

PRELIMINARY DRAFT
FOR DISCUSSION PURPOSES ONLY

DISCUSSION OUTLINE
OMP ADVISORY SESSION
September 10, 2002

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AGENDA

- I. INTRODUCTION
- II. SIMULATION MODELING
- III. AIRFIELD REFINEMENTS
- IV. PROPOSED REFINEMENTS
- V. NEXT STEPS

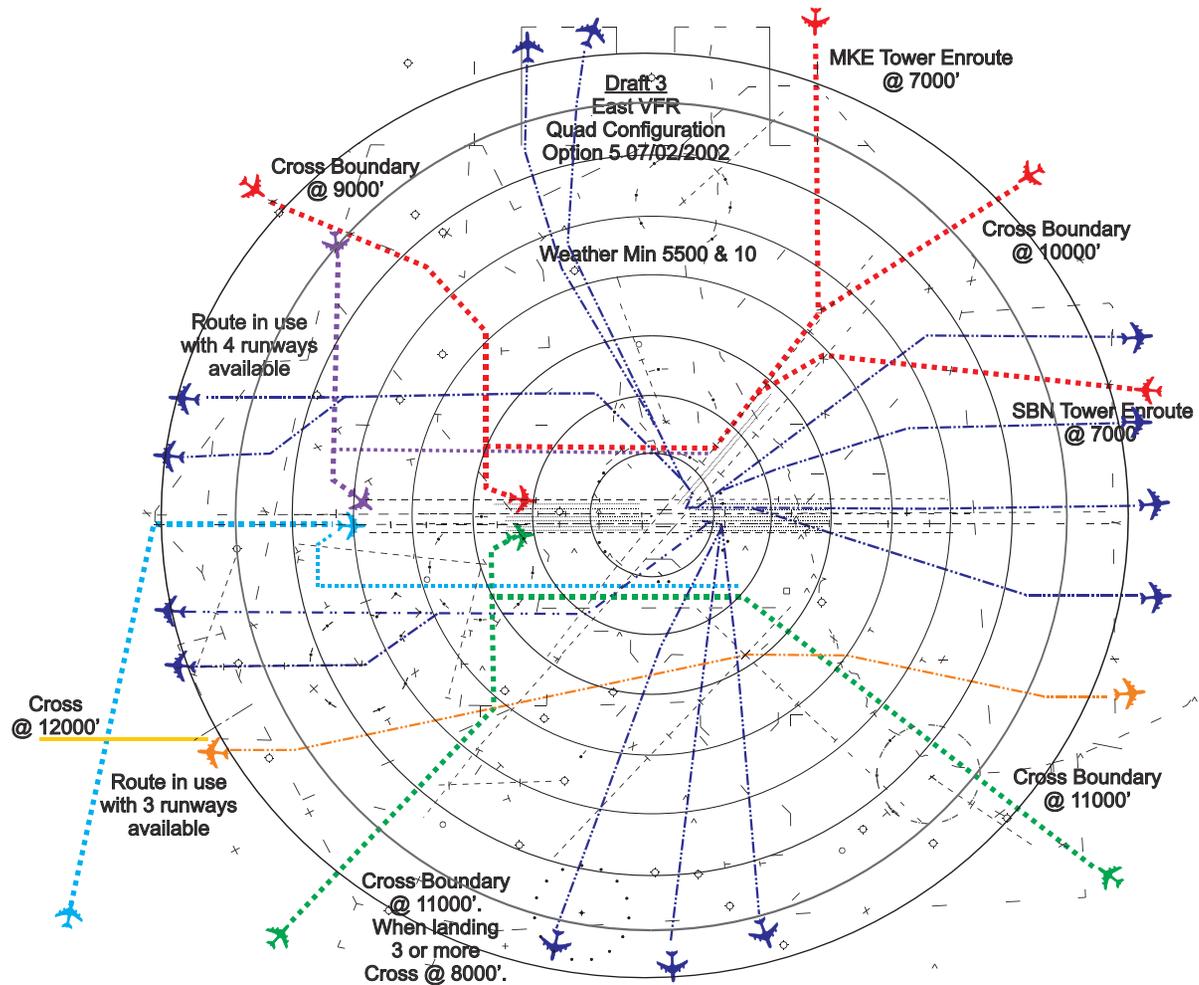
I. INTRODUCTION

1. Simulation runs have been initiated for Options 1, 2, and 5 to assess various assumptions on the airfield flows and operating plans. Preliminary results from these simulations are reviewed in the following sections of this document.
2. In order to facilitate the ultimate development of an Airport Layout Plan consistent with FAA requirements, and to support other planning elements, an Integrated Plan, based on Option 5, has been developed. The Integrated Plan incorporates terminal facilities, cargo/maintenance facilities, service roads, ground access/parking and other airport facilities that will ultimately be defined to complete the ALP.

II. SIMULATION MODELLING

AIRSPACE SIMULATION – OPTIONS 1, 2, & 5

1. Airspace changes are required upon operational use of a third parallel runway and this change is consistent throughout all options.
2. Arrivals, whether trips or quads, use the existing corner-post structure with some variation necessitated by the need to feed the center runways. Generally, the center runways are fed by routing traffic to points approximately 25NM and 40 NM east or west of the Airport depending on the configuration. From these points aircraft proceed straight-in to the intended landing runway.
3. Departure routings have also changed somewhat. On west parallel configurations, east departures are routed both north and south of the arrival descent area. Aircraft destined for New England, Eastern Canada, and some European cities are routed north of the Runway 27/28-descent area, while traffic destined for CLE, PIT, JFK, EWR, and the Washington DC area are routed south of the descent area. Conversely, on east parallel configurations, west departures are routed north and south of the Runway 9/10-descent area. Departures destined for cities in the northwestern U.S. and Canada, and some Pacific Rim traffic will be routed north of the arrival descent area, while traffic destined to cities between DFW and the LAX basin are routed south of the descent area. The airspace routes described are consistent with the latest thinking associated with the National Airspace Review (NAR).
4. The TRACON ceiling is increased to 15,000 feet to facilitate unrestricted departure climbs to the extent possible.
5. Generalized airspace routes for each operating configuration are illustrated in the following exhibits:
 - Exhibit II-1 - VFR East Parallel Option 5 (LAHSO)
 - Exhibit II-2 - VFR East Parallel Option 2
 - Exhibit II-3 - VFR East Parallel Option 1 (No LAHSO)



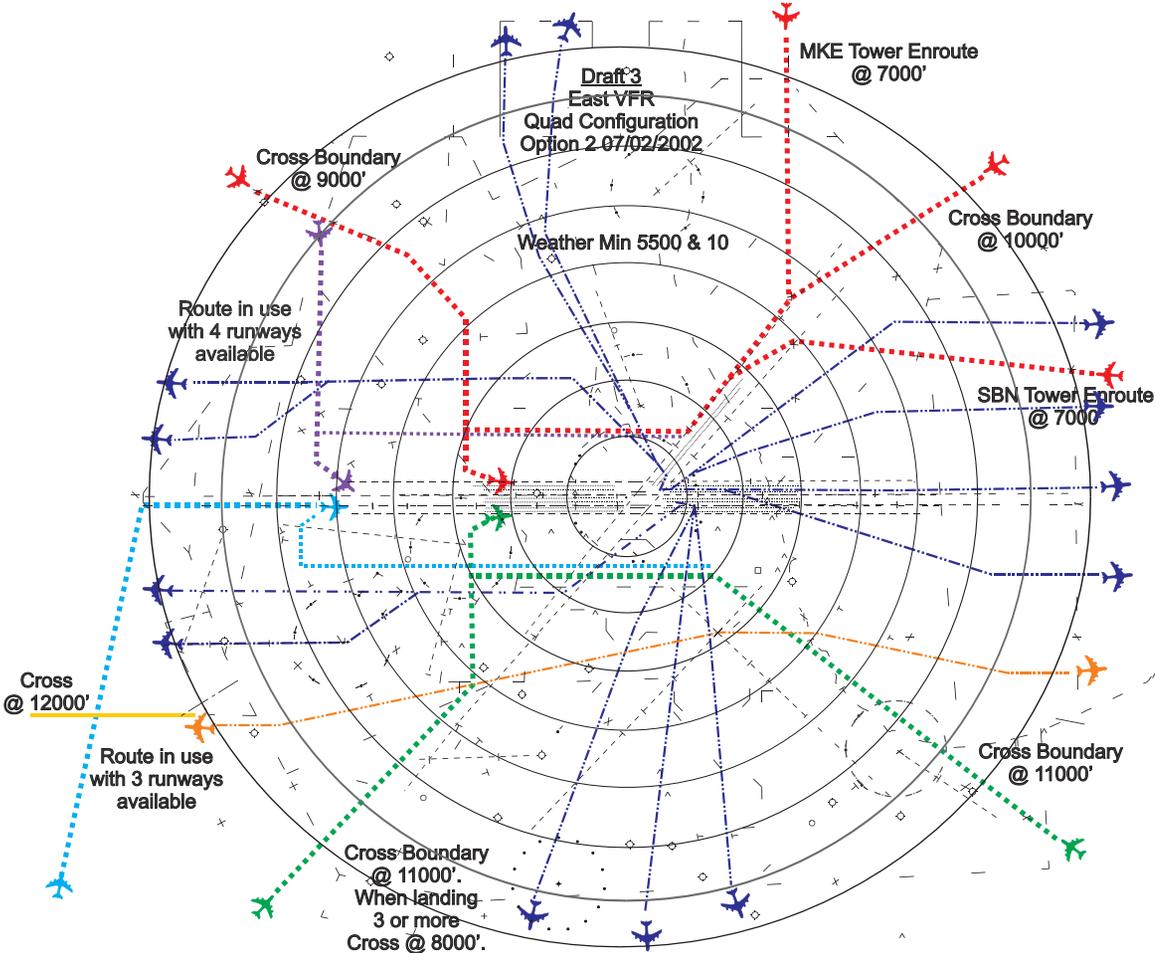
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Exhibit II-1



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Option 5 VFR East Parallel (LAHSO)



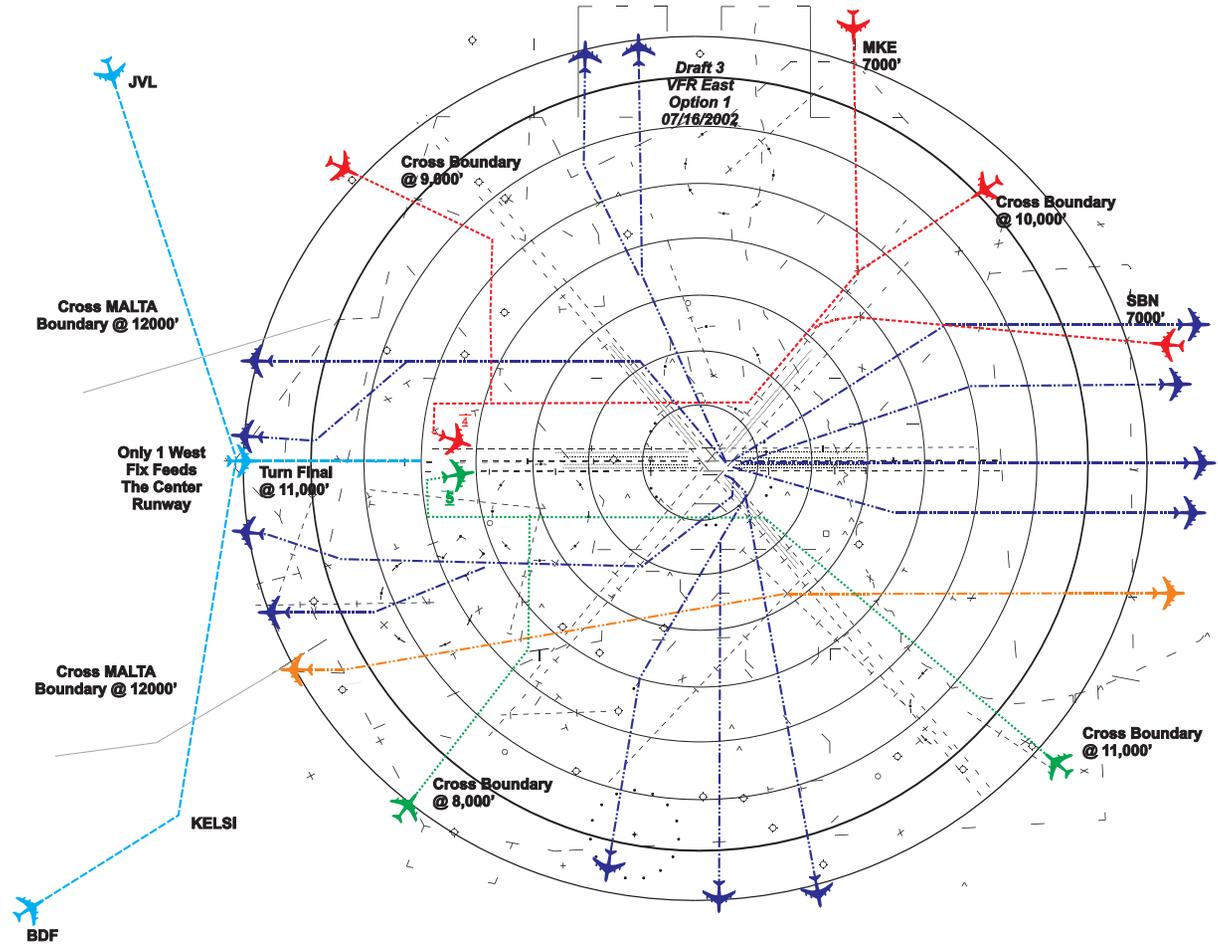
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Exhibit II-2

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Option 2 VFR East Parallel

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Exhibit II-3

↑ north
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Option 1 VFR East Parallel (No LAHSO)

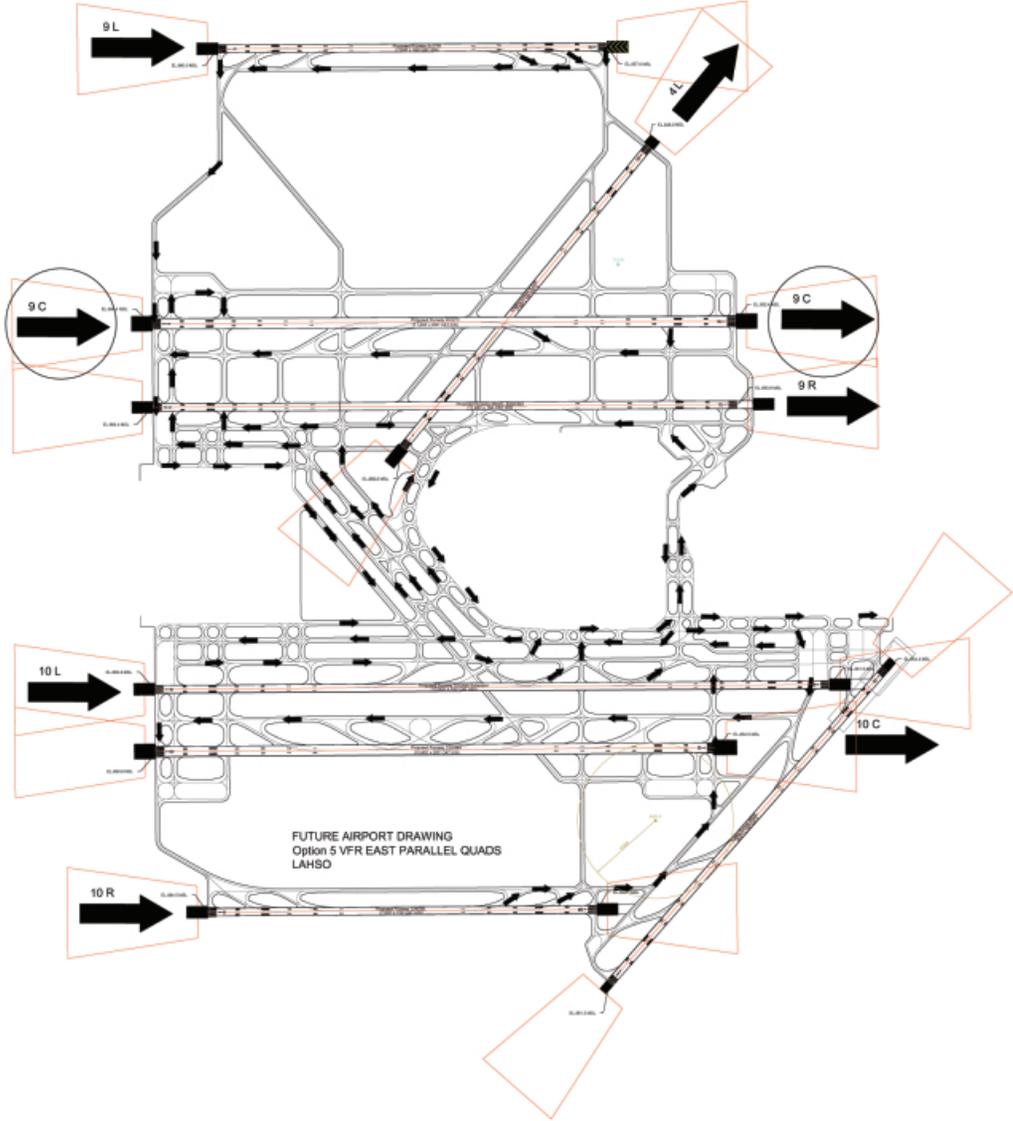
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AIRFIELD SIMULATION CONCEPTS

1. A “West Terminal” concept was introduced to the simulation model. As a result, two west airfield taxiways were eliminated and two diagonal cross-field taxiways were added.
2. The airfield layout used for simulation modeling was set as of August 2, 2002. Any future airfield refinements will be added to the model as a second round of simulations after a preferred Option is selected.
3. The taxi flows indicated are intended to avoid runway crossings to the maximum extent possible.
4. Pushback areas are provided, where possible, to permit aircraft from adjacent gates to push back without blocking taxilanes.

AIRFIELD SIMULATION – OPTION 5

1. The anticipated flows of aircraft between the runways and terminal gate areas are illustrated in **Exhibit II - 4 - VFR East Parallel Option 5 (LAHSO)**. Inboard/outboard runway configurations are dependent on weather conditions. LAHSO procedures are widely used to accommodate uncoordinated runway crossing under VMC dry runway condition. When LAHSO is not available, aircraft arrive on the outboard runways and depart on the inboard runways as shown in **Exhibit II-5 - VFR East Parallel Option 5 (No LAHSO)**.
2. Intersection departures are used to facilitate the uncoordinated movement of aircraft taxiing behind departing traffic.



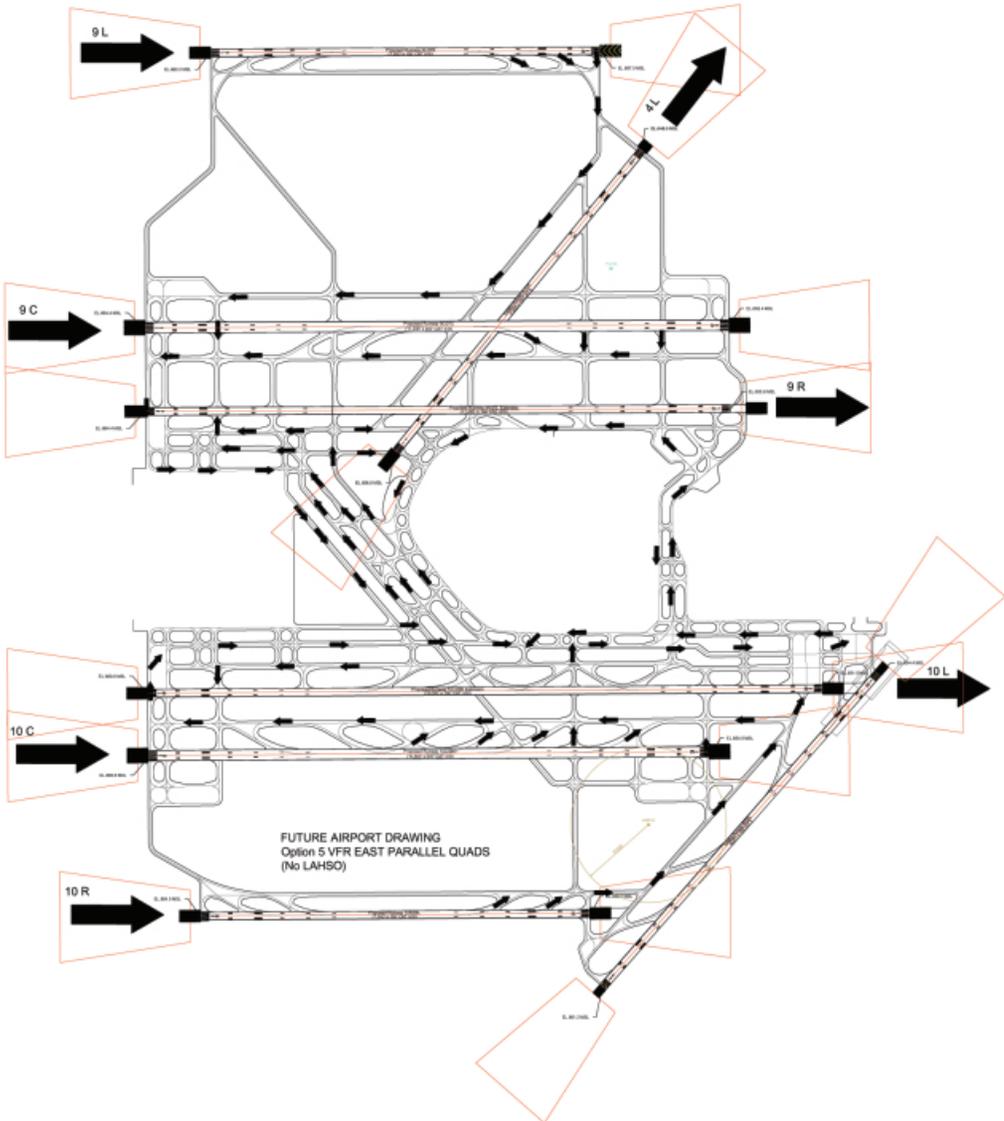
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Exhibit II-4


north Not to scale

Option 5 VFR East Parallel (LAHSO)

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Exhibit II-5

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north Not to scale

Option 5 VFR East Parallel (No LAHSO)

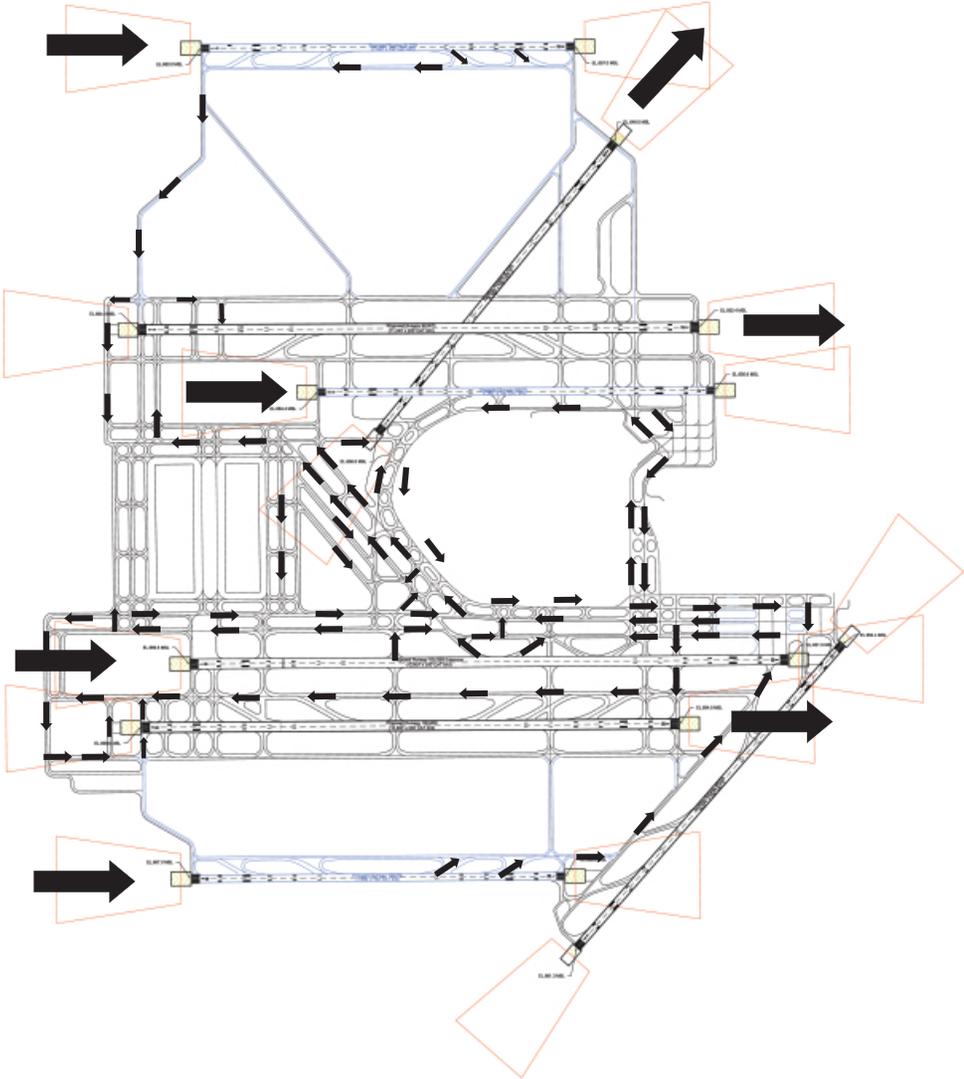
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AIRFIELD SIMULATION– OPTION 2

1. The anticipated runway configuration and associated taxi-flows are illustrated **Exhibit II-6 - VFR East Parallel Option 2**.
2. This airfield option was designed to avoid runway crossings by providing perimeter taxiways around the runway ends. Initial uncoordinated taxi movements were modeled; however, based on AFS-400 Memo of 8/22/02 which states that “taxiing aircraft must be positively controlled to cross the extended runway centerline.” coordinated crossings are now being modeled. Additionally, Runway 10R arrivals taxiing north on Taxiway S also result in coordinated dependencies with Runway 10C departures.
3. With the staggered runways unique to Option 2, modeling Runway 9R arrival and Runway 9C departure wake turbulence dependencies is being accomplished with assistance of the model developer to ensure that the dependencies are properly simulated.

AIRFIELD SIMULATION– OPTION 1

1. The anticipated arrival configuration and associated taxi-flows are illustrated **Exhibit II-7 - VFR East Parallel Option 1 (No LAHSO)**.
2. Unique to Option 1 is the Runway 14R-32L interaction with the “West Terminal” and east-west and north-south taxi flow across the airfield resulting in a funneling of aircraft in a confined area of the airfield. To mitigate congestion in this area, Runway 14R-32L will be used for arrivals to the “West Terminal”. Additionally, Taxiway M will be used for queuing of departing aircraft.



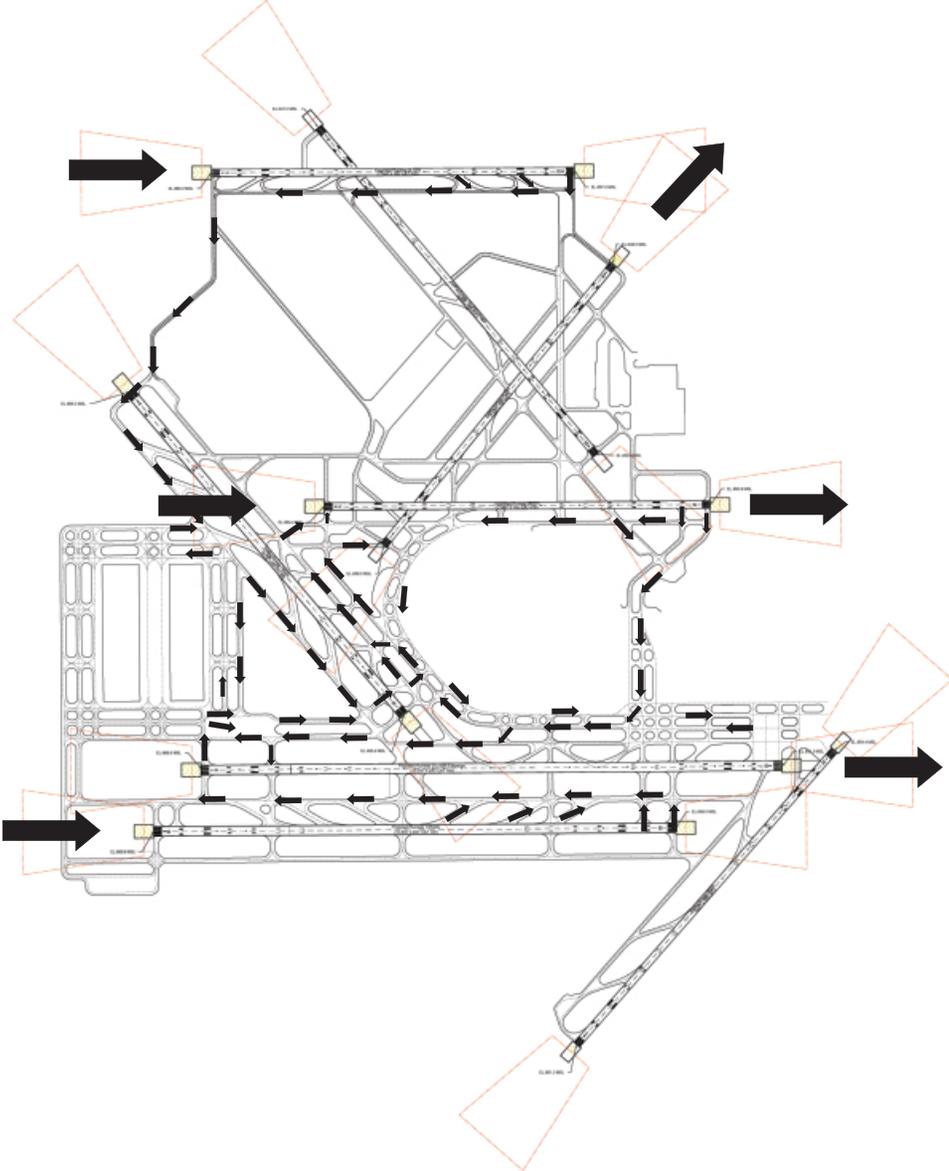
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Exhibit II-6


north Not to scale

Option 2
VFR East Parallel

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Exhibit II-7


north Not to scale

Option 1
VFR East Parallel (No LAHSO)

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IV. PROPOSED AIRFIELD REFINEMENTS

APPROACH CRITERIA AND SURFACES

1. The Runway 10R-28L (Options 2 and 5) west runway elevation of 694.9' MSL conforms to FAR Part 77, 50:1 approach surface criteria resulting in an effective gradient of 0.54 percent.

Application of the latest TERPS criteria from Order 8260.36A, with 34:1 approach surface element to the prescribed approach surface would result in a Runway 10R-28L (Options 2 and 5) west end elevation of 672.7' MSL and a 0.24 percent gradient.

2. Runway 10C-28C (Option 5) conforms to FAR Part 77 transitional surface; however, to avoid penetrations from the 2nd tier cargo buildings located south of the runway, the center portion of the runway would have to be raised. The resulting runway profile would preclude an intersection with Runway 14R/32L (thus requiring its shortening) and would also maximize elevation differences with existing Runway 9R/27L (future Runway 10L/28R).

Applying TERPS criteria in Order 8260.36A, would allow Runway 10C-28C (Option 5) to remain at grade thus eliminating the raised center portion of the runway while avoiding penetrations from the 2nd tier cargo buildings.

III. AIRFIELD REFINEMENTS

DUAL T/W SYSTEM ON NORTH AIRFIELD INNER CORE

Runway 9C-27C (Option 5) has been moved 410 feet to the north to accommodate a Dual T/W system on the north airfield inner core should it be necessary to build at a later date.

DIAGONAL CROSS-FIELD TAXIWAYS

Introduction of the “West Terminal” concept for Option 5 resulted in the two west airfield taxiways located west of the “West Terminal” to be eliminated. Two diagonal cross-field taxiways were added to provide taxi movement from the north and south airfields.

EXISTING RUNWAY 9L-27R SAFETY AREA

Existing Runway 27R was moved 300’ to the west to provide full 1,000’ safety area.

SERVICE ROADS

Runway 9R-27L (Option 5) parallel taxiway west end moved to accommodate placement of a service road.
Runway 10L-28R (Option 5) parallel taxiway west end moved to accommodate placement of a service road.
Runway 10L-28R (Option 5) parallel taxiway east end moved to accommodate placement of a service road.
Service road tunnels provided to reduce taxiway crossings of service vehicles.

V. NEXT STEPS