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PHL Capacity Enhancement

Full Build Configuration and Assumptions

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Federal Aviation Administration

25th of March 2006

General Assumptions (1)

- Timetable (Schedule)
 - Developed from OAG and ETMS data.
 - Baseline Operations represents Peak Month, Average Day
 - Future year schedules being developed by LFA to represent estimated traffic mix and number of operations
 - Inbound Flights and Outbound flights “linked”
- Gate utilization
 - Main market segment will use designated terminals and concourses
 - Domestic; International; Air Taxi; Cargo; GA
- Runway Usage
 - General Concept – Taxi for direction
 - Northbounds/Arrivals use North runways
 - Southbounds/Arrivals use South runways
 - Short runways 8/26 and 17/35 restricted to appropriate Ac – Narrow bodies and below
 - Runway movement balancing applied to all runways

General Assumptions (2)

- Taxiing
 - Basic plan but will need to be tweaked based upon modeling results during ground environment setup
 - Base taxi speed 12 kts; 5 kts in terminal apron areas
- Separation Standards takes into account
 - VFR and IFR departure separation
 - 3nm VFR arrival separation
 - 3.5nm IFR arrival separation
 - Wake turbulence separation
 - Runway dependency separation
 - Estimated Intrail separation at departure fixes

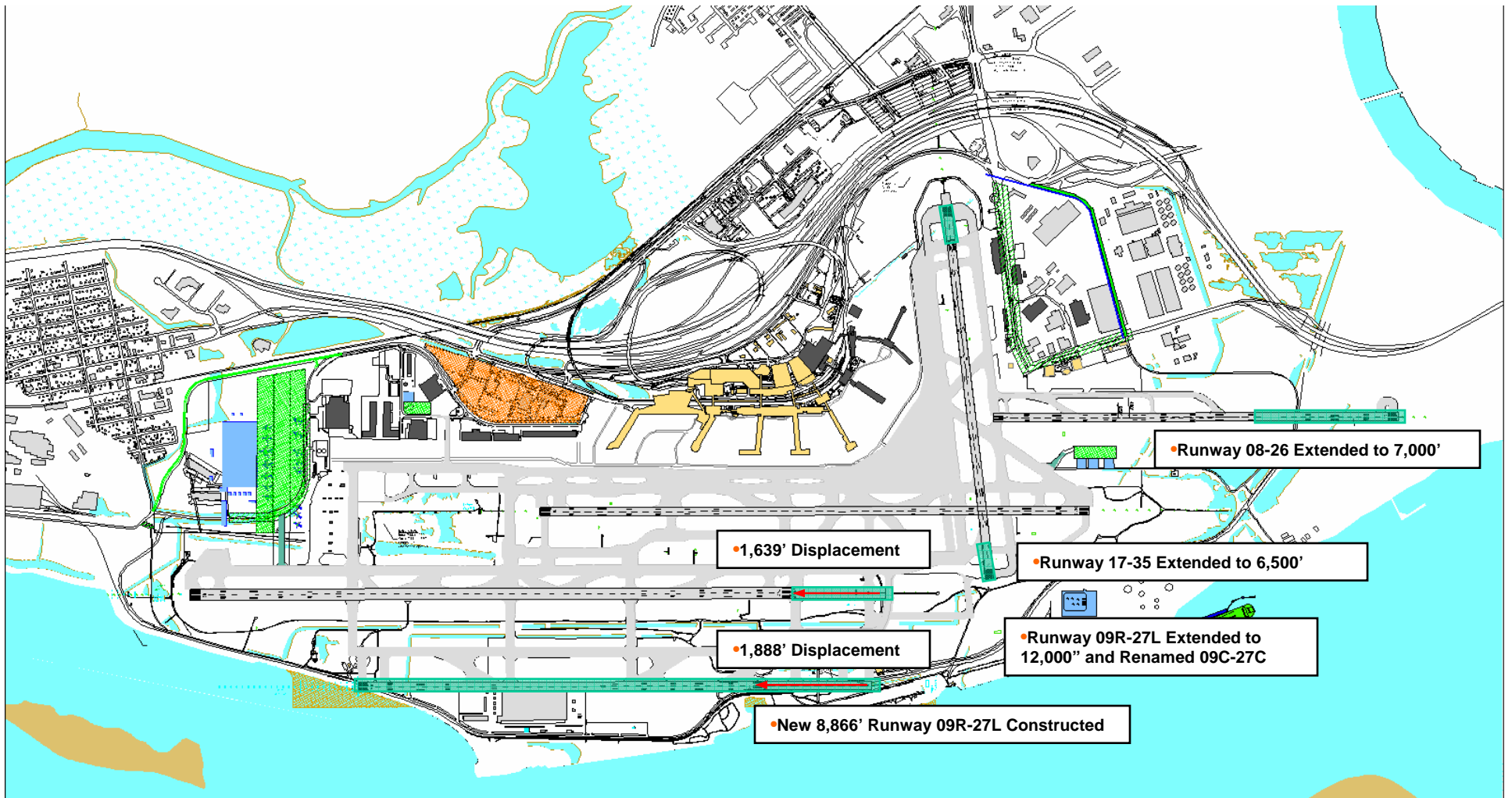
Example Data

	Daily # of Flgts	Daily # of Arrs	Daily # of Deps	Total Delay (mins)	Sys Delay/ac (mins)	Apt Delay/ac (mins)	Arr Delay/ac (mins)	Dep Delay/ac (mins)	Taxi-in Time/ac (mins)	Unimp Taxi-in Time/ac (mins)	Taxi-out Time/ac (mins)	Unimp Taxi-out Time/ac (mins)	Total Time (mins)	Peak Arrs (# per Hour)	Peak Deps (# per Hour)	Peak Ops (# per Hour)
2003	1269	646	623	6114.6	4.8	4.8	4.7	4.9	5.0	4.8	13.4	9.0	125121	56	60	114

Runway Utilization							
Runway	Departures	% Departures	Arrivals	% Arrivals	Total	Average Taxi Out	Average Taxi In
17	1	0.16%	0	0	1	3:58	-
26	0	0	89	13.78%	89	-	6:01
35	130	20.87%	206	31.89%	336	9:26	4:48
36	73	11.72%	0	0	73	7:50	-
27L	419	67.26%	0	0	419	15:35	-
27R	0	0	351	54.33%	351	-	4:56

Parallel Plan

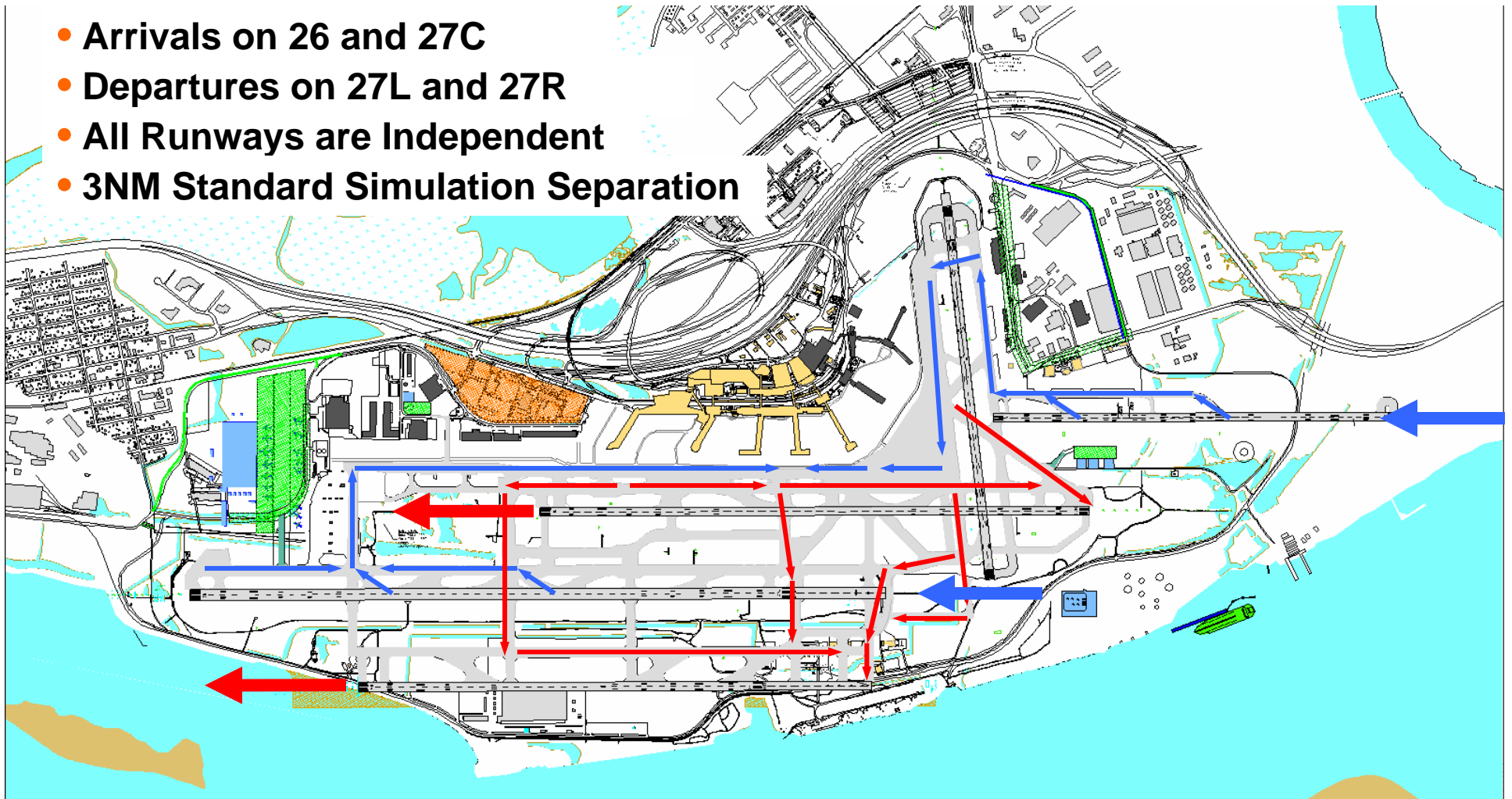
West VFR



Parallel Plan

West VFR

- Arrivals on 26 and 27C
- Departures on 27L and 27R
- All Runways are Independent
- 3NM Standard Simulation Separation



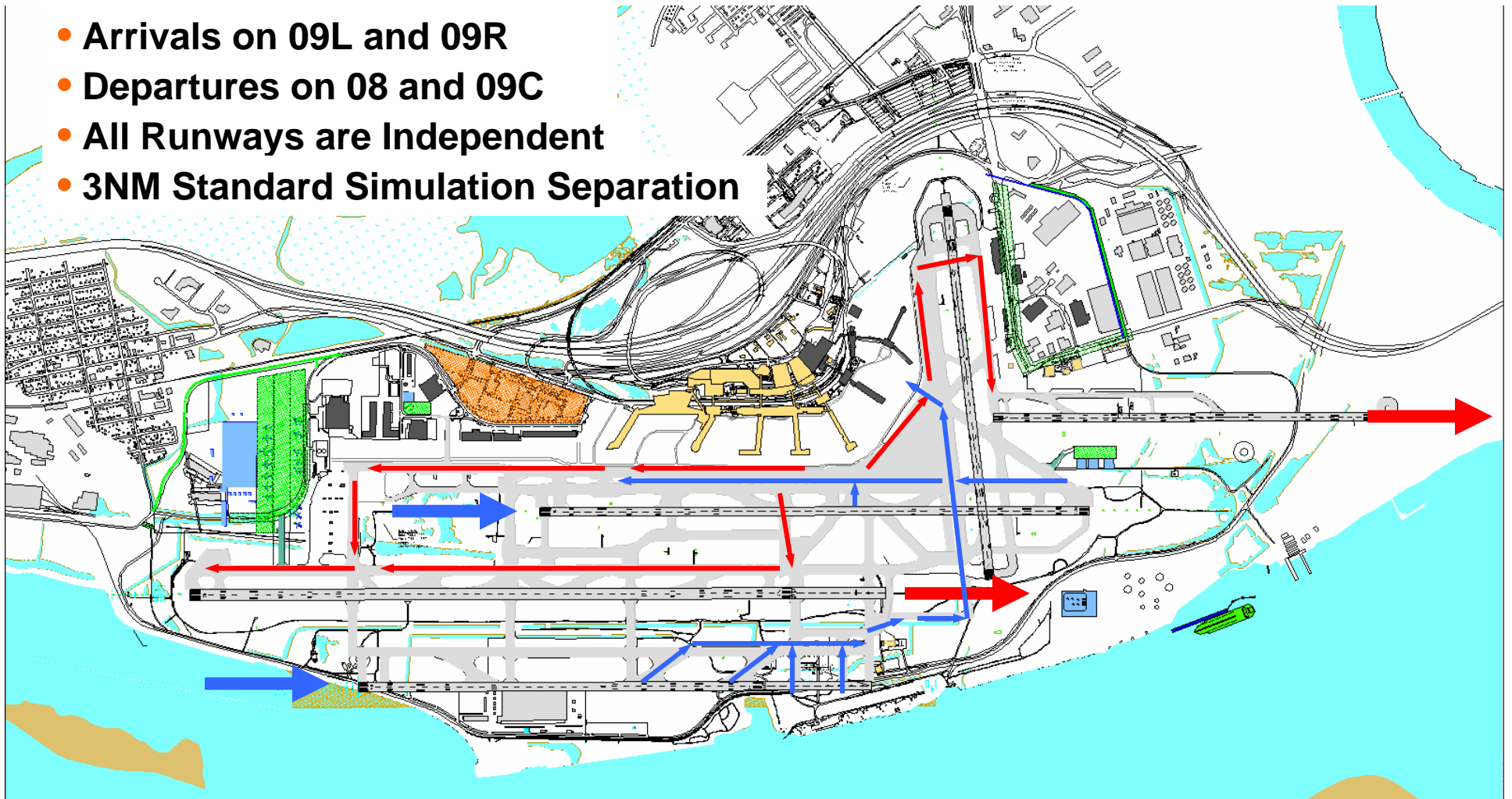
← Arrivals

← Departures

Parallel Plan

East VFR

- Arrivals on 09L and 09R
- Departures on 08 and 09C
- All Runways are Independent
- 3NM Standard Simulation Separation



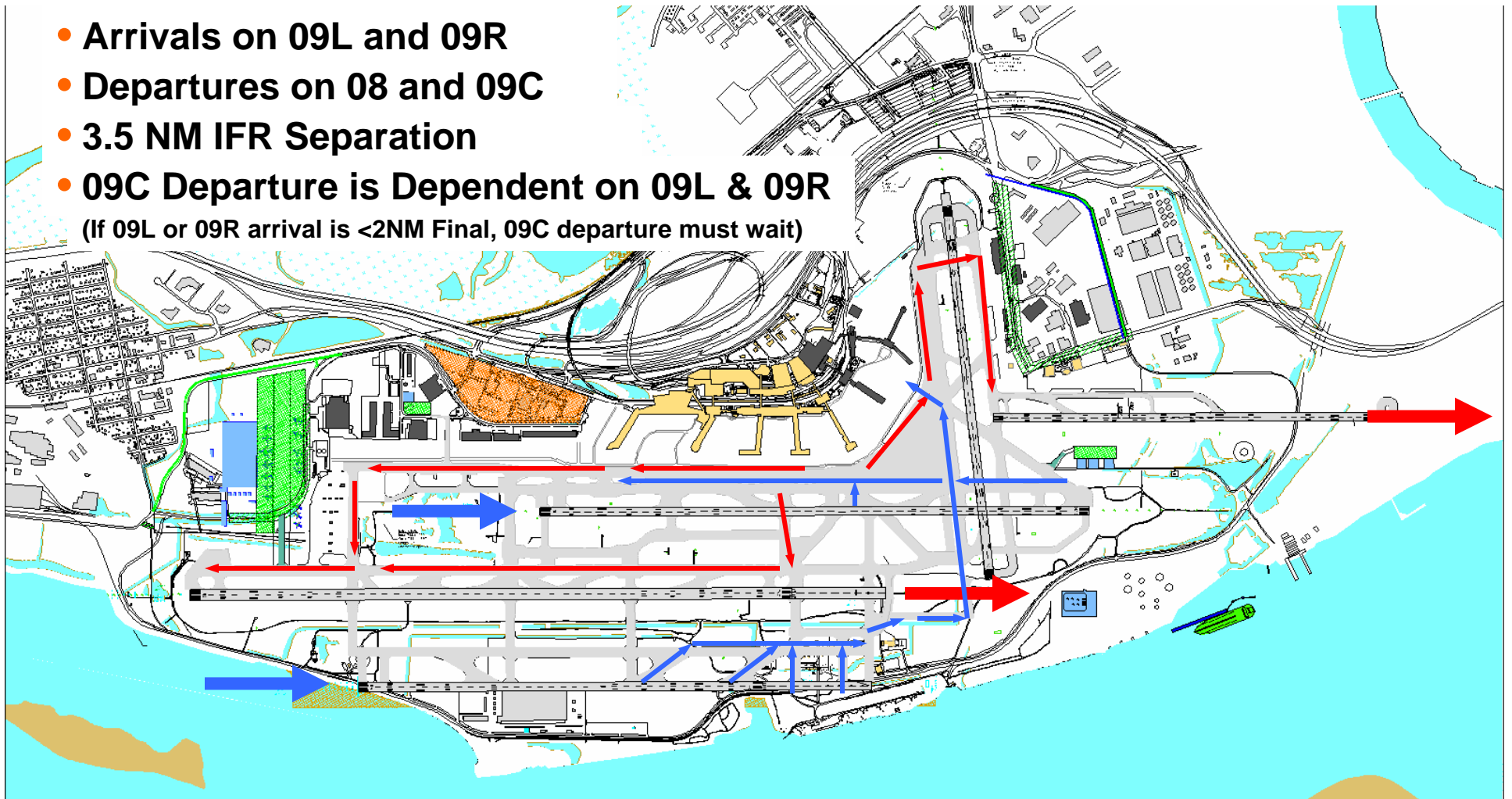
← Arrivals

← Departures

Parallel Plan

East IFR

- Arrivals on 09L and 09R
- Departures on 08 and 09C
- 3.5 NM IFR Separation
- 09C Departure is Dependent on 09L & 09R
(If 09L or 09R arrival is <2NM Final, 09C departure must wait)



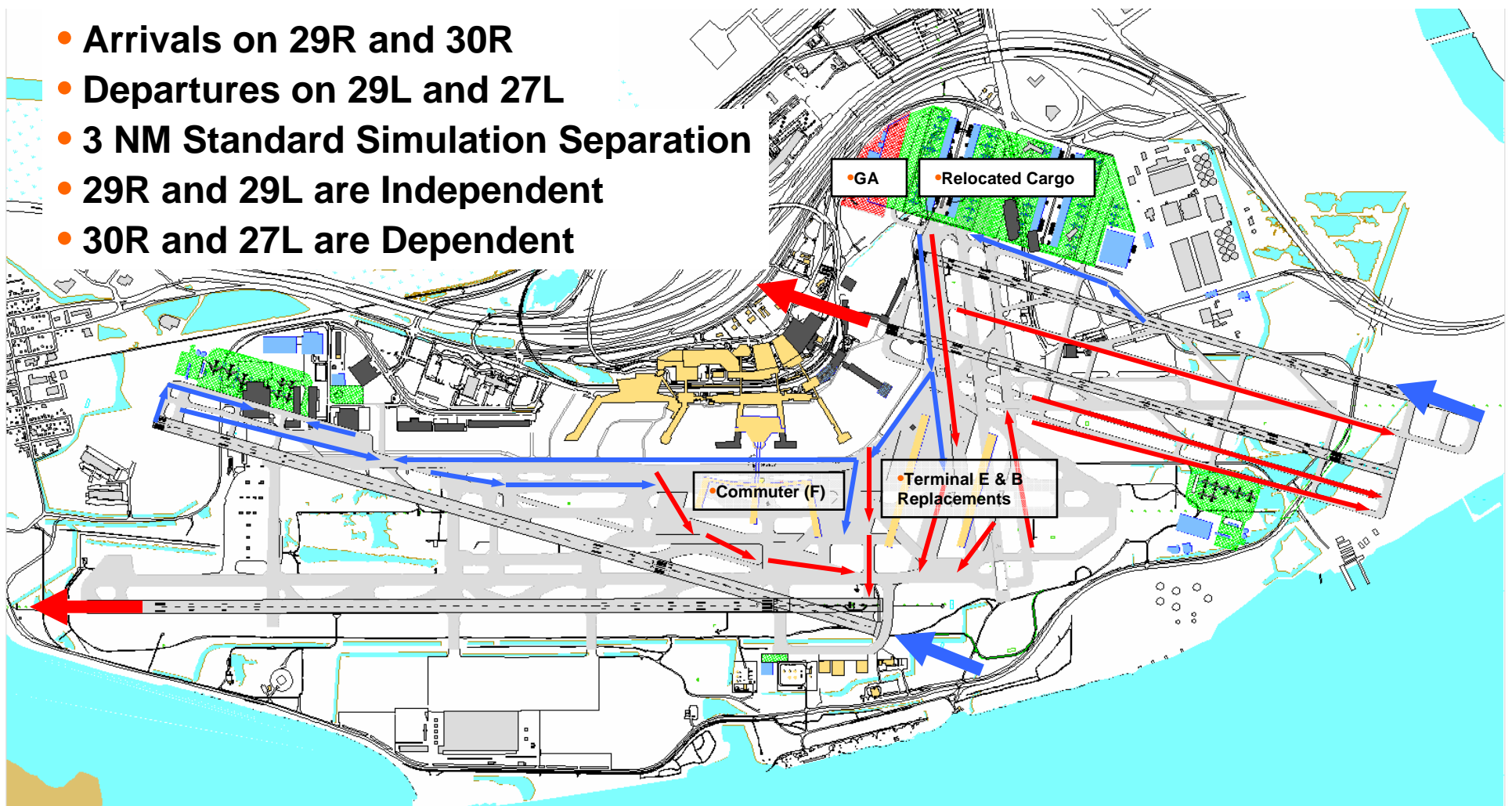
← Arrivals

← Departures

Diagonal Plan

West VFR

- Arrivals on 29R and 30R
- Departures on 29L and 27L
- 3 NM Standard Simulation Separation
- 29R and 29L are Independent
- 30R and 27L are Dependent



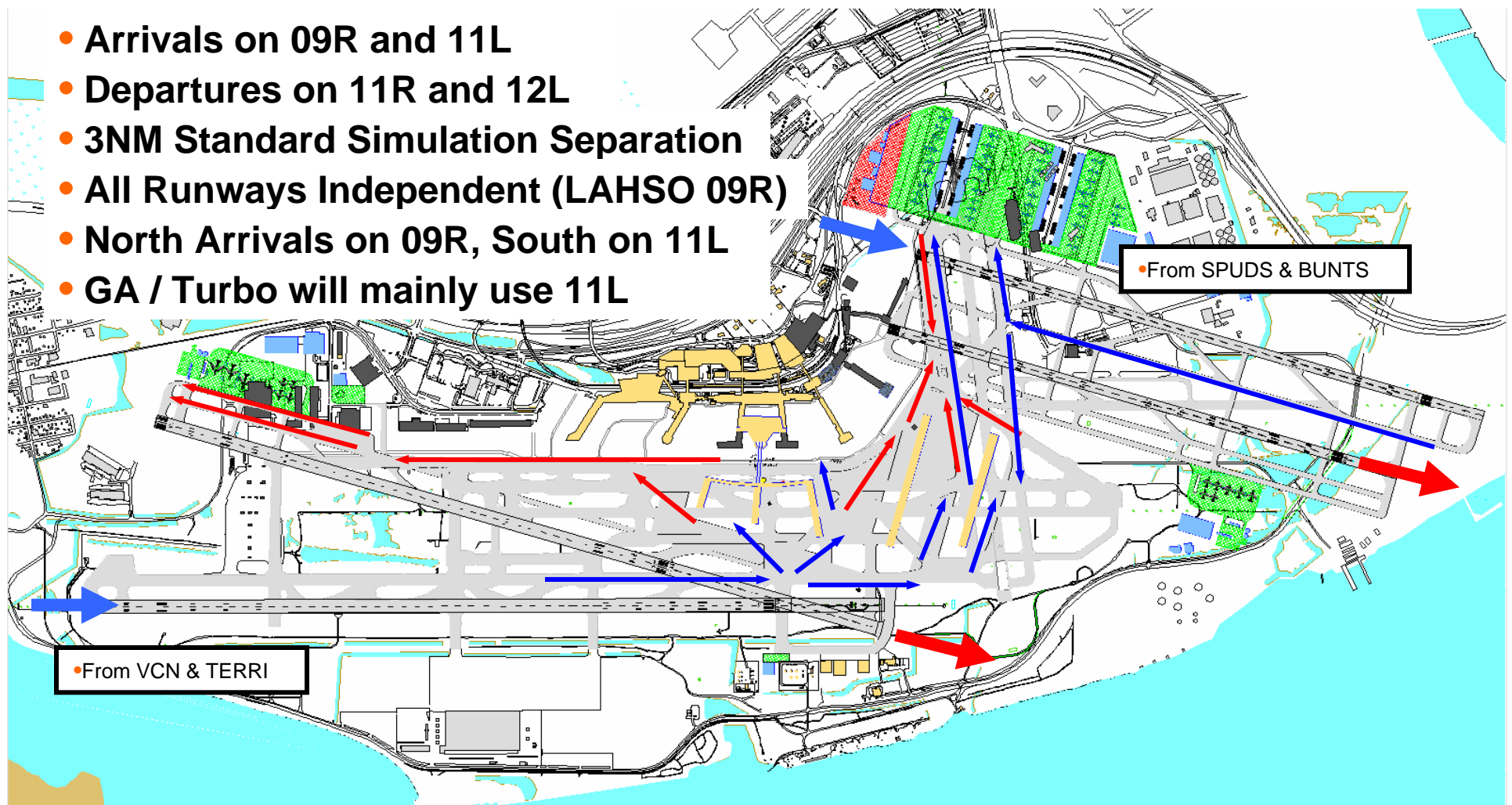
← Arrivals

← Departures

Diagonal Plan

East VFR

- Arrivals on 09R and 11L
- Departures on 11R and 12L
- 3NM Standard Simulation Separation
- All Runways Independent (LAHSO 09R)
- North Arrivals on 09R, South on 11L
- GA / Turbo will mainly use 11L



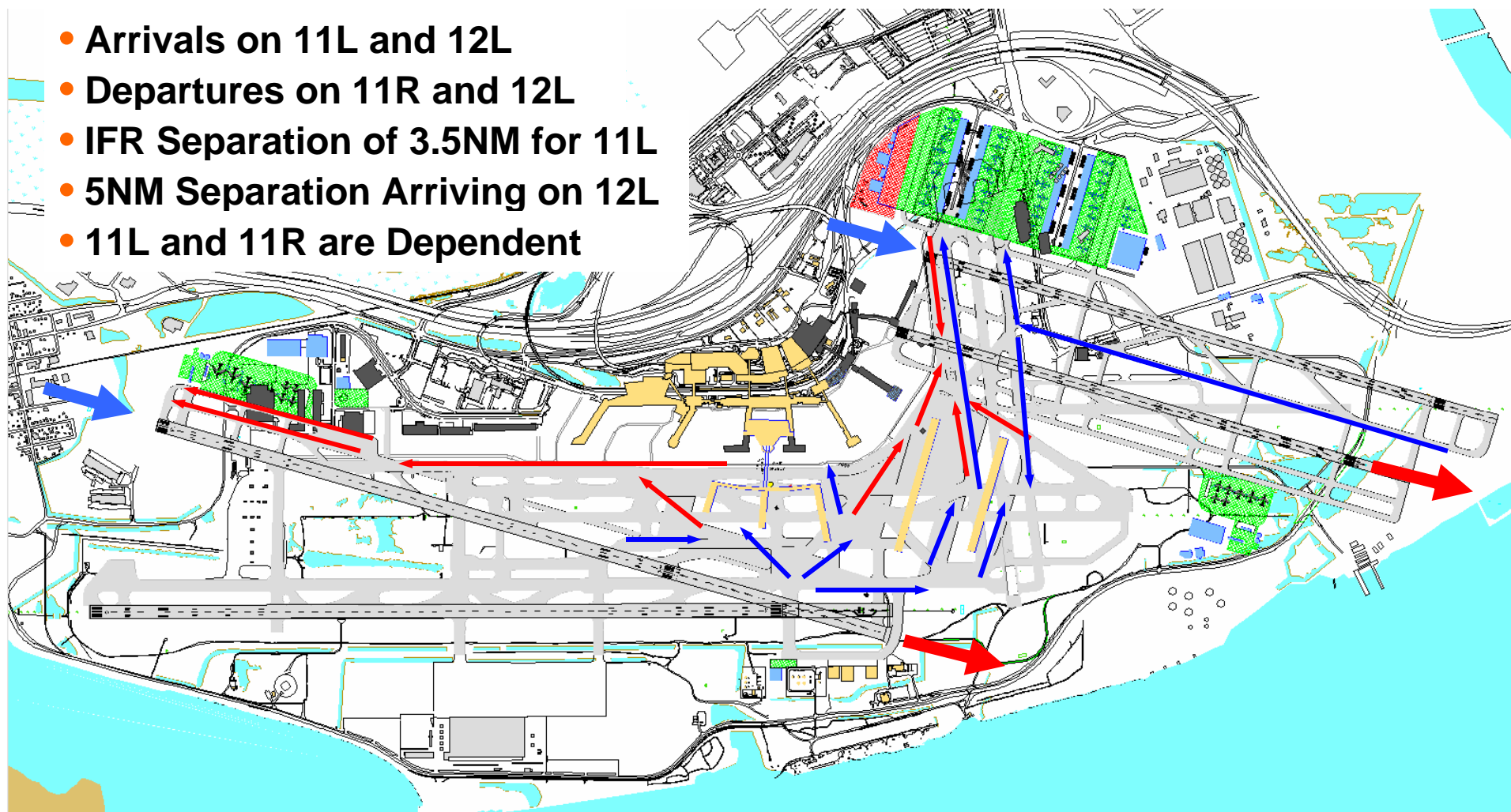
← Arrivals

← Departures

Diagonal Plan

East IFR

- Arrivals on 11L and 12L
- Departures on 11R and 12L
- IFR Separation of 3.5NM for 11L
- 5NM Separation Arriving on 12L
- 11L and 11R are Dependent



← Arrivals

← Departures