

## BEBS 1D MDW PBN APPROACHES TO RWY 13C

**Candidate Scenario Title:** Incorporate custom RNAV/RNP STARS w/ RNP 0.3 w/RF legs curved path IAP's to MDW RWY 13C

**Theme:** Maintains VFR arrival rates during lower weather conditions and de-conflicts MDW and ORD flows using PBN procedures to RWY 13C.

<b>Operational Description</b>	<b>Concise description of Operational Scenario</b>	
		<p>This operation de-conflicts the arrival flows at MDW and ORD using custom RNAV STARS with a transition to RNAV/ RNP w/ RF legs to MDW RWY 13C.</p> <p>Whenever MDW is using RWY 13C for arrivals and ORD traffic is departing on Runway 14R and arriving on Runway 22L, a potential traffic conflict exists. The missed approach path for MDW Runway 13C conflicts with the missed approach path for ORD Runway 14R. The MDW Runway 13C ILS approach path also interferes with the departure path for ORD Runway 22L.</p> <p>These operational constraints force delays into MDW's and ORD's respective arrivals and departures and can create bottlenecks during periods of peak traffic.</p> <p>Typically, Runway 13C is only used for arrivals in certain weather conditions. Under these conditions, ORD RWY 22L departures have to be relocated to another runway for takeoff, which results in a reduced arrival rate because these departures that would normally utilize runway 22L must taxi to one of the arrival runways, thus taking an arrival slot.</p> <p>This places O'Hare in a ground delay program, reducing its arrivals rate to 68 per hour from the normal rate of 92-</p>

		<p>112 arrivals per hour</p> <p>At O’Hare, departures may operate from Runway 22L as they would in normal weather conditions, enabling O’Hare to maintain normal arrival rates at its other runways. As a result, O’Hare can retain an arrival rate of 92 per hour. Neither airport needs to incur delays or lost capacity.</p> <p>Provide PBN equipped a/c priority handling during lower than visual approach minimums, using existing air traffic procedures.</p>
<b>Target Operational Time Frame</b>		2012 to 2014
<b>Technology (equipment) Targeted</b>	Technology or equipment associated with this operational candidate	<p>PBN -- RNAV RNP 0.3 w/RF leg is enabled by:</p> <ol style="list-style-type: none"> <li>1. GPS with Approach Capability, or</li> <li>2. RNP capable FMC with multi-scan DME/DME and GPS sensors, and</li> <li>3. Advanced NAV Display capable of RF legs</li> </ol>
<b>Impact on equipped and capable a/c</b>		<ul style="list-style-type: none"> <li>• Provides IAP with vertical guidance and lower minimums.</li> </ul>
<b>Impact to non-equipped or not capable a/c</b>		<ul style="list-style-type: none"> <li>• Non-equipped must use higher approach minimums with no vertical guidance and experience greater delays</li> </ul>
<b>Impact on NAS efficiency or capacity</b>		<ul style="list-style-type: none"> <li>• Increases efficiency and capacity by enabling MDW and ORD to stay in a most efficient configuration for a longer period of time.</li> </ul>