td> <td></td>	- Trans	sverse - Few	, Moderate - Se	ealed. Seconda	ary Crack	s on 60%	of Joints.			
Pavement Rating = Good 2013 PC 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIEL Traffic Index J J1 J J5 FWD Center Plate Deflection - 20 K Load 48-51 (51) <td></td> <td></td> <td>ealed.</td> <td></td> <td></td> <td></td> <td></td> <td></td>			ealed.							
2011 Pavement Remaining Life Analysis Traffic Index J J J J FWD Center Plate Deflection - 20 K Load Pavement Structure Remaining Life - Years Pavement Structure Estimate Year of Failure Pavement S	Weathering - M	1oderate			velling			2011 PCI = 77		
Traffic Index J J1 J J1 J J1 J J2 FWD Center Plate Deflection - 20 K Load 48-51 (51)		<u> </u>	Pavement Rati	ng = Good				2013 PCI = 70		
FWD Center Plate Deflection - 20 K Load 48-51 (51)		Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	AARFIELD		
Pavement Structure Remaining Life - Years 59 45 14 8 Pavement Structure Estimate Year of Failure 2070 2056 2025 20 Recommended Rehabilitation: Rehab. Date Code Description 2015 F, H Saw & Seal New Joints - Supplemental, Reclamite 2022 C Add Rock, Pulverize, Recompact + 3" AC								J1		
Pavement Structure Estimate Year of Failure 2070 2056 2025 20- Recommended Rehabilitation: Rehab. Date Code Description 2015 F, H Saw & Seal New Joints - Supplemental, Reclamite 2022 C Add Rock, Pulverize, Recompact + 3" AC								48-51 (51)		
Recommended Rehabilitation: Rehab. Date Code Description 2015 F, H Saw & Seal New Joints - Supplemental, Reclamite 2022 C Add Rock, Pulverize, Recompact + 3" AC			•		-			8		
Rehab. Date Code Description 2015 F, H Saw & Seal New Joints - Supplemental, Reclamite Add Rock, Pulverize, Recompact + 3" AC				2070	20	056	2025	2019		
DateCodeDescription2015F, HSaw & Seal New Joints - Supplemental, Reclamite2022CAdd Rock, Pulverize, Recompact + 3" AC	necommende		ition:							
2015 F, H Saw & Seal New Joints - Supplemental, Reclamite 2022 C Add Rock, Pulverize, Recompact + 3" AC	Dots				Daniel					
2022 C Add Rock, Pulverize, Recompact + 3" AC				Cow 9 C = 1 N			al Danie vit			
							577			
CAND I I I I I I AND A MEN NEW TOTAL FOR SERIO					·	<u> </u>				
Oday & Geal New Joints, 1 by Geal	2030	Ι,Π	<u> </u>	Saw & 3	beal New	Joints, Fog	Jeal			
Remarks: Station based on Sta. 0 located at Runway 02 edge south end and proceeding North	Remarks:	Station base	ed on Sta. 0 loc	ated at Runway	02 edge	south end	and proceed	ding North		
FWD used was mean value for section - See FWD Graphs, Appendix B								3		
For Traffic Index see Appendix D. For Rehabilitation Code see Tables 3-1 & 3-3.								& 3-3:		

Airport: Element: Station:		Truckee-Tah							
		Tracked rai	ruckee-Tahoe Airport Date of Survey: May 5 & 6, 2011 Survey: October 2013 Update						
Station:	Taxiway G								
	16+00 to 45	5+00							
Dimensions:	50' x 2900'								
FAA Pavemen	_	•	T4 Single	Gear - 60) kips				
Element Ident	tification (Fo								
			s - inches	Е	ksi	μ	Remarks		
		2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC								
Section:	AC	5	5 350 0.35						
	AB	5	5	100		0.35			
	ASB		-						
	Subgrade 48 48 20 0.35								
	Sub-soil	S.I.	S.I.	25		0.35			
Date Construc	cted:	1984			V. J. Brit				
Rehabilitation	Record:	Date			Туре		Take Site		
		1994	3" AC Hot In PI	ace Recy	/cle				
	2011 Reclamite								
		2013	Seal Joints						
Pavement Co			25' - 3/4" to 1" (t edge, wi	th depression	s) - Sealed		
			t 10' from West						
			@ 25') - Sealed			ks on 60% of	Joints.		
			in 2 locations 1		vest edge				
Weathering - N	/loderate		Shoving, or Ra	velling			2011 PCI = 77		
0011 D		Pavement Rati	ng = Good				2013 PCI = 65		
2011 Pavement	Remaining L	ite Analysis	Brandley - F				ARFIELD		
Traffic Index	Plata Daflacti	on - 20 K Load	J 19-30 (28)		J1 0 (28)	J 19-30 (28)	J1 19-30 (28)		
		ing Life - Years	19-30 (28)		97	359	246		
	acture Estimate Year of Failure 2133 2108 2370 2257								
ricoommenae	Rehab.	ition.							
Date	Code			Descri	ption				
2015	F, H		Saw & Seal New			al. Reclamite			
2022	С	" '	Add Rock, F						
2036	F, H	-			Joints, Fog				
5					-				
Remarks:	Station base	ed on Sta. 0 loo	ated at Runway	02 edge	south end	d and proceed	ling North		
		·	e for section - Se				9		
			ndix D. For Ref				& 3-3.		

TABLE	NO. C37 - P.	AVEMENT COI	NDITION SURV	EY AND	A Company of the Comp			
Airport:		Truckee-Tah	Truckee-Tahoe Airport Date of Survey: October 2013 Upd					
Element:	Taxiway G						-	
Station:	45+00 to 48	3+00		_				
Dimensions:	50' x 300' +	Runup Area						
FAA Pavemen	t Strength S	Survey -	T4 Single	Gear - 60) kips			
Element Ident	ification (Fo							
			s - inches	E	ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC					1		
Section:	AC	6	6 250 0.35					
	AB	6	6	40		0.35		
	ASB		-					
	Subgrade	48	48	12		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construc	cted:	1984						
Rehabilitation	Record:	Date			Туре			
		1994	3" AC Hot In PI	ace Rec	ycle			
	2011 Reclamite							
		2013	Seal Joints, AC					
Pavement Cor			25' - 3/4" to 1" (st edge, wi	th depression	s) - Sealed	
			t 10' from West	Edge.				
			25') - Sealed.					
		Runup area (50						
Weathering - N	/loderate		Shoving, or Ra	velling			2011 PCI = 77	
2011 Pavement	Pemaining I	Pavement Rati	ng = Good Brandley - F	otious A	nalvaia		2013 PCI = 65	
Traffic Index	Remaining L	lie Analysis	Brandley - F				ARFIELD	
	Plate Deflecti	on - 20 K Load			J1 I0 (39)	J 28-40 (39)	J1 28-40 (39)	
		ing Life - Years	97		76	76	49	
		Year of Failure	2108			2087	***************************************	
	cture Estimate Year of Failure 2108 2087 2087 2060						2000	
	Rehab.	Mary no service				The same of		
Date	Code			Descri	ption			
2015	F, H		Saw & Seal New			al, Reclamite		
2022	С		Add Rock, F					
2036	F, H		Saw & S	Seal New	Joints, Fog	Seal		
Remarks:			ated at Runway e for section - Se			<u>-</u>	ling North.	
	For Traffic I	ndex see Appe	ndix D. For Reh	abilitatio	n Code se	e Tables 3-1	& 3-3.	

TABLE	NO. C38 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCH	IEDULE	
Airport:		Truckee-Tah	oe Airport		Date of Survey:	· · · · · · · · · · · · · · · · · · ·		
Element:	Taxiway P							
Station:	0+00 to 1+	15						
Dimensions:	50' x 115'							
FAA Pavemer	_	•	T4 Single	Gear - 60) kips			
Element Ident	tification (Fo							
			s - inches	- Inches	ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC				7,			
Pavement	PCC							
Section:	AC	3	3	250		0.35		
	AB	6	6	30		0.35		
	ASB		-					
	Subgrade	48	48	6		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construe	Landard To Control							
Rehabilitation	Record:	Date			Туре			
		2011	Reclamite					
		2013	Seal Joints					
		1						
Pavement Co			25' - 1" to 3" - S	ealed, D	epressed a	at Joints		
Cracks - Seco		ts - Moderate.						
- Corne	r - rew							
Weathering - N	Andorato	No Butting	Shoving, or Ra	volling			2011 PCI = 80	
weathering - N	noderate	Pavement Rati		veiling			2011 PCI = 80 2013 PCI = 70	
2011 Pavement	Remaining I	ife Analysis	Brandley - F	atique A	nalveie		ARFIELD	
Traffic Index	Tromaining L	illo Allalyolo	J J		J1	1 777 - 17	J1	
•	Plate Deflecti	on - 20 K Load			9 (58)	52-59 (58)	52-59 (58)	
		ing Life - Years	25	-	18	4	2	
Pavement Struc	cture Estimate	Year of Failure	2036		029	2015	2013	
Recommende	d Rehabilita	ntion:						
	Rehab.			and profile	T((())			
Date	Code			Descri	ption			
2015	F, H	-	Saw & Seal New			al, Reclamite		
2022	С		Add Rock, F					
2036	F, H				Joints, Fog			
Remarks:	-		ated at Runway					
·			e for section - Se					
	For Traffic I	ndex see Appe	ndix D. For Reh	nabilitatio	n Code se	e Tables 3-1	<u>& 3-3.</u>	

TABLE	NO. C39 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE
Airport:		Truckee-Tah	noe Airport	Date of May 5 & 6, 2011 Survey: October 2013 Update			
Element:	Taxiway V						
Station:	0+00 to 1+	15					
Dimensions:	50' x 115'						
FAA Pavemen		•	T4 Single	Gear - 60) kips		
Element Ident	tification (Fo						
			s - inches		ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC						
Section:	AC	3	3	100		0.35	
	AB	6	6	20		0.35	
	ASB		-				
	Subgrade	48	48	7		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Construc							
Rehabilitation	Record:						
	2011 Reclamite						
		2013	Seal Joints				
Pavement Co	ndition:	Jointed - 25' x	<u> </u> 25' - 1" to 3" - S	ealed, De	enression	at Joints	
Cracks - Secon							
Weathering - N	/loderate		Shoving, or Ra	velling			2011 PCI = 80
		Pavement Rati	ng = Good				2013 PCI = 70
2011 Pavement	Remaining L	ife Analysis	Brandley - F	F		FAA - FA	ARFIELD
Traffic Index	21-1-5-6-1	00.161	J		J1	J	J1
		ion - 20 K Load ing Life - Years			0 (80)	77-80 (80)	77-80 (80)
		Year of Failure	21		15	0.9	0.4
Recommende			2032		026	2012	2011
	Rehab.			THE STATE OF			
Date	Code			Descri	ption		
2015	F, H		Saw & Seal New			tal. Reclamite	
2022	С		Add Rock, I				
2036	F, H				Joints, Fog		
					····		
Remarks:			ated at Taxiway		<u> </u>		
			e for section - Se				0.00
	For Traffic I	naex see Appe	ndix D. For Rel	abilitatio	n Code se	e Tables 3-1	<u>& 3-3.</u>

TABLE	NO. C40 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE	
Airport:		Truckee-Tah			Date of Survey:	May 5	& 6, 2011 2013 Update	
Element:	Taxiway Q							
Station:	Row a & b							
Dimensions:							t:	
FAA Pavemen	_	-	T4/A5 Single	Gear - 30	kips			
Element Ident	incation (Fo		o inches		ksi	μ	Remarks	
		Thickness - inches E ksi 2011 2013 2011 2013					Remarks	
Existing	PFC	2011	2013	2011	2013			
Pavement	PCC							
Section:	AC	0	0	050		0.05	<u> </u>	
Section:		3	3	250		0.35		
	AB	6	6	40	-	0.35		
	ASB	40	-					
	Subgrade	48	48	15		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construc		1973						
Rehabilitation	Record:	Date			Туре			
		1999						
		2013	Seal Joints					
Pavement Cor			5' - 1" to 2" - Mod			ks at Joints - S	Sealed	
Cracks - Longi	tudinal - Few	<i>i</i> - Sealed	Transverse -	Few - Se	aled			
NA/ Al A	Alata		AL D. III					
Weathering - N	loderate H	avelling - Minor		or Shovir	ng		2011 PCI = 80	
0011 D	DI	Pavement Rati				F.A. F.	2013 PCI = 70	
2011 Pavement	Remaining L	.ire Analysis	Brandley - F	T			ARFIELD	
Traffic Index	Note Deflect	an 00 K l and	K		(1	K (55)	K1	
Pavement Stru	<u>rture Bemain</u>	on - 20 K Load ing Life - Years	<55 (55)		5 (55) 46	<55 (55)	<55 (55)	
		Year of Failure	46		16	21	21	
Recommende			2057	1 20	057	2032	2032	
necommende		itiOII.						
Date	Rehab. Code			Decer	ntion			
2015			Saw & Cool Name	Descri		ol Doolamit-		
2015	F, H C		Saw & Seal Nev					
2022	F, H	Add Rock, Pulverize, Recompact + 3" AC Saw & Seal New Joints, Fog Seal						
2000	1',11	. <u> </u>	Saw & C	Jeal New .	Joints, Fug	Jeal	·	
							<u></u> _	
Remarks:	See FWD T	est Data Summ	nary for Test Lo	cations				
			e for section - S		Granhe A	nnendiy R		
			ndix D. For Rel				ደ 3_3	
	· Or Traine I	Hack acc Appel	TAIN D. TOT HE	-abilitatio	., Jour 30	0 1 abies 0-1	u 0-0.	

TABLE N	NO. C41a - P	AVEMENT CO	NDITION SURV	EY AND	REHABIL	ITATION SC	HEDULE
Airport:		Truckee-Tah	oe Airport		Date of Survey:	May 5 & 6, 2011 October 2013 Update	
Element:	Apron A1a						
Station:	Row a & b						
Dimensions:	200' x 500'	(Entire Apron A	11a)				
FAA Pavemen	_	•	T4/A5 Single	Gear - 30) kips		
Element Ident	ification (Fo				ksi		
		Thicknes	μ	Remarks			
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC						
Section:	AC	3	3-4	250		0.35	
	AB	6	6	40		0.35	
	ASB		-				
	Subgrade	48	48	15		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Construc	cted:	1973					
Rehabilitation	Record:	Date			Туре		
		1999				• • • • • • • • • • • • • • • • • • • •	
		2013	Mill and Fill 1.5	" AC			
Pavement Cor		No Joints on Sur					
25' Joints in un	derlying 1.5	of AC, surface	is discolored a	t joints.			
Weathering - L	ight N	lo Ravelling, Ru]			2011 PCI = 45
		Pavement Rati					2013 PCI = 95
2011 Pavement	Remaining L	ife Analysis	Brandley - F		-		ARFIELD
Traffic Index		20161	K		K1	K	K1
Payament Stru	<u> Plate Deflecti</u>	ion - 20 K Load ing Life - Years		Ť T	5 (55)	<55 (55)	<55 (55)
		Year of Failure	46		46	21	21
			2057	1 2	057	2032	2032
Recommende		ation:			010 C - 105		0.00
Date	Rehab. Code			Descri	ntion		
2023	A		Por		Reconstruc	<u> </u>	
2036	F, H				Joints, Fog		
2000	1,11		Jaw & C	Jeal INEW	oomia, rug	Jeai	
Remarks:	See FWD T	est Data Summ	nary for Test Lo	cations			
		was mean value			Graphs A	ppendix B	
		ndex see Appe					& 3-3.

TABLE N	O. C41b - P	AVEMENT CO	NDITION SURV	EY AND		and the second of the second	
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 013 Update
Element:	Apron A1a						
Station:	Row a & b						
Dimensions:	200' x 500'	(Entire Apron A	1a)				
FAA Pavemen			1	Gear - 30) kips		
Element Ident	ification (Fo	orm 5335-1):					
Marie and the color of the colo		Thicknes	s - inches	E	ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC						
Section:	AC	3	3-4	250		0.35	
	AB	6	6	30		0.35	
	ASB		-				
	Subgrade	48	48	10		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Construc	ted:	1973					
Rehabilitation	itation Record: Date Type						
		1999					
		2013	Mill and Fill 1.5	' AC			
D	-1141						
Pavement Cor		No Joints on Sur		tataka	· · ·		
25 Joints in un	derlying 1.5	of AC, surface	is discolored at	joints.			
Weathering - L	iaht N	o Ravelling, Ru	tting or Shoving				2011 PCI = 45
<u></u>		Pavement Rati					2013 PCI = 95
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis		ARFIELD
Traffic Index			K		K 1	К	K1
		on - 20 K Load	55 - 70 (70)	55 -	70 (70)	55 - 70 (70)	55 - 70 (70)
Pavement Struc		_	24	:	24	2	2
Pavement Struc			2035	2	035	2013	2013
Recommende		ition:					
	Rehab.						
Date	Code		Ni new Electric	Descri			
2023	A				Reconstruc		
2036	F, H		Saw & S	eal New	Joints, Fog	Seal	
			- ,,,,,				
						13	
			·		· ·		
Remarks:	See FWD T	est Data Summ	nary for Test Lo	cations			
			e for section - Se		Graphs. A	ppendix B	
			ndix D. For Ref				9 2 2

TABLE I	NO. C41c - F	PAVEMENT CO	NDITION SUR	VEY AND	REHABIL	TATION SO	CHEDULE	
Airport:		Truckee-Tah	noe Airport		Date of Survey:	-	& 6, 2011 2013 Update	
Element:	Apron A1a	_						
Station:	EAA Apron							
Dimensions:	250' x 80' (EAA Apron)			<u></u>	-		
FAA Pavemer				·				
Element Ident								
		Thicknes	s - inches	HECOM E	ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC							
Section:	AC	2	3	-		0.35		
	AB	4	3	-		0.35		
	ASB		8 - 0.35					
	Subgrade	48	48					
	Sub-soil	S.I.	S.I.	-		0.35		
Date Constru	cted:					H. X		
Rehabilitation	Record:	Date			Туре			
		2013	Full Reconstru	ction with	2013 Main	tenance Pro	ogram	
<u> </u>								
Pavement Co	naition:							
							2011 PCI = X	
		Pavement Rati	na = Excellent				2013 PCI = 100	
2011 Pavement	Remaining L	ife Analysis		Fatigue A	nalysis	FAA - F	AARFIELD	
Traffic Index								
		on - 20 K Load						
		ing Life - Years	<u> </u>					
<u> </u>		Year of Failure		<u> </u>				
Recommende		ition:						
D	Rehab.							
Date	Code	Capital Conf Phys		Descri				
2026	F, H				Joints, Fog S			
2031	G		Crack H	epair, Sea	I Cracks & J	DINTS		
				·				
						<u> </u>		
•				 -				
Remarks:	See FWD T	est Data Summ	nary for Test Lo	cations	·			
		was mean value			Graphs, Ap	pendix B		
	For Traffic I	ndex see Appe	ndix D. For Re	habilitatio	n Code see	Tables 3-1	& 3-3.	

TABLE N	O. C42 - P	AVEMENT CO	NDITION SURV	EY AND	REHABIL	TATION SCH	IEDULE	
Airport:		Truckee-Tah	oe Airport		Date of Survey:			
Element:	Apron A1				7			
Station: F	Rowa&b							
Dimensions: 2	200' x 650'	(Entire Apron A	A1)					
FAA Pavement	Strength S	Survey -	A5 Single	Gear - 30) kips			
Element Identif	ication (Fo							
		Thicknes	s - inches	E	ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing F	PFC							
Pavement F	CC							
	IC	3	3-4	250		0.35		
<u></u>	B	6	6	70		0.35		
	SB		-					
	Subgrade	48	48	20		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construct		1973						
Rehabilitation F	Record:	Date			Туре			
		1999						
		2013	Mill and Fill 1.5	" AC				
Pavement Cond	litian.	No leiste es Con	.					
		No Joints on Sur		t ininta				
25' Joints in und	enying 1.5	or AC, surface	is discolored a	t joints.				
	·							
Weathering - Lig	ht N	o Ravelling, Ru	tting or Shoving	 1			2011 PCI = 45	
		Pavement Ratio		· · · · · · · · · · · · · · · · · · ·			2013 PCI = 95	
2011 Pavement R	emaining L	ife Analysis	Brandley - F	atique A	nalysis		ARFIELD	
Traffic Index			L	T	L1	L	L1	
FWD Center Pla			<40 (40)	<40	(40)	<40 (40)	<40 (40)	
Pavement Struct		•	39	:	29	15	8	
Pavement Structu			2050	20	040	2026	2019	
Recommended		ition:						
	Rehab.							
Date	Code			Descri				
2023	A				Reconstruc			
2036	F, H		Saw & S	Seal New	Joints, Fog	Seal		
+								
						<u></u>		
+								
Remarks: S	ee FWD T	est Data Summ	nary for Test Lo	cations				
		was mean value			Graphs, Ai	ppendix B		

						May 5 6	0.0011
Airport:		Truckee-Tah	oe Airport		Date of May 5 & 6, 2011 Survey: October 2013 Update		
Element:	Apron A1						
Station:	Row a & b				"		
Dimensions:	200' x 650'	(Entire Apron	A1)				
FAA Pavemer		•	A5 Single	Gear - 30	kips		
Element Ident	ification (Fo						
			s - inches	E	ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC						
Section:	AC	3	3-4	250		0.35	
	AB	6	6	40		0.35	
	ASB		-				
	Subgrade	48	48	15		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Constru		1973					
Renabilitation	ation Record: Date Type						
		1999 2013	Mill and Fill 1.5	" A C	-		
		2013	IVIIII and FIII 1.5	AC			
Pavement Co	ndition:	No Joints on Sur	Lface				
			is discolored at	ioints.			
	jg			. ,			
Weathering - L	ight N		tting or Shoving	l			2011 PCI = 45
		Pavement Rati					2013 PCI = 95
2011 Pavement	Remaining L	ife Analysis	Brandley - F			FAA - FA	ARFIELD
			L		_1	L	L1
	01 1 50 11 11	00141					
FWD Center F		on - 20 K Load			1 ,	<u> </u>	
FWD Center F Pavement Stru	cture Remain	ing Life - Years	23		16	1.5	0.8
FWD Center F Pavement Structure Pavement P	cture Remain	ing Life - Years Year of Failure			1 ,	<u> </u>	
FWD Center I Pavement Struce Pavement Struce	cture Remain cture Estimate d Rehabilita	ing Life - Years Year of Failure	23		16	1.5	0.8
FWD Center F Pavement Strue Pavement Strue Recommende	cture Remain cture Estimate d Rehabilita Rehab.	ing Life - Years Year of Failure	23	20	16 027	1.5	0.8
FWD Center F Pavement Structure Pavement Structure Pavement Structure Pavemende Paveme	cture Remain cture Estimate d Rehabilita	ing Life - Years Year of Failure	23 2034	20 Descri	16 027 ption	1.5 2013	0.8
FWD Center F Pavement Strue Pavement Strue Recommende	cture Remain cture Estimate d Rehabilita Rehab. Code	ing Life - Years Year of Failure	23 2034 Ren	20 Descri	16 027	1.5 2013	0.8
FWD Center F Pavement Stru Pavement Stru Recommende Date 2023	cture Remain cture Estimate d Rehabilita Rehab. Code	ing Life - Years Year of Failure	23 2034 Ren	20 Descri	ption	1.5 2013	0.8
Pavement Stru Pavement Stru Recommende Date 2023	cture Remain cture Estimate d Rehabilita Rehab. Code	ing Life - Years Year of Failure	23 2034 Ren	20 Descri	ption	1.5 2013	0.8
FWD Center F Pavement Struct Pavement Struct Recommende Date 2023	cture Remain cture Estimate d Rehabilita Rehab. Code	ing Life - Years Year of Failure	23 2034 Ren	Descri	ption	1.5 2013	0.8
FWD Center F Pavement Stru Pavement Stru Recommende Date 2023 2036	cture Remain cture Estimate d Rehabilita Rehab. Code A F, H	ing Life - Years Year of Failure ation:	23 2034 Ren Saw & S	Descri nove and Seal New	ption	1.5 2013	0.8
FWD Center F Pavement Stru Pavement Stru Recommende Date 2023	cture Remain cture Estimate d Rehabilita Rehab. Code A F, H See FWD T	ing Life - Years Year of Failure Ition:	23 2034 Ren	Descri nove and Seal New	ption Reconstructions, Fog	1.5 2013 et Seal	0.8

TABLE	NO. C44 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE	
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 013 Update	
Element:	Apron A1							
Station:	Row a & b							
Dimensions:	200' x 650'	(Entire Apron	A1)		-			
FAA Pavemen				Gear - 30) kips			
Element Ident	ification (Fo	orm 5335-1):						
		Thicknes	s - inches	E	ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC							
Section:	AC	3	3-4	250		0.35		
	AB	6	6	30		0.35		
	ASB		-					
	Subgrade	48	48	10		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construc		1973						
Rehabilitation	Record:	Date						
		1999	N 4:11 N = 111 A =					
		2013	Mill and Fill 1.5	" AC				
Pavement Coi	ndition:	No Joints on Sur	food					
			is discolored a	iointe				
20 0011113 111 011	idenying 1.5	or AO, surface	is discolored a	. joints.				
		-				<u> </u>		
Weathering - L	ight N		itting or Shoving	<u> </u>			2011 PCI = 45	
		Pavement Rati	ng = Excellent				2013 PCI = 95	
	Remaining L	ite Analysis	Brandley - F			FAA - FA	ARFIELD	
Traffic Index	Doto Doffort	on - 20 K Load	55 - 70 (70)		L1	L 55 70 (70)	L1	
		ing Life - Years	11		70 (70) 8	55 - 70 (70) 0.1	55 - 70 (70) 0.1	
		Year of Failure	2022		019	2011	2011	
Recommende			2022		713	2011	2011	
	Rehab.	hulflan en en en					V-20-20-4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	
Date	Code			Descri	ption			
2023	А		Ren		Reconstruc	pt		
2036	F, H		Saw & S	Seal New	Joints, Fog	Seal		
							·	
							·····	
Remarks:			nary for Test Lo					
			e for section - Se					
	For Traffic I	ndex see Appe	ndix D. For Rel	abilitatio	n Code se	e Tables 3-1	& 3-3.	

TABLE	NO. C45 - P	AVEMENT COI	NDITION SURV	EY AND	REHABILI		
Airport:		Truckee-Tah	oe Airport		Date of Survey:		k 6, 2011 013 Update
Element:	Apron A2				_		
Station:	Row a & b						
Dimensions:	200' x 950'	(Entire Apron A	A 2)				
FAA Pavemen	-A	<u> </u>	A1-A4 Single	Gear - 55	5 kips		
Element ident	_	•		ear - 95 l			
		Thicknes	Remarks				
		2011	2013	2011	ksi 2013	μ	
Existing	PFC						
Pavement	PCC						
Section:	AC	3	3-4	250		0.35	-
	AB	6	6	100		0.35	
	ASB		-			5.55	
	Subgrade	48	48	25		0.35	
	Sub-soil	S.I.	S.I.	30		0.35	
Date Construe	The Committee of the Co					0.00	
Rehabilitation		Date			Туре		
		1999			7		
		2011	Sealed with Re	clamite			
		2012, 2013	1.5" AC Mill & F		1/2 in 2013.	2" AC-West	1/2 in 2012
Pavement Co	ndition:	No Joints on Sur					
25' Joints in ur	derlying 1.5	of AC, surface	is discolored a	t joints.			
		ng on west 1/2,					
Existing Tie Do	wns exist be	neath AC surfa	ice on West 1/2	•			
Weathering - L	ight No R	utting, Ravelling	g, or Shoving				2011 PCI = 43
		Pavement Rati	ng = Excellent				2013 PCI = 90
	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	ARFIELD
Traffic Index			M		M1	M	M1
		on - 20 K Load	` '		2 (32)	<32 (32)	<32 (32)
		ing Life - Years	44		31	38	23
		Year of Failure	2055	2	042	2049	2034
Recommende		ition:					
Deta	Rehab.			Desaria	nat an		
Date	Code		D	Descri			
2025 2038	F, H				Reconstruct		
2036	Г, П		Saw & 3	seal New	Joints, Fog S	seai	
Remarks:	See FWD T	est Data Summ	nary for Test Lo	cations			
			e for section - Se		Graphs, Ap	pendix B	
			ndix D. For Rel				& 3-3.

TABLE	NO. C46 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 013 Update
Element:	Apron A2						
Station:	Row a & b						
Dimensions:	200' x 950'	(Entire Apron A	A2)				·
FAA Pavemen	· · · · · · · · · · · · · · · · · · ·		A1-A4 Single	3ear - 5	kins		·-
Element Ident	_	•		ear - 95			
	THE WAY	Thicknes	s - inches		ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC						
Section:	AC	3	3-4	250		0.35	
	AB	6	6	70		0.35	
	ASB		**				
	Subgrade	48	48	20		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Construc	cted:		he la				
Rehabilitation	Record:	Date		IN THE	Туре		
		1999					
		2011	Sealed with Re	clamite			
	*		1.5" AC Mill & F	ill-East	1/2 in 2013	3, 2" AC-West	1/2 in 2012
Pavement Cor		No Joints on Sur					
			is discolored at	joints.			
		ng on west 1/2,				· · · · · · · · · · · · · · · · · · ·	
			ice on West 1/2	•			
vveatnering - L	ignt no h	utting, Ravelling	, 				2011 PCI = 43
2011 Payament	Pemaining I	Pavement Rati	ng = Excellent Brandley - F	otious A	nolvoje		2013 PCI = 90
Traffic Index	nemaining L	.iic Alialysis	M M		M1	M M	M1
	Plate Deflecti	on - 20 K Load			40 (40)	32 - 40 (40)	32 - 40 (40)
		ing Life - Years	28		19	8	4
		Year of Failure	2039		030	2019	2015
Recommende	d Rehabilita	ition:				20.0	2010
	Rehab.				a de la constanta		
Date	Code			Descri	ption		
2025	А		Ren	nove and	Reconstruc	t	
2038	F, H	- "	Saw & S	Seal New	Joints, Fog	Seal	
			···				
Remarks:	See FWD T	est Data Summ	nary for Test Loc	ations			
	FWD used	was mean value	e for section - Se	e FWD	Graphs, A	ppendix B	-
	For Traffic I	ndex see Appei	ndix D. For Reh	abilitatio	n Code se	e Tables 3-1	& 3-3.

TABLE	NO. C47 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE	
Airport:		Truckee-Tah	noe Airport		Date of Survey:		& 6, 2011 013 Update	
Element:	Apron A2							
Station:	Row a & b							
Dimensions:	200' x 950'	(Entire Apron	A2)					
FAA Pavemen	t Strength	Survey -	A1-A4 Single	Gear - 55	kips		_	
Element Ident	tification (Fo	orm 5335-1):		ear - 95 k				
		Thicknes	s - inches	E	ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC							
Section:	AC	3	3-4	250		0.35		
	AB	6	6	40		0.35		
	ASB		-					
	Subgrade	48	48	15		0.35		
	Sub-soil	S.I.	S.I. 25 0.35					
Date Construc	cted:					15.3 1. 15.		
Rehabilitation	n Record: Date Type							
		1999						
		2011	Sealed with Re	clamite				
		2012, 2013	1.5" AC Mill & F	ill-East 1	1/2 in 2013	3, 2" AC-West	1/2 in 2012	
Pavement Cor	ndition:	No Joints on Sui						
25' Joints in un	derlying 1.5	of AC, surface	is discolored at	joints.	·			
1200 sq. ft. of	profile grindi	ng on west 1/2,	fog sealed.					
Existing Tie Do			ace on West 1/2					
Weathering - L	ight No R	utting, Ravelling	g, or Shoving				2011 PCI = 43	
		Pavement Rati	ng = Excellent				2013 PCI = 90	
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	ARFIELD	
Traffic Index			M		V 11	M	M1	
		ion - 20 K Load			55 (55)	40 - 55 (55)	40 - 55 (55)	
		ing Life - Years	16		11	0.7	0.4	
		Year of Failure	2027	20	022	2012	2011	
Recommende		ation:				4		
D	Rehab.	4-11-11						
Date	Code			Descri	*			
2025	A				Reconstruc			
2038	F, H		Saw & S	bear New	Joints, Fog	oeai		
			·					
Remarks:	See FWD T	est Data Summ	nary for Test Lo	rations				
	_		e for section - Se		Granhe A	nnendiy R	<u></u>	
			ndix D. For Reh			<u> </u>	& 3-3	
	. J. Hamol	ooo Appo		المانان حد.	5040 30		<u> </u>	

TABLE	NO. C48 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCH	HEDULE
Airport:		Truckee-Tah	oe Airport		Date of May 5 & 6, 2011 Survey: October 2013 Update		
Element:	Apron A3						
Station:	Row a, b, n	, 0					
Dimensions:	200' x 1000	' (Entire Apron	A3)				
FAA Pavemer	· · · · · · · · · · · · · · · · · · ·			Gear - 40) kips		
Element ident	_	•	<u> </u>	ear - 65 l			
		Thicknes	s - inches		ksi	μ	Remarks
La partir de la companya della companya de la companya de la companya della companya della companya de la companya de la companya della compa		2011	2013	2011	2013	THE REAL PROPERTY.	
Existing	PFC					******	
Pavement	PCC						
Section:	AC	3	2-3	250		0.35	
	AB	6	6	100		0.35	
	ASB		-				
	Subgrade	48	48	25		0.35	
	Sub-soil	S.I.	S.I.	30		0.35	
Date Constru	cted:	STATE STATE		Na Provincia			
Rehabilitation	Record:	Date			Туре		
		1999					
		2013	Mill and Fill - 2"	' AC			
Pavement Co			face, 25' Joints ir				
			urface delamina			fill. Delamina	ated AC was
removed and 2	2" of AC was	placed on top o	of existing AB / o	grindings	mix.		
3.8.2 .1 . 1		N D #: 5	- ··· · ·				
Weathering - L	<u>light</u>		Rutting or Shovi	ng			2011 PCI = 40
2011 Devement	Demaining	Pavement Rati	ng = Excellent	-A: A			2013 PCI = 95
	Remaining L	lie Analysis	Brandley - F				ARFIELD
Traffic Index	Plata Deflect	on - 20 K Load	N <32 (32)		N1 2 (32)	N <32 (32)	N1 <32 (32)
		ing Life - Years	112		112	587	587
		Year of Failure	2123	1	123	2598	2598
Recommende			2120		120	2590	2390
110001111101140	Rehab.						
Date	Code			Descri	iption		
2021	D		Remo		d Reconstru	uct	
2034	F, H				Joints, Fog		
			- 11				<u></u>
Remarks:			nary for Test Lo				
			e for section - S				
	For Traffic I	ndex see Appe	ndix D. For Rel	nabilitatio	n Code se	e Tables 3-1	<u>& 3-3.</u>

TABLE	NO. C49 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 013 Update
Element:	Apron A3						
Station:	Row a, b, n	, o					
Dimensions:	200' x 1000	' (Entire Apron	A3)				
FAA Pavemer		<u>.</u>		 Gear - 40) kips		
Element Iden	_			ear - 65 l			
		Thicknes	s - inches		ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC						
Section:	AC	3	2-3	250		0.35	
	AB	6	6	70		0.35	
	ASB		-				
	Subgrade 48 48 20 0.35						
	Sub-soil	S.I.	S.I.	25		0.35	
Date Constru	cted:						
Rehabilitation	Record:	Date			Туре		
		1999					
		2013	Mill and Fill - 2'	' AC			
Pavement Co			face, 25' Joints in				
			urface delamina			I fill. Delamina	ated AC was
removed and a	2 of AC was	placed on top o	of existing AB /	grinaings	mix.		
Weathering - L	ight	No Bayelling F	Rutting or Shovi	na			2011 PCI = 40
vveathering - t	-igint	Pavement Rati		ny			2011 PCI = 40 2013 PCI = 95
2011 Pavement	Remaining L		Brandley - F	atique A	nalysis		ARFIELD
Traffic Index			N		N1	N	N1
	Plate Deflecti	on - 20 K Load			40 (40)	32 - 40 (40)	32 - 40 (40)
Pavement Stru	icture Remain	ing Life - Years	75	-	75	114	114
Pavement Stru	cture Estimate	Year of Failure	2086	20	086	2125	2125
Recommende	d Rehabilita	ition:					
	Rehab.		ntall bearing				
Date	Code			Descri	ption		
2021	D				d Reconstr		
2034	F, H		Saw & S	Seal New	Joints, Fog	Seal	
	-		····			<u>.</u>	
			<u> </u>				
Remarks:	See FWD T	est Data Summ	nary for Test I or	cations			
Remarks:		est Data Summ	nary for Test Loc e for section - S		Graphs A	nnendix B	

TABLE	NO. C50 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE
Airport:		Truckee-Tah	noe Airport		Date of Survey:		& 6, 2011 013 Update
Element:	Apron A3						
Station:	Row a, b, n	, 0					
Dimensions:		' (Entire Apron	A3)				
FAA Pavemen			i i	Gear - 40) kips		
Element Ident	_	•		ear - 65 l			
		Thicknes	s - inches		ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC						
Section:	AC	3	2-3	250		0.35	
	AB	6	6	40		0.35	_
	ASB		-				
	Subgrade	48	48	15		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Construc	cted:			Y DEL			
Rehabilitation	Record:	Date	MANUAL PROPERTY.		Туре		THE REAL PROPERTY.
		1999					
		2013	Mill and Fill - 2"	AC			
Pavement Cor			face, 25' Joints in				
			urface delamina			l fill. Delamina	ated AC was
removed and 2	of AC was	placed on top o	of existing AB / of	grindings	mix.		
Weathering - L	ight	No Pavelling I	Putting or Shovi	200		····	0011 DOL 40
vveathering - L	.igrit	Pavement Rati	Rutting or Shovi	ig			2011 PCI = 40 2013 PCI = 95
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atique A	nalveie		ARFIELD
Traffic Index	110111111111111111111111111111111111111	ino Anaryoro	N N		N1	N	N1
	Plate Deflecti	on - 20 K Load			55 (55)	40 - 55 (55)	40 - 55 (55)
		ing Life - Years	46		46	21	21
Pavement Struc	cture Estimate	Year of Failure	2057		057	2032	2032
Recommende	d Rehabilita	ition:					
	Rehab.						The second section
Date	Code			Descri	ption		
2021	D		Remo	ve AC an	d Reconstr	uct	
2034	F, H		Saw & S	Seal New	Joints, Fog	Seal	
·							
		·					
Domorko:	See EMD T	oot Data Com	omifau Testi -	antion -		·	
Remarks:			nary for Test Loc		Granha A	nnondiy D	
			e for section - Sondix D. For Ref				9 2 2
	TOT TRAINET	ildex see Ahbe	TUIX D. FUI MEI	iaviiilallo	ii Code se	e rabies 3-1	α ₃ -3.

TABLE	NO. C51 - P	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE		
Airport:		Truckee-Tah	oe Airport		Date of Survey:	1 .	& 6, 2011 013 Update		
Element:	Apron A3								
Station:	Row a, b, n	, o							
Dimensions:	200' x 1000	' (Entire Apron	A3)						
FAA Pavemer			· ·	Gear - 40) kips				
Element Ident	ification (Fo	orm 5335-1):		ear - 65 l					
Control Lance Control		Thicknes	s - inches	E	ksi	μ	Remarks		
		2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC								
Section:	AC	3	2-3	250		0.35			
	AB	6	6	30		0.35			
	ASB	-							
	Subgrade 48 48 10 0.35								
	Sub-soil	S.I.	S.I.	25		0.35			
Date Construe	cted:			Earl Tool N					
Rehabilitation	Record:	Date	NAME OF TAXABLE PARTY.		Туре	RATE OF THE REAL PROPERTY.			
		1999							
		2013	Mill and Fill - 2"	AC					
Pavement Co			face, 25' Joints in						
			urface delamina			till. Delamina	ated AC was		
removed and 2	of AC was	placed on top o	of existing AB / g	grindings	mıx.				
Weathering - L	ight	No Povelling F	Putting or Chavin	200			2011 PCI = 40		
weathering - L	.igrit	Pavement Rati	Rutting or Shovi	ig			2011 PCI = 40 2013 PCI = 95		
2011 Pavement	Remaining I		Brandley - F	atiquo A	nalveie		ARFIELD		
Traffic Index	Tiemaning L	ile Allalysis	N		N1	N N	N1		
	Plate Deflecti	on - 20 K Load			70 (70)	55 - 70 (70)	55 - 70 (70)		
		ing Life - Years	24		24	2	2		
Pavement Strue	cture Estimate	Year of Failure	2035		035	2013	2013		
Recommende	d Rehabilita	ition:				2010	2010		
Hamilton Bridge	Rehab.				146157				
Date	Code			Descri	ption				
2021	D		Remo		d Reconstr	uct			
2034	F, H		Saw & S	Seal New	Joints, Fog	Seal			
							·		
Remarks:			nary for Test Loc						
			e for section - Se						
	For Traffic I	naex see Appe	ndix D. For Reh	abilitatio	n Code se	e Lables 3-1	& 3-3.		

TABLE	NO. C52 - P.	AVEMENT CO	NDITION SURV	EY AND				
Airport:		Truckee-Tah	oe Airport		Date of Survey:			
Element:	Apron A4							
Station:	Row n, o							
Dimensions:	300' x 1000	' (Entire Apron	A4)					
FAA Pavemen	 		· ·	Gear - 30) kins			
Element ident			, contigue	<u></u>	, mpo			
	Thickness - inches E ksi μ Re							
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC						· · · · ·	
Section:	AC	3	3	250		0.35		
	AB	6	6	70		0.35		
	ASB		-					
	Subgrade	48	48	20		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construc	cted:	1965						
Rehabilitation	Record:	Date	a ster that the		Туре			
		1999						
Pavement Cor			5' - 0.5" to 2" - Mo				Sealed	
			rate-Severe Blo					
			Corner Cracks					
			ed in this descrip					
Weathering - S	severe	Ravelling - Mod		Rutting c	or Shoving		2011 PCI = 37	
2011 Boyoment	Pomoining I	Pavement Rati	ng = Very Poor Brandley - F	ations A	nalusia I		2013 PCI = 23	
Traffic Index	Remaining L	lie Analysis		T			ARFIELD	
	Plate Deflect	on - 20 K Load	N <40 (40)		N1 0 (40)	N <40 (40)	N1 <40 (40)	
		ing Life - Years	75		75	114	114	
		Year of Failure	2086		086	2125	2125	
Recommende			2000		000	2120	2123	
	Rehab.					EXERCIT THE		
Date	Code			Descri	ption			
2014	D	**	Remo		d Reconstru	ıct		
2028	F, H		Saw & S	Seal New	Joints, Fog	Seal		
Remarks:			nary for Test Loc					
			e for section - Se					
	For Traffic I	ndex see Appe	ndix D. For Reh	nabilitatio	n Code se	e Lables 3-1	& 3-3.	

TABLE	NO. C53 - P	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE
Airport:		Truckee-Tah	oe Airport Date of Survey:			May 5 & 6, 2011 October 2013 Update	
Element:	Apron A4						
Station:	Row n, o					_	
Dimensions:	300' x 1000	' (Entire Apron	A4)				
FAA Pavemen	t Strength	Survey -	A7 Single	Gear - 30) kips		
Element Ident	tification (Fo						
		Thicknes	s - inches	Е	ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC	<u> </u>			- 		
Section:	AC	3	3	250		0.35	
ı	AB	6	6	40		0.35	
	ASB		-				
	Subgrade	48	48	15		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Construe	cted:	1965					
Rehabilitation	Record:	Date		IN PAGE	Type		
		1999			71		
Pavement Cor	ndition:	Jointed - 25' x 25	5' - 0.5" to 2" - Mo	derate Se	condary Cr	acks at Joints -	Sealed
Slurry Seal Ra	velling/Delar	ninating. Mode	rate-Severe Blo	ck Crack	ing - 80%	Apron.	,
			Corner Cracks				
			ed in this descrip	tion, nev	v construc	tion)	
Weathering - S	Severe	Ravelling - Mod		Rutting o	r Shoving		2011 PCI = 37
		Pavement Rati	ng = Very Poor				2013 PCI = 23
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	ARFIELD
Traffic Index			N		V1	N	N1
		on - 20 K Load			55 (55)	40 - 55 (55)	40 - 55 (55)
		ing Life - Years	46		46	21	21
		Year of Failure	2057	20	057	2032	2032
Recommende		ition:				· · · · · · · · · · · · · · · · · · ·	
Dete	Rehab.						
Date	Code			Descri			
2014	D				d Reconstr		·
2028	F, H		Saw & S	beal New	Joints, Fog	Seal	
						·	-
Remarks:	See FWD T	est Data Summ	nary for Test Loc	cations			
			e for section - Se		Granhe A	nnendiy R	
			ndix D. For Reh				& 3-3
	1 Of Hallio	Hack ace Whhel	TOTAL	iabilitatiO	11 Oode Se	C 1 anies 3-1	u 0-0.

TABLE	NO. C54 - P.	AVEMENT CO	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE
Airport:		Truckee-Tah	oe Airport		Date of Survey:	1 .	& 6, 2011 013 Update
Element:	Apron A4						
Station:	Row n, o						
Dimensions:	300' x 1000	' (Entire Apron	A4)				
FAA Pavemen				Gear - 30) kins	-	
Element ident			, og.c				
		Thicknes	s - inches	F	ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC						
Section:	AC	3	3	250		0.35	
	AB	6	6	23		0.35	
	ASB -						
	Subgrade	48	48	15		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Construc	cted:	1965					
Rehabilitation	Record:	Date	PERMEN		Туре		
		1999					
Pavement Cor			5' - 0.5" to 2" - Mo				Sealed
			rate-Severe Blo				
			Corner Cracks				
			ed in this descrip				0044 DOL 07
Weathering - S	evere	Ravelling - Mod		Hulling C	r Shoving		2011 PCI = 37
2011 Pavement	Remaining I	ife Analysis	ng = Very Poor Brandley - F	atique A	nalveie		2013 PCI = 23 ARFIELD
Traffic Index	nemaining L	ile Allalysis	N		V1	N N	N1
	Plate Deflecti	ion - 20 K Load			65 (65)	56 - 65 (65)	56 - 65 (65)
		ing Life - Years	39		39	13	13
Pavement Struc	cture Estimate	Year of Failure	2050	2	050	2024	2024
Recommende	d Rehabilita	ation:					· · · · · · · · · · · · · · · · · · ·
	Rehab.				Bayrist.		
Date	Code			Descri	ption		
2014	D		Remo	ve AC an	d Reconstr	uct	
2028	F, H		Saw & S	Seal New	Joints, Fog	Seal	
			<u> </u>				
<u> </u>	20						· · · · · · · · · · · · · · · · · · ·
Remarks:	See FWD T	est Data Summ	nary for Test Loc	ations			
			e for section - Se		Graphs, A	ppendix B	- -
			ndix D. For Reh				& 3-3.

TABLE N	O. C55 - P.	AVEMENT CON	NDITION SURV	EY AND	REHABIL	ITATION SCH	HEDULE	
Airport:		Truckee-Tah	oe Airport		Date of Survey:	May 5 & 6, 2011 October 2013 Update		
Element:	South Jet A	pron			_			
Station:	Taxilane R	Sta. 16+00 - 20	+00					
Dimensions:	160' x 540'						 	
FAA Pavement	_	•	A8 Single	Gear - 70) kips			
Element Identif	fication (Fo				1			
			s - inches		ksi	μ	Remarks	
		2011	2013	2011	2013			
- J	PFC							
	PCC							
	AC	4	4	250		0.35		
F	AB	6	6	30		0.35		
<u> </u>	ASB		**					
	Subgrade	48	48	10		0.35		
-	Sub-soil	S.I.	S.I.	25		0.35		
Date Construct								
Rehabilitation	Record:	Date			Туре		STREET, DE	
		1991						
Pavement Con		No Joints, Slur						
Cracks - Block (ttern.				
- Alligato	r Cracking	- Moderate- 20%	% of Apron					
144		N 5 W 6		***				
Weathering - Mo	oderate		hoving, or Rave	lling			2011 PCI = 55	
0044 D		Pavement Rati					2013 PCI = 30	
2011 Pavement F	Remaining L	ife Analysis	Brandley - F				ARFIELD	
Traffic Index	-4- D-fl4	00 1/ 11	Q 50.60.(60)		Q1	Q = CO (CO)	Q1	
FWD Center PI Pavement Struc			50-60 (60)	50-6	0 (60)	50-60 (60)	50-60 (60)	
Pavement Struct		_	10		24.0	8.0	0.4	
Recommended			2021	20	018	2012	2011	
recommenueu	Rehab.	itiOII.						
Date	Code			Descri	ntion			
2015	D		Pomo		d Reconstr	uet		
2028	F, H				Joints, Fog			
2020	1,11		Jaw & C	Jeal NEW	oomia, rog	Jeal		
					-			
	-							
Remarks:	See FWD T	est Data Summ	nary for Test Lo	cations				
·			for section - S		Graphs, A	ppendix B		
			ndix D. For Reh				& 3-3.	

TABLE	NO. C56 - P	AVEMENT COI	NDITION SURV	EY AND				
Airport:		Truckee-Tah	oe Airport		Date of Survey:	•	& 6, 2011 013 Update	
Element:	Hangars A-	Н						
Station:	Taxilane R							
Dimensions:	65' x 1250'							
FAA Pavemen	t Strength S	Survey -	None					
Element Ident	ification (Fo							
			s - inches		ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC					=		
Section:	AC	3	3	250		0.35		
	AB	8	8	30		0.35		
	ASB 0							
	Subgrade	48	48	11		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construc	Particular Company							
Rehabilitation	on Record: Date Type							
		1994		_				
		2011, 2012	AC Patch Repa	ıir _				
D	1141							
Pavement Cor		No Joints, Slurry		1.40	W			
	itudinal - Fe	erate (40 @ 25			:" to 18" wid s - 50'x1'	de Patches		
<u></u>					5 - 50 X I			
Weathering - L			king on 50% of t Iling, or Shoving				2011 PCI = 59	
weathering - L	ignt N	Pavement Rati		j			2011 PCI = 39 2013 PCI = 45	
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atique A	nalvsis I		ARFIELD	
Traffic Index	<u> </u>		0		01	0	01	
	Plate Deflect	ion - 20 K Load	50-62 (62)	50-6	62 (62)	50-62 (62)	50-62 (62)	
Pavement Stru	cture Remain	ing Life - Years	52		47	27	23	
Pavement Struc	cture Estimate	Year of Failure	2063	2	058	2038	2034	
Recommende	-	ation:						
	Rehab.					ince little		
Date	Code			Descri	•	Here a selle		
2019	Α			Recon	struct			
					 			
			=					
Remarks:	Station has	ed on Sta O loc	ated at Taxiway	G edge	and proce	eding West		
			e for section - Se		·			
			ndix D. For Rel				& 3-3.	

TABLE	NO. C57 - P	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 013 Update
Element:	Hangars A-	Н					·
Station:	Taxilane R			· · · ·			
Dimensions:	65' x 1250'						
FAA Pavemen	t Strength	Survey -	None		·		
Element ident	ification (Fo	orm 5335-1):					
		μ	Remarks				
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC		· · · ·				•
Section:	AC	3	3	250		0.35	
	AB	8	8	30		0.35	
	ASB		0				
	Subgrade	48	48	9		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Construc	ted:			AP LOS			
Rehabilitation	Record:	Date			Type		
		1994					
		2011, 2012	AC Patch Repa	ir			
				•			···
Pavement Cor		No Joints, Slurry					
		erate (40 @ 25'				de Patches	
	itudinal - Fe			k Cracks	- 50'x1'		
			ing on 50% of the			·	
Weathering - L	ight No		lling, or Shoving				2011 PCI = 59
0011 D	<u> </u>	Pavement Rati					2013 PCI = 45
	Remaining L	.ite Analysis	Brandley - F				ARFIELD
Traffic Index	Note Deflecti	on - 20 K Load	O 65-72 (71)		D1	O 65 70 (71)	O1
		ing Life - Years	41		2 (71) 36	65-72 (71) 12	65-72 (71)
		Year of Failure	2052		047	2023	11
Recommende			2032		J41	2023	2022
	Rehab.	Euroria en				-05000	-W
Date	Code			Descri	ption		
2019	А			Recons			
			·				
Remarks:			ated at Taxiway				
			for section - Se				
	For Traffic I	ndex see Appei	ndix D. For Reh	abilitatio	n Code se	e Tables 3-1	& 3-3.

TABLE	NO. C58 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE	
Airport:		Truckee-Tah	oe Airport		Date of Survey:	May 5 & 6, 2011 October 2013 Update		
Element:	Hangars A-	Н						
Station:	Row West	A - Taxilane W	est of Hangar A					
Dimensions:								
FAA Pavemen	_	•	None					
Element Ident	itication (Fo		s - inches		1!			
					ksi	μ	Remarks	
Eviation	DEC	2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC			070				
Section:	AC	3	3	250		0.35		
	AB	6	6	70		0.35		
	ASB		-					
	Subgrade		48 48 20 0.35					
	Sub-soil	S.I.	S.I.	25		0.35		
Date Construc						<u> </u>		
Rehabilitation	Record:	Date			Туре			
		2001						
		2013	Add Suppleme	ntal Joint	s, Rehab I	Exist. Joints. (Tape)	
Pavement Cor	ndition:	Jointed 12.5'x1	2.5' - 1" & 3/8"	- Some S	Secondary	Cracking - Se	ealed	
		AC at Concrete			, , , , , , , , , , , , , , , , , , ,	O.C.O.		
Slurry Sealed								
Weathering - L	ight		·					
No Rutting, Sh		elling.				·	2011 PCI = 75	
		Pavement Rati	ng = Very Good				2013 PCI = 73	
2011 Pavement	Remaining L	ife Analysis	Brandley - F		nalysis		ARFIELD	
Traffic Index			Р	T T	21	Р	P1	
		on - 20 K Load	42-81 (70)	42-8	1 (70)	42-81 (70)	42-81 (70)	
		ing Life - Years	28		28	6	6	
Pavement Struc	ture Estimate	Year of Failure	2039	20	039	2017	2017	
Recommende		ition:						
	Rehab.							
Date	Code			Descri		المناه المالين		
2018	G				Cracks and			
2024	G, H	Crack Repair, Seal Cracks and Joints, Fog Seal						
2030	D		Remo	ve AC an	d Reconstru	uct		
Remarks:	Station has	nd on Sta Alaa	atad at South F	nd of the	Honger	low prosection	a North	
nemarks:			ated at South E for section - S				y North.	
	I AAD GOED I	rus mean value				e Tables 3-1		

TABLE	NO. C59 - P	AVEMENT CO	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE	
Airport:		Truckee-Tah	noe Airport		Date of Survey:	1		
Element:	Hangars A-	Н						
Station:	Row East A	\ - Taxilane Ea	st of Hangar A					
Dimensions:	60' x 560'							
FAA Pavemen	_	•	None					
Element ident	ification (F							
			s - inches	E	ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC				i.			
Section:	AC	3	3	250		0.35		
	AB	6	6	20		0.35		
	ASB		-					
	Subgrade	48	48	10		0.35		
	Sub-soil S.I. S.I. 25 0.35							
Date Construc	cted:							
Rehabilitation	Record:	Date		To USW	Туре			
		2001						
		2013	Add Suppleme	ntal Joint	s, Rehab	Exist. Joints. (Tape)	
Pavement Cor			2.5' - 1" & 3/8"			Cracking - Se	ealed	
Cracks - Long.	Crack Appr	ox 4" from edge	of pavement a	longside	ditch.			
Slurry Sealed								
Weathering - L								
No Rutting, Sh	oving or Rav	velling.					2011 PCI = 75	
		Pavement Rati	ng = Very Good				2013 PCI = 73	
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	ARFIELD	
Traffic Index			Р		21	P	P1	
		ion - 20 K Load	70-92 (80)	70-9	2 (80)	70-92 (80)	70-92 (80)	
		ing Life - Years	24		24	4	4	
		Year of Failure	2035	20	035	2015	2015	
Recommende		ation:						
	Rehab.			TENTE,				
Date	Code	B. C.		Descri				
2018	G				Cracks and			
2024	G, H		Crack Repair,					
2030	D		Hemo	ve AC an	d Reconstr	uct		
								
Remarks:	Station has	ed on Sta Allea	ated at South E	nd of the	Hangar F	low proceeding	a North	
i icilidi kə.			ated at South E for section - S				ig ivortii.	
			ndix D. For Rel				8. 2. 2	
	TOI HAIRET	Haey see Whhe	HUIX D. FUI MEI	iaviiitatio	ii Code Se	E Tables 3-1	α υ-υ.	

PFC	TABLE	NO. C60 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE	
Station: Row West B - Taxilane West of Hangar B	Airport:		Truckee-Tah	noe Airport					
Dimensions: 60' x 560'	Element:	Hangars A-	Н						
None Steep	Station:	Row West I	B - Taxilane W	est of Hangar B					
Thickness - inches	Dimensions:	60' x 560'							
Thickness - inches		_	-	None					
Proc PCC	Element Identi	ification (Fo							
PFC							μ	Remarks	
Pavement Section: AC			2011	2013	2011	2013			
AC 3 3 250 0.35 AB 6 6 70 0.35 ASB -								T- V	
AB		A STATE OF THE STA							
ASB	Section:						0.35		
Subgrade 48			6	6	70		0.35		
Sub-soil S.I. S.I. 25 0.35				-					
Date Constructed: Rehabilitation Record: Date Type		Subgrade	48	48	20		0.35		
Date Type									
Pavement Condition: Jointed 12.5'x12.5' - 1" & 3/8" - Some Secondary Cracking - Sealed Cracks - Long. Crack Approx 4" from edge of pavement alongside ditch. Slurry Sealed Weathering - Light No Rutting, Shoving or Ravelling. Pavement Rating = Good 2011 F Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFI Traffic Index P P1 P1 FWD Center Plate Deflection - 20 K Load Pavement Structure Remaining Life - Years Pavement Structure Estimate Year of Failure 2039 2039 2017 2018 Recommended Rehabilitation: Rehab. Code Description 2018 Crack Repair, Seal Cracks and Joints, Fog Seal 2030 D Remove AC and Reconstruct Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding Nor	Date Construc	ted:							
Pavement Condition: Jointed 12.5'x12.5' - 1" & 3/8" - Some Secondary Cracking - Sealed Cracks - Long. Crack Approx 4" from edge of pavement alongside ditch. Slurry Sealed Weathering - Light No Rutting, Shoving or Ravelling. Pavement Remaining Life Analysis Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFI Traffic Index P P1 P FWD Center Plate Deflection - 20 K Load Pavement Structure Remaining Life - Years Pavement Structure Estimate Year of Failure Pavement Structure Estimate Year of Failure Pavement Rehabilitation: Rehab. Date Code Description 2018 G Crack Repair, Seal Cracks and Joints, Fog Seal Pavemove AC and Reconstruct Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding Nor	Rehabilitation	Record:	Date			Туре			
Pavement Condition: Jointed 12.5'x12.5' - 1" & 3/8" - Some Secondary Cracking - Sealed Cracks - Long. Crack Approx 4" from edge of pavement alongside ditch. Slurry Sealed Weathering - Light No Rutting, Shoving or Ravelling. Pavement Rating = Good 2013 F 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFI Traffic Index P P1 P FWD Center Plate Deflection - 20 K Load 58-81 (70) 58-			2001						
Cracks - Long. Crack Approx 4" from edge of pavement alongside ditch. Slurry Sealed Weathering - Light No Rutting, Shoving or Ravelling. Pavement Rating = Good 2013 F Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFII Traffic Index P P1 P1 PWD Center Plate Deflection - 20 K Load 58-81 (70) 58-8			2013	Add Suppleme	ntal Joint	s, Rehab	Exist. Joints. (Tape)	
Cracks - Long. Crack Approx 4" from edge of pavement alongside ditch. Slurry Sealed Weathering - Light No Rutting, Shoving or Ravelling. Pavement Rating = Good 2013 F Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFII Traffic Index P P1 P1 PWD Center Plate Deflection - 20 K Load 58-81 (70) 58-8									
Slurry Sealed Weathering - Light							Cracking - Se	ealed	
No Rutting, Shoving or Ravelling. 2011 F		Crack Appre	ox 4" from edge	e of pavement a	longside	ditch.			
No Rutting, Shoving or Ravelling. Pavement Rating = Good 2013 F 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFI Traffic Index P P1 P FWD Center Plate Deflection - 20 K Load Pavement Structure Remaining Life - Years Pavement Structure Estimate Year of Failure Pavement Structure Estimate Year									
Pavement Rating = Good 2013 F 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFI Traffic Index P P1 P FWD Center Plate Deflection - 20 K Load 58-81 (70) 58									
Traffic Index P FWD Center Plate Deflection - 20 K Load Pavement Structure Remaining Life - Years Pavement Structure Estimate Year of Failure Pate Code Pate	No Rutting, Sho	oving or Rav						2011 PCI = 63	
Traffic Index			Pavement Rati					2013 PCI = 70	
FWD Center Plate Deflection - 20 K Load 58-81 (70) 58-8		Remaining L	ife Analysis					ARFIELD	
Pavement Structure Remaining Life - Years 28 28 6 Pavement Structure Estimate Year of Failure 2039 2039 2017 2 Recommended Rehabilitation: Rehab Code Description				· ·				P1	
Pavement Structure Estimate Year of Failure 2039 2039 2017 2 Recommended Rehabilitation: Rehab. Description				·				58-81 (70)	
Recommended Rehabilitation: Rehab. Description			<u> </u>					6	
Rehab. Code Description				2039	20)39	2017	2017	
Date Code Description 2018 G Crack Repair, Seal Cracks and Joints 2024 G, H Crack Repair, Seal Cracks and Joints, Fog Seal 2030 D Remove AC and Reconstruct Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding Nor	necommende		ition:						
2018 G Crack Repair, Seal Cracks and Joints 2024 G, H Crack Repair, Seal Cracks and Joints, Fog Seal 2030 D Remove AC and Reconstruct Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding Nor	Deta	Carl March 1997			D				
2024 G, H Crack Repair, Seal Cracks and Joints, Fog Seal 2030 D Remove AC and Reconstruct Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding Nor				0 1 0			1		
2030 D Remove AC and Reconstruct Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding Nor									
Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding Nor									
	2030	U		Hemo	ve AC an	u neconstr	ucl		
	Remarks:	Station has	ed on Sta O loc	ated at South F	nd of the	Hangar F	low proceeding	na North	
THE GOOD HOURS WINDS IN ARREST FROM THE PROPERTY OF THE PROPER							<u> </u>	19 1401011.	
For Traffic Index see Appendix D. For Rehabilitation Code see Tables 3-1 & 3-3.								& 3-3	

TABLE N	NO. C61 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE	
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 013 Update	
Element:	Hangars A-	Н						
Station:	Row BC - ⁻	Taxilane Betwe	en Hangars B &	С				
Dimensions:								
FAA Pavement			None					
Element Identi	Tication (Fo						Remarks	
			Thickness - inches E ksi μ					
Estation I	DEC	2011	2011 2013 2011 2013					
	PFC							
	PCC			0=0				
	AC	3	3	250		0.35		
ļ	AB	6	6	70		0.35		
	ASB		-					
	Subgrade	48	48	20		0.35		
	Sub-soil	S.I.	S.I. S.I. 25 0.35					
Date Construc								
Rehabilitation								
		1999						
		2013	Add Suppleme	ntal Joint	s, Rehab	<u> Exist. Joints. (</u>	Tape)	
D	-1141	1.1 140 51 4	0.51 411.0.0/011	0 0				
Pavement Con			2.5' - 1" & 3/8"				aled	
Cracks - 20 cor								
Slurry Sealed -		by plows.	BIOCK	Cracks -	3'x2' area			
Weathering - Li No Rutting, Sho		rolling			- 181 0.5		0011 DOL 60	
No Hulling, She	oving or hav	Pavement Rati	ng – Good				2011 PCI = 63	
2011 Pavement	Remaining I	ife Analysis	Brandley - F	atique A	nalveie		2013 PCI = 65 ARFIELD	
Traffic Index	i tomaning L	ile Analysis	P		P1	P P	P1	
	late Deflecti	on - 20 K Load	39-75 (70)		5 (70)	39-75 (70)	39-75 (70)	
Pavement Struc	ture Remain	ing Life - Years	28		28	6	6	
Pavement Struc			2039		039	2017	2017	
Recommended	d Rehabilita	ition:				2017	2011	
	Rehab.	N. W.						
Date	Code			Descri	ption			
2018	G		Crack Re		Cracks and	Joints		
2024	G, H		Crack Repair,					
2030	D				d Reconstr			
Remarks:		ed on Sta. 0 loc	ated at South E	nd of the	Hangar F	Row proceedin	g North.	
			e for section - S	·			-	
			ndix D. For Rel				& 3-3.	

		Truckee-Tahoe Airport Date of May 5 & 6, 2011 Output May 5 & 6, 2011								
Airport:	-	Truckee-Tah	oe Airport		Survey:		013 Update			
Element:	Hangars A-	Н								
Station:	Row CD - 1	Taxilane Betwe	en Hangars C 8	ι D						
Dimensions:	75' x 560'									
FAA Pavemen	_	•	None		•					
Element Ident	ification (Fo									
			s - inches		ksi	μ	Remarks			
		2011	2013	2011	2013					
Existing	PFC									
Pavement	PCC									
Section:	AC	3	3	250		0.35				
	AB	6	6	70		0.35				
	ASB	•	-							
	Subgrade	48	48	20		0.35				
	Sub-soil	S.I.	S.I. S.I. 25 0.35							
Date Construc	ted:									
Rehabilitation	Record:	Date		HE KATE	Туре					
		1999								
		2012	AC Patch Repa	air		(V				
Pavement Cor	ndition:	No Joints. Con	crete Slot Drain	•						
		ght-Moderate Lo								
Patches - Seve			ved AC along ea	ast side l	Hangar C	2'x20' @ 5' C).C.)			
Weathering - L										
No Rutting, Sh	oving or Rav						2011 PCI = 61			
		Pavement Rati					2013 PCI = 57			
2011 Pavement	Remaining L	ite Analysis	Brandley - F	1			ARFIELD			
Traffic Index	Nata Datia di	00 1/1	P		P1	P	P1			
		on - 20 K Load ing Life - Years			00 (70)	55-90 (70)	55-90 (70)			
		Year of Failure	28	 	28	6	6			
Recommende			2039	1 2	039	2017	2017			
recommende	Rehabilita	ttioff.		Part of the	a special					
Date	Code			Descri	ntion					
2017	D		Remo			uct				
2028	F		Remove AC and Reconstruct Saw & Seal New Joints							
2033	G				I Cracks &	Joints				
		<u> </u>	2.001111							
										
Remarks:			ated at South E				ng North.			
	FWD used	was mean value	e for section - S	ee FWD	Graphs, A	ppendix B				
	For Traffic I	ndex see Appe	ndiy D. For Rel	ahilitatio	n Code se	a Tables 3-1	8 3 3			

Airport:		Truckee-Tah	oe Airport		Date of		& 6, 2011 2013 Update	
Element:	Hangars A-	————— Н			Survey:	October 2	2013 Opuale	
Station:			Between Hang	are D & I				
Dimensions:	<u> </u>	est) - Taxilane	Detween hang	a13 D & 1	-			
FAA Pavemer		Survey -	None					
Element Ident	_	•	None					
		Thickness - inches E ksi μ Rema						
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC							
Section:	AC	AC 3 3 250 0.35						
	AB	6	6	30		0.35	Cement Treated	
	ASB		-					
	Subgrade	48	48	15		0.35		
	Sub-soil	S.I.	S.I.	25		0.35		
Date Constru					Em V			
Rehabilitation	Record:	Date			Type			
		1982, 2012	2012, Remove	and Rep	lace AC o	n top of Exist	ing CTB	
Pavement Co		No Ininto Con	crete Slot Drain					
Pavement Co	nation:	NO JOINES. CON	crete Slot Drain	•				
	<u> </u>							
VA (= + t)= = ut = = = -1								
vveatnering - L	iaht							
		oving.					2011 PCI = 57	
No Ravelling, I	Rutting or Sh	Pavement Rati	ng = Excellent				2011 PCI = 57 2013 PCI = 95	
	Rutting or Sh	Pavement Rati	ng = Excellent Brandley - F	atigue A	nalysis	FAA - F.	2011 PCI = 57 2013 PCI = 95 AARFIELD	
No Ravelling, I	Rutting or Sh	Pavement Rati	Brandley - F P		nalysis	FAA - F.	2013 PCI = 95	
No Ravelling, I 2011 Pavement Traffic Index FWD Center F	Rutting or Share Remaining L	Pavement Rati Life Analysis on - 20 K Load	Brandley - F				2013 PCI = 95 AARFIELD	
No Ravelling, I 2011 Pavement Traffic Index FWD Center F Pavement Stru	Rutting or Share Remaining Least Deflection of the Remain	Pavement Rati Life Analysis on - 20 K Load ing Life - Years	Brandley - F P	40-6	21	Р	2013 PCI = 95 AARFIELD P1	
2011 Pavement Traffic Index FWD Center F Pavement Strue	Rutting or Share Remaining Leader Deflection Remains cture Estimate	Pavement Rati Life Analysis On - 20 K Load ing Life - Years Year of Failure	Brandley - F P 40-60 (60)	40-6	P1 0 (60)	P 40-60 (60)	2013 PCI = 95 AARFIELD P1 40-60 (60)	
No Ravelling, I 2011 Pavement Traffic Index FWD Center F Pavement Stru	Rutting or Share Remaining Leader Deflect lecture Remain cture Estimated Rehabilita	Pavement Rati Life Analysis On - 20 K Load ing Life - Years Year of Failure	Brandley - F P 40-60 (60) 47	40-6	P1 0 (60) 47	P 40-60 (60) 35	2013 PCI = 95 AARFIELD P1 40-60 (60) 35	
2011 Pavement Traffic Index FWD Center F Pavement Strue Pavement Strue Recommende	Rutting or Share Remaining Leader Deflection Remaining Leader Estimated Rehabilitation Rehab.	Pavement Rati Life Analysis On - 20 K Load ing Life - Years Year of Failure	Brandley - F P 40-60 (60) 47	40-6	P1 0 (60) 47 058	P 40-60 (60) 35	2013 PCI = 95 AARFIELD P1 40-60 (60) 35	
No Ravelling, I 2011 Pavement Traffic Index FWD Center I Pavement Struct Pavement Struct Recommende Date	Rutting or Share Deflection Remaining Loture Remaining ture Estimated Rehabilita Rehab. Code	Pavement Rati Life Analysis On - 20 K Load ing Life - Years Year of Failure	Brandley - F P 40-60 (60) 47 2058	40-6	P1 00 (60) 47 058 ption	P 40-60 (60) 35 2046	2013 PCI = 95 AARFIELD P1 40-60 (60) 35	
No Ravelling, I 2011 Pavement Traffic Index FWD Center F Pavement Struct Pavement Stru	Rutting or Share Remaining Leader Deflection Remaining Leader Remaining Course Estimated Rehabilitation Rehab. Code F, H	Pavement Rati Life Analysis On - 20 K Load ing Life - Years Year of Failure	Brandley - F P 40-60 (60) 47 2058	40-6 20 Descri	P1 0 (60) 47 058 ption Joints, Fog	P 40-60 (60) 35 2046	2013 PCI = 95 AARFIELD P1 40-60 (60) 35	
No Ravelling, I 2011 Pavement Traffic Index FWD Center I Pavement Struct Pavement Struct Recommende Date	Rutting or Share Deflection Remaining Loture Remaining ture Estimated Rehabilita Rehab. Code	Pavement Rati Life Analysis On - 20 K Load ing Life - Years Year of Failure	Brandley - F P 40-60 (60) 47 2058	40-6 20 Descri	P1 00 (60) 47 058 ption	P 40-60 (60) 35 2046	2013 PCI = 95 AARFIELD P1 40-60 (60) 35	
No Ravelling, I 2011 Pavement Traffic Index FWD Center F Pavement Struct Pavement Struct Recommende Date 2026	Rutting or Share Remaining Leader Deflection Remaining Leader Remaining Course Estimated Rehabilitation Rehab. Code F, H	Pavement Rati Life Analysis On - 20 K Load ing Life - Years Year of Failure	Brandley - F P 40-60 (60) 47 2058	40-6 20 Descri	P1 0 (60) 47 058 ption Joints, Fog	P 40-60 (60) 35 2046	2013 PCI = 95 AARFIELD P1 40-60 (60) 35	
No Ravelling, I 2011 Pavement Traffic Index FWD Center I Pavement Struct Pavement Struct Recommende Date 2026	Rutting or Share Remaining Leader Deflection Remaining Leader Remaining Course Estimated Rehabilitation Rehab. Code F, H	Pavement Rati Life Analysis On - 20 K Load ing Life - Years Year of Failure	Brandley - F P 40-60 (60) 47 2058	40-6 20 Descri	P1 0 (60) 47 058 ption Joints, Fog	P 40-60 (60) 35 2046	2013 PCI = 95 AARFIELD P1 40-60 (60) 35	
No Ravelling, I 2011 Pavement Traffic Index FWD Center I Pavement Struct Pavement Struct Recommende Date 2026	Rutting or Share Remaining Leader Deflection Remaining Leader Remaining Course Estimated Rehabilitation Rehab. Code F, H	Pavement Rati Life Analysis On - 20 K Load ing Life - Years Year of Failure	Brandley - F P 40-60 (60) 47 2058	40-6 20 Descri	P1 0 (60) 47 058 ption Joints, Fog	P 40-60 (60) 35 2046	2013 PCI = 95 AARFIELD P1 40-60 (60) 35	
No Ravelling, I 2011 Pavement Traffic Index FWD Center I Pavement Struct Pavement Struct Recommende Date 2026 2031	Rutting or Share Remaining Late Deflect Incture Remaining Later Estimate Carlo Rehabilita Rehab. Code F, H G	Pavement Rati Life Analysis On - 20 K Load ing Life - Years e Year of Failure ation:	Brandley - F P 40-60 (60) 47 2058	Descri Seal New epair, Sea	P1 00 (60) 47 058 ption Joints, Fog I Cracks &	P 40-60 (60) 35 2046 Seal Joints	2013 PCI = 95 AARFIELD P1 40-60 (60) 35 2046	
No Ravelling, I 2011 Pavement Traffic Index FWD Center I Pavement Struct Pavement Struct Recommende Date 2026	Rutting or Sharman Remaining Leave Deflect Incture Remaining Course Estimate Rehab. Code F, H G Station base	Pavement Rati Life Analysis On - 20 K Load ing Life - Years Pear of Failure ation: ed on Sta. 0 loc	Brandley - F P 40-60 (60) 47 2058 Saw & S Crack Re	Descri Geal New epair, Sea	P1 0 (60) 47 058 ption Joints, Fog I Cracks &	P 40-60 (60) 35 2046 Seal Joints	2013 PCI = 95 AARFIELD P1 40-60 (60) 35 2046	

TABLE N	IO. C63b - F	PAVEMENT CO	NDITION SUR	EY AND	REHABII	LITATION SC	HEDULE	
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 013 Update	
Element:	Hangars A-	H						
Station:	Row DE (E	ast) - Taxilane	Between Hanga	rs D & E				
Dimensions:	37.5' x 560'							
FAA Pavemen	_	•	None					
Element Ident	ification (Fo							
			s - inches		ksi	μ	Remarks	
		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC							
Section:	AC	3	3	250		0.35		
	AB	6	6	30		0.35		
	ASB		-					
	Subgrade							
	Sub-soil	soil S.I. S.I. 25 0.35						
Date Construc	ted:							
Rehabilitation	Record:	Date			Туре			
		1982						
		2011, 2012	AC Patch Repa	ir				
		=						
Pavement Cor			crete Slot Drain					
		<u> Fransverse - Mo</u>	derate-Severe	<u>(28@25',</u>	2@500')			
Seal Coat - Ra								
Weathering - M								
No Rutting or S	shoving.	D					2011 PCI = 57	
0011 Davement	Domestin	Pavement Rati		- 11 A			2013 PCI = 52	
2011 Pavement	Remaining L	ite Analysis	Brandley - F				ARFIELD	
Traffic Index	Note Deflect	ion 00 K Lood	<u> </u>		P1 60 (60)	P 40-60 (60)	P1 40-60 (60)	
		ion - 20 K Load ing Life - Years	47		47	35	35	
		Year of Failure	2058		058	2046	2046	
Recommende			2036		056	2040	2046	
necommende	Rehab.	tion.		No. 10 Person				
Date	Code			Descri	ntion			
2017	D		Remo		d Reconstr	uct		
2028	F				New Joints		-	
2033	G				Cracks &			
	-			. ₋ ,				
						-	<u></u>	
Remarks:	Station base	ed on Sta. 0 loc	ated at South E	nd of the	Hangar F	low proceedir	g North.	
	FWD used	was mean value	e for section - S	ee FWD	Graphs, A	ppendix B		
	For Traffic I	ndex see Appe	ndix D. For Rel	abilitatio	n Code se	e Tables 3-1	& 3-3.	

TABLE	NO. C64 - P	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE	
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 013 Update	
Element:	Hangars A-	Н	-					
Station:	Row EF -	Taxilane Betwee	en Hangars E &	F				
Dimensions:	75' x 560'							
FAA Pavemer	_	-	None					
Element Ident	tification (Fe							
			s - inches		ksi	μ	Remarks	
Hard-Land Street		2011	2013	2011	2013			
Existing	PFC							
Pavement	PCC							
Section:	AC	3	3	250		0.35		
	AB	6	6-18	70		0.35		
	ASB		-					
	Subgrade		48 48 20 0.35					
	Sub-soil	S.I. S.I. 25 0.35						
Date Construc								
Rehabilitation	Record:	Date			Туре			
		1982, 2012	2012 Remove	AC & Red	construct			
				17				
Pavement Co	ndition:	No Joints. Con	crete Slot Drain	•				
Cracks - None								
		ıg out 18-24" ar	nd baserock pla	ced in thi	s area.			
Weathering - L	_==					_		
No Ravelling, F	Rutting or Sh		- " .				2011 PCI = 84	
0044 D	D	Pavement Rati					2013 PCI = 95	
2011 Pavement	Remaining L	ite Analysis	Brandley - F	т -			ARFIELD	
Traffic Index	Plata Deflect	on 00 K I and	P 40-75 (70)		P1 '5 (70)	P 40-75 (70)	P1 40-75 (70)	
Pavement Stru	cture Bemain	on - 20 K Load ing Life - Years	28		28	6	6	
		Year of Failure	2039					
Recommende			2039		039	2017	2017	
necommende	Rehab.	ttiori.	alternation to the					
Date	Code	Manufacture & M		Descri	ntion			
2026	F, H		Saw &			Seal		
2031	G	Saw & Seal New Joints, Fog Seal Crack Repair, Seal Cracks & Joints						
2001				-pan, 00a	Oracho a			
Remarks:	Station base	ed on Sta. 0 loc	ated at South E	nd of the	Hangar F	low proceedir	ng North.	
		was mean value					<u> </u>	
		ndex see Appe					& 3-3.	

IADLE	10. 000 - P.	MACIAICIAI COI	NDITION SURV	LI AND			
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 013 Update
Element:	Hangars A-	Н					
Station:	Row East F	- Taxilane Eas	st of Hangar F				
Dimensions:	60' x 560'						
FAA Pavemen	_	•	None				
Element Ident	ification (Fo						
			s - inches		ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC						
Section:	AC	3	3	250		0.35	
	AB	6	6-18	30		0.35	
	ASB		-				
	Subgrade	48	48	15		0.35	
	Sub-soil S.I. S.I. 25 0.35						
Date Construc			ALL DE LA PROPERTY				
Rehabilitation	n Record: Date Type						
		1986, 2012	2012 Remove	AC & Re	construct		
Pavement Co	ndition:	No Joints.					
Cracks - None							
		ig out 18-24" ar	nd baserock plac	ced in thi	s area.		
Weathering - L							
No Ravelling, F	Autting or Sn		ne Eveellent				2011 PCI = 81
2011 Pavement	Pomoining I	Pavement Rati	Brandley - F	otique A	nalvoia		2013 PCI = 95 ARFIELD
Traffic Index	nemaining L	lie Alidiysis	P Brandley - F		P1	P P	
	Plato Deflect	on - 20 K Load	·		58 (60)	40-58 (60)	P1 40-58 (60)
		ing Life - Years	47	1	47	35	35
***		Year of Failure	2058		058	2046	2046
Recommende			2000		000	2040	2040
	Rehab.		White he had a		gittle High		
Date	Code			Descri	iption		
2026	F, H		Saw & S		Joints, Fog	Seal	
2031	G				l Cracks &		
_							
Remarks:			ated at South E				g North.
			e for section - S				
	For Traffic I	ndex see Appe	ndix D. For Rel	nabilitatio	n Code se	e Tables 3-1	& 3-3

Pavement PFC	TABLE	NO. C66 - P	AVEMENT CON	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE		
Station:	Airport:		Truckee-Tah	oe Airport						
Dimensions G0' x 560' FAA Pavement Strength Survey - Element Identification (Form 5335-1): Thickness - inches	Element:	Hangars A-	Н							
None Element Identification (Form 5335-1): Thickness - inches E ksi μ Remark Remark 2011 2013 2013 2014 2014 2014 2014 2014 2014 2014 2014 2014 2014 2015	Station:	Row West	G - Taxilane W	est of Hangar C	à					
Thickness - Inches	Dimensions:	60' x 560'								
Thickness - inches	FAA Pavemen	t Strength S	Survey -	None						
Pavement PCC	Element Ident	tification (Fo								
PFC			Thicknes	s - inches	E	ksi	μ	Remarks		
Pavement Section: AC			2011	2011 2013 2011 2013						
AC 3 3 250 0.35 AB 6 6 20 0.35 ASB -	Existing	PFC								
AB	Pavement	PCC								
ASB	Section:	AC	3	3	250		0.35			
Subgrade		AB	6	6	20		0.35			
Sub-soil S.I. S.I. 25 0.35		ASB		-						
Date Constructed: Rehabilitation Record: Date Type 1986 2012 AC Patch Repair AC Patch Repair Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding North. FWD used was mean value for section - See FWD Graphs, Appendix B		Subgrade	ie 48 48 10 0.35							
Pavement Condition: No Joints.			S.I.	S.I.	25	- 	0.35			
1986	Date Construc	cted:					Burnish Ut			
1986	Rehabilitation	Record:	Date			Type	Water Bridge			
Pavement Condition: No Joints. Cracks - Longitudinal and Transverse - Some - Moderate. (15@25') Seal Coat - Slurry Sealed Patches - Several 12"-18" Patches Weathering - Moderate			1986							
Pavement Condition: No Joints. Cracks - Longitudinal and Transverse - Some - Moderate. (15@25') Seal Coat - Slurry Sealed Patches - Several 12"-18" Patches Weathering - Moderate			2012	AC Patch Repa	air					
Cracks - Longitudinal and Transverse - Some - Moderate. (15@25') Seal Coat - Slurry Sealed Patches - Several 12"-18" Patches Weathering - Moderate										
Seal Coat - Slurry Sealed Patches - Several 12"-18" Patches Weathering - Moderate	Pavement Co	ndition:	No Joints.							
Patches - Several 12"-18" Patches Weathering - Moderate No Rutting, Shoving, or Ravelling. 2011 PCI = Pavement Rating = Fair 2013 PCI = 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index P P1 P1 P P1 FWD Center Plate Deflection - 20 K Load 58-80 (80) 58-80 (80) 58-80 (80) 58-80 (80) 58-80 (80) Pavement Structure Remaining Life - Years 24 24 4 4 4 4 Pavement Structure Estimate Year of Failure 2035 2035 2015 2015 Recommended Rehabilitation: Rehab. Code Description 2015 D Remove AC and Reconstruct Saw & Seal New Joints Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding North. FWD used was mean value for section - See FWD Graphs, Appendix B	Cracks - Longi	tudinal and 1	ransverse - So	me - Moderate.	(15@25')				
Weathering - Moderate No Rutting, Shoving, or Ravelling. Pavement Rating = Fair 2013 PCI = 2011 Pavement Remaining Life Analysis Brandley - Fatigue Analysis FAA - FAARFIELD Traffic Index P P1 P1 P P1 FWD Center Plate Deflection - 20 K Load 58-80 (80) 58-80 (80) 58-80 (80) 58-80 (80) 58-80 (80) Pavement Structure Remaining Life - Years 24 24 4 4 4 Pavement Structure Estimate Year of Failure 2035 2035 2015 2015 Recommended Rehabilitation: Rehab. Code Description 2015 D Remove AC and Reconstruct Saw & Seal New Joints Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding North. FWD used was mean value for section - See FWD Graphs, Appendix B										
Pavement Rating = Fair 2013 PCI =	Patches - Seve	eral 12"-18" l	Patches							
Traffic Index P P1 P1 P P1 FWD Center Plate Deflection - 20 K Load 58-80 (80) 58-80 (80) 58-80 (80) 58-80 (80) Pavement Structure Remaining Life - Years 24 24 4 4 4 Pavement Structure Estimate Year of Failure 2035 2035 2015 2015 Recommended Rehabilitation: Rehab. Code Description 2015 D Remove AC and Reconstruct 2027 F Saw & Seal New Joints Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding North. FWD used was mean value for section - See FWD Graphs, Appendix B	Weathering - N	/loderate			Ravellin	g.		2011 PCI = 58		
Traffic Index P P1 P1 P P1 FWD Center Plate Deflection - 20 K Load 58-80 (80) 58-80 (80) 58-80 (80) 58-80 (80) Pavement Structure Remaining Life - Years 24 24 4 4 4 Pavement Structure Estimate Year of Failure 2035 2035 2015 2015 Recommended Rehabilitation: Rehab. Code Description			Pavement Rati	ng = Fair				2013 PCI = 50		
FWD Center Plate Deflection - 20 K Load 58-80 (80) 58-80 (80) 58-80 (80) 58-80 (80) Pavement Structure Remaining Life - Years 24 24 4 4 4 Pavement Structure Estimate Year of Failure 2035 2035 2015 2015 2015 Pecommended Rehabilitation: Rehab.		Remaining L	ife Analysis	Brandley - F	atigue A	nalysis	FAA - FA	ARFIELD		
Pavement Structure Remaining Life - Years 24 24 4 4 4 4 Pavement Structure Estimate Year of Failure 2035 2035 2015 2015 Recommended Rehabilitation: Rehab.						·	<u> </u>			
Pavement Structure Estimate Year of Failure 2035 2035 2015 2015 Recommended Rehabilitation: Rehab.						, ,	58-80 (80)	58-80 (80)		
Rehab. Date Code Description 2015 D Remove AC and Reconstruct Saw & Seal New Joints Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding North. FWD used was mean value for section - See FWD Graphs, Appendix B			•							
Rehab. Code Description 2015 D Remove AC and Reconstruct Saw & Seal New Joints Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding North. FWD used was mean value for section - See FWD Graphs, Appendix B				2035	20	035	2015	2015		
Date Code Description 2015 D Remove AC and Reconstruct 2027 F Saw & Seal New Joints Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding North. FWD used was mean value for section - See FWD Graphs, Appendix B	Recommende		ition:							
2015 D Remove AC and Reconstruct 2027 F Saw & Seal New Joints Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding North. FWD used was mean value for section - See FWD Graphs, Appendix B										
Properties: Saw & Seal New Joints			PERCHASIA				Market No.			
Remarks: Station based on Sta. 0 located at South End of the Hangar Row proceeding North. FWD used was mean value for section - See FWD Graphs, Appendix B										
FWD used was mean value for section - See FWD Graphs, Appendix B	2027	F		Sa	w & Seal	New Joints				
FWD used was mean value for section - See FWD Graphs, Appendix B										
FWD used was mean value for section - See FWD Graphs, Appendix B										
FWD used was mean value for section - See FWD Graphs, Appendix B										
FWD used was mean value for section - See FWD Graphs, Appendix B	Remarks:	Station has	ed on Sta O loc	ated at South F	nd of the	Hangar F	low proceedir	na North		
								.g 1401111.		
For Traffic Index see Appendix D. For Rehabilitation Code see Tables 3-1 & 3-3.								& 3-3		

TABLE	NO. C67 - P	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SCI	HEDULE		
Airport:		Truckee-Tah	noe Airport		Date of Survey:		& 6, 2011 013 Update		
Element:	Hangars A-	Н							
Station:	Row GH -	Taxilane Betwe	en Hangars G 8	ι Η (Jet F	Row)				
Dimensions:	100' x 700'								
FAA Pavemen	_	-	None						
Element Ident	tification (Fo								
A COLUMN TO THE REAL PROPERTY OF THE PARTY O			Thickness - inches E ksi μ F						
in the second		2011	2013	2011	2013				
Existing	PFC								
Pavement	PCC								
Section:	AC	: 3	3	250		0.35			
	AB	6	6	30		0.35			
	ASB		-						
	Subgrade	48	48	10		0.35			
	Sub-soil	S.I.	S.I.	25		0.35			
Date Construc	cted:								
Rehabilitation	Record:	Date		TY SA	Туре				
		1999							
		2012	AC Patch Repa	ir					
Pavement Cor			h Drain in AC -						
			gator/Block Crac						
			han west 1/2. T				ent from plow.		
Patches - Man			Slurry Sealed -			ws.			
Weathering - N	/loderate		ting, Shoving, or	Ravellin	g.		2011 PCI = 55		
2011 Pavement	Damaining I	Pavement Rati		-4: A		FAA 5	2013 PCI = 38		
Traffic Index	Remaining L	Life Analysis	Brandley - F				ARFIELD		
	Plata Dofloati	on - 20 K Load	O 50-72 (70)		<u>) 2 (70)</u> 2 (70)	O 50-72 (70)	O1 50-72 (70)		
		ing Life - Years	24		21	5	4		
		Year of Failure	2035		032	2016	2015		
Recommende			2000		002	2010	2015		
	Rehab.			in the					
Date	Code			Descri	ption				
2015	D		Remo		d Reconstr	uct			
2027	F		Saw & Seal New Joints						
			·-						
Remarks:			ated at South E				ng North.		
			e for section - Se						
	For Traffic I	ndex see Appe	ndix D. For Ref	abilitatio	n Code se	e Tables 3-1	<u>&</u> 3-3.		

TABLE	NO. C68 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SC	HEDULE
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 2013 Update
Element:	Hangars J-	<					
Station:	Row East J	- Hangars J &	K				
Dimensions:	320' x 430'	- Total Hangar	H2 Area				
FAA Pavemen			1	Gear - 40) kips	·	-
Element Ident	_	•		ear - 65 k			
		Thicknes	s - inches		ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC						
Section:	AC	3	3	250		0.35	
	AB	12	12	30		0.35	Cement Treated
	ASB						
	Subgrade	48	48	10		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Construc	cted:			State Add			
Rehabilitation	Record: Date Type						
		2012	Reconstruction	(Atkins E	Engineerin	g Job)	
Devement Co.	adition.	OEL leinte (4/4II		:-1\			
Pavement Cor		Flush Gutters.	wide, no banda	iia)			
No Cracking.		riush Gullers. Is from paving (oporations)				
Snow Plow scr			pperations)				
Weathering - L			Shoving, or Rav	elling			2011 PCI = 35
<u>.</u>	<u>-</u>	Pavement Rati		og.			2013 PCI = 90
2011 Pavement	Remaining L		Brandley - F	atique A	nalvsis	FAA - FA	AARFIELD
Traffic Index			Р		P1	Р	P1
		on - 20 K Load	57-70 (70)	57-7	'0 (70)	57-70 (70)	57-70 (70)
		ing Life - Years	28	- 7	28	6	6
	<u></u>	Year of Failure	2039	20	039	2017	2017
Recommende		ition:					
	Rehab.						
Date	Code			Descri		<u> </u>	
2020	F				nts - Supple	*****	
2026	G, H G		Crack Repair,			<u>. </u>	
2031	G		Orack Ri	spail, Sea	I Cracks &	JUITIS	
Remarks:			ated at South E			<u> </u>	ng North.
	FWD used	was mean value	e for section - S	ee FWD	Graphs, A	ppendix B	
	For Traffic I	ndex see Appe	ndix D. For Rel	nabilitatio	n Code se	e Tables 3-1	& 3-3.

TABLE	NO. C69 - P.	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SC	HEDULE
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 2013 Update
Element:	Hangars J-	K					
Station:	Row JK - H	langars J & K					
Dimensions:	320' x 430'	- Total Hangar	H2 Area				
FAA Pavemer			1	 Gear - 40) kips		
Element Ident				ear - 65			<u> </u>
		Thicknes	s - inches		ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC					*	
Pavement	PCC						
Section:	AC	3	3	250		0.35	
	AB	12	12	20		0.35	Cement Treated
	ASB		-				
	Subgrade	48	48	10		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Construc	cted:			ليرانطان			
Rehabilitation	Record: Date Type						
		2012	Reconstruction	(Atkins	Engineerin	g Job)	
Pavement Co			wide, no banda	uid)			
No Cracking.		Flush Gutters.					
		s from paving o	operations)				
Snow Plow scr			01 : D			·	
Weathering - L	<u>lignt</u>		Shoving, or Ray	elling.			2011 PCI = 35
2011 Payament	Pomoining I	Pavement Rati		otions A	nalvoia	FAA F	2013 PCI = 90
Traffic Index	nemaining L	Life Analysis	Brandley - F		naiysis P1	P P	AARFIELD
	Plate Deflecti	on - 20 K Load	<u>'</u>		30 (80)	70-80 (80)	P1 70-80 (80)
		ing Life - Years	24		24	4	4
		Year of Failure	2035	 	035	2015	2015
Recommende	d Rehabilita	ntion:	2000		000	2010	2010
	Rehab.			- The Lat	ZIIREA		
Date	Code			Descri	iption		
2020	F		Saw & Sea		ints - Supple	emental	
2026	G, H		Crack Repair,	Seal Cra	cks & Joints	s, Fog Seal	
2031	G		Crack Re	epair, Sea	ıl Cracks &	Joints	
Remarks:			ated at South E				ng North.
			e for section - S				0.00
	ror i ramic i	nuex see Appe	ndix D. For Rel	iadilitatio	on Code se	e rabies 3-1	& 3-3.

TABLE	NO. C70 - P	AVEMENT COI	NDITION SURV	EY AND	REHABIL	ITATION SC	HEDULE
Airport:		Truckee-Tah	oe Airport		Date of Survey:		& 6, 2011 2013 Update
Element:	Hangars J-	K					
Station:	Row West I	K - Hangars J &	& K				
Dimensions:	320' x 430'	- Total Hangar	H2 Area				
FAA Pavemen			ľ	Gear - 40) kips		-
Element ident	ification (Fo	orm 5335-1):		ear - 65 l			
		Thicknes	s - inches		ksi	μ	Remarks
		2011	2013	2011	2013		
Existing	PFC						
Pavement	PCC						
Section:	AC	3	3	250		0.35	
	AB	12	12	20		0.35	Cement Treated
	ASB		-				
	Subgrade	48	48	8		0.35	
	Sub-soil	S.I.	S.I.	25		0.35	
Date Construc	cted:						
Rehabilitation	Record:	Date			Туре		
		2012	Reconstruction	(Atkins I	Engineerin	g Job)	
D		051 1-1-1- /4/4		• 1)			
Pavement Cor			wide, no banda	lia)			
No Cracking.		Flush Gutters. Is from paving o	norotiono)	 			· · ·
Snow Plow scr			pperations)				
Weathering - L			Shoving, or Rav	elling			2011 PCI = 35
TV Octationing L	.igiit	Pavement Rati		oming.			2013 PCI = 90
2011 Pavement	Remaining L	ife Analysis	Brandley - F	atique A	nalvsis	FAA - F	AARFIELD
Traffic Index			Р		P1	Р	P1
FWD Center F	Plate Deflecti	on - 20 K Load	80-90 (90)	80-9	0 (90)	80-90 (90)	80-90 (90)
		ing Life - Years	17		17	1.2	1.2
Pavement Struc	cture Estimate	Year of Failure	2028	2	028	2012	2012
Recommende	d Rehabilita	ition:					
	Rehab.			AL SOTO			
Date	Code			Descri			
2020	F				nts - Suppl	·	
2026	G, H		Crack Repair,				
2031	G		Crack He	epair, Sea	I Cracks &	Joints	
Remarks:	Station has	ed on Sta Olea	ated at South E	nd of the	Hangar	Pow proceed	ng North
remarks.	FWD used	was mean value	e for section - S	ee FWD	Graphs, A	ppendix B	
	For Traffic I	ndex see Appe	ndix D. For Reh	nabilitatio	n Code se	e Tables 3-1	& 3-3.

TABLE	NO 074 D	AVENENT OO	NOTION OUT	EV AND								
IABLE	NO. C/1 - P	AVEMENI COI	NDITION SURV	EY AND								
Airport:		Truckee-Tah	noe Airport		Date of Survey:	1						
Element:	Hangars L-	M										
Station:	Taxilane T	- West Hangar	s and Warehou	se Taxila	ne							
Dimensions:	Varies thro	ughout Area										
FAA Pavemen	_	•	None	-								
Element Identification (Form 5335-1): Thickness - inches E ksi u Remarks												
						μ	Remarks					
	T===	2011	2013	2011	2013		E WAS IN					
Existing	PFC											
Pavement	PCC											
Section:	AC	4	4	250		0.35						
	AB	10	10	40		0.35						
	ASB		-									
	Subgrade	48	48	12		0.35						
D	Sub-soil	S.I.	S.I.	25		0.35						
Date Construc			2004									
Rehabilitation	Hecora:	Date		and short	Туре							
		0010	A d d O	-4-1 1-1-1	- D-II-	= :	/-					
		2013	Add Suppleme	ntai Joint	s, Renab	EXIST. Joints.	(Tape)					
Pavement Cor	ndition:	Jointed 12.5' to	15' - 1"-3" & 3/	8" - Som	e Seconda	ary Cracking ·	Sealed					
Cracks - None.			-				<u> </u>					
AC Patch (1 @	30'x1') @ C	enterline of Tax	xilane T @ Taxi	way A								
MAZ - Ma - 2 L	• • •	N. D. III	<u> </u>									
Weathering - L	ignt		Shoving, or Rav				2011 PCI = 83					
2011 Davement	Demaining I	ife Analysis	ng = Very Good Brandley - F	otions A	nalvaia		2013 PCI = 77					
Traffic Index	Remaining L	.iic Alialysis	P Brandley - F		naiysis P1	P P	ARFIELD P1					
	Plate Deflecti	on - 20 K Load			9 (45)	20-49 (45)	20-49 (45)					
		ing Life - Years	157		57	345	345					
Pavement Struc	ture Estimate	Year of Failure	2168		168	2356	2356					
Recommende	d Rehabilita	ition:										
	Rehab.						Talena Yangi					
Date	Code			Descri	ption							
2015	Н			Recla								
2018	G		Crack Repair,									
2023	G Crack Repair, Seal Cracks & Joints											
2028	G, H		Crack Repair,	Seal Crad	cks & Joints	s, Fog Seal	· · · · · · · · · · · · · · · · · · ·					
Remarks:	Station base	ed on Sta O loo	ated at South E	dae of Tr	aviway A							
			for section - Se			nnendiy R						
<u> </u>			ndix D. For Reh				& 3-3					
					0040 00	<u> </u>	~ O O.					

TABLE	NO. C72 - P.	AVEMENT CO	NDITION SURV	EY AND	REHABIL	ITATION SC	HEDULE					
Airport:		Truckee-Tah	noe Airport		Date of Survey:	May 5 & 6, 2011 October 2013 Update						
Element:	Hangars L-	М										
Station:	Taxilane T	- West Hangar	s and Warehou	se Taxila	ne							
Dimensions:	Varies thro	ughout Area										
FAA Pavemen			None									
Element Ident	ification (Fo	orm 5335-1):										
		Thicknes	s - inches	E	ksi	μ	Remarks					
		2011	2013	2011	2013							
Existing	PFC											
Pavement	PCC											
Section:	AC	3	3	250		0.35						
	AB	6	6	30		0.35						
	ASB		-									
	Subgrade	48	48	10		0.35						
	Sub-soil	S.I.	S.I.	25	_	0.35						
Date Construc	cted:	2004										
Rehabilitation	Record:	Date	Date Type									
		2013	Add Supplemental Joints, Rehab Exist. Joints. (Tape)									
Pavement Cor	ndition:	Jointed 12 5' to	 	8" - Som	e Second	ary Cracking	Sealed					
Cracks - None.		0011100 12:0 10	7 10 1 0 00	0 00111	C OCCOING	ary Oracking	Jealed					
		enterline of Tax	xilane T @ Taxi	way A								
	-											
Weathering - L	ight		Shoving, or Rav				2011 PCI = 83					
0044.5			ng = Very Good				2013 PCI = 77					
	Remaining L	ife Analysis	Brandley - F				ARFIELD					
Traffic Index	Note Deflect	an 00 K l and	P = (70)		P1	P = (70)	P1					
		on - 20 K Load ing Life - Years	50-75 (70) 28		5 (70) 28	50-75 (70)	50-75 (70)					
		Year of Failure	2039		28	6 2017	6 2017					
Recommende			2003		303	2011	2017					
	Rehab.		Tray (Kin 1999									
Date	Code			Descri	ption							
2015	Н			Recla								
2018	G		Crack Repair,	Seal Crad	cks & Joints	s, Fog Seal						
2023	G Crack Repair, Seal Cracks & Joints											
2028	G, H		Crack Repair,	Seal Crad	cks & Joints	s, Fog Seal	·					
Remarks:	Station base	ed on Sta. 0 loc	ated at South E	dae of T:	axiwav A							
			e for section - Se			ppendix B						
			ndix D. For Reh				& 3-3.					

TRUCKEE TAHOE AIRPORT PAVEMENT EVALUATION STUDY PAVEMENT MAINTENANCE/MANAGEMENT PLAN

Appendix D Traffic Summary

This Appendix summarizes the design characteristics of all the aircraft that are currently utilizing the airport. It also provides existing aircraft operations by type, as well as the number of annual operations currently operating at the airport.

The total annual coverages of each general type aircraft group for each area have been calculated as "Traffic Indexes" and are included in Table No. D3. The traffic designated for each Traffic Index is the traffic that was used to calculate deep-seated distresses in the pavement sections and to calculate the predicted remaining life of each pavement section.

Since the business jet traffic at Truckee Tahoe Airport has increased significantly over the past few years and the national fleet is increasing, there is a possibility that the amount of larger aircraft using the airport will increase more than what has been forecast. In order to evaluate the effect that increased traffic would have, a new set of traffic indexes was prepared and used in the Fatigue Analysis studies. With the new traffic indexes the number of operations of the large aircraft (those with maximum takeoff weight in excess of 37,500 pounds) was doubled. The new traffic index with the doubling of the heavy aircraft operations has also been included in Appendix D as Table No. D4.

A table of contents of this appendix is shown below:

<u>Tables</u>

Table No. D1	Traffic Group Summary
Table No. D2	Summary of Traffic Data for Truckee Tahoe Airport
Table No. D3	Summary of Traffic Indexes
Table No. D4	Summary of Enhanced Traffic Indexes

TABLE No. D1 - Traffic Group Summary

Aircraft		Aircraft	Aircraft 60%	Aircraft	Gear
Group	Aircraft Type	Empty (lbs)	Fuel (lbs)	MTOW (lbs)	Configuration
1	Beech Baron	4,190	4,930	5,424	Single
2	Conquest	6,210	8,439	9,925	Single
	Citation CJ1	6,160	8,704	10,400	Single
	Raytheon Premier I	8,600	10,940	12,500	Single
	King Air 350	10,000	13,000	15,000	Single
3	Citation CJ II Bravo	9,300	12,780	15,100	Single
3	Lear 31	10,250	13,400	15,500	Dual
	Raytheon Hawker 400	10,550	14,000	16,300	Single
	Citation Ultra/Encore	9,900	13,938	16,630	Single
4	Citation Excel	12,550	17,020	20,000	Single
	Lear 45	12,050	16,940	20,200	Dual
5	Citation III	13,500	18,600	22,000	Dual
	Lear 60	14,750	20,000	23,500	Dual
	Gulfstream 150	15,100	21,700	26,100	Dual
6	Raytheon Hawker 800	16,100	23,240	28,000	Dual
0	Citation Sovereign	20,800	26,500	30,300	Dual
	Raytheon Hawker 1000	17,220	25,488	31,000	Dual
	Gulfstream 200	21,200	29,390	34,850	Dual
7	Citation X	21,600	30,060	35,700	Dual
	Dessault Falcon 2000	19,700	29,360	35,800	Dual
	Challenger 300	23,800	32,020	37,500	Dual
8	Raytheon Hawker 4000	23,500	33,100	39,500	Dual
8	Dassault Falcon 50 EX	20,200	31,900	39,700	Dual
	Dassault Falcon 2000EX	23,190	34,596	42,200	Dual
_	Dassault Falcon 900B	22,610	36,344	45,500	Dual
	Challenger 605	26,990	39,716	48,200	Dual
9	Dassault Falcon 900EX	24,700	38,860	48,300	Dual
	Legacy	30,000	41,760	49,600	Dual
10	Gulfstream III	38,000	57,020	69,700	Dual
10	Gulfstream IV	43,000	61,120	73,200	Dual
4.4	Gulfstream V	48,300	73,920	91,000	Dual
11	Bombardier Global Express	52,000	79,600	98,000	Dual

Note: 60% Fuel Weight is the weight of the aircraft with 60% of the total fuel, passengers, and payload allowable.

G \FWD\Truckee\2011\05 14 35 37 Table 2-1 4-3 Appendix C and D 40_04-13 Truckee Fatigue Analysis Data Tables FAARFIELD Analysis xlsAppendix D - Traffic Indexes

APPENDIX D - TRAFFIC SUMMARY

TABLE No. D2 - Summary of Traffic Data for Truckee Tahoe Airport

		Aircraft			Annual
	Aircraft	MTOW	Gear	2011	Growth
	Group	(lbs)	Type	Operations	Rate
	1	5,500	Single	16,746	0.70%
	2	10,000	Single	2,618	2.27%
Small to	3	16,000	Single	2,654	2.90%
Medium	4	20,000	Single	464	4.40%
Aircraft	5	23,000	Dual	312	4.40%
	6	30,000	Dual	192	4.40%
	7	35,700	Dual	416	4.40%
	8	42,000	Dual	58	4.32%
Large	9	49,000	Dual	98	4.27%
Aircraft	10	73,000	Dual	50	3.65%
	11	94,000	Dual	72	3.30%
	Total 2	011 Opera	ations	23,680	

TABLE No. D3 - Summary of Traffic Indexes

	Aircraft		Traffic Index (Aircraft Operations in 2011)															
	Group	Α	В	С	D	Е	F	G	Н	1	J	K	L	M	N	0	Р	Q
	1	4,521	8,206	13,732	2,512	6,029	8,708	6,866	3,014	1,507	1,172	5,024	6,698	6,698	5,024	1,675	1,675	3,349
	2	707	1,283	2,147	393	942	1,361	1,073	471	236	183	785	1,047	1,047	785	262	262	524
Small to Medium	3	717	1,300	2,176	398	955	1,380	1,088	478	239	186	796	1,062	1,062	796	265	265	531
Aircraft -	4	125	227	380	70	167	241	190	84	42	32	139	186	186	139	46	46	93
AllClait	5	84	153	256	47	112	162	128	56	28	22	94	125	125	94	31	31	62
	6	52	94	157	29	69	100	79	35	17	13	58	77	77	58	19	19	38
	7	112	204	341	62	150	216	171	75	37	29	125	166	166	125	42	42	83
	8	31	49	50	21	27	30	24	5	5	3	-	26	53	-	6	-	17
Large Aircraft	9	53	82	85	35	45	51	40	9	9	6	-	44	89	-	10	-	29
Large Allcraft	10	27	42	44	18	23	26	21	5	5	3	-	23	46	-	-	-	15
	11	39	60	63	26	33	37	30	6	6	4	-	32	66	-	-	-	22
Total 2011 Opera	ations	6,468	11,700	19,431	3,611	8,552	12,312	9,710	4,238	2,131	1,653	7,021	9,486	9,615	7,021	2,356	2,340	4,763
% Use of Small/Media	um Aircraft	27%	49%	82%	15%	36%	52%	41%	18%	9%	7%	30%	40%	40%	30%	10%	10%	20%
% Use of Large A	Aircraft	54%	84%	87%	36%	46%	52%	41%	9%	9%	6%	0%	45%	91%	0%	10%	0%	30%

TABLE No. D4 - Summary of Enhanced Traffic Indexes

	Aircraft		Enhanced Traffic Index (Aircraft Operations in 2011 with Large Aircraft Operations Doubled)															
	Group	A1	B1	C1	D1	E1	F1	G1	H1	11	J1	K1	L1	M1	N1	01	P1	Q1
	1	4,521	8,206	13,732	2,512	6,029	8,708	6,866	3,014	1,507	1,172	5,024	6,698	6,698	5,024	1,675	1,675	3,349
	2	707	1,283	2,147	393	942	1,361	1,073	471	236	183	785	1,047	1,047	785	262	262	524
Small to Medium	3	717	1,300	2,176	398	955	1,380	1,088	478	239	186	796	1,062	1,062	796	265	265	531
Aircraft	4	125	227	380	70	167	241	190	84	42	32	139	186	186	139	46	46	93
AllCraft	5	84	153	256	47	112	162	128	56	28	22	94	125	125	94	31	31	62
	6	52	94	157	29	69	100	79	35	17	13	58	77	77	58	19	19	38
	7	112	204	341	62	150	216	171	75	37	29	125	166	166	125	42	42	83
	8	62	98	100	42	54	60	48	10	10	6	-	52	106	-	12	-	34
Large Aircraft	9	106	164	170	70	90	102	80	18	18	12	-	88	178	-	20	-	58
Large Alician	10	54	84	88	36	46	52	42	10	10	6	•	46	92	-		_	_30
	11	78	120	126	52	66	74	60	12	12	8	-	64	132	-	-		44
Total 2011 Open	ations	6,618	11,933	19,673	3,711	8,680	12,456	9,825	4,263	2,156	1,669	7,021	9,611	9,869	7,021	2,372	2,340	4,846
% Use of Small/Mediu	ım Aircraft*	27%	49%	82%	15%	36%	52%	41%	18%	9%	7%	30%	40%	40%	30%	10%	10%	20%
% Use of Large A	ircraft*	54%	84%	87%	36%	46%	52%	41%	9%	9%	6%	0%	45%	91%	0%	10%	0%	30%
* - Percent use inidcate	es the perce	ntage of	different a	aircraft grou	ps using a	an analyz	ed pavem	ent eleme	nt.									

TRUCKEE TAHOE AIRPORT PAVEMENT EVALUATION STUDY PAVEMENT MAINTENANCE/MANAGEMENT PLAN

Appendix E Supplement No. 1

This supplement to our Pavement Evaluation Study and Pavement Maintenance/Management Plan dated November 2011 includes additional information requested by the Truckee Tahoe Airport District.

Question No. 1 – Look at 2/20 with aircraft group 1-9 + 30% of traffic. You do not need to adjust 11-29.

Runway 2-20, Taxiway G and the cross taxiways at each end of Runway 2-20 have similar pavement sections and will receive similar traffic. Taxiway V, Taxiway P and Taxiway Q have thinner pavement sections but should not receive the heavy jet traffic. The analysis of increased traffic on Runway 2-20 and Taxiway G assumes no heavy jet traffic on Taxiways V, P, and Q. The Fatigue Analysis has been conducted for the following conditions:

- 10% of total traffic on Runway 2-20
- 30% of Groups 1 to 9 traffic on Runway 2-20
- 30% of all traffic operating on Runway 2-20

The results of this analysis showing the remaining structural life based on deep-seated failure using the Brandley Fatigue Analysis methodology is included in Table No. S1. It will be noted that the remaining pavement life exceeded 20 years except for that section of Taxiway G from Station 600 to Station 900 under 30% of all traffic. In this section the remaining life is 15 years.

Question No. 2 – What will the new load-bearing capacity of the west side of 10/28 be after we construct your design?

The allowable load-bearing capacity for each area of the airport has been prepared for all sections of the airport for the condition where 100 annual departures of all aircraft are allowed and is included in Table S2. This analysis has been prepared showing the allowable load-bearing capacity for existing conditions and for various design options. In some instances only one or two options are applicable and these are the only ones that are shown. With some options the subgrade strength is the critical factor in determining load-bearing capacity and in other instances it is the strength of the pulverized existing AC and AB used as aggregate base. On this

table we indicate a range of costs per square foot for each option of pavement rehabilitation. Option 3 on this table shows the increased strength of the easterly 2,000 feet of Runway 11-29, which was reconstructed in 2008.

Question No. 3 - If we add 3" of asphalt on the east side, what is the load-bearing capacity?

The load-bearing capacity for adding 3" of asphalt is shown in Table No. S2 under Option 3.

Table S1 <u>Truckee Tahoe Airport</u>

Runway 2-20 Remaining Life Sensitivity Analysis December 21, 2011

		Remaining Structural Life (Years)									
Element	Station	10% AI	I Traffic	30% Gr	oups 1-9	30% All Traffic					
		Standard	Enhanced	Standard	Enhanced	Standard	Enhanced				
	0 - 1000	145	114	89	75	74	57				
Runway 2-20	1000 - 1700	87	68	52	43	43	32				
	1700 - 4600	93	73	55	46	46	34				
	0 - 600	59	45	34	28	28	20				
Taxiway G	600 - 900	46	36	26	21	21	15				
(Including Cross Taxiways at each End	900 - 1500	97	76	58	48	48	36				
of the Runway)	1500 - 4500	122	96	74	62	62	48				
	4500 - 4800	97	76	58	48	48	36				

Notes:

- 1. Midfield cross Taxiways P, Q, & V are not included as they will not receive any of the large jet traffic. Remaing life of these Taxiways remain greater than 20 years.
- 2. Standard Traffic is the forecast traffic for each segment of pavement.
- 3. Enhanced Traffic is the forecast traffic with the operations of aircraft greater than 40,000 pounds doubled for each segment of pavement.

Table S2 <u>Truckee Tahoe Airport</u>

Bearing Capacity Analysis December 21, 2011

Element	Gear Type	Maximum Load Limit - (x 1,000 lbs)	Allowable Bearing Capacity (x 1,000 lbs) - 100 Annual Departures								
		(X 1,000 lb3)	Existing	Option 1	Option 2	Option 3	Option 4				
Runway 11-29 (West 5,000 ft) &	Dual	80	55	70	80 *	-	100				
Associated Taxiways	Single	50	40	45	50	-	60				
Runway 11-29 (East 2,000 ft) &	Dual	80	55	-	-	80 *	100				
Associated Taxiways	Single	50	40	-	-	50	60				
Runway 2-20 & Associated Taxiways	Dual	50	50	65	80 *	-	100				
nullway 2-20 & Associated Taxiways	Single	35	35	40	50	-	60				
Aprons	Dual	50	35	-		-	80 *				
Apions	Single	35	25	-	-	•	50				
Hangar Taxilanes	Dual	50	35	-	-	-	50 *				
manyai raxilaries	Single	30	25	-	-	-	35				

Option 1 - Pulverize and Recompact Existing AC & AB, Place 3" New AC - \$3.15 / sq.ft.

Option 2 - Add 2" Rock, Pulverize and Recompact Existing AC & AB, Place 3" New AC - \$3.75 / sq.ft.

Option 3 - Place 3" New AC Overlay - \$2.50 / sq.ft.

Option 4 - Pulverize and Recompact Existing AC & AB, Place 4" New AB, Place 3" New AC - \$4.35 / sq.ft.

Note - Unit costs not applicable in areas where existing grade cannot be raised, such as Aprons and Hangar Taxilanes.

* - Rehabilitation Option Recommended in the Pavement Maintenance/Managament Plan dated November 2011.