

CalAERO

DIVISION OF AERONAUTICS

CALIFORNIA DEPARTMENT OF TRANSPORTATION

Winter 2014

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Southard Field Airport Safety and Capacity Improvements

By Danny Uppal

Southard Field Airport is a public-use general aviation airport located two miles northeast of the City of Bieber in Lassen County, at an altitude of 4158 feet above mean sea level. The airport is operated year round and is used for fire suppression, emergency medical response, and frequently to access the many recreational opportunities in the area.



Southard Field Airport Lassen County, California

Single Runway 4/22 is 2,976 feet long and 35 feet wide. An Airport Pavement Management System inspection in 2002 showed the Pavement Condition Index value was rated 49, indicating a fair surface. The California Department of Transportation, Division of Aeronautics (Division), visual inspection conducted in July, 2013, showed the runway pavement markings were faded and the pavement had numerous cracks.



Runway Before Construction



Runway After Construction

The Division funded a project to improve the pavement condition by placing a slurry seal on the entire runway, taxiway, and tie down areas. Construction was completed in October 2013 within 15 working days. Before the slurry seal operation, the existing asphalt pavement was treated with a crack seal, the vegetation was removed, and an herbicide treatment was used on the shoulders. After the slurry seal was placed, the runway numbers and centerline stripe airport pavement markings were applied. This project will help to enhance safety and operations at the airport. The total cost of the project was \$142,257, with the State providing a matching grant of \$117,187.



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TRIM TABS

By Colette Armao



What you notice when talking to Carol Ford is her passion for aviation, her superlative organizational skills, an ability to articulate aviation issues in a way that can easily be understood, and her ability to mobilize people to act on an issue. Carol's love of aviation is life long, and she promotes it every chance she gets. She's the owner and Principle of Ford Aviation Consultants, a small business specializing in grant writing and grass roots organizing that addresses aviation issues such as Airport encroachment and energy facilities site selections. Carol loves aviation, and it shows in everything she says and does.

Born and raised in New Jersey, Carol shared that as a child, she watched airplanes flying overhead and wondered, "What are they doing up there? Where are they going?" and thought, "Gee, it must be fun doing that!" Once, during an outdoor painting class in high school, headed towards the spot where the convinced the class to put their the word "HI" to the pilot. The pilot back, and rocked his wings to the coolest thing she had ever seen.

Her husband's job transfer took Carol her pilot's certificate at Phoenix Field San Francisco Bay Area and flew out airport's closure. Now her home Seeing the loss of airports distressed something to fight encroachment and



to Sacramento where she earned in Fair Oaks. She moved to the of Fremont Airport until the airport is San Carlos Airport. her and moved her to do airport closures.

Carol is the Vice President Region 2 of the California Pilots Association (aka Cal Pilots), President of the San Carlos Airport Pilots Association, and on the Board of Redwood Shores Community Association. She volunteers countless hours to help with aviation causes and is one of the organizers of California Aviation Day. She understands the need for well organized grass roots campaigns to fight for airport needs and has helped numerous airports martial their resources to successfully fight development proposals that would have negatively impacted airports' abilities to operate.

Carol was heavily involved with Hayward Municipal Airport's fight over the sitting of two power plants that were to be located in or near the airport's traffic pattern in heavily used Class B airspace. The Federal Aviation Administration advises pilots to fly a minimum of 1,000 feet above the power plant stacks, even though the pattern altitude is only 650 feet due to the overlying controlled airspace. One of the biggest problems with power plants so close to airports is the thermal plumes, which create their own weather, turbulence, and visibility problems for pilots.

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Trim Tabs

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In spite of the aviation safety concerns and conflicts in airspace, the first of two proposed power plants was approved. The permit for the second plant was not approved after a coalition of aviation interests, organized by Carol, created enough support to stop it.

Carol deeply understands the importance of coalition building and working with elected officials and other decision makers when fighting anti-airport development interests. She was awarded the Cal Pilots Airport Defender of the Year for her work in helping airports defend themselves over encroachment and land use compatibility issues.

Carol also understands and is a strong advocate for a community's needs and stresses the importance of building good relationships between the airport and its neighbors in several ways. She's an outspoken advocate of things like fly quiet procedures, airport open houses, aviation education, and community outreach and feels education is the best way to convert airport opponents into airport supporters. One of her favorite topics is the value local airports can be to their communities in times of emergencies and disasters.

A new area of concern for Carol is the growing interest in alternative energy development near airports, including wind farms and large solar panel fields. Too often, proposed alternative energy developments are too close to Airports, which may create new safety issues for pilots that are only beginning to be identified. As the need for alternative energy grows, so will the frequency and intensity of this issue. Carol is working hard to find the right combination of experts who understand all aspects of the issue, so that aviation can build the collaborations needed to help work on compromise proposals to allow both facilities to co-exist. The California Energy Commission has approached her for help with this important issue.

One of Carol's biggest concerns is who the next generation of pilots and aviation professionals will be. Typical of her activist style, she applied for and received a Wolf Grant to create an aviation day at her local high school. The program included numerous aviation table top displays and speakers talking about different aspects of flying. The conference style displays made it easy for the students to chat and interact with the different guest speakers. Another way she likes to engage young people to explore career opportunities in aviation is to introduce them to today's high tech glass cockpit. She noted this gets the attention of kids who were born with electronic gadgets in their hands.

Carol's fondest wish for aviation is this: understand and see the fun as well as want to tell everyone." And she shared a pilot from South County Airport were party at Half Moon Bay Airport. The meeting and decided to fly instead. They flight, following the shoreline, noting that pearl necklace of lights. They arrived at example of her dream.



"I wish that more people could come to practicality of aviation. That's what I this example of what she meant. She and going to attend a meeting and holiday two had originally planned to drive to the had a wonderful forty-minute traffic free the San Francisco Bay was encircled in a the meeting energized and living the

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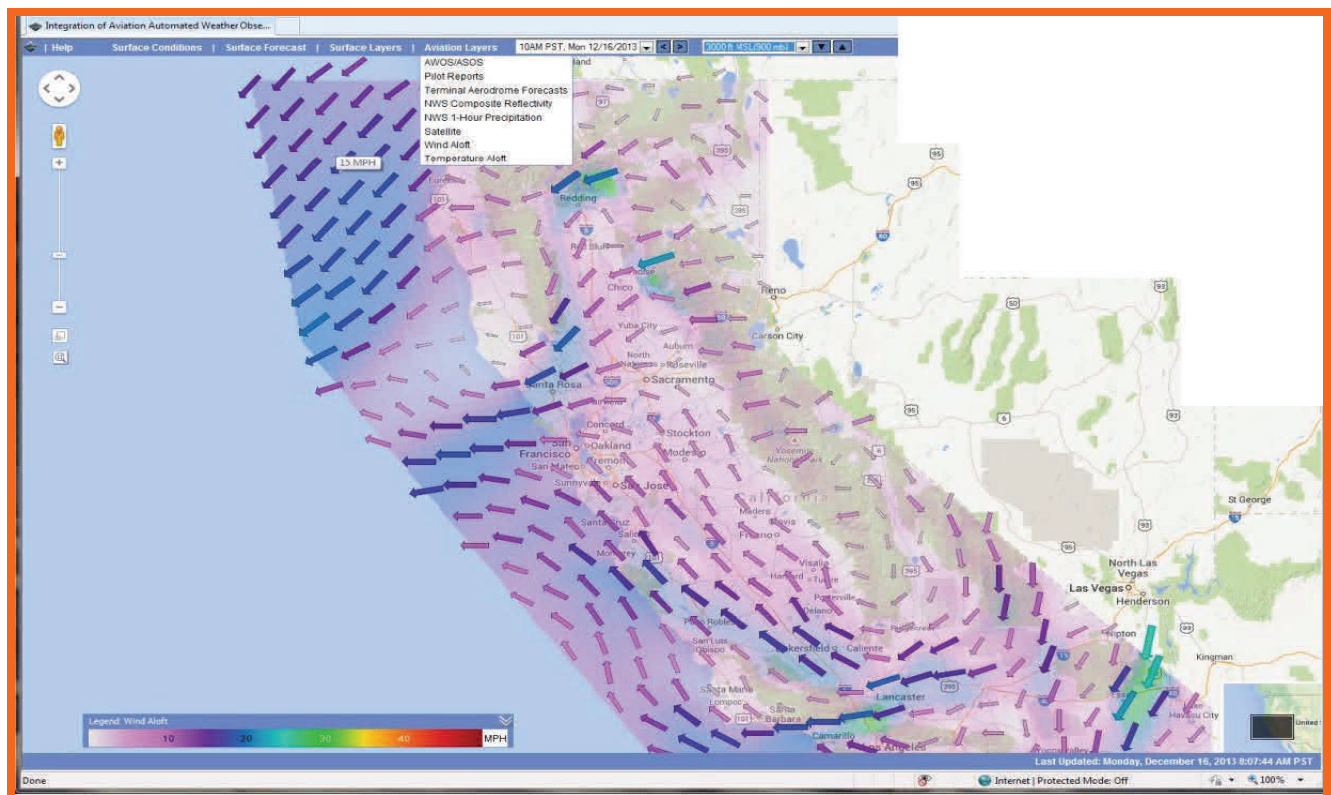
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Aeronautics Testing Aviation WeatherShare By Derek Kantar

Caltrans Aeronautics has partnered with the Western Transportation Institute at Montana State University and San Jose State University to develop an easy-to-use web based weather tool for California's aviation community called Aviation WeatherShare (<http://aviation.weathershare.org>). This unique weather site provides pilots, airports, heliports, ground crews, emergency responders, and others with localized and timely weather conditions and forecast information. This project integrates Caltrans' Roadside Weather Information System (RWIS) with aviation's Automated Weather Observing System (AWOS). It is modeled after and expands on Caltrans' successful WeatherShare system.

The project team developed and launched Aviation WeatherShare with a prototype system that displays aviation weather conditions and forecasts for the entire State. In a single location, this tool currently integrates a range of data from numerous sources and displays it on state maps. Users can view current or forecast conditions across a region, or zoom in on a specific location. From there, users can select the specific data they need, such as wind speeds aloft or on the ground, satellite photos, pilot reports, or National Weather Service alerts. The following screenshot shows the winds aloft at 3,000 feet from the aviation layer in aviation.weathershare.org

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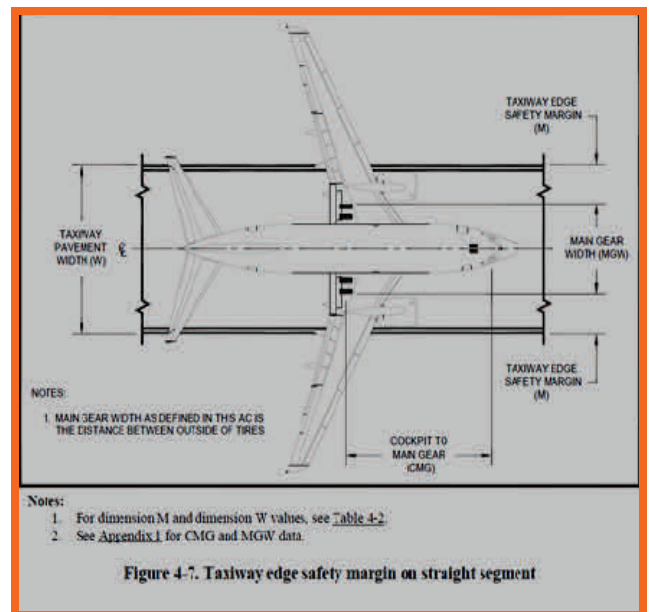
Federal Aviation Administration Airport Design Advisory Circular 150/5300-13A Update

By Lee Provost

The Federal Aviation Administration (FAA) conducted a nationwide webinar this past December to highlight the updates to Advisory Circular (AC) 150/5300-13A, “Airport Design” standards and procedures dated September 28, 2012. The AC contains the FAA’s standards and recommendations for the geometric layout and engineering design of runways, taxiways, aprons, and other facilities at civil airports. This substantial revision fully incorporates all previous changes to AC 150/5300-13 as well as new standards and technical requirements. The AC can be found at the FAA website: http://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5300_13A.pdf.

In this updated revision, the document has been reformatted to simplify and clarify the FAA’s airport design standards and to improve readability. Users should review the entire document to familiarize themselves with the new format. Principal changes include:

1. A new Runway Design Code
2. An expanded discussion on Declared Distances
3. A new Runway Reference Code designation
4. An update to the Runway Protection Zone standards
5. New Taxiway Design Group categories for fillet design
6. Guidance for intersecting and non-intersecting runway geometry
7. An expanded discussion on Runway Incursion prevention geometry for new construction
8. Consolidation of numerous design tables into one interactive Runway Design Requirements Matrix
9. Consolidation of several Appendices into the runway and taxiway design chapters
10. A new Aircraft Characteristics Database and a refresh to all listed Appendices



Hyperlinks (allowing the reader to access documents located on the internet and to maneuver within the document) are provided throughout and are identified with underlined text.

Engineering Brief No. 92, “Light Spacing Guidance for New Taxiway Fillet Geometry” was recently posted on the FAA website for design/installation criteria associated with the recent changes. FAA Engineering Brief No. 75, “Incorporation of Runway Incursion Prevention into Taxiway and Apron Design” dated November 8, 2007, was also recommended. An Engineering Memo dated September 27, 2012, “Interim Guidance on Land Uses Within a Runway Protection Zone” was also suggested as an additional reference to accompany the AC. The FAA website is: http://www.faa.gov/airports/resources/advisory_circulars/.

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Airport Pavement Management System

By Parvin Bijani

In the past, some airport sponsors have made decisions about pavement maintenance and rehabilitation based on an immediate need or experience, rather than long-term planning or documented data. This short term planning approach did not allow airport sponsors to evaluate the cost effectiveness of alternative maintenance and repair strategies, which led to an inefficient use of funds.

Typically, every five years, the Federal Aviation Administration (FAA) awards a grant to the California Department of Transportation (Caltrans), Division of Aeronautics (Division) to conduct Airport Pavement Management System (APMS) surveys at general aviation airports throughout California. These surveys identify needs and estimate capital outlay costs for airport pavement projects. Key partners are Airport Managers, the FAA, and Caltrans. An Architectural and Engineering Contract is signed by an engineering consultant with the Division. The Division provides five percent of the total project cost with in-kind services.

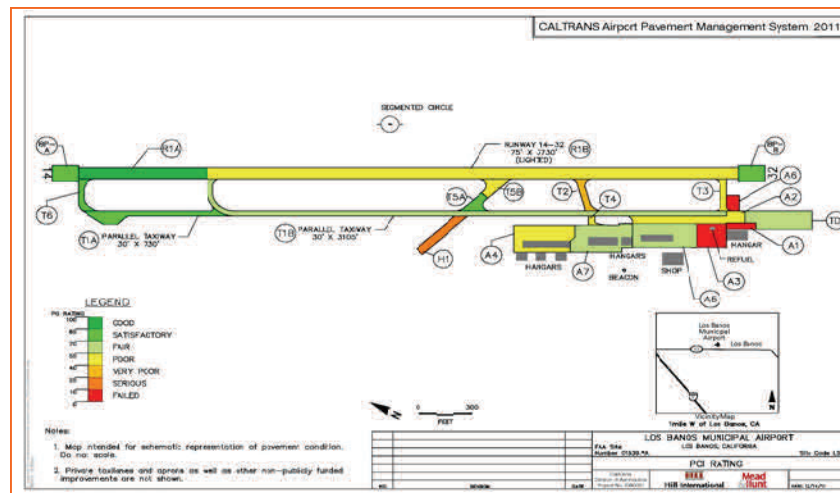
Under current FAA eligible for federal airports are required to maintenance manage-Caltrans, with funding contracts for an APMS update previous APMS update enables with FAA require-eligible for federal the Division with information on airfield provide airport owners pavement condition

recommend pavement maintenance and their cost estimates.

An APMS not only evaluates the present condition of a pavement, but also predicts its future condition through the use of a pavement condition indicator. By projecting the rate of deterioration, a life cycle cost analysis can be made for various alternatives. This analysis helps to determine the optimal time for applying the best alternative.

The consultant is required to systematically collect data and conduct the surveys to create or update the APMS for each selected airport. The APMS and the determination of the Pavement Condition Index are the primary means of obtaining and recording vital airport pavement performance data. Surveys consist principally of a visual inspection of the pavement surfaces for signs of distress resulting from the influence of aircraft traffic and environmental conditions. The survey provides a snapshot of the condition of all the various pavement components at each airport and develops a network-level forecast for future pavement maintenance and repair needs.

The goal is to enhance the economic benefits of general aviation, reliever, and commercial airport pavements in California to insure safe landings and takeoffs.



guidelines, to be grant funds, have a pavement ment program. from the FAA, survey to create or surveys. This airports to comply ments, become funds, supply detailed pavement needs, and operators with reports, and

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Information on New and Updated California Airports and Heliports

FRESNO YOSEMITE INTERNATIONAL AIRPORT RUNWAY EXTENSION – Projects to extend both runways at the Fresno Yosemite International Airport were completed in early October 2013. An Amended State Airport Permit was issued on October 21, 2013. The work on the runways enabled the airport to meet requirements of the Federal Aviation Administration's Runway Safety Area Program for Federal Aviation Regulations Part 139 airports. The primary airport runway, Runway 11L/29R, was extended from 9,227 feet to 9,539 feet. The extension of the secondary runway, Runway 11R/29L, from 7,208 feet to 8,008 feet, was finished in December 2012. That project also increased the runway width to 150 feet and allowed the elimination of the preexisting 1,448 feet Displaced Threshold to Runway 11R.



UCSF MEDICAL CENTER MISSION BAY HELIPORT – The UCSF Medical Center at Mission Bay was issued a State Heliport Permit for a new Hospital Heliport on September 18, 2013. The design helicopter for this heliport is a Sikorsky H-60 Blackhawk. The facility was designed for a helicopter rotor diameter of 54 feet, overall length of 65 feet, and maximum gross takeoff weight of 22,000 pounds, and is lighted for night operations. Although the heliport is complete, construction of the medical center is still underway. The heliport permit has been suspended until the opening of the medical facility, which is scheduled for February 2015. For more information on this facility (after it is open for use), see the Hospital Heliport Dataplate on the Division of Aeronautics website.



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Aeronautics Testing Aviation WeatherShare

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Aviation WeatherShare is already proving beneficial to various Divisions within Caltrans and emergency responders in rural regions of the State. It has also been used in several Emergency Operations Centers during federal and State declared emergencies

The Aviation WeatherShare website is currently operational for testing, and we are encouraging the aviation community to give it a try. We are also asking for feedback on the site through a short online survey. Please consider spending some time on the site, then taking the survey. The responses will be used to help finalize the product for full deployment by summer 2014. The survey can be found at: <https://www.surveymonkey.com/s/awosrwis2>

Further information can be requested from Derek Kantar (Derek.kantar@dot.ca.gov) at Caltrans or Doug Galarus (dgalarus@coe.montana.edu) at Montana State University.

Helpful Resources

By Carol Glatfelter and Kevin Ryan

The California State Legislature, comprised of the State Senate and the State Assembly, convenes for two-year sessions. January is an active month for legislators. As of January 1, 2014, non-urgency bills passed by the Legislature and signed by the Governor during the previous regular session take effect. The Legislature reconvened on January 6, 2014 and submitted their budget to Governor Brown. The last day for policy committees to hear and report all fiscal bills introduced in each house from the 2013 cycle to the Fiscal committees is on January 17, and legislative calendar activities continue from there. Members of the Legislature can introduce bills until late February. Caltrans has an entire division dedicated to legislation issues, and all public inquiries can be addressed through division staff at <http://onramp.dot.ca.gov/hq/paffairs/LegislativeHomeMain.html>

Aeronautics Maps & Lists webpage has some new features! We have posted the 2014 Public Use Airports, Military Airfields and Bases map. Soon, we will have the 2014 Assembly and Senate maps updated to reflect the redistricting of the Senate's even districts. Check back regularly for updates. <http://www.dot.ca.gov/hq/planning/aeronaut/documents/maps/index.htm>



Upcoming Event

California Aviation Day
at the Capitol
April 23, 2014



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Do you have something noteworthy to suggest for future issues of the CalAERO Newsletter?
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