AGENDA ITEM: 14

TRUCKEE TAHOE AIRPORT DISTRICT

BOARD OF DIRECTOR STAFF REPORT

AGENDA TITLE: **Proposal to review and adopt Policy Instruction (PI) 512 - Hangar Door Momentary Safety Switch Operation and Enforcement Policy**

MEETING DATE: **April 28, 2021**

PREPARED BY: **Stacey Justesen, Airport Safety and Security Manager**

RECOMMENDED ACTION: Staff recommends Board approval of PI 512 – Hangar Door Momentary Safety Switch Operation and Enforcement Policy for the proper operation and enforcement action regarding use of hangar door momentary switches.

In that failure to abide by this Policy Instruction could result in tenant eviction, staff felt it important for the Board of Directors to have discussion and take action on this proposed Policy Instruction.

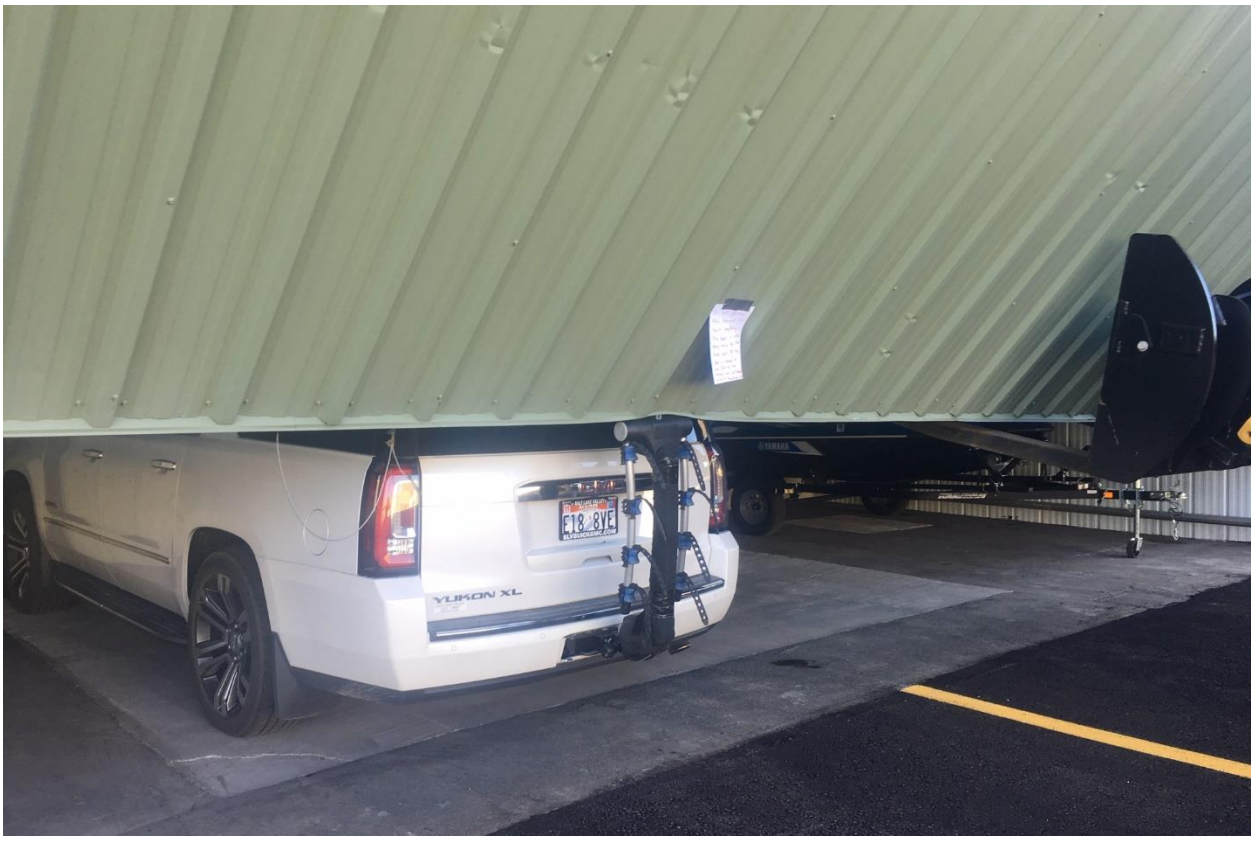
DISCUSSION: The District currently has 230 hangars, all of which have bi-folding doors. These hangar doors range from 2 years to over 60 years in age with the majority being built prior to 1985. To aid in the ongoing care and maintenance of these doors as well as to enhance safety for our tenants and staff, the District made the decision in 2018 to install momentary safety switches. Momentary switches require the door operator to hold down the switch for the door to operate. It takes between 86 and 94 seconds for a door to cycle up or down.

It should be noted that the vast majority of hangar tenants are operating their doors per our instruction and guidelines. We do have tenants that struggle to meet our hangar door use policy and periodically defeat or alter the switch. This policy is intended to assure the Airport Tenants, Staff, and Board of Directors are aligned with the process and enforcement action related to operation of hangar doors and momentary switches.

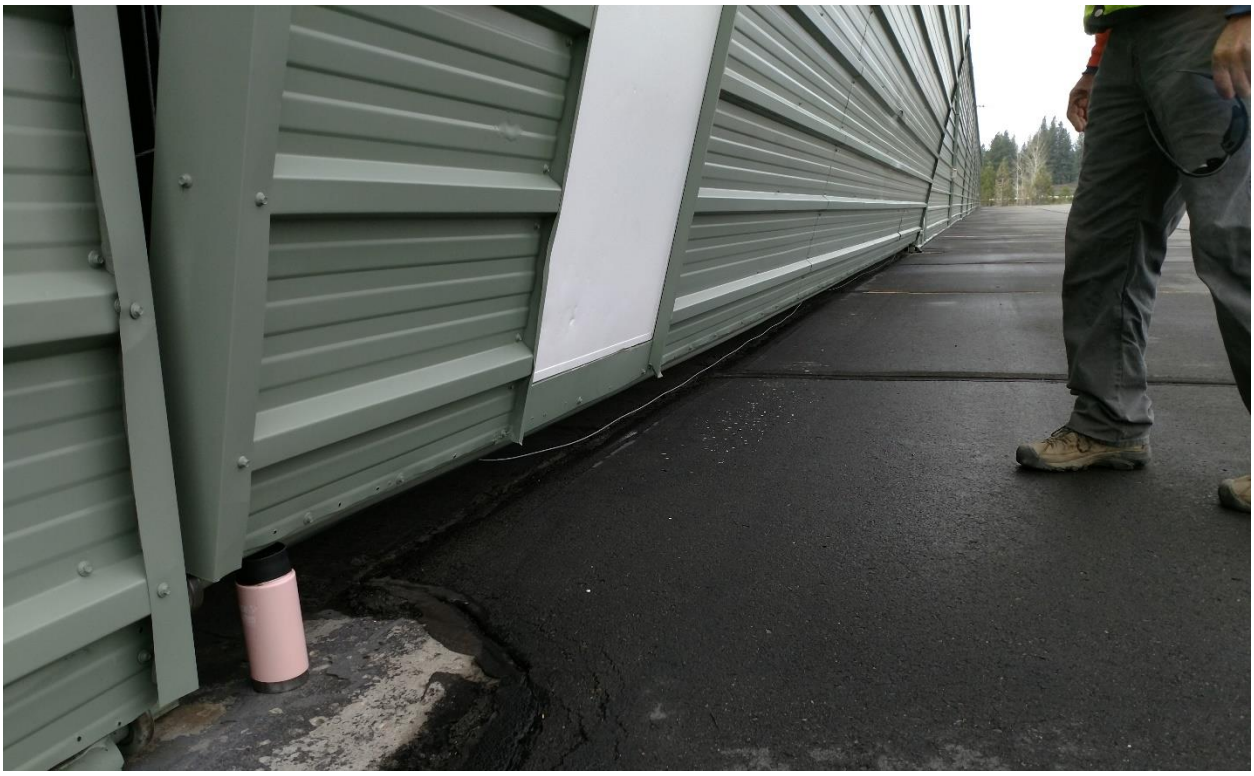
BACKGROUND: Why do we need Momentary Safety Switches? Staff felt it necessary to pursue momentary switches to address mechanical as well as primarily unintended tenant caused incidents such as hangar doors being lowered onto a steel coffee cup, a Thole bike rack and a tenant's vehicle while being driven into their hangar. In one instance, a hangar door had crushed a garbage can in half at the access door effectively creating a vice lock that prevented any access into the hangar to raise the

door for repairs. In addition, there were multiple mechanical incidents (non-tenant caused) that could have been prevented if the switch had been attended during the full operation of the hangar door. Before the momentary safety switch was installed, the button could be pushed, either up or down, and then left unattended to complete the cycle by itself. In these situations, the tenant was neither in a confirmed position of safety nor in a position to stop the motion of the door if required.

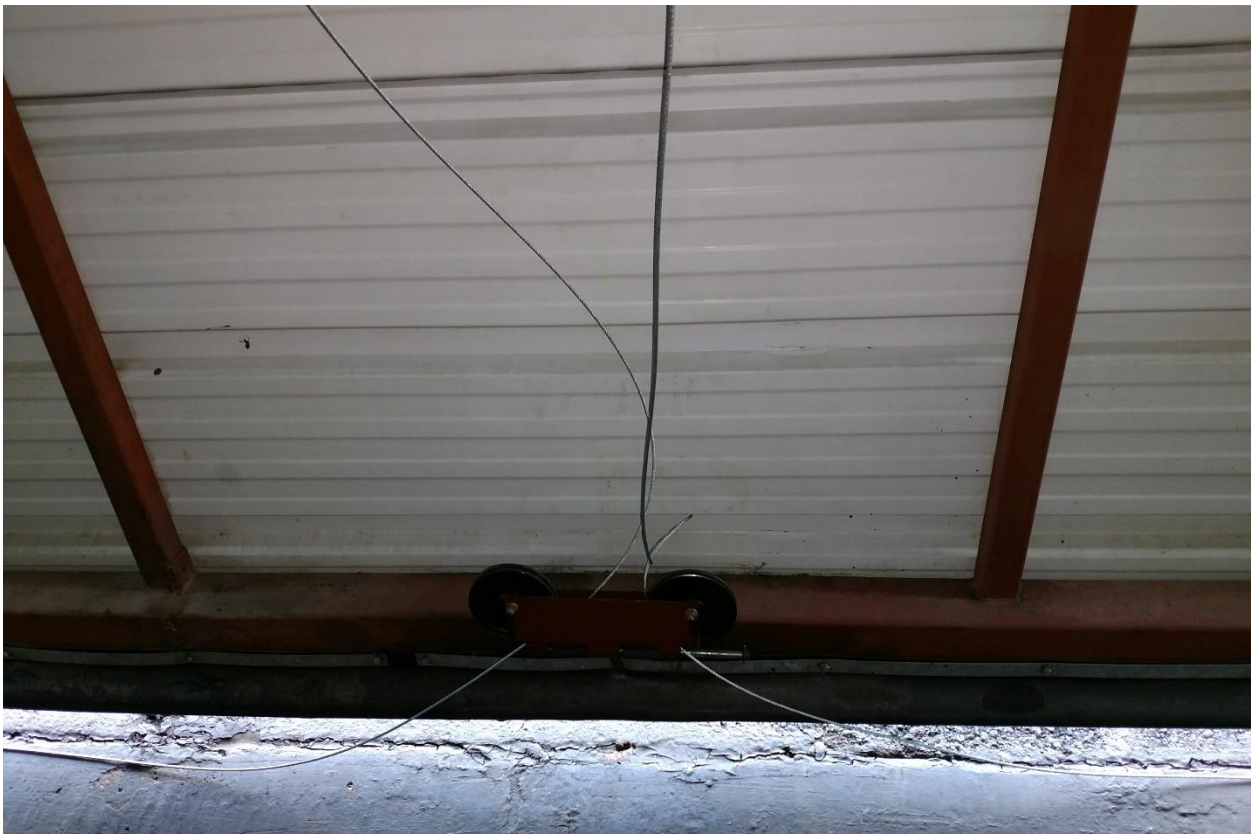
In either situation, unsafe hangar door conditions were found much later during airfield inspections or when reported by other tenants. Unfortunately, we do not always have the O&M staff to immediately fix the problem but are only able to safely shore-up the door until the problem can be addressed later, which may be inconvenient to the hangar tenant.



Thole bike rack and vehicle hitch were found holding the full weight of this hangar door. A TTAD forklift was positioned to share the load, which enabled O&M staff to safely access the hangar to repair the hangar door system.



The coffee mug was found holding the entire weight of the hangar door. Slack cables are seen under the hangar door.



Fully slack cables.

When a hangar door has a mechanical failure, whether being lowered onto something or due to a mechanical issue, the cable motors do not stop until the preset limits are reached. None of the hangar doors can detect an object and initiate an emergency stop. The cables unwind and wrap upon themselves into a tangled mess. In addition, limit switches, cables, sheaves, followers, motors, and drums can break or work incorrectly. Top and bottom limit switch failures can, and have, resulted in serious cable overwrap conditions resulting in some of the most dangerous hung-up hangar door conditions. Bi-fold doors have opened unevenly and jumped their track and, in some instances, have totally free fallen back to the ground.

Bi-fold doors weigh several thousand pounds. The final motivation to install the momentary safety switches was based on the August 2018 accident when a hangar door nearly fell onto a staff member and a tenant.

A momentary switch closes (energizes) a circuit when the button is depressed and returns automatically to an open position (non-energized state) when finger pressure is released. Therefore, motion of the hangar door only occurs when the button is physically depressed.

Since the installation of the momentary switches, there have been ZERO incidents. In fact, when something has gone wrong with the hangar door during transit, the tenant prevents further mishap and subsequent damage by taking their finger off the button. Whether intentionally or as a normal human reaction, it has reduced the severity of every situation.

POLICY INSTRUCTION OUTREACH TO TENANTS: The draft PI was distributed to our hangar tenants on March 12, 2021. Staff provided a 30-day comment period giving tenants an opportunity to provide input on the Policy Instruction.

Staff initially presented the momentary switch project to the Board as part of a monthly General Manger Report prior to installation. As the switches went in, most tenants accepted the change while a few felt they were unnecessary and a burden. Staff did learn from that experience and has provided more information and outreach regarding this program since 2018. We placed flyers above the switches in each hangar with notice of the installation that included operating instructions. We also began an outreach campaign along with a follow-up promotion in 2020. Some of our outreach efforts are as follows:

October 18, 2018	Facebook Post
October 30, 2018	Website under “Airport Community News” section
November 05, 2018	Website Home Page under the Banner section
September 01, 2020	Website under “Airport Community News” section
September 04, 2020	Monthly E-Blast

Some of our tenants as well as past members of the Board of Directors have expressed disfavor regarding momentary safety switches, insisting that tenants should be given the opportunity to opt-out and have the opportunity to take responsibility for the safety and mechanical upkeep of the door if they so choose. Staff did explore various opt-out options but ultimately strongly recommend to the Board that we not pursue any opt-out options due to the significant safety benefits of the momentary switches. These switches were installed for a practical reason and have proven to be 100% successful over the last 2 years with ZERO incidents. In addition, ultimate liability and proper maintenance of airport infrastructure, systems and equipment are very difficult if not impossible to convene to a hangar tenant.

As an additional note, contemporary hangar doors, such as those in the November and Papa rows, come standard with momentary safety switches. The option to install non-momentary switches is not recommended by the Schweiss hangar company.

WHAT'S NEXT: Should the Board pursue adoption of the policy, enforcement action would be as follows:

An infraction shall result when the spring-loaded "momentary" aspect of the switch has been overridden or otherwise been rendered inoperative. This has been accomplished in the past using magnets, shims and broom handles which holds down the button or by electrically modifying the switch itself. PI 512 proposes the following progressive enforcement action.

> **1st Infraction:** A $500 penalty along with a Letter of Correction to the hangar tenant informing the tenant of the penalty and that a 2nd offense will result in eviction from the hangar. If a hangar tenant refuses to pay the penalty, TTAD will begin the eviction process.
>
> **2nd Infraction:** Eviction from the hangar.

Third party tampering (e.g., mechanic, friend, detailer etc.) is the responsibility of the hangar tenant.

If the switch is intentionally bypassed, such as electrically re-wiring the switch, Staff may elevate the infraction per this process.

SAMPLE MOTION: I move to adopt PI 512 Hangar Door Momentary Safety Switch Operation and Enforcement Policy as attached.