## Appendix H – Runway Protection Zones Alternatives Analysis

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May 8, 2018

Mr. Neil Ralston, A.A.E., Airport Planner
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, MN 55450

Crystal Airport (MIC) Runway Protection Zone Alternatives Analysis – Douglas Drive & Apron

Mr. Ralston:

The FAA concurs with the revised Crystal Airport Runway Protection Zone Alternatives Analysis (RPZ AA) requested by the Metropolitan Airports Commission (MAC).

The previously preferred alternative was to convert 500 feet of existing blast pad/overrun pavement on both ends of Runway 14L/32R to stopways. Douglas Drive, a local road, is the Runway 14L RPZ. The current preferred alternative proposes modifications to Runway 14L/32R associated with converting portions of existing paved blast pads to usable runway, including shifting both landing thresholds approximately 115 feet to the northwest. The shift relocates the 32R RPZ entirely onto airport property. The Runway 14L RPZ will continue to be located entirely within airport property.

FIGURE 2: FINAL PREFERRED DEVELOPMENT ALTERNATIVE
Runway 6R/24L is proposed to be shortened to eliminate existing hot spots and remove incompatible land uses (i.e. Douglas Drive, CSAH 81/Bottineau Boulevard, BNSF railroad, and the Blue Line/Bottineau Transitway) from the RPZ. This modification will result in a portion of an existing apron containing three tiedowns to be temporarily located within the 6R RPZ until the apron is expanded and relocated outside of the RPZ.

The sponsor evaluated alternatives to improve the safety and utility of the airport and mitigate nationally important Runway Incursion Mitigation (RIM) initiatives at MIC. FAA’s concurrence of the proposed improvements to Runway 14L/32R is subject to MAC working with the City of Brooklyn Park to consider the installation of “Low Flying Aircraft/No Parking” signage on Douglas Drive at the edges of the RPZ as a mitigation strategy.

If you have any questions or would like to discuss this information further, please feel welcome to contact Gina Mitchell, Community Planner, at (612) 253-4641 or gina.mitchell@faa.gov.

Sincerely,

Andy Peek, Manager
Dakota-Minnesota Airports District Office, Minnesota Office

cc Mike Wilson, MAC, (by email)
Nancy Nistler, FAA (by email)
Josh Fitzpatrick, FAA (by email)
Rylan Juran, MnDOT Aeronautics (by email)
Dan Boerner, MnDOT Aeronautics (by email)
Bob Burrell, MnDOT Aeronautics (by email)
Memo

DATE:  19 March 2018

TO:  Gina Mitchell, ADO Community Planner

FROM:  Neil Ralston, MAC Airport Planner

SUBJECT:  Crystal Airport (MIC)

Runway Protection Zone Alternatives Analysis (RPZ AA), Revision 2
Submittal for FAA Review

**Request:** The Metropolitan Airports Commission (MAC) has finalized a Long-Term Comprehensive Plan (LTCP) (i.e. 20-year master planning study) for Crystal Airport (MIC). The initial draft of the LTCP, issued for public review and comment in September 2016, proposed a project to convert approximately 500 feet of existing overrun pavement on both ends of ultimate primary Runway 14-32 (existing primary Runway 14L-32R) to stopways to improve the Accelerate-Stop Distance Available (ASDA).

A local road (Douglas Drive) currently encroaches into the existing Runway 14L RPZ. Considering the low volume of vehicle traffic on this road and the low probability of an aircraft landing on ultimate Runway 14 while a vehicle is traversing the RPZ, MAC sought FAA’s approval to keep this section of Douglas Drive within the RPZ via an Alternatives Analysis (AA) document submitted on June 17, 2016. **Figure 1** depicts the layout of this configuration. A copy of the original RPZ Alternatives Analysis memo is included in Attachment 1.

FAA concurrence on the RPZ AA was received on July 27, 2016, subject to MAC working with the City of Brooklyn Park to consider the installation of “Low Flying Aircraft/No Parking” signage on Douglas Drive at the edges of the RPZ as a mitigation strategy. FAA’s concurrence letter is reproduced in Attachment 2.

Based on comments and input received during the LTCP public comment period, MAC refined the preferred alternative to 1] increase the ultimate Runway 14-32 published runway length from 3,267 feet to approximately 3,750 feet in order to not only improve ASDA, but other takeoff and landing distances as well through the use of declared distances, and 2] shorten the existing turf Runway 6R-24L instead of decommissioning it as originally anticipated. The RPZ impacts associated with both of these alternative refinements will be addressed below.

**Ultimate Primary Runway 14/32 Preferred Alternative Refinements**

The final preferred alternative for ultimate Runway 14-32 involves converting portions of existing paved blast pads on each end to useable runway. The refined concept also proposes to shift the landing thresholds approximately 115 feet to the northwest in order to move the ultimate Runway 32 RPZ fully onto airport property. Based on the current threshold location, the existing Runway 32R RPZ extends beyond the airport boundary onto private residential property. As a result, the ultimate Runway 14 RPZ also shifts 115 feet to the north, but remains on airport property. However, the linear frontage of Douglas Drive within the RPZ increases from approximately 160 feet in the existing condition to approximately 280...
feet in the refined alternative condition, an increase of approximately 120 feet. See Figure 2 for a layout of this configuration, and Attachment 3 for a copy of the approach plan and profile sheet for ultimate Runway 14-32 from the Draft ALP.

**Action Request #1**: Based on the rationale as presented in the original RPZ AA (see Attachment 1), MAC is seeking FAA's approval to keep an extended section of Douglas Drive within the ultimate Runway 14 RPZ at Crystal Airport, subject to the mitigation strategy outlined in FAA's previous concurrence.

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**FIGURE 1: ORIGINAL PREFERRED DEVELOPMENT ALTERNATIVE (STOPWAY CONCEPT)**

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**FIGURE 2: FINAL PREFERRED DEVELOPMENT ALTERNATIVE**
Ultimate Turf Runway 6R/24L Preferred Alternative Refinements

A key objective for airfield improvements at Crystal Airport is to simplify the airfield geometry by reducing the number of designated “hot spots” on the airfield, which represent the areas with the greatest potential for pilot confusion and incursion errors. This is consistent with a nationwide initiative by the Federal Aviation Administration (FAA) to reduce the number of runway incursions and increase airfield safety.

The initial draft of the LTCP, issued for public review and comment in September 2016, proposed to decommission turf Runway 6R-24L as one of several methods to reduce the number of hot spots. As shown in Figure 3 below, three of the eight Hot Spots at MIC are associated with the turf runway (HS #4, #5, and #7).

![Figure 3: HOT SPOTS ASSOCIATED WITH TURF RUNWAY 6R/24L](image)

Existing turf Runway 6R-24L is 2,123 feet long and 137 feet wide. As the distance between the edges of Runway 6R-24L and adjacent paved crosswind Runway 6L-24R is less than 200 feet, simultaneous same direction VFR operations are not authorized. The runway is not lit to accommodate night operations. The Runway Design Code (RDC) is A-I-Visual (small aircraft).

As illustrated in Figure 4, Taxiways F and D cross through the Runway Safety Area (RSA), Runway Object Free Area (ROFA), and Runway Obstacle Free Zone (ROFZ) of existing Runway 6R-24L. As such, ATCT controllers must hold aircraft and vehicles short of the turf runway (ROFZ) and issue clearance to cross (“mandatory hold”). This holds true even during the winter months when the turf runway is closed and results in a large volume of runway crossings.

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1 JO 7110.65W, Change 1, para. 3-B-3
The shortened turf Runway 6R-24 concept proposes the following changes to the existing condition:

- Shift the Runway 6R end to begin 400 feet from the centerline of crossing Taxiway F and the Runway 24L end to begin 400 feet from the centerline of crossing Taxiway D\(^2\)
  - These shifts result in a remaining runway length of 1,669 feet. The existing width will be retained.
  - Based on a review of typical aircraft performance manuals and user feedback, this runway length is adequate to accommodate the fleet mix expected to use the turf runway.
- Employ Threshold Siting Surface (TSS) Type #1 from Table 3-2 of AC 5300-13A, Draft Change 2.
  - This TSS is for the approach end of runways expected to serve small airplanes with approach speeds less than 50 knots (visual runways only, day/night).
  - Based on the known fleet mix of tail wheeled aircraft based at MIC, many existing turf runway operations are conducted by aircraft with an approach speed of less than 50 knots (e.g., Aviat A-1B/C Husky, Cessna 140, Aeronca 7AC Champ, and Piper J-3 Cub).
  - In addition, several models of Light Sport Aircraft (LSA) now on the market have approach speeds of less than 50 knots (e.g., Cessna 162 Skycatcher, and Pipistrel Alpha Trainer).
  - The number of aircraft operating on this runway with an approach speed of greater than 50 knots is not expected to reach 500 annually.
  - With an obstacle clearance slope of 15:1, the TSS will be at a height of approximately 27 feet at the crossing taxiway centerlines.
- Convert the existing “mandatory” runway hold short locations at crossing Taxiways F and D to “holding positions for runway approach area” locations (“approach holds”)\(^3\). This is appropriate as these crossing taxiways will no longer penetrate the RSA, ROFA, or ROFZ.

\(^2\) Locations for turf runway access will be identified such that aircraft will not taxi through the approach area onto the runway from Taxiways D or F

\(^3\) AC 150-5340-18F, Chapter 1 para. 5d; AC 150-5340-1L para. 3.3; AIM para. 2-3-5.3 and 2-3-8.2
The primary operational benefit of employing “approach holds” is that ATCT controllers will only have to hold an aircraft short of the turf runway at crossing taxiways F and D when there is an arrival or departure operation on the turf runway. When no operations are occurring on the turf runway, aircraft are not required to hold short of it. Given the low volume of operations, the number of times that ATCT controllers have to hold an aircraft short of the turf runway will be infrequent. However, when a hold is needed, the appropriate hold short lines and signs will be in place. This will reduce ATCT controller workload and reduce the potential for pilot/vehicle operator confusion and incursions associated with runway hold short instructions at Hot Spots #4 and #5.4

The existing hold line locations are proposed to remain in place as they protect the volume of airspace associated with the Type 1 TSS.

Issue a Form 5010 note and permanent NOTAM stating that the turf runway is closed to operations when the ATCT is closed.

This shortened turf runway concept is shown in Figure 5.

From a Runway Protection Zone (RPZ) perspective, in the existing condition the Runway 6R RPZ extends beyond the airport boundary onto two public roadways: Bottineau Boulevard/County Road 81, which accommodates an estimated 26,500 average daily vehicles, and its frontage road, Lakeland Avenue. The corner of the RPZ also extends into the railroad right-of-way adjacent to Bottineau Boulevard (approximately 0.1 acres). The existing Runway 6R RPZ also encompasses three aircraft parking/tie-down positions on the Fixed Base Operator (FBO) apron. The Runway 24L RPZ in contained on airport property and encompasses compatible land uses. The existing RPZ condition is shown in Figure 6.

4 Hot Spot #7 will also be addressed by removing the section of existing TWY E that crosses the turf runway. See Figure 7.
The proposed shortened turf runway concept improves RPZ land use compatibility in the following ways:

- Shifts the Runway 6R RPZ fully onto airport property.
- Removes Bottineau Boulevard, Lakeland Avenue, and the railroad right of way from the Runway 6R RPZ.
- Removes one of the three existing aircraft parking/tie-down locations from the FBO apron from the Runway 6R RPZ. This represents an interim condition until an expansion of the FBO apron is constructed. When the expansion is constructed, all three existing parking/tie-down locations will be converted into taxilane pavement providing access to a new parking/tie-down area that is fully removed from the Runway 6R RPZ. The timing for the FBO apron expansion is currently unknown, but it is feasible that it could occur within a five-year time period.
- A new service road is proposed between Taxiway A and B that will reduce the number of vehicles crossing Runways 6L-24R and 6R-24L.
- The Runway 24L RPZ continues to remain on airport property and encompass compatible land uses.

Figure 7 illustrates the RPZ condition associated with the proposed shortened turf runway concept.

For further reference, the approach plan and profile sheet from the Draft ALP set for the proposed turf Runway 6R-24L concept is included as Attachment 4.

Action Request #2: MAC is requesting FAA concurrence of the proposed turf Runway 6R-24L RPZ condition for the following reasons:
- Crystal has been identified as a RIM priority airport. Approving the land uses within the proposed condition RPZ will advance completion of the ALP and EA/EAW, which are necessary steps to develop a comprehensive project to mitigate nationally important RIM initiatives at MIC.

- The concept is designed to significantly reduce the number of instances where hold short instructions will have to be issued for aircraft and vehicles crossing the ends of the turf runway on Taxiways F and D. This will reduce ATCT controller workload and reduce the potential for pilot/vehicle operator confusion and incursions associated with runway hold short instructions at Hot Spots #4 and #5.

- Retains turf runway operational capabilities at MIC – the last turf runway in the Twin Cities Metropolitan Area System.

- The proposed concept to shorten turf Runway 6R-24L improves upon existing RPZ land use compatibility by shifting the Runway 6R RPZ fully onto airport property and removing both Bottineau Boulevard (26,500 average daily vehicles) and Lakeland Avenue from it.

- In the interim condition with the existing FBO apron, the proposed concept reduces the number of aircraft parking/tie-down positions in the RPZ from three to two. In the ultimate condition with an expanded FBO apron in place, all three existing aircraft parking/tie-down positions will be removed from the RPZ.

We look forward to receiving FAA's written determination on these two action request items. If you have any questions or would like to discuss this information further, please contact me at (612) 726-8129 or neil.ralston@mspmac.org.
Request: The Metropolitan Airports Commission (MAC) staff is preparing a Long-Term Comprehensive Plan (LTCP) (i.e. 20-year master planning study) for Crystal Airport (MIC) and is proposing a project to convert 500 feet of existing overrun pavement on both ends of Runway 14L/32R (the primary runway) to stopways. This will improve the Accelerate-Stop Distance Available (ASDA). The ADO has determined that the conversion of the overrun pavement to a stopway constitutes an “airfield project” thereby triggering a review of land use compatibility within the RPZ. A local road (Douglas Drive) currently encroaches into the Runway 14L RPZ.

Considering the low volume of vehicle traffic on this road (as documented further below) and the low probability of an aircraft landing on Runway 14L while a vehicle is traversing the RPZ, MAC is seeking FAA’s approval to keep this section of Douglas Drive within the RPZ.

Background Information: MIC is one of six reliever airports owned and operated by MAC. It has three paved runways and one turf runway as illustrated on the adjacent airport diagram. It is also served by an Airport Traffic Control Tower (ATCT). MIC has historically had a high number of runway incursions and has been identified as a high priority airport within FAA’s Runway Incursion Mitigation (RIM) program.
The previous LTCP, completed in 2008, recommended that runways 14R/32L and 6R/24L be decommissioned in order to better align the size and complexity of the airfield with existing and projected air traffic demand levels. Due to community pressure about land use compatibility within the built up urban area around the airport, MAC has also studied the feasibility of closing the airport. It has been determined that MIC serves an important role in the regional and state airport systems and that its closure is not a viable option.

The Draft 2035 LTCP underway identifies existing and forecasted aircraft operations to remain steady at approximately 40,000 throughout the 20-year planning horizon. The Draft 2035 LTCP carries forward the 2008 vision for closure of runways 14R/32L and 6R/24L, as well as converting 14R/32L into a full-length parallel taxiway. An area of emphasis in the plan is to evaluate airfield modifications to eliminate or minimize all runway incursions at the airport, but particularly at Hot Spot #6 which is identified in the RIM program. Most of the incursions are a result of the close spacing between the runways and confusion over hold instructions (see Attachment 1).

It is anticipated that converting 14R/32L into a parallel taxiway would also reduce the potential for runway incursions at Hot Spots #1, #2, and #3, because the short taxi distance and related hold problems between the runways would be eliminated. It is anticipated that closing turf Runway 6R/24L would reduce the potential for runway incursions at Hot Spots #4, #5, and #7 as a result of eliminating related runway crossings.

Concurrently, a project is underway in CY 2016 to remove TERPs 20:1 visual area surface penetrations at the airport. By the end of CY 2016, all known 20:1 visual area surface penetrations to Runways 14L/32R and 6L/24R are expected to be mitigated.

Runway 14L/32R is 3,267 feet long and has one mile approach minimums (Runway 14L end). The airport primarily serves small (B-II) propeller driven aircraft with fewer than 10 passenger seats. The 2008 LTCP and the existing Airport Facility Directory (AFD) publish the Runway 14L/32R certified pavement strength as greater than 12,500 pounds (i.e. 13,000 pounds single-wheel and 25,000 pounds dual-wheel). To improve land use compatibility, however, the Draft 2035 LTCP proposes to update Runway 14L/32R’s published maximum takeoff weight as 12,500 pounds or less (Utility Runway designation). As a result, Runway 14L/32R’s RPZ size would be 250 feet x 450 feet x 1,000 feet (B-II small aircraft, not lower than 1 mile visibility minimums).

The Draft 2035 LTCP reviewed the FAA’s Runway Length Advisory Circular (AC) and identified that an appropriate runway length would be 3,300 feet to accommodate 95% of the fleet or 3,900 feet for 100% of the fleet at maximum payload. Based on existing and projected user needs, the plan recommends enhancing the overall utility of the airport by activating the existing 500-foot paved overruns at each end of Runway 14L/32R as stopways. By activating the stopways, the published runway length to accommodate ASDA requirements would increase to 3,767 feet. Activating the stopways would not change the takeoff run available (TORA), takeoff distance available (TODA), or the landing distance available (LDA). This is appropriate, given that ASDA typically represents the most demanding runway length for the design aircraft family. In addition, it was determined that the improvements needed to increase the TORA, TODA, and LDA would reduce the airport’s overall compatibility with adjacent land uses. Activating the stopways would not change the RPZ locations relative to the existing runway thresholds.

The following improvements are needed to activate the stopways as proposed:

- Relocate existing runway threshold lights in-pavement or outboard
- Install stopway lighting (red) per AC 150/5340-30H, Design and Installation Details for Airport Visual Aids
- Complete Runway Safety Area (RSA) grading off stopway ends
- The estimated cost for these airfield improvements at MIC is approximately $200,000
The proposed improvements are shown on Attachment 2.

Reducing the RPZ size by reverting to a Utility Runway designation improves land use compatibility. It does not, however, eliminate all incompatible land uses within the RPZs, as further explained below.

Runway 14L RPZ: Douglas Drive is designated as a local road that provides access to the airport and adjacent residential development. By definition, a local roadway serves less than 1,000 vehicles per day. Although no recent traffic study is known to exist for this section of Douglas Drive, vehicle counts taken on other local roadways in the vicinity of the Airport suggest average daily traffic levels in the range of 300 – 500 vehicles. Douglas Drive bisects the outer corner of the RPZ. Relocating Douglas Drive is not feasible due to the existing urban development pattern and adjacent transportation corridors located immediately west of the airport, including Bottineau Boulevard (4-lane arterial roadway), Lakeland Avenue (local frontage road), a freight rail line, and the planned Bottineau/Blue Line Extension Light Rail Transit (LRT)1. There are no current plans to increase the capacity of this roadway.

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1 The planned Bottineau Light Rail Transit Line received RPZ AA approval for its location within the Runway 6L and 6R RPZs in 2014
Runway 32R RPZ: The only on-airport land use within this RPZ is an access-controlled hangar access driveway. This driveway only serves airport tenants and is not a public roadway. The small RPZ conforms to FAA RPZ guidance and is owned almost in its entirety by the airport. The small corner of the RPZ that extends beyond the airport boundary does not contain any structures.

In summary, MAC’s rationale for not realigning Douglas Drive outside of the RPZ is as follows:

- Crystal has been identified as a RIM priority airport. Approving the existing land uses within the RPZ will advance completion of the 2035 LTCP. This is the necessary first step to proceed into an Environmental Assessment and then develop a project to convert Runway 14R/32L to a parallel taxiway, decommission turf Runway 6R/24L, and mitigate nationally important RIM initiatives at MIC.

- Changing to a Utility runway designation and publishing a maximum pavement strength of 12,500 pounds does not impact users operating at the airport on a regular basis or the airport’s role in the regional or state aviation network. The reduction allows a smaller RPZ and minimizes incompatible land uses from the existing condition. This change improves the safety of people and property on the ground.

- Douglas Drive is a low volume, local roadway. There is a low risk of an airplane accident within the outer edge of the RPZ where the road is located, when a vehicle is present. Realignment of the road outside of the RPZ is not viable given the location of existing residential development and adjacent transportation corridors immediately west of the airport, including Bottineau Boulevard, Lakeland Avenue, a freight rail line, and the planned Bottineau Light Rail Transit Line. MAC is willing to consider the installation of “Low Flying Aircraft/No Parking” signage on Douglas Drive at the edges of the RPZ as a mitigating strategy, but this will require coordination with and approval from the municipality with roadway jurisdiction (City of Brooklyn Park).

We look forward to receiving FAA’s written determination on this matter. If you have any questions or would like to discuss this information further, please contact me at (612) 726-8129 or neil.ralston@mspmac.org.
1. Local Control (LC) observed an unidentified private vehicle driving on Taxiway Echo without an ATC clearance or communications. The vehicle crossed Runway 32R on Taxiway Echo-4 northeast bound. Runway 32R was active at the time of the event. No conflicts. (08/30/2013)

2. Local Control (LC) observed an unidentified private vehicle driving on Taxiway Echo without an ATC clearance or communications. The vehicle then crossed Runway 32L on Taxiway Echo-4 northeast bound at Hot Spot 6. No conflicts reported. (08/30/2013)

3. BE9L received taxi instructions, Runway 14R, via Alpha and Echo, cross Runways 6L and 6R. The BE9L incorrectly read back Runway 14L. GC corrected the pilot and verified he was going to Runway 14R, re-issuing the detailed taxi instructions. The BE9L correctly read back the instructions and runway assignment. Subsequently, the BE9L was observed crossing Runway 14R at the approach end (Echo 4). GC instructed the BE9L to STOP, and the aircraft stopped short of the Hold Lines for Runway 14L on Echo 4. No reported conflict. Area is identified as a Hot Spot. (03/30/2012)

4. PA28A, operated by a student pilot, had been in the pattern doing full stop taxi backs. After the second landing the PA28 called Ground at Taxiway Echo 3 to taxi back to Runway 14R. The controller issued instructions to taxi to Runway 14R via Taxiway Echo, crossing Runways 6R and 6L. The read back was correct. PA28 proceeded across the hold short lines and on to Runway 14R at Taxiway Echo without a clearance. No other vehicles or aircraft were involved so there were no conflicts reported. This even occurred in an area identified as a hot spot. (12/28/2011)

5. A Cessna C172 crossed the hold short line at approach end for Runway 14R without clearance. Local (LC) instructed the pilot to hold position. No conflicts reported. Pilot stated being distracted by a fox near the runway and in error crossed the hold lines. (06/10/2011)

6. A Piper AEST was taxied via Taxiway Echo to Runway 14R which pilot read back. The AEST completed a run-up then entered Runway 14R at approach end without clearance. No conflicts reported. (05/10/2011)

7. A Piper P28A was assigned Runway 14R with instructions to hold short of Runway 14L which was read back correctly the second time. The P28A crossed the hold lines for Runway 14L at approach end without clearance. No conflicts reported. (01/02/2011)

8. A Cessna C172 was issued Runway 14R via Echo for departure and read back Runway 14L. ATCT corrected the pilot and ask to verify they received Runway 14R. The pilot read back Runway 14R. Subsequently the C172 crossed Runway 14R at approach end without clearance. No conflicts
9. An airport taxi crossed Runway 32R (closed for construction) and then Runway 32L at Taxiway E4 (departure end) without authorization. A Piper PA32 was approximately one half (.50) mile final Runway 32L when issued a go around. The vehicle dropped off a passenger on the Shamrock FBO ramp then reversed direction and crossed Runway 32L at E 4 onto Taxiway Charlie. The vehicle was intercepted by an airport vehicle near the approach end of Runway 24R at Charlie. In addition, the pedestrian crossed the departure end of Runway 24R without authorization and was also intercepted. (08/01/2008)

10. A Beech BE58 was issued Runway 14R and instructed to cross Runway 6R/L. The pilot read back the instructions to include runway assignment. The BE58 made a right turn from Echo onto Echo 4 and appeared to not be slowing down to hold short of Runway 14R when Ground (GC) instructed the pilot to stop. The BE58 did stop but with tail of aircraft over the hold short line on Echo 4. No conflicts reported. (08/22/2010)

11. Piper PA34 was issued Runway 14R and asked to verify they had ATIS Foxtrot and that they were taxiing to Runway 14R. The pilot responded ‘going to 14R and listening to Foxtrot right now?’ The PA34 completed run-up in 14R run-up area then crossed Runway 14R without clearance and called ready at Runway 14L. No conflicts reported. (08/19/2010)

12. A POV (Ford F150) was observed by Ground (GC) entering Taxiway Charlie from a non-movement area without authorization. The vehicle proceeded south on Charlie and crossed Runway 14L/R on Echo 4 and entered the non-movement east of Shamrock Aviation. The vehicle then drove south onto Bravo, turned west and crossed Runway 6L/R on Foxtrot, west on Alpha and stopped at Thunderbird Aviation where it was intercepted by a fuel truck driver. No conflicts reported. (08/16/2010)

13. A Cessna C172 taxied from north ramp to Runway 14R via Charlie, E4, and to hold short of Runway 14R. Subsequently the C172 was instructed to cross Runway 14L at E4 and hold short of Runway 14R. The C172 pilot acknowledged then stopped at the Runway 14L hold lines on west side instead of Runway 14R hold lines thus conflicting with N99607, C172, on final Runway 14L. LC issued the C172 a go around but due to a stuck mike from unknown aircraft the C172 could not receive and landed on Runway 14L. The C172 on E4 was clear of the runway stopping approximately 85 feet from Runway 14L runway edge (hold line to runway edge is 95 feet). (08/22/2009)
TOPEKA
FORBES FLD (FOE)

HS 1 Southbound tfc on Twy A must remain alert so as to not miss the right turn on Twy A when taxiing to Rwy 03. Twy B continues to an intersection with Twy A which turns to the southwest.

HS 2 Use caution Twy A becomes Twy E just past access to the apch end of Rwy 03. Twy A turns left, Twy E continues southwest bound to the KS ANG ramp.

HS 3 Twy E is not visible from the ATCT. Twy E also accesses KS ANG ramp and is not maintained by the Airport Authority.

TOPEKA
PHILIP BILLARD MUNI (TOP)


WICHITA
WICHITA DWIGHT D EISENHOWER NATIONAL (ICT)

HS 1 Gates 5, 6, 11 and 12 are in close proximity to the movement area boundary. Pushback from these gates enters Twy R.

MINNESOTA
DULUTH
DULUTH INTL (DLH)

HS 1 Act/vehicular tfc on Twy E1, Twy E2 and Twy E should be alert. Signage indicates Rwy 27 APCH. Twy E is in the safety area for Rwy 09–27.

HS 2 Apch end of Rwy 27 located at Twy A5.

MINNEAPOLIS
CRYSTAL (MIC)

HS 1 Short distance between rwys. Manage your taxi speed.

HS 2 Short distance between rwys. Manage your taxi speed.

HS 3 Short distance between rwys. Manage your taxi speed.

HS 4 Be prepared to hold short of Rwy 06R (sod) on Twy F.

HS 5 Be prepared to hold short of Rwy 24L (sod) on Twy D.

HS 6 Multiple vehicle/pedestrian deviations have occurred in this area due to proximity of arpt access points and hangars obscuring twr view.

HS 7 Close proximity of Rwy 14R and Rwy 06R hold markings at Twy A and Twy E intersection.

HS 8 Act/ taxiing northeast on Twy B for Rwy 24R or Rwy 24L, tend to make a right turn onto Twy E, incurring on the active rwy.

MINNEAPOLIS
FLYING CLOUD (FCM)

HS 1 Hold position marking/signs for Rwy 10L located 30' south of Twy A.

HS 2 Hold position marking/signs for Rwy 10L located 30' south of Twy A.

HS 3 Hold position marking/signs for Rwy 10L located 30' south of Twy A.

HS 4 Hold position marking/signs for Rwy 10L located 30' south of Twy A.

HS 5 Hold position marking/signs for Rwy 10L located 30' south of Twy A.

HS 6 Hold position marking/signs for Rwy 10L located 30' south of Twy A.

HS 7 Hold position marking/signs for Rwy 10L located 30' south of Twy A.

HS 8 Hold position marking/signs for Rwy 10L located 30' south of Twy A.

HS 9 Rwy 18 apch area proximity to adjacent ramps along Twy A.

HS 10 Close proximity of parallel rwys and holding positions when crossing apch end of Rwy 28L.

HS 11 Short distance between rwy hold short lines. Be prepared to hold short of each rwy.
Scenario 1 (Application of Stopway Standards)

In this scenario, the existing paved overruns were reconfigured and lighted as stopways, extending the ASDA in both directions by 500 feet.


Legend:
- Airport Property Boundary
- Runway Protection Zone (RPZ)
- Runway Safety Area (RSA)
- Runway Object Free Area (OFA)
- Runway Obstacle Free Zone (OFZ)
- VASI
- Helipad
- Obstacle identified through the Planimetric Survey that was completed in January 2014
- Proposed Airfield Pavement
July 27, 2016

Mr. Neil Ralston, A.A.E., Airport Planner
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, MN 55450

Crystal Airport (MIC) Runway Protection Zone Alternatives Analysis – Douglas Drive

Mr. Ralston:

The FAA Dakota-Minnesota Airports District Office (ADO) has obtained FAA Regional and Headquarters concurrence on the Crystal Airport Runway Protection Zone Alternatives Analysis (RPZ AA) requested by the Metropolitan Airports Commission (MAC).

The triggering event for this analysis is the proposed project to convert 500 feet of existing overrun pavement on both ends of Runway 14L/32R to stopways. This will improve the Accelerate-Stop Distance Available. The conversion of the overrun pavement to a stopway constitutes an “airfield project” thereby triggering a review of land use compatibility within the RPZ. A local road (Douglas Drive) currently encroaches into the Runway 14L RPZ.

The sponsor evaluated alternatives to improve the safety and utility of the airport. The sponsor’s attached preferred alternative (Scenario 1 illustrated on Attachment 2) is to

- Convert 500 feet of existing overrun pavement on both ends of Runway 14L/32R to stopways.
- Proceed into an Environmental Assessment and then develop a project to convert Runway 14R/32L to a parallel taxiway, decommission turf Runway 6R/24L, and mitigate nationally important Runway Incursion Mitigation (RIM) initiatives at MIC.
- Change to a “utility” runway designation and publish maximum pavement strength of 12,500 pounds to accommodate existing users operating at the airport and maintain the airport’s role in the regional or state aviation network. The reduction allows a smaller RPZ and minimizes incompatible land uses from the existing condition.

FAA’s concurrence of the conversion of 500 feet of existing overrun pavement on Runway 14L to a stopway is subject to MAC working with the City of Brooklyn Park to consider the installation of “Low Flying Aircraft/No Parking” signage on Douglas Drive at the edges of the RPZ as a mitigation strategy.

If you have any questions or would like to discuss this information further, please feel welcome to contact Gina Mitchell, Community Planner, at (612) 253-4641 or gina.mitchell@faa.gov.
Sincerely,

Lindsay Butler  
Assistant Manager  
Dakota-Minnesota Airports District Office, Minnesota Office

cc  Preferred Alternative (Scenario 1 illustrated on Attachment 2)

cc  Mike Wilson, MAC, (by email)  
Nancy Nistler, FAA (by email)  
Josh Fitzpatrick, FAA (by email)  
Paul Lo, FAA (by email)  
Rylan Juran, MnDOT Aeronautics (by email)  
Dan Boerner, MnDOT Aeronautics (by email)  
Bob Burrell, MnDOT Aeronautics (by email)
Runway 14L-32R
Scenario 1 (Application of Stopway Standards)

Note:
1/ In this scenario, the existing paved overruns were reconfigured and lighted as stopways, extending the ASDA in both directions by 500 feet.

