

NYNJPHL Airspace Redesign Implementation Schedule - FY10 Q3

PLEASE READ BEFORE READING IMPLEMENTATION SCHEDULE

Schedule Overview:

The New York/New Jersey/Philadelphia Metropolitan Area Airspace Redesign Project Implementation Timeline (schedule) describes the tasks necessary to implement the project. Implementation is scheduled to take place in four (4) stages. Each stage was designed to take approximately 12-18 months and some stages may overlap. As the project moves from design to implementation, the dates will be adjusted to accommodate project requirements.

The planned implementation dates for future stages:

- Stage 2a: Integration of N90 and ZNY with Westgate Expansion – May 2011
- Stage 2b: Philadelphia Terminal Expansion - October 2011
- Stage 3: Major Airspace Realignment - November 2011
- Stage 4: Full Airspace Integration - September 2012

Line Items Overview (Left Pane):

The schedule only shows the main tasks required to implement the Airspace Redesign. Many subtasks are not displayed because they are composed of steps that recur each time the subtask is done. For example, the development of an RNAV procedure is an 18-step process that is used each time a procedure is developed. Other subtasks that are comprised of a generic list of steps include: Procedure Development, Safety Risk Management, Spectrum Analysis, Business Case Analysis, Human-in-the-Loop Simulations, Airspace Implementation, and Facility & Equipment Schedules.

Schedule Bar Chart (Right Pane) and Legend:

Most of the bars appear in black because they are comprised of many subtasks. Each of the main tasks has a milestone subtask that indicates the completion point. The milestone tasks are shown as blue diamonds. Each main task also has a critical path that is comprised of subtasks that impact the total duration of the main task. Many milestones and critical tasks do not appear on the schedule because they are included in the subtasks under the main tasks.

Reformatting Changes

Beginning in January 2009, the schedule has been reformatted and reduced from approximately 14,000 line items to approximately 9,600. This was accomplished by removing non-applicable tasks reducing the task depth, which results in more clearly identified airspace deliverables. Additionally, the reformatting includes identifying the route changes into and out of Philadelphia as '*Stage 2b – PHL Arrival/Departure Route Changes*'. Stage 4 implementation requires changes at air traffic control facilities to include transfer of sectors as well as operational changes for neighboring facilities, and is delineated in the timeline by being grouped into 5 deliverable categories.

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Caveat:

The schedule is dependent on the resources available, design refinements, and the completion dates of earlier tasks; therefore, the schedule is subject to change. The Implementation schedule will be updated periodically and posted on the Project website. Look for the next update in the Third Quarter of FY 2010 (September 2010).

Stage 1 Accomplishments and Status:

Dispersal Headings:

- Newark Liberty International Airport (EWR): When EWR has reached moderate demand or greater, dispersal headings are used for Runway 22. Those headings are 215° and 239°. With light demand, the 190° heading is issued.
- Philadelphia International Airport (PHL) (props and jets) Dispersal Headings:
 - For Runway 09L/R Dispersal Headings for jets departing the airport between 0600-2200 (Local time) headings 081° and 096° are used. Outside the designated schedule of 0600-2200 (Local time), heading 085° is used.
 - For Runway 27L/R Dispersal Headings for jets departing the airport between 0600-2200 (Local time) headings 245° and 268° are used.
 - For props, daily pre-coordinated headings that vary from 220° – 230° are used during dispersal heading schedule. Outside of the dispersal heading schedule, heading 255° is used.
- LaGuardia Airport (LGA):
 - For Runway 31, we are currently using 340° and 359° for Dispersal Headings.
 - For Runway 04 Dispersal Headings will not be implemented until Stage 4 of the Project when the arrival routes shift.

Stage 1 Procedure Development:

- John F. Kennedy International Airport (JFK):
 - Runway 13 L/R CRI Canarsie Required Navigation Performance (RNP) for Special Aircraft and Aircrew Authorization Required (SAAAR) Visual Approach to avoid Sandy Hook was published October 2009.
 - PARCH STAR – Charted and published on 02/11/2010.
 - JFK SKORR 2 Departure Procedure (DP) published on 6/3/2010. Submitted for publication. (In progress).
- LGA
 - Runway 22 Area Navigation (RNAV) Overlay of Localizer (LOC) Localizer Directional Aid (LDA) complete.
- TEB
 - Runway 24 RNAV Overlay Approach Procedure (On hold to determine priority)
 - Runway 19 RNAV Overlay Approach Procedure (On hold to determine priority)

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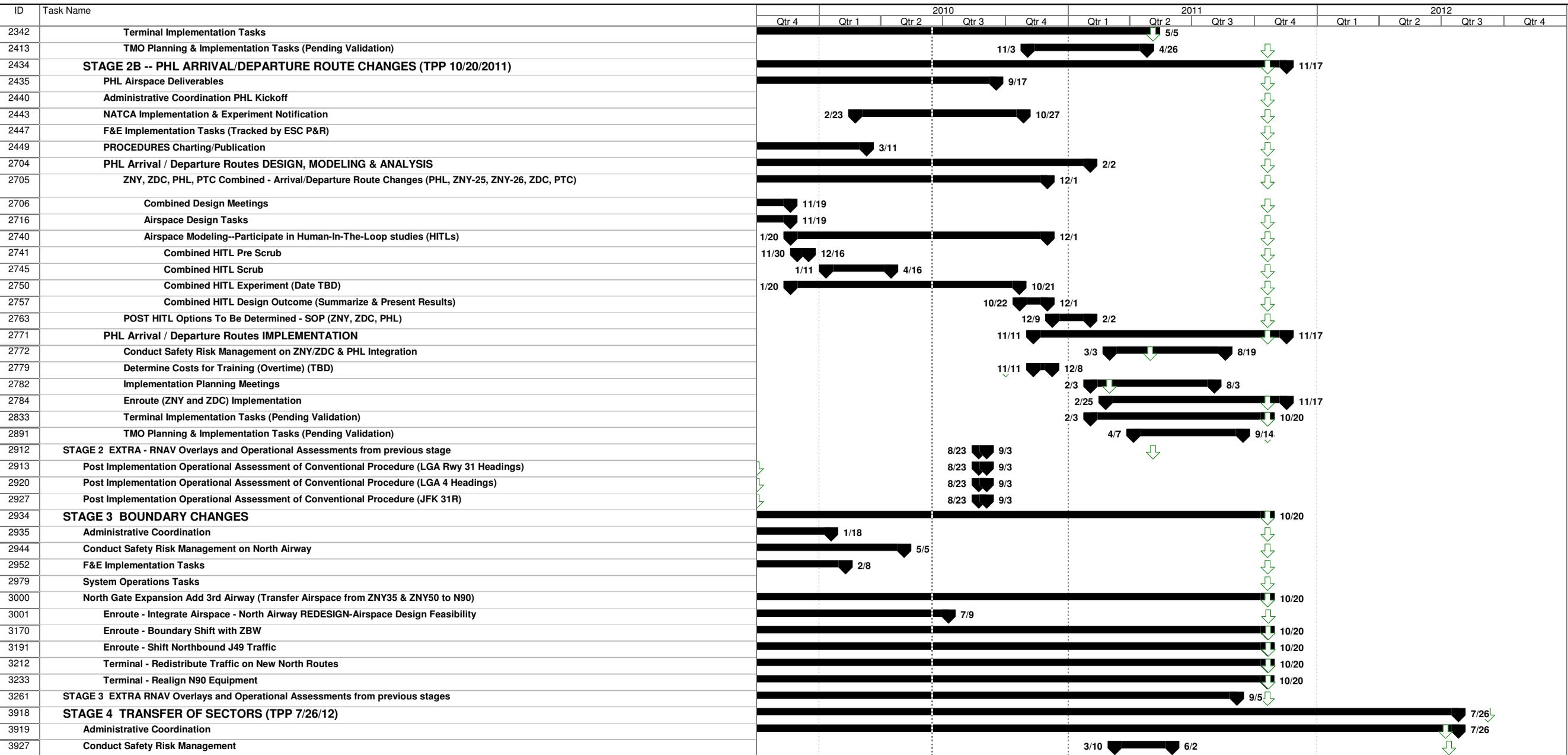
Stage 2 Accomplishments and Status: The Stage 2 original planned end date was 10/1/09, but has been revised as indicated below:

- **Stage 2a Westgate Expansion:** The design process with 5 options was tested in Human-in-the-Loop (HITL) simulations in the MITRE, Corporation lab during the month of May 2009. The intra-agency HITL outcome briefings began on June 11, 2009 and continued through June 29, 2009. Stage 2a implementation date has been adjusted to May 5, 2011. This change is a result of implementation delays of a system-wide automation (ERAM) update in the Enroute air traffic system that will permit an additional alternative for consideration.
- **Stage 2b PHL Arrival Departure Route Changes:**
 - This deliverable consists of establishing a new arrival route into PHL and establishing a third westbound departure fix for PHL. The design process began with a kick-off meeting, and was followed with additional design meetings. The Human-in-the-Loop (HITL) testing of design options are planned for first quarter FY2011, which has been postponed from April and May 2010. Stage 2b implementation date has adjusted to October 20, 2011, which is dependent on the completion of Stage 2a.
- **Stage 3:** Stage 3 covers additional boundary changes. A planning meeting occurred in May 2010. The planned implementation date is November 2011.
- **Stage 4:** Stage 4 covers full integration of the airspace. The planned implementation date is September 2012. A planning meeting occurred in May 2010.

NYNJPHL Airspace Redesign Implementation Schedule - FY10 Q3
(Time-Line in Calendar Years)



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ID	Task Name	2010				2011				2012				
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
3935	F&E Implementation Tasks													
3962	System Operations Tasks													
3983	Stage 4A Reallocation of Airspace between ZNY, ZBW, ZDC, N90													
4060	Stage 4B Southgate Realignment													
4061	Enroute													
4062	Enroute South Airway Redesign Enroute													
4103	Realign WHITE and WAVEY Fixes Enroute													
4187	Implement ZNY Southgate Airways Enroute													
4278	Integrate Airspace Enroute													
4315	Enroute - Realign Sectors													
4352	Terminal													
4353	Adjust all Impacted SIDs													
4358	Reroute Traffic to WHITE and WAVEY Depending on City Pairs													
4359	Redistribute Traffic on New South Routes													
4720	Re-Align Sectors													
4757	Stage 4C Eastgate Realignment													
4758	Enroute													
4759	East Airway Redesign Enroute													
4919	Integrate Airspace Enroute													
4955	Realign Sector Equipment													
4991	Terminal													
4992	Reroute to allow EWR to access BETTE/HAPIE													
5049	Shift LGA East Departures to the East (for LGA Arrivals from the North)													
5106	Shift HPN East Departures to the East													
5195	Shift JFK East Departures to the East													
5284	Adjust all other impacted SIDs													
5373	Reroute NY traffic to the Eastgate													
5730	Reroute PHL traffic to the Eastgate													
5909	Re-Align Sector Equipment													
5945	Stage 4D Southgate & Eastgate Terminal Tasks (Supporting South and East Gates)													
5946	EWR													
5947	EWR - Reroute Northside Prop Arrivals at EWR													
6004	EWR - Reroute EWR WATRS Arrivals to Join PHLBO2 at FAK													
6061	EWR - Eliminate BREZY from Departure Procedures at EWR**													
6118	EWR - Reroute EWR PENNS Arrival Stream													
6176	EWR - Reroute EWR Arrivals from ZDC and ZBW													
6233	TEB													
6234	TEB - Reroute TEB/MMU West arrival streams to the South													
6291	TEB - Shift TEB/MMU FLOSI arrivals to the East**													
6348	JFK													
6349	JFK - Reroute JFK Pacific Rim Arrivals to the East via Canada													
6406	ISP													
6407	ISP - Shift Southern Arrivals to the West													
6464	LGA													

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		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
6465	LGA - Redesigning LGA Arrivals						3/10					3/1		
6466	Reroute LGA Western Arrivals over MIP						3/10				12/6			
6526	Reroute LGA Southern Arrival Steam (Via BDL and HFO)						3/10					3/1		
6584	Reroute LGA arrivals from the East						3/10				12/6			
6641	Reroute LGA Arrivals from Eastern Canada via VALRE						3/10				12/6			
6698	Reroute LGA Arrivals over DNY and ALB						3/10					3/1		
6788	PHL						3/10							
6789	PHL - Realign SPUDS Arrivals from the North						3/10						7/26	
6846	Stage 4E Terminal Operation Tasks						3/10							7/26
6847	EWR - Redesigning EWR Arrivals/Departures						3/10						3/1	
6848	Terminal Changes for 22						3/10					12/6		
7134	Terminal Changes for 04						3/10						3/1	
7495	Cancel FQM STAR						3/10					12/6		
7552	Relocate SHAFF 6 STAR West for EWR						3/10					12/6		
7609	Implement 3rd Dispersal Heading at EWR - RNAV Procedure						3/10					12/6		
7666	EWR Night Time Ocean Routing Departures (RWY 22)						3/10					12/6		
7723	Adjust EWR Arrival Procedures						3/10					12/6		
7783	Create Optimal Profile Decent Approach Procedures (Optimal Profile Descent-OPD)						3/10					12/6		
7898	TEB/MMU - Redesigning TEB/MMU Arrivals/Departures						3/10					12/6		
7899	Align TEB and MMU Departure Gates feeding EWR Departures						3/10					12/6		
7956	Procedure to deconflict with EWR 11/29 (on all TEB runways)						3/10					12/6		
8013	Create Procedure for TEB West Departure Fly to a Single Gate before Heading West or Southwest						3/10					12/6		
8070	Reroute TEB Southern Arrivals to the West (to BWZ)						3/10					12/6		
8127	Reroute MMU Arrivals to Merge West of the Airport						3/10					12/6		
8184	RNAV Procedures for MMU Approach to Deconflict MMU RWY 23 Arrivals from TEB						3/10					12/6		
8241	JFK - Redesigning JFK Arrivals/Departures						3/10					12/6		
8242	Raise JFK LENDY Arrivals						3/10					12/6		
8299	Create Jet Route Overlay of PWL2 STAR for JFK Arrivals						3/10					12/6		
8356	Remove IGN8 STAR for JFK Arrivals						3/10					12/6		
8413	Merge J70.LENDY5 for JFK Arrivals						3/10					12/6		
8470	Reroute JFK South America and Caribbean Arrivals via CAMRN						3/10					12/6		
8527	Ocean Departures						3/10					12/6		
8585	ISP - Redesigning ISP Arrivals/Departures						3/10					12/6		
8586	Reroute ISP Southern Departure Streams (create one stream)						3/10					12/6		
8643	New Departure Procedures for ISP						3/10					12/6		
8700	LGA - Redesigning LGA Arrivals/Departures						3/10					12/6		
8701	Shift LGA North departures further north for EWR Space						3/10					12/6		
8758	Realign approaches from the South						3/10					12/6		
8817	Realign approaches from the North						3/10					12/6		
8875	LGA Southern Arrival RNAV Overlay to RWY 22						3/10					12/6		
8932	LGA Southern Arrival RNAV Overlay to RWY 31						3/10					12/6		
8989	Apply Altitude Restriction on LGA to Separate NY and PHL Traffic						3/10					12/6		
9046	HPN - Redesigning HPN Arrivals/ Departures						3/10					12/6		
9047	Shift Arrival Streams						3/10					12/6		

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		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	
9162	Shift Departure Streams						3/10				12/6				
9334	Establish Departure Procedures for HPN						3/10				12/6				
9620	PHL - Redesigning PHL Arrivals/Departures						3/10							7/26	
9621	Create Optimal Profile Decent Procedures (Optimal Profile Descnet-OPD)						3/10							7/26	
9622	All fixes to 27 (RNAV)						3/10				12/6				
9679	All fixes to 09 (RNAV)						3/10							7/26	
9736	Stage 4F General Integration Tasks						3/10							7/26	
9737	TEC (Tower Enroute Control) Adjustments						3/10				12/6				
9795	Satellite Airports (23 EIS Study Airports)						3/10				12/6				
10024	Reroute J42 to BOS (and Satellites) to the East						3/10				12/6				
10081	Reroute BOS (and Satellites) Southwest Departure Routes West of BDR						3/10				12/6				
10138	Westgate Finalization (Refer to Stage 2) (6th Fix)						3/10					3/1			
10742	Shift DCA/BWI Arrival Routes from ZBW						3/10							7/26	
10799	Post Implementation Benefits Analysis of Stage 1			6/3						11/15					
10802	Post Implementation Benefits Analysis of Stage 2														11/21
10805	Post Implementation Benefits Analysis of Stage 3										10/20			4/5	
10808	Post Implementation Benefits Analysis of Stage 4 and the Overall Project												7/26		

Acronyms Related to Airspace Redesign Project

ARD	Yardley VOR
ARTCC	Air Route Traffic Control Center
BDR	Bridgeport VOR
BWI	Baltimore Washington International Airport
CDA	Continuous Decent Approach
DCA	Reagan National Airport
DTW	Detroit International Airport
EIS	Environmental Impact Statement
ERAM	Enroute Automation Modernization
EWR	Newark International Airport
FEIS	Final Environmental Impact Statement
FPO	Flight Procedures Office
FQM	Williamsport VOR
GPS	Global Positioning System
HAR	Harrisburg VOR
HITL	Human in the Loop
HPN	White Plains/Westchester County Airport
IAD	Dulles International Airport
IFR	Instrument Flight Rules
ILS	Instrument Landing System
ISP	Long Island MacArthur Airport
JFK	JFK Airport
LDA	Localizer Directional Aid
LIB	Liberty Sector
LOA	Letters of Agreement
LOC	Localizer
LPV	A type of approach with vertical guidance based on WAAS, published on RNAV (GPS) approach charts
MMU	Morristown Airport
MXE MODENA	(Departure Fix for PHL & its Satellites)
N90	New York TRACON
NAP	Needs Assessment Program
OOD	Woodstown VOR
OPD	Optimal Profile Decent
PCT	Potomac TRACON
PHL	Philadelphia Airport
PTW	Pottstown VOR
RAPT	Regional Airspace Procedure Team
RBV	Robinsville VOR
RNAV	Area Navigation
RNP	Required Navigational Performance
ROD	Record of Decision
ROMA	Route Optimization and Mitigation Analysis
RWY	Runway
SID	Standard Instrument Departure
SMS	Safety Management System
SOP	Standard Operating Procedures
SRM	Safety Risk Management
SRMD	Safety Risk Management Document
STAR	Standard Terminal Arrival Route
SWAP	Severe Weather Avoidance Plan
TEB	Teterboro NJ Airport
TEC	Tower En-route Control
TMA	Traffic Management Advisor
TPP	Terminal Procedures Publication

TRACON	Terminal Radar Approach Control
VCN	Cedar Lake VOR
VFR	Visual Flight Rules
VHF	Very high Frequency
VOR	VHF Omni-directional Radio Range Station
ZBW	Boston ARTCC
ZDC	Washington ARTCC, Leesburg, VA
ZID	Indianapolis ARTCC
ZNY	New York ARTCC
ZOB	Cleveland ARTCC
WAAS	Wide Area Augmentation System