UTSA 1604 Campus
Automated Sliding Doors Assessment

Michael J. Merada, P.E.
Plant Engineer
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Background
Operational failures with automated sliding doors create pedestrian travel issues, building security concerns, and in the cases where the doors fail open, increased energy consumption due to direct ambient air exposure. Although all automated doors will have periodic failures, there is a concern that UTSA is experiencing a higher than normal failure rate with the sliding doors.

Objective
Conduct an assessment of the automated sliding doors at the UTSA 1604 Campus for the following:
• Automated Sliding Door Call-in Analysis
• Doors exhibiting most problems
• Door replacement recommendations
• Door maintenance recommendations
• Next Steps
Automated Sliding Door Call-in Analysis

A history of automated sliding door call-ins was acquired from the Facilities TMA database and summarized in the table below.

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<th>Off Track</th>
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</table>

Other - Ghosting, Loss of Power, Cycling Open and Closed, Hardware Failure, Opening or Closing Slowly
Automated Sliding Door Call-in Analysis (Cont.)

Based on the information acquired from TMA over a 40 month period, the following observations were made:

• The Convocation Center and McKinney Humanities Building are impacted the most by automated sliding door issues
• Doors fail in the open position 27% more times than in the closed position
• Comparing the last 16 months to the 40 month period:
  – Greater than 30% increase in calls at the Convo and EB
  – Reduction of more than 30% in calls at the ARTS and MS
  – Overall total costs for door repairs have remained flat
• Primary failure causes seen in the field:
  – Doors off track due to being pushed (Emergency Break-away)
  – Door Auto-Switch turned off
  – Trouble corrected before technician arrival (Ghosting)
Problematic Doors

Based on the TMA analysis and technician feedback, the following sliding doors presented the highest number of issue since 1/1/2011:

- Convo Lvl 1 – 35 calls
- MH Lvl 2 – 27 calls
- SB Lvl 2 – 14 calls
- UC Lvl 1 – 14 calls
- MB Lvl 1 – 11 calls

Door Replacement Recommendations

Useful Service Life on automated sliding doors will vary by manufacturer, product, and activity. Doors having 10 years or more of service should be evaluated for replacement. Due to simultaneous wear of multiple parts on the doors, overhauling is not recommended. The following doors should be first targeted for Deferred Maintenance replacement:

- Convo Lvl 1 South
- MH Lvl 2 facing Sombrilla
Progressive Door Issue in BSE

The BSE east sliding door has progressively exhibited sticking problems.

- An initial assessment of the door and substantiated by technician observations, it appears the door is binding due to the weight of the windows above it and insufficient structural support.
- Pressure on the doors have been temporarily relieved by removing shims above the doors.
- A structural assessment and permanent engineering solution is needed for this window and door system before the situation amplifies itself.

Window system does not appear to have structural support other than the door frame under initial inspection.

Slight sagging of window frame exhibited above doors resulting in binding.
Door Maintenance Recommendations

After a review of automatic sliding door maintenance recommendation from manufacturers Dorma and Tormax, RFP information from the USAF, the American Association of Automatic Door Manufacturers web site, and ANSI A156.10, the following maintenance recommendations are suggested:

• Monthly door inspection by UTSA facilities staff
  – Inspection checks attached in Backup
• Annual service inspection by a certified manufacturer’s representative

Noted: The AAADM does strongly recommend a daily safety check of automatic doors. This is not a regulatory requirement and would not be practical with the limited UTSA Facilities O&M staff and number of automatic sliding doors at the 1604 Campus. The proposed Monthly door inspection contains all the elements of the AAADM daily safety check as well as other actions to validate proper door operation.
Next Steps

The following are recommended Next Steps to this assessment:

• Validate the current list of automated sliding doors to ensure all are accounted for and eliminate any duplications.
• Designate automatic sliding door specific equipment identifiers in TMA to be used going forward.
• Document finalized P.M.s in TMA and implement.
• Provide labels on doors with their unique identifier for improved identification during call-ins and maintenance.
• Look into programming the door auto-switches to reduce tampering.
• Complete an initial service inspection by a manufacturer’s representative over the next fiscal year (2013).
• Investigate if the current service contract with Tormax can include routine annual service inspections.
• Have a structural engineering assessment completed on the BSE window and door system.
Backup
P.M. Recommendations for Automated Sliding Door