

TRUCKEE TAHOE AIRPORT DISTRICT  
BOARD OF DIRECTORS AGENDA ITEM SUMMARY

Topic: Airport Pavement Maintenance Plan – Review and Approval

Purpose	Information:	Guidance:	Decision: <b>X</b>
Recommendation	<p>The Pavement Maintenance Plan Ad Hoc Committee is recommending approval of the 2011 Pavement Evaluation Study and its associated Pavement Maintenance/Management Plan (PMP).</p> <p>Approve staff to move forward with PMP projects outlined in the 2012 Plan year which include:</p> <ul style="list-style-type: none"><li>• Apron A2: Mill and Fill or Hot Recycle - \$255,000</li><li>• Apron A2 and A4 (May substitute for Rejuvenator option)<sup>1</sup>: Crack Repair, Seal Cracks &amp; Joints - \$130,000</li><li>• H3 Taxilanes and Warehouse Area: Saw and seal new joints – Supplemental – \$115,000</li></ul> <p>Line 128 of the FY2011-12 Budget allocates \$530,000 for airfield pavement maintenance.</p>		
Last Action	<p>The Board of Directors approved the formation of the Pavement Maintenance Plan Ad Hoc Committee at the June 23, 2011 meeting with Directors Hetherington and Morrison serving on the Committee. Former Director Bill Quesnel has served as an advisor to the committee along with Kevin Smith – General Manager and Phred Stoner – Director of Operations and Maintenance. The District selected Reinard Brandley, Consulting Airport Engineer to conduct the study. This committee has met multiple times over the past few months with Mr. Brandley to review progress and give guidance and direction to the development of the PMP. The committee and staff have reviewed the plan contents in detail and are confident in recommending full approval to the Board of Directors.</p>		
Discussion	<p>This study takes a comprehensive review of all airport pavements. Not only has the study considered the condition of all pavement surfaces at the airport, but also analyzed and incorporated deep seated distress<sup>2</sup> data in to maintenance projections. This is the first time this type of distress has been considered at this level of detail</p>		

<sup>1</sup> Plate No. 4-1 calls for \$100,000 for crack and joint repair for Taxi Way A, D, F, E, & H. This is not listed in Table 4-2 as most of this work was completed in 2011. Staff would like the ability to consider a Pavement Rejuvenator for Apron A4, which is a less expensive option, and divert some of this funding to finish the crack and joint repair work on Taxi Ways A, D, F, E, & H.

<sup>2</sup> Deep seated distress refers to stress and/or failure of the lower sections of the pavement, subgrade and subsoil beneath the pavement section. See section 3-2 of Study for more information.

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in our pavement maintenance programs.

The main objective of this study is to set the airport on a course to provide a reasonable standard of care in how the airport maintains its pavement resources over time. The overall pavement condition bench mark used in the Study is a Pavement Condition Index (PCI) of 65.<sup>3</sup> This is a reasonable industry standard for pavement condition maintenance. If pavement is allowed to deteriorate to levels below PCI 65, maintenance costs start to increase exponentially (see Plate 3-3).

As mentioned, the study considers both surface distress conditions as well as deep seated distress to establish a program for year to year maintenance. The plan projects approximately \$500,000 per year on pavement expenditures to maintain our PCI bench mark. This expenditure would be supported with Federal Airport Improvement Program Funds. As part of your review of the study, please consider Agenda Item 12 – Airport Capital Improvement Program (ACIP). Our 2013-2017 ACIP includes items identified in the PMP and puts the District in position to seek federal funding as necessary. If you compare the ACIP with Table 4-2 (page 4-12) you will see the correlation. Not all projects in the PMP are included on the ACIP. We have strategically placed items on the ACIP which we feel are most likely to receive funding.

Please review the provided PMP. While you are welcome to review all information in the study, the first section is most critical. As you review the Table of Contents you will see the PMP is divided into 4 chapters and the appendices. Chapters 1 through 4 are the critical parts of the plan. The appendices are included as support for the conclusions contained in the chapters. There is a list of tables included as part of the Table of Contents.

Of particular interest is Table No. 4-2 on page 4-12. This table outlines our year to year maintenance schedule along with the projected budget recommendation. All monies included in the Plan are in 2011 dollars and are not adjusted for projected inflation. This is to allow expenditure comparisons between years. Inflationary adjustments will be tracked on a year to year basis as the District conducts its annual review of the PMP and projects the pavement work program as part of the yearly budget process. Directly after Table No. 4-2 you will find these projects outlined in map form starting with Plate No. 4-1.

Other items that may be of particular interest are Table No. 2-1 – Traffic Summary and an analysis of load bearing capacity on page

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<sup>3</sup> PCI is measured from 1 to 100 with 1 considered extremely poor pavement and 100 considered newly constructed pavement.

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4-3. Mr. Brandley put considerable time into analyzing how and where aircraft of different types utilize our pavement. The PMP also considers the weight of aircraft in relation to the typical projected amount of fuel they carry as they use our high altitude airport. Mr. Brandley has also reviewed all available data<sup>4</sup>, and has proposed some recommended load limits for both Runway 10/28 and 1/19. Staff is currently working on a plan to propose implementation of engineer recommended changes to load bearing on both 1/19 and 10/28.

Mr. Brandley will present the PMP to the Board at the Dec. 1<sup>st</sup> meeting. He will provide a 20 minute presentation to begin our discussion. While this Item is listed for Action, it can easily be continued to the January 26<sup>th</sup> meeting if there are additional questions by the Board or from members of the public.

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<b>Fiscal Impact</b>	The PMP calls out for a soft commitment of \$500,000 per year. This will vary year to year depending on program outline. This will also be supplemented with AIP funding when available. Staff will continue to pursue AIP funding when appropriate.
<b>Communication Strategy</b>	The District sent out an eblast and informed airport users of the PMP and the Dec. 1 <sup>st</sup> meeting. This notice was sent out on Nov. 22 <sup>nd</sup> informing interested parties that the Maintenance and Rehabilitation Schedule is posted on the District website and that a full copy of the Plan is available for review at Unicom.
<b>Attachments</b>	Pavement Maintenance Plan

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<sup>4</sup> In addition to visual inspection and multiple site visits, Mr. Brandley used falling weight deflectometer (FWD) testing data from 2009 and 2011, Brandley Soil Study from 1970, Stantec Geotechnical Study from 2009, and data collected from the Runway 10/28 soil moisture and temperature gage installed last year.