CHARLOTTE Metroplex

National Customer Forum

Presented by:

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May 11, 2016

Federal Aviation Administration

National Air Traffic Controllers Association

Agenda

- Metroplex Overview
- CLT Summary of Changes
- Implementation Schedule
- 5/26/16 Chart Date
- 7/21/16 Chart Date
- Additional Industry Briefings
- The Big Day
- Questions

Metroplex Overview

- Purpose of the project is to optimize airspace and procedures
- Success of this project is dependent upon the successful and collaborative efforts of Industry, FAA, NATCA & lessons learned from previous Metroplex implementations
- The project is focused on enabling full utilization of these new procedures
- Full utilization will maximize benefits:
  - Reduction in fuel consumption
  - Reduction in flight times
  - Reduction in carbon emissions
  - Reduce pilot/controller communications
  - Reduce task complexities for pilots and controllers
  - Repeatable predictable flight paths
- Charlotte began staged implementation on 6/25/15

Implementation Schedule

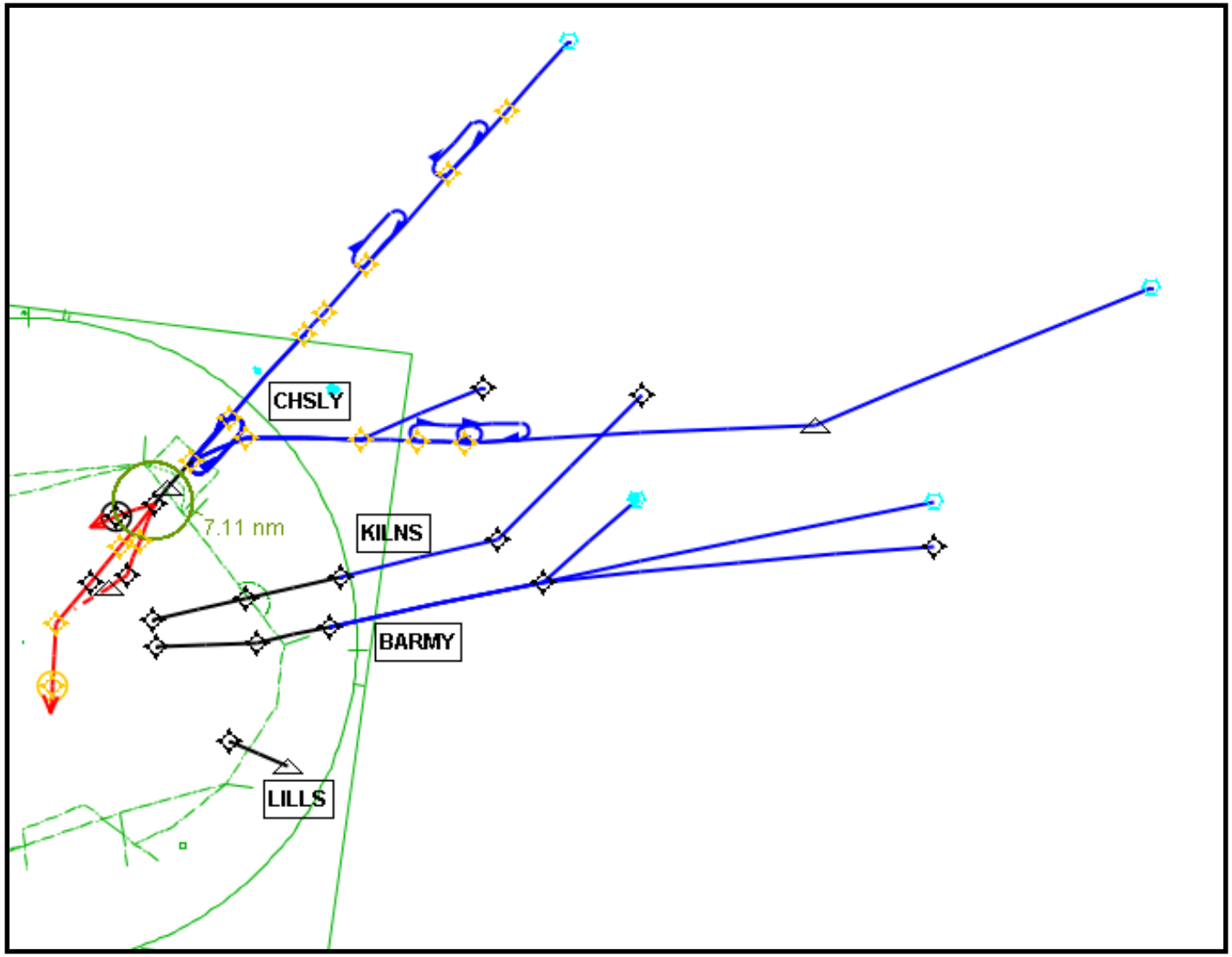
- 5/26/16 & 5/31/16 - NE Corner
  - Airspace Changes
    - CLT, ZTL & ZDC
  - 1 CLT STAR
  - 3 CLT SIDS
- 7/21/16 - South
  - Airspace Changes
    - CLT, GSP, ZTL, ZJX & ZDC
  - 6 CLT STARS
  - 3 CLT SIDS
- 1/5/17
  - CLT – 2 STARS & 2 SIDS
  - 1 RDU STAR
  - 2 CHS STARS
  - GSO – 1 STAR & 3 SIDS
  - GSP – 3 STARS & 1 SID

05/31/16 Implementation

- 5/26/16
  - 18 Airspace Changes
  - 3 New Procedures Published—NOTAM'd NA until 5/31/16
  - LILLS RNAV SID (up-number)

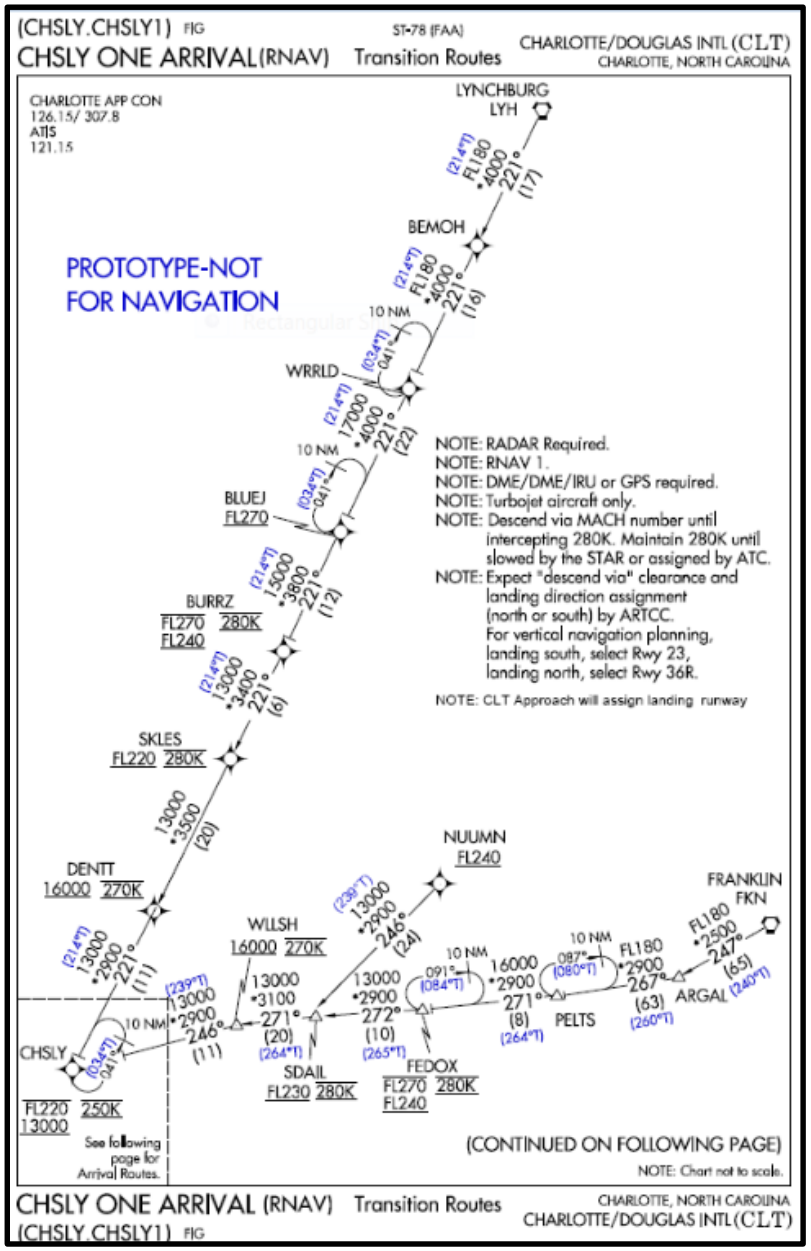
- 5/31/16
  - Implementation Day
  - CHSLY RNAV STAR
  - KILNS and BARMY RNAV SIDs

5/26/16 Publication - CLT NE and E



CHSLY RNAV OPD

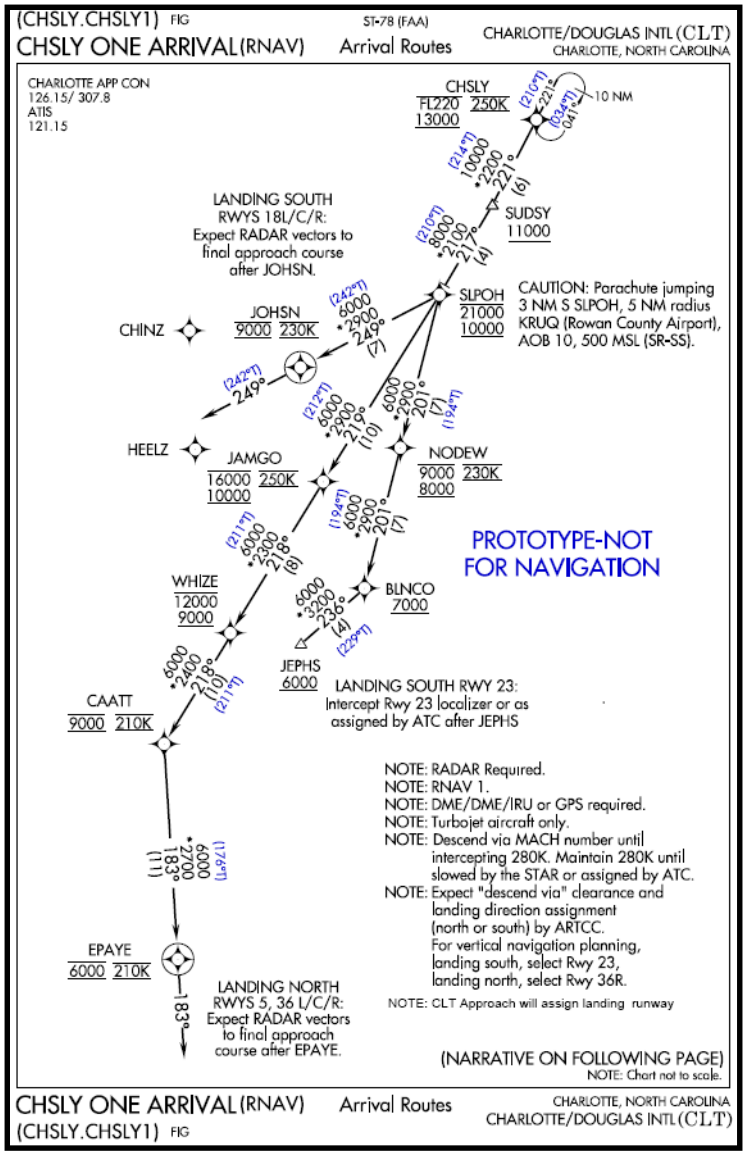
- **Replaces the existing IVANE OPD**
- En route transitions begin at Lynchburg VORTAC (LYH), Franklin VORTAC (FKN), NUUMN (waypoint), SDAIL (waypoint), and SKLES (waypoint).
- The NUUMN transition is established for aircraft transitioning from the LYH transition to the FKN transition and will be primarily used during reroute scenarios.
- The SDAIL and SKLES transitions are designed for aircraft that depart airports “inside” the LYH and FKN Transitions and help ensure DataComm compliance.



CHSLY RNAV OPD

Based on lessons learned from our 10/15/15 and input from Industry the following changes were made:

- EPAYE moved 1.5 nm south of original location
- EPAYE altitude changed from 6000B7000 to 6000 and 210 kts
- JOHSN altitude changed from 8000B10000 to 9000 and 230 kts

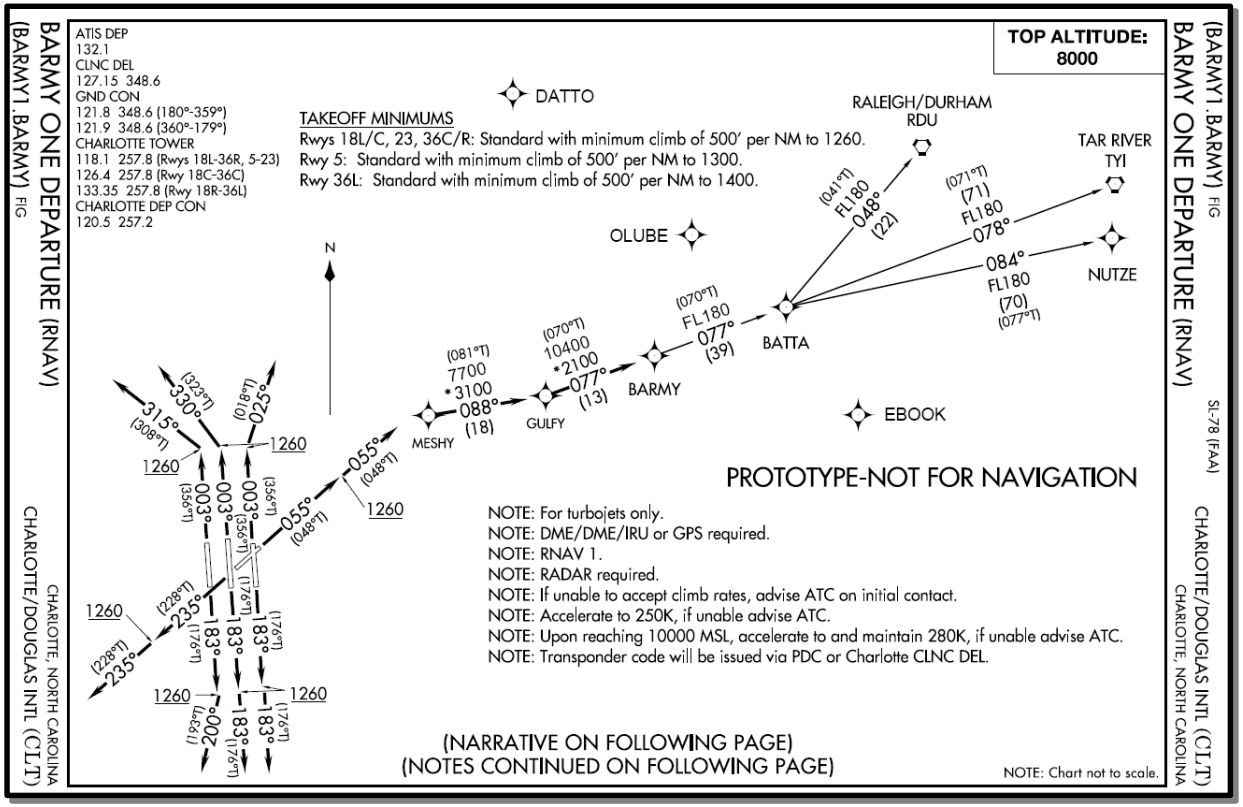


BARMY RNAV SID

- **KILNS & BARMY replace the existing MERIL SID**

- This SID will incorporate earlier route divergence, decreased track miles flown, decrease departure delays, and increased departure efficiency.

- 3 en route transitions:
  - RDU (Raleigh Durham VORTAC)
  - TYI (Tar River VORTAC)
  - NUTZE



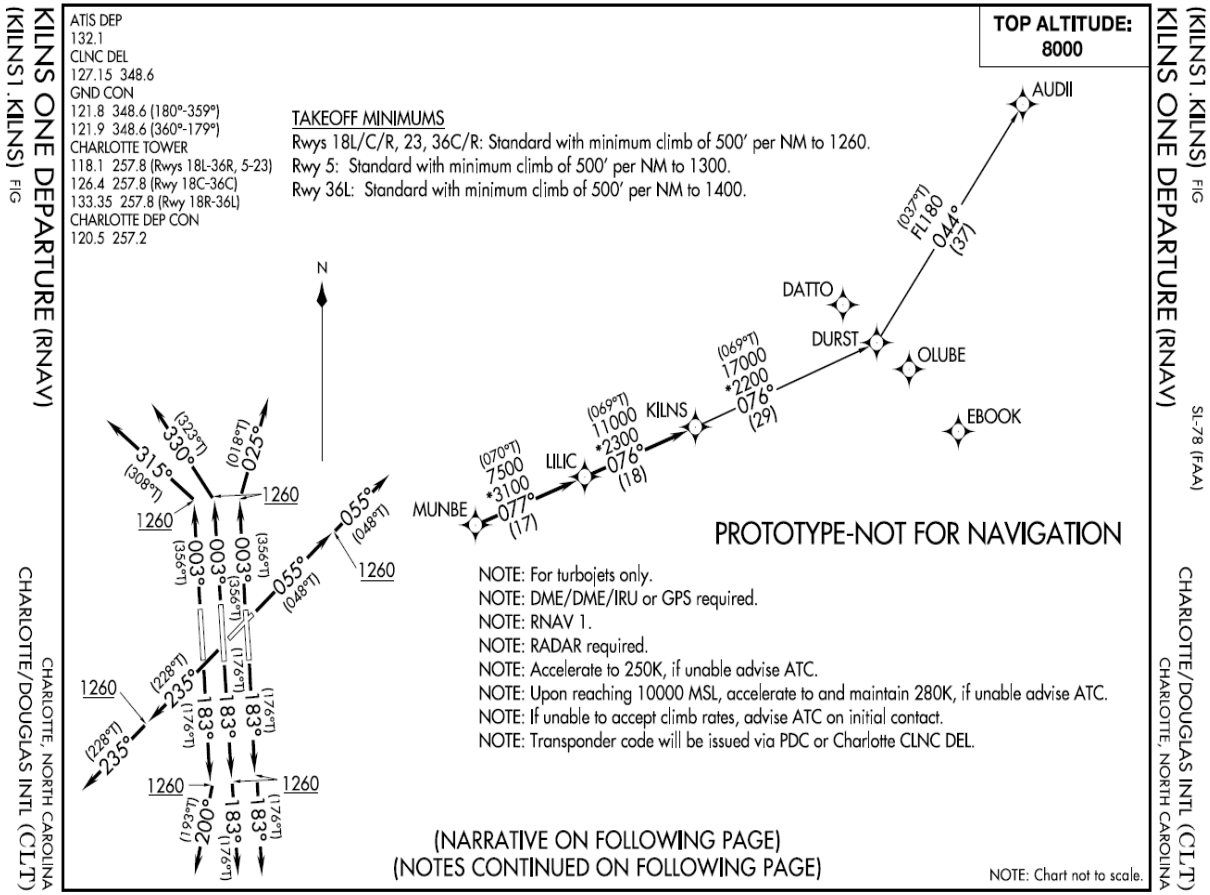
BARMY RNAV SID

KILNS & BARMY are City Pair specific

KPGV		CLT BARMY1 BATTA PGV				
KORF		CLT BARMY1 NUTZE CVI DRONE1 ORF				
KPHF		CLT BARMY1 NUTZE CVI DRONE1 PHF				
KLGA		CLT BARMY1 RDU J55 HPW J191 PXT KORRY3 LGA				
KRIC		CLT BARMY1 RDU NEAVL DUCXS3 RIC				
KPWM		CLT BARMY1 RDU THHMP OOD J42 RBV LGA SCOGS2 PWM				
KBDL		CLT BARMY1 RDU THHMP OOD J42 RBV J222 JFK DPK DPK3 BDL				
KBED		CLT BARMY1 RDU THHMP OOD J42 RBV J222 JFK DPK MAD HFD GRAYM3 BED				
KBOS		CLT BARMY1 RDU THHMP OOD J42 RBV J222 JFK ROBUC1 BOS				
KMHT		CLT BARMY1 RDU THHMP OOD J42 RBV LGA CMK SMYTH ROZZE1 MHT				
KALB		CLT BARMY1 RDU THHMP OOD J42 RBV LGA TRUDE V487 CANAN ALB				
KMTN		CLT BARMY1 RDU THHMP RAVNN6 MTN				
KFOK		CLT BARMY1 TYI ORF J121 HTO FOK				
KGON		CLT BARMY1 TYI ORF J121 HTO GON				
KPVD		CLT BARMY1 TYI ORF J121 HTO JORDN2 PVD				
KISP		CLT BARMY1 TYI ORF J121 SARDI CCC ISP				
KHTO		CLT BARMY1 TYI ORF J121 SARDI HTO				
KFRG		CLT BARMY1 TYI ORF J121 SIE CAMRN4 FRG				
KJFK		CLT BARMY1 TYI ORF J121 SIE CAMRN4 JFK				

KILNS RNAV SID

- **KILNS & BARMY replace the existing MERIL SID**
- One en route transition for traffic routed north of RDU to serve east coast city-pairs to and north of Washington D.C
- Incorporates radar vectoring that allows for quicker course divergence while creating flexibility and minimizing level-offs



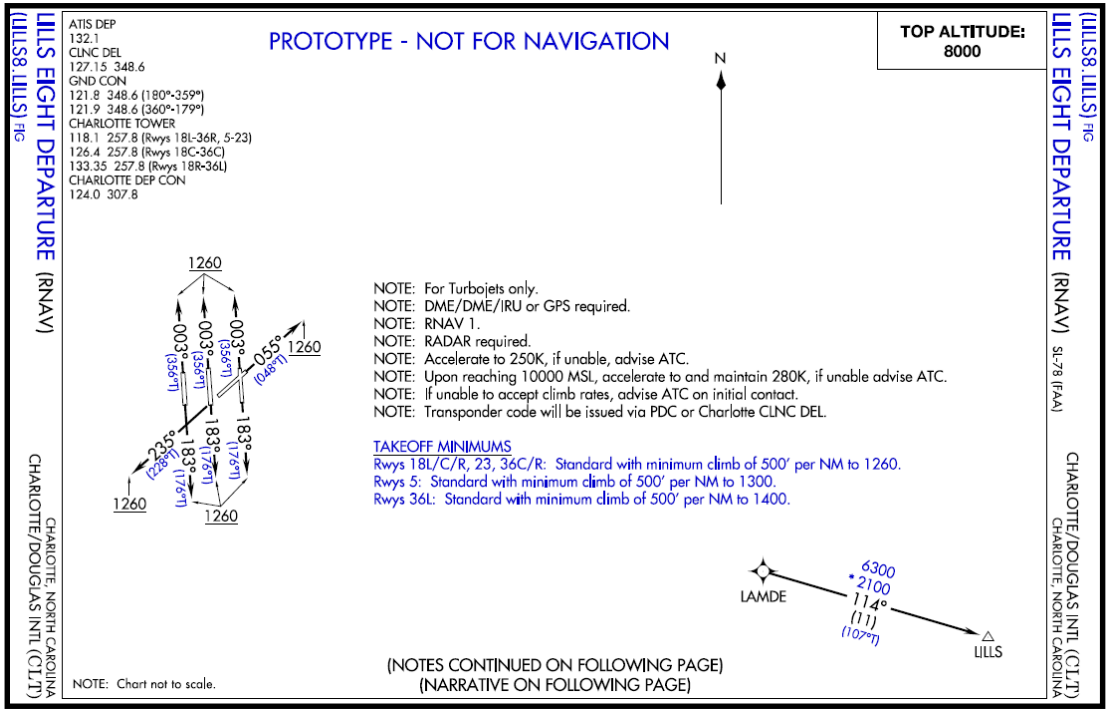
KILNS RNAV SID

KILNS & BARMY are City Pair specific

KIAD		CLT KILNS1 AUDII DORRN CAVLR3 IAD		
KROC		CLT KILNS1 AUDII FAK AML J227 ULW V31 GIBBE ROC		
KSYR		CLT KILNS1 AUDII FAK BRV AML BABEE CFB SYR		
KCDW		CLT KILNS1 AUDII FAK JAIKE3 CDW		
KMMU		CLT KILNS1 AUDII FAK JAIKE3 MMU		
KTEB		CLT KILNS1 AUDII FAK JAIKE3 TEB		
KHPN		CLT KILNS1 AUDII FAK OTT J150 CYN BOUNO4 HPN		
KPHL		CLT KILNS1 AUDII FAK PAATS2 PHL		
KPNE		CLT KILNS1 AUDII FAK PAATS2 PNE		
KTTN		CLT KILNS1 AUDII FAK PAATS2 TTN		
KEWR		CLT KILNS1 AUDII FAK PHLBO3 EWR		
KHEF		CLT KILNS1 AUDII LORAA TRSTN3 HEF		
KJYO		CLT KILNS1 AUDII LORAA TRSTN3 JYO		
KBWI		CLT KILNS1 AUDII THHMP RAVNN6 BWI		
KADW		CLT KILNS1 AUDII THHMP VUDOO2 ADW		
KDCA		CLT KILNS1 AUDII WAVES CAPSS2 DCA		

LILLS RNAV SID

- Incorporates radar vectoring that allows for quicker course divergence while creating flexibility and minimizing level-offs



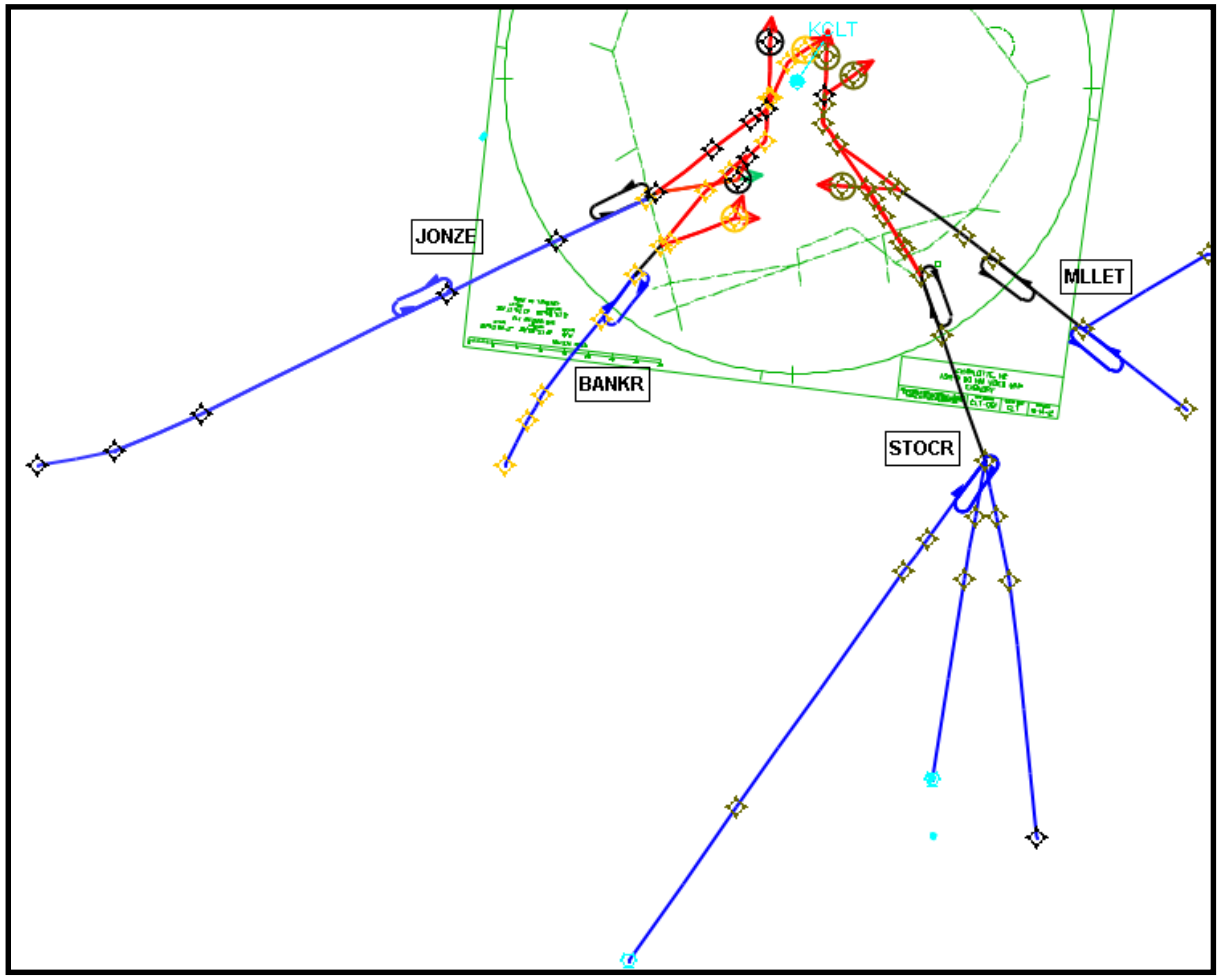
5/31/16 Implementation TMIs

- Departures
  - 10 MIT on the BARMY and KILNS for first 7 to 14 days. Re-evaluate after 7 days or sooner if possible.
  - ZTL will pass the ZDC 10 MIT back to CLT due to little airspace/time in ZTL30 to establish the 10 MIT
  - CLT—does not believe this will be major impact, not likely to affect arrival rate unless there is an unforeseen impact
  - ATCSCC—believes one week is proper amount of time to make evaluations
- Arrivals
  - CLT expects no MIT issues
  - ZDC will not be passing any additional TMIs to ZNY outside of the normal passbacks, same as today
  - ATCSCC see no issues

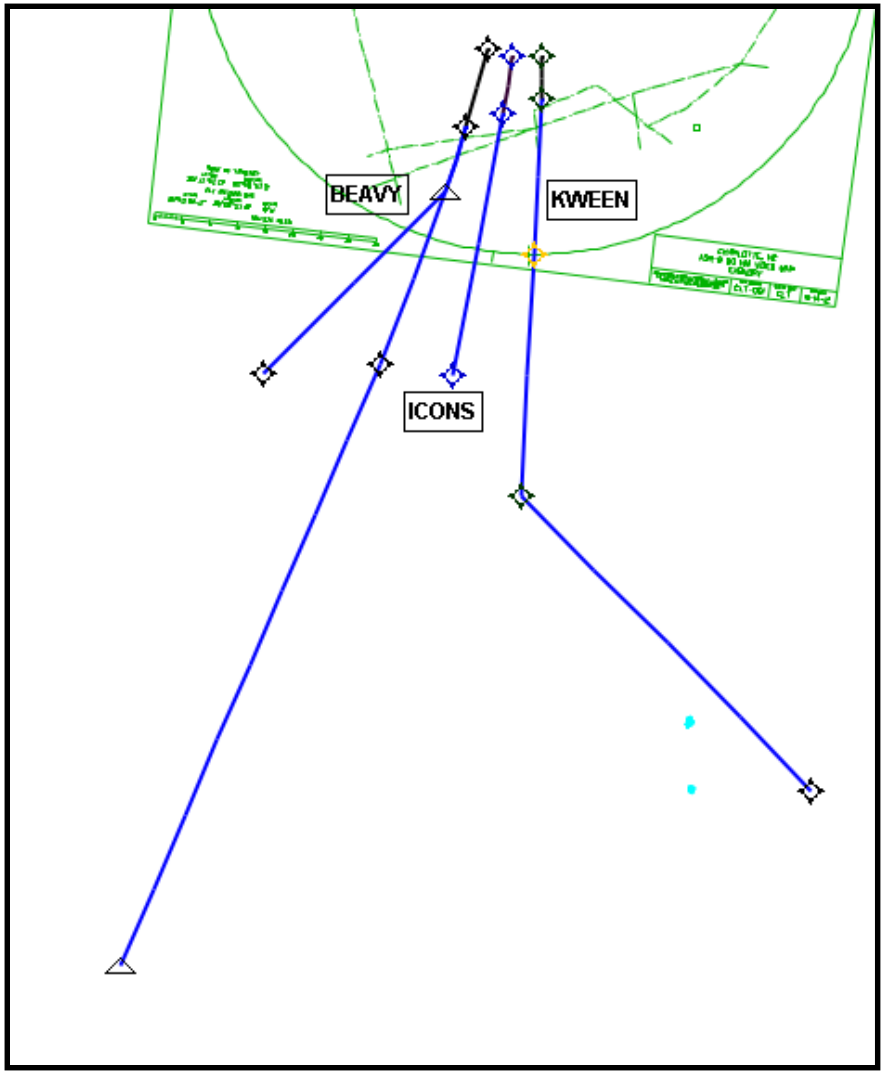
07/21/16 Implementation

- 7/21/16
  - 12 Airspace Changes
  - 9 New Procedures
    - BEAVY, ICONS, KWEEN SIDs
    - JONZE, BANKR, STOCR, MLLET RNAV STARs
    - KABEE, RASLN Conventional STARs
  - 3 Post Implementation Procedures Published
    - FILPZ2, PARQR2 RNAV STARs
    - KRITR2 SID

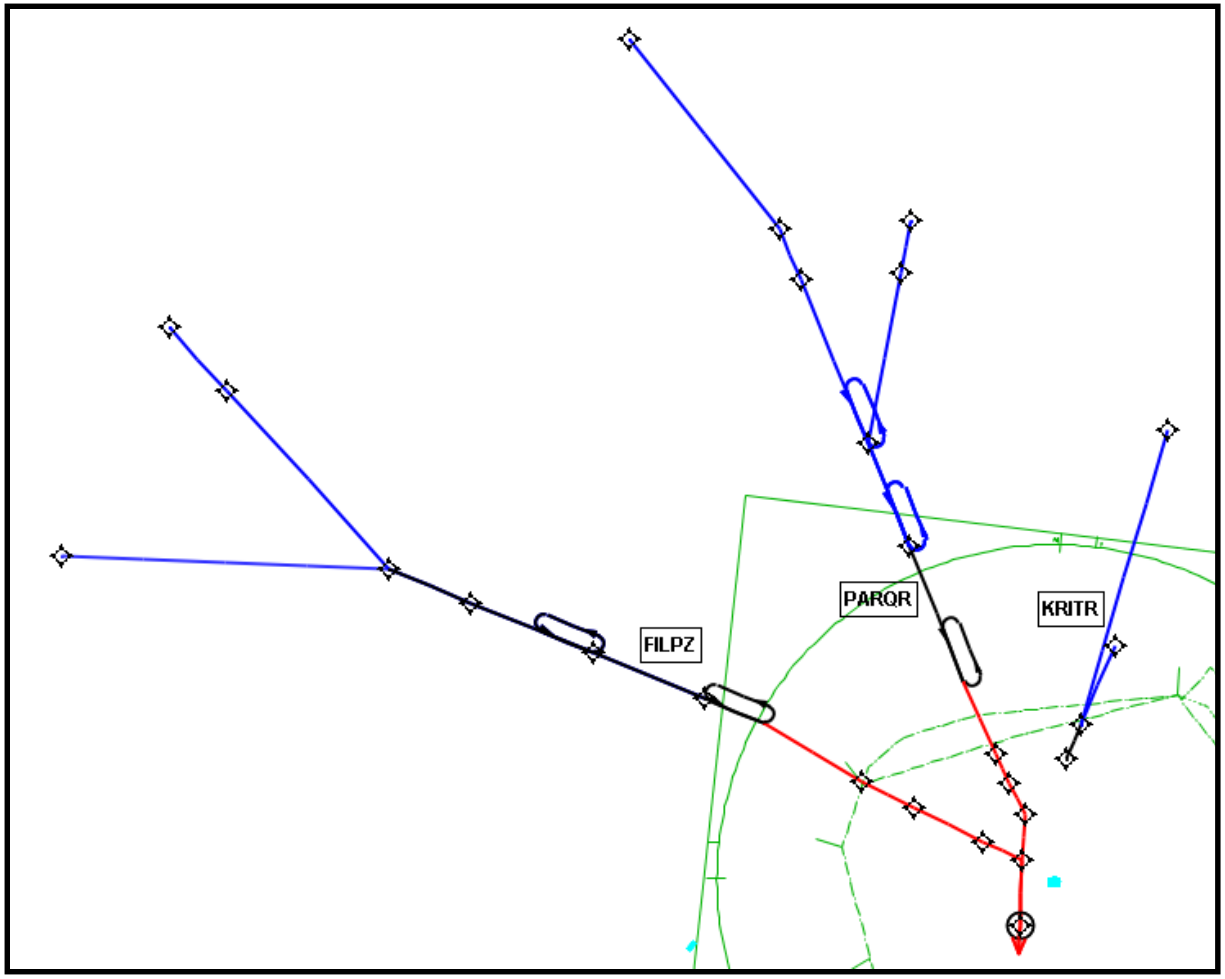
7/21/16 Publication – CLT SE-S-SW



7/21/16 Publication – CLT SE-S-SW

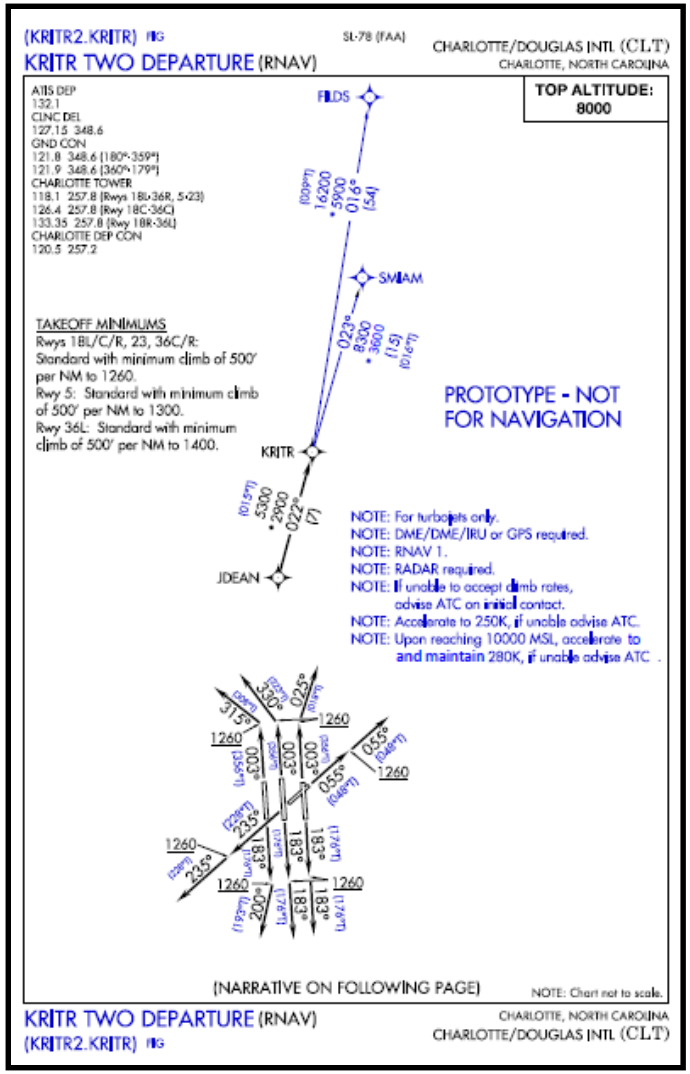


7/21/16 Publication – Re-designs

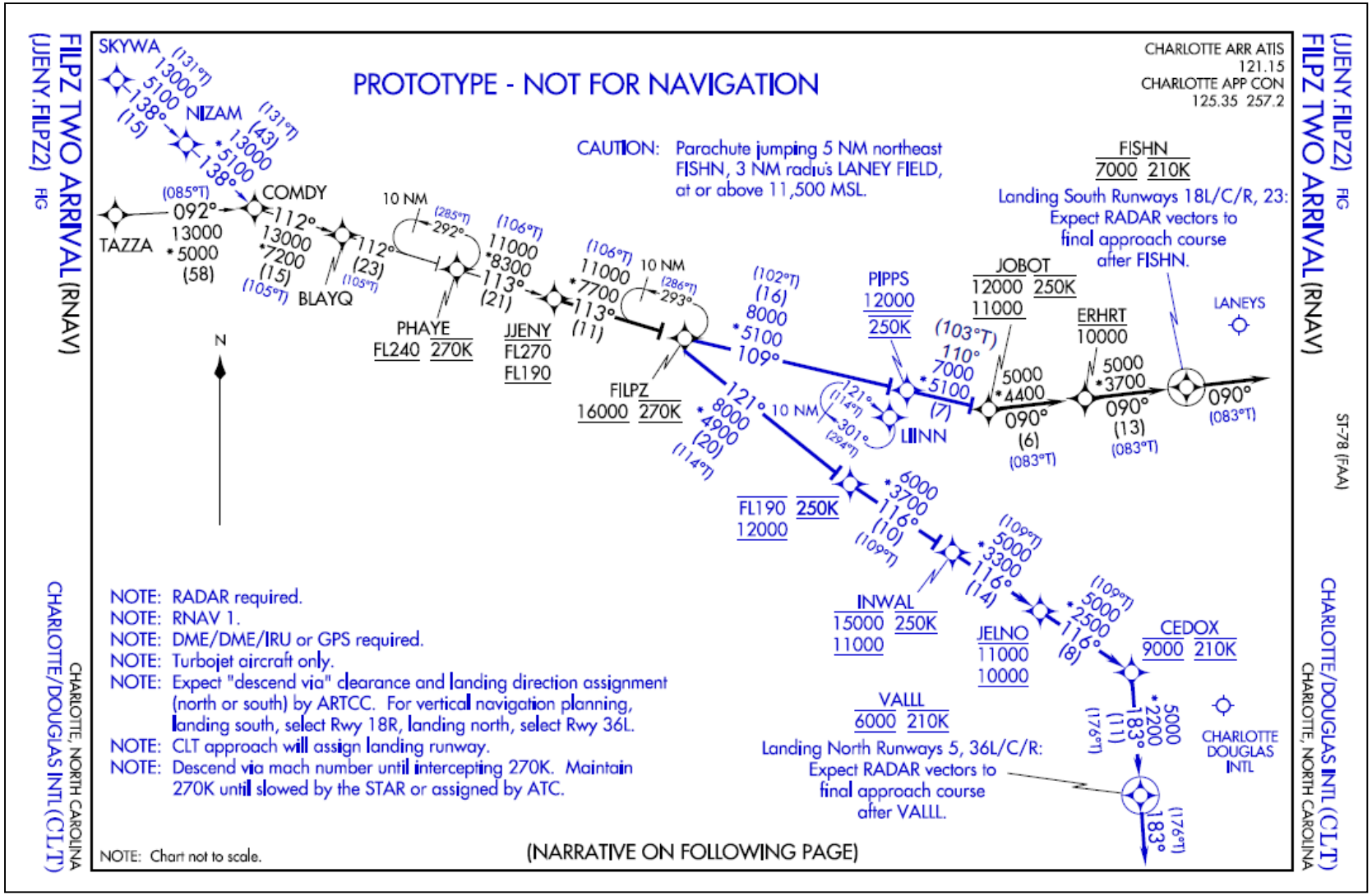


KRITR2 RNAV SID

- Turbojet only with two transitions
- Built new transition that goes from KRITR direct to new WP FILDS, this transition is to eliminate point out issues associated with ZTL29/47
- SMIAM transition will remain



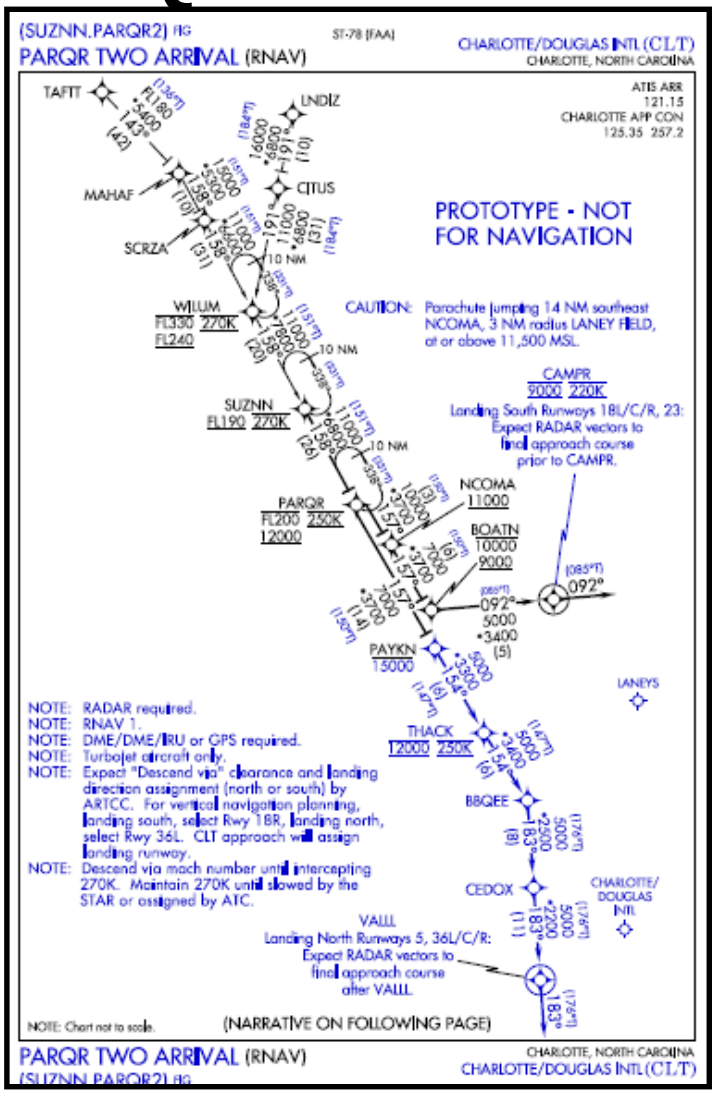
FILPZ2 RNAV SID



FILPZ2 RNAV SID

- Added WP NIZAM between SKYWA and COMDY (137.90 heading and 14.98nm from SKYWA)
- Changed MEA on TAZZA/SKYWA to request lowest possible MEA for July 2016 implementation
- Started common route at JJENY for Data Comm compliance
- New transition at COMDY will also be the point for the TYS/CHA departures
- Removed speed at JJENY
- FILPZ changed from at or above 17000 to at or above 16000 added 270kts speed
- Removed speed/altitude at BLAYQ
- Removed CHLOW
- Added WP PIPPS between FILPZ and JOBOT with at or above 12000
- Added 250kts at PIPPS and JOBOT
- BACKK changed from 260kts to 250kts
- Straightened route between BACKK and CEDOX
- Moved associated fixes (INWAL heading 16.26 and .91nm & JELNO heading 127.45 and .91nm) with route straightening
- Removed WELKY
- Changed altitude on JELNO from 10000 to 12000 to 10000 to 11000 added 230kts
- CEDOX changed to at 9000/210kts versus 9000 to 11000
- Removed DOSBE and added new WP VALLL (heading 182.83 and 2nm south of the DOSBE location)
- Satellite airports removed and associated transitions removed
- Add LIINN holding

PARQR2 RNAV SID

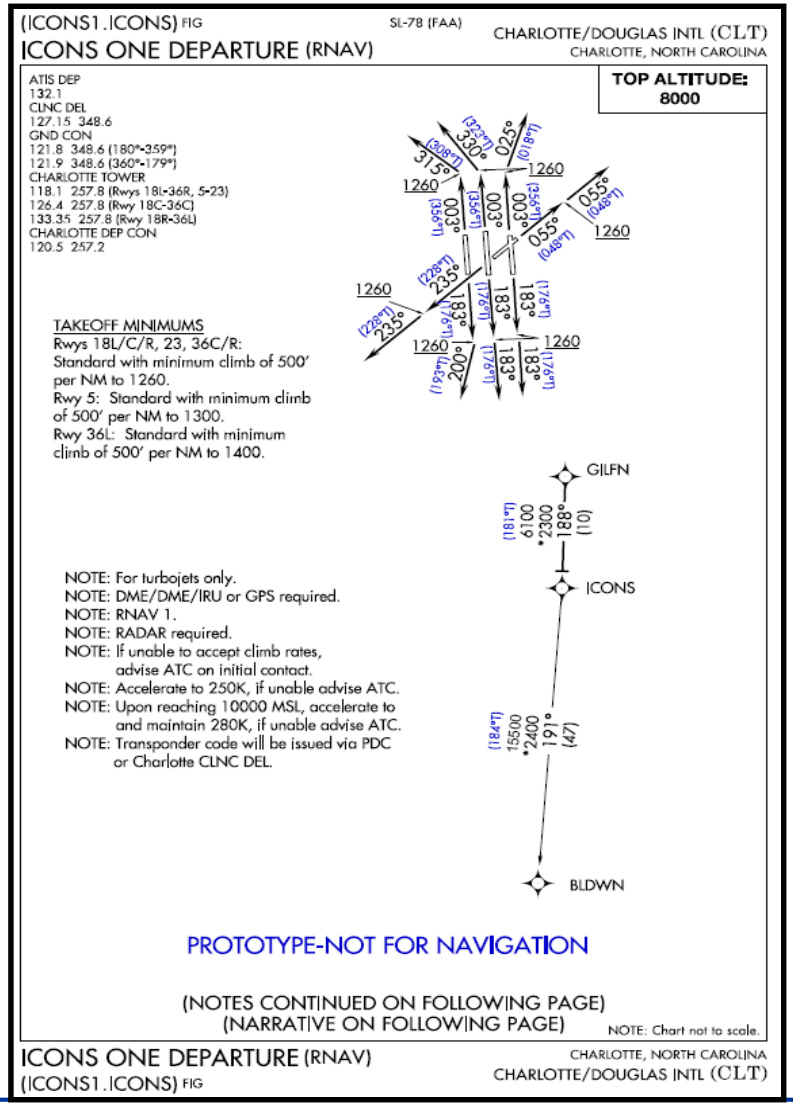


PARQR RNAV STAR
Changes on 7/21/16

- Removed altitudes/speeds at MAHAF and LNDIZ
- Created ATC assigned only transition at WILUM
- Started common route at SUZNN for data comm compliance and terminated at PARQR
- Made RWY23 transition the same as RWY18 transition
- Changed PAYKN to at or below 15000 (previously 12000/16000 block)
- Added WP THACK between PAYKN and BBQEE with 12000/250kts restriction (heading 154.01 and 5.64nm from PAYKN) , placed so if CLT ATCT needs a/c to cross CEDOX at 9000/210kts industry can comply
- Removed altitude and speed from BBQEE
- Removed HIKNG waypoint
- Removed DOSBE and added new WP VALLL (heading 182.83 and 2nm south of the DOSBE location)
- Satellite airports removed and associated transitions removed
- Remove LIINN holding

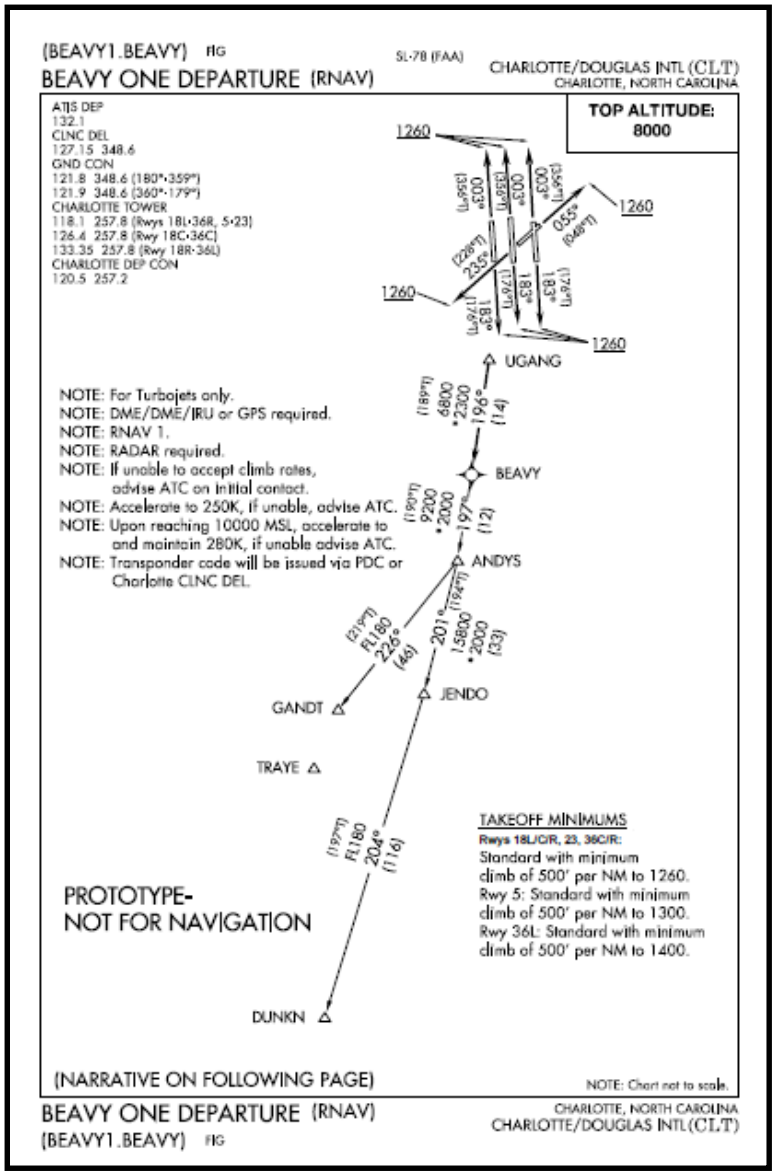
ICONS RNAV SID

- **BEAVY, ICONS & KWEEN replace existing ANDYS/BUCKLS**
- Turbojet only
- Incorporates radar vectors which allows for quicker course divergence as close to the airport as possible, while creating flexibility and minimizing level-offs.
- Used for F11 airports (MCO,ORL,ISM,MLB), DAB, JAX, and arrivals into ZMA routed over SAV/CRG/OMN/TRV



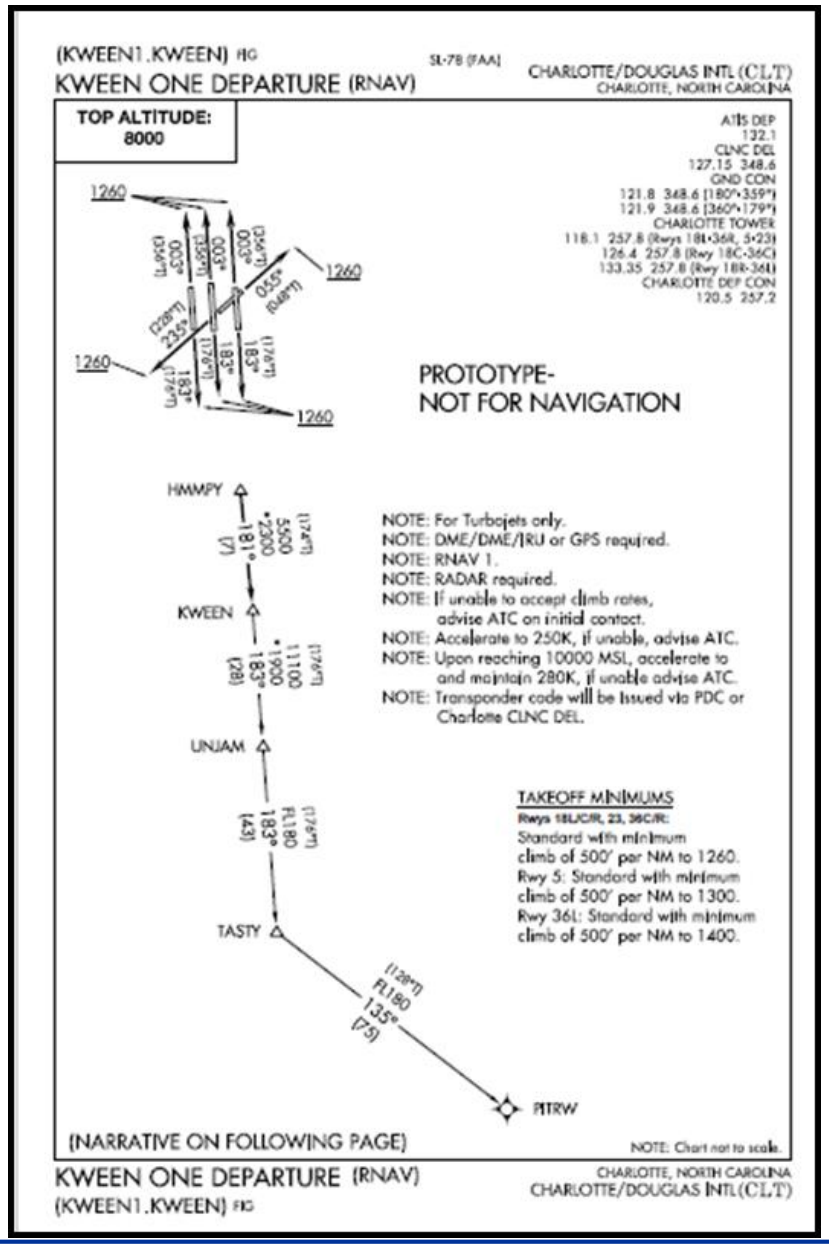
BEAVY RNAV SID

- **BEAVY, ICONS & KWEEN replace existing ANDYS/BUCKLS**
- Turbojet only
- Incorporates radar vectors which allows for quicker course divergence as close to the airport as possible, while creating flexibility and minimizing level-offs.
- Used for ATL, AGS, and arrivals into ZMA routed J75 or TAY, or aircraft landing TLH or points west



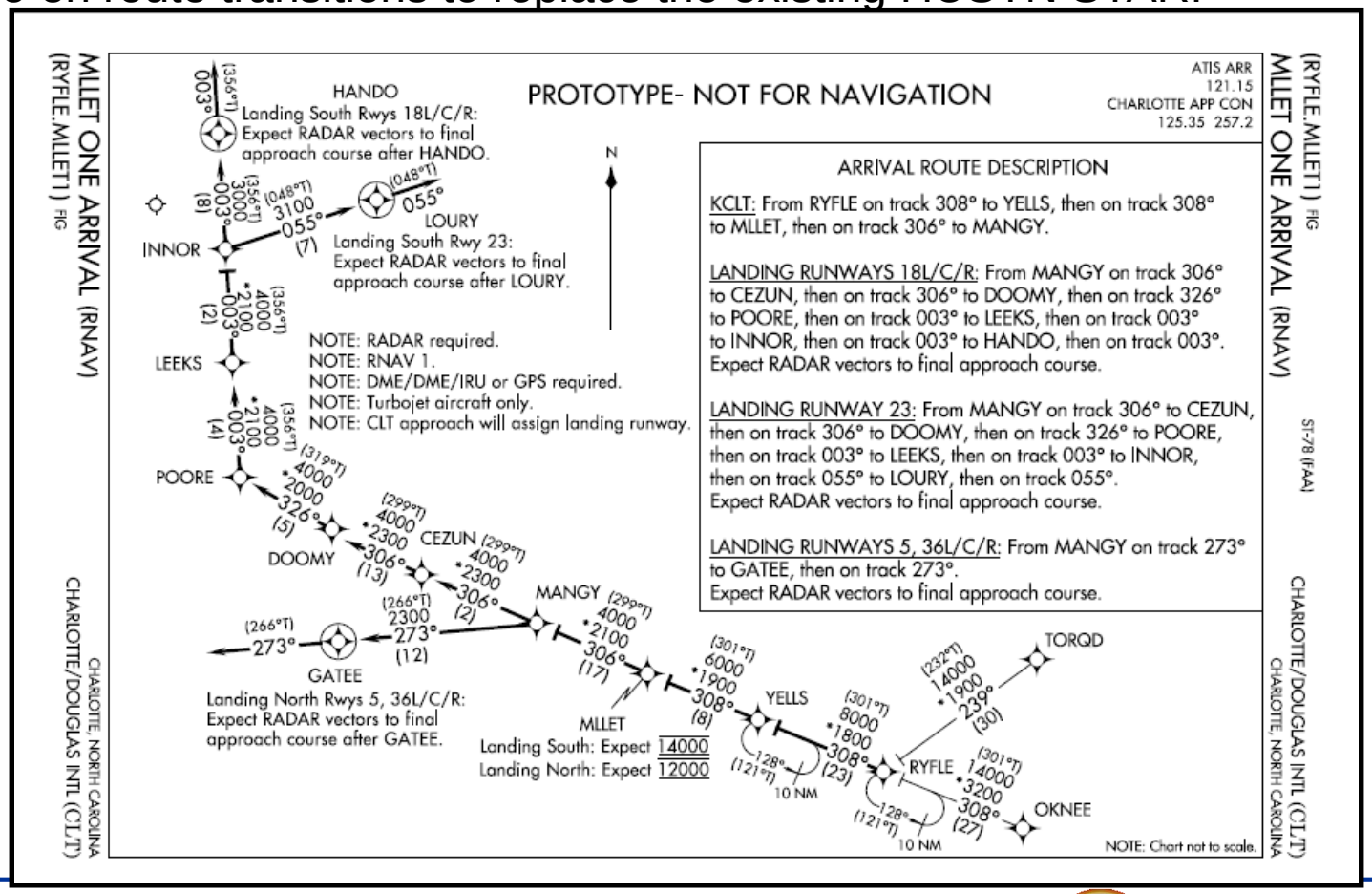
KWEEN RNAV SID

- **BEAVY, ICONS & KWEEN replace existing ANDYS/BUCKLS**
- Turbojet only
- Incorporates radar vectors which allows for quicker course divergence as close to the airport as possible, while creating flexibility and minimizing level-offs.
- Used for flights to CHS, MYR, International Departures routed over the AR's



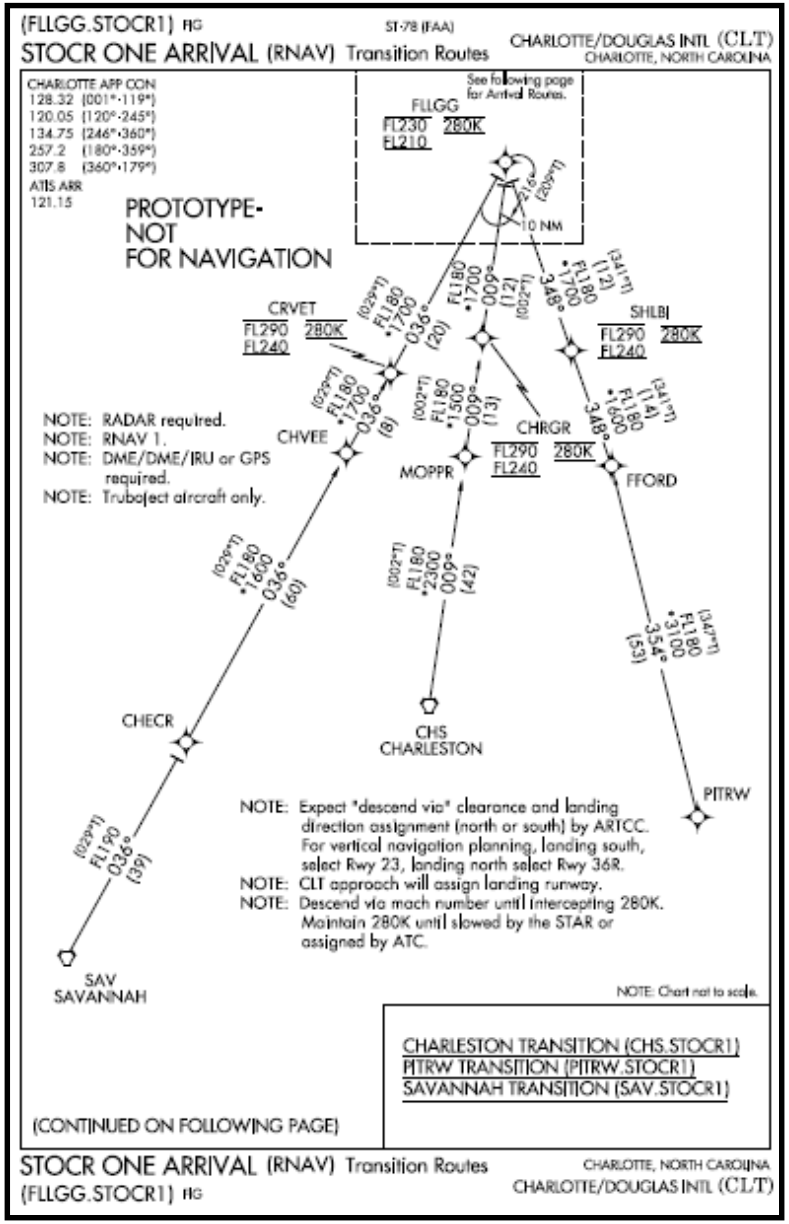
MLLET RNAV STAR

- **MLLET & STOCR replace existing HUSTN STAR**
- Jets and Turboprops.
- Two en route transitions to replace the existing HUSTN STAR.



STOCR RNAV STAR

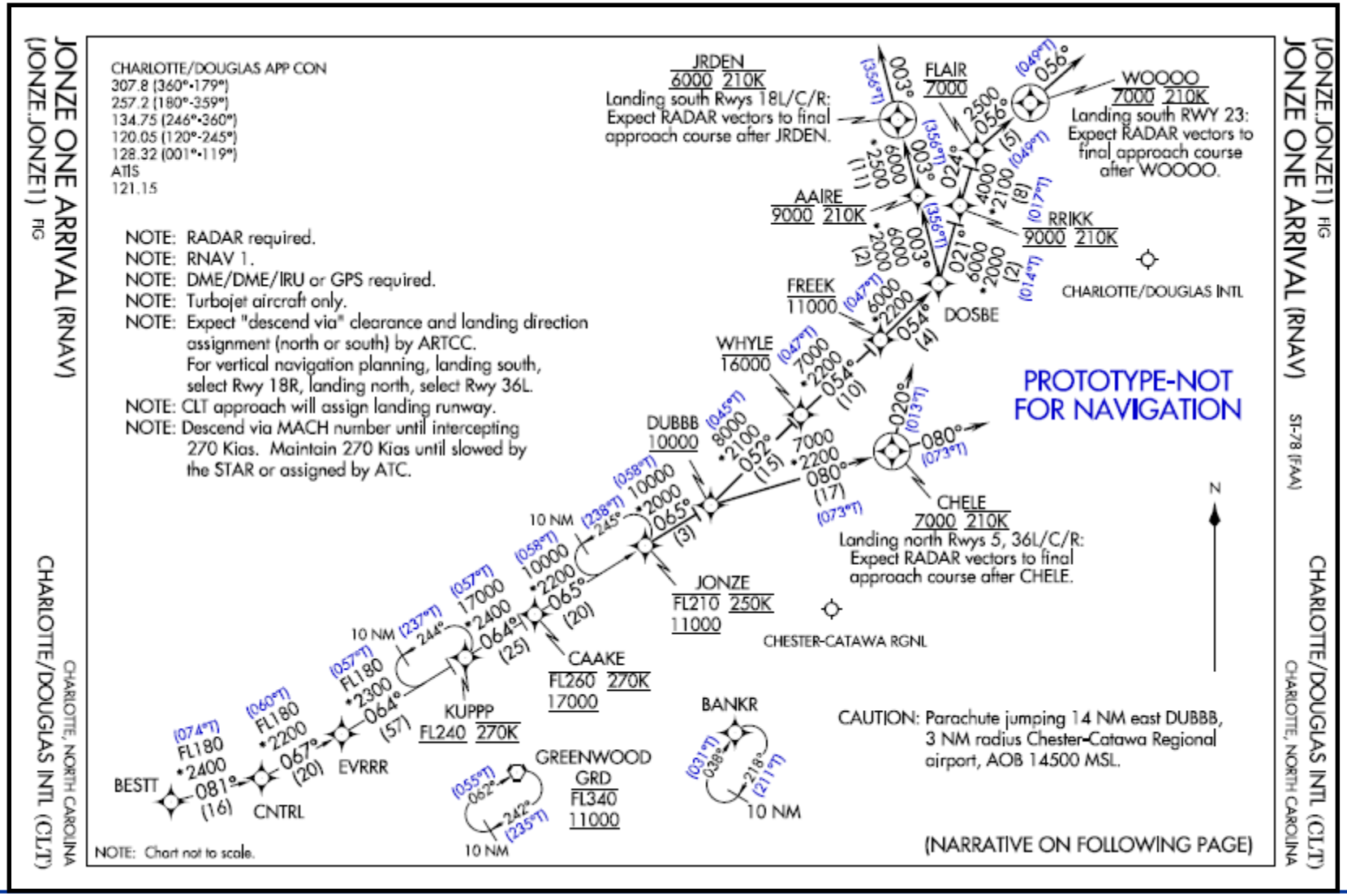
- **MLLET & STOCR replace existing HUSTN STAR**
- Jets Only
- Three en route transitions to replace the existing HUSTN STAR
- OPD



JONZE RNAV STAR

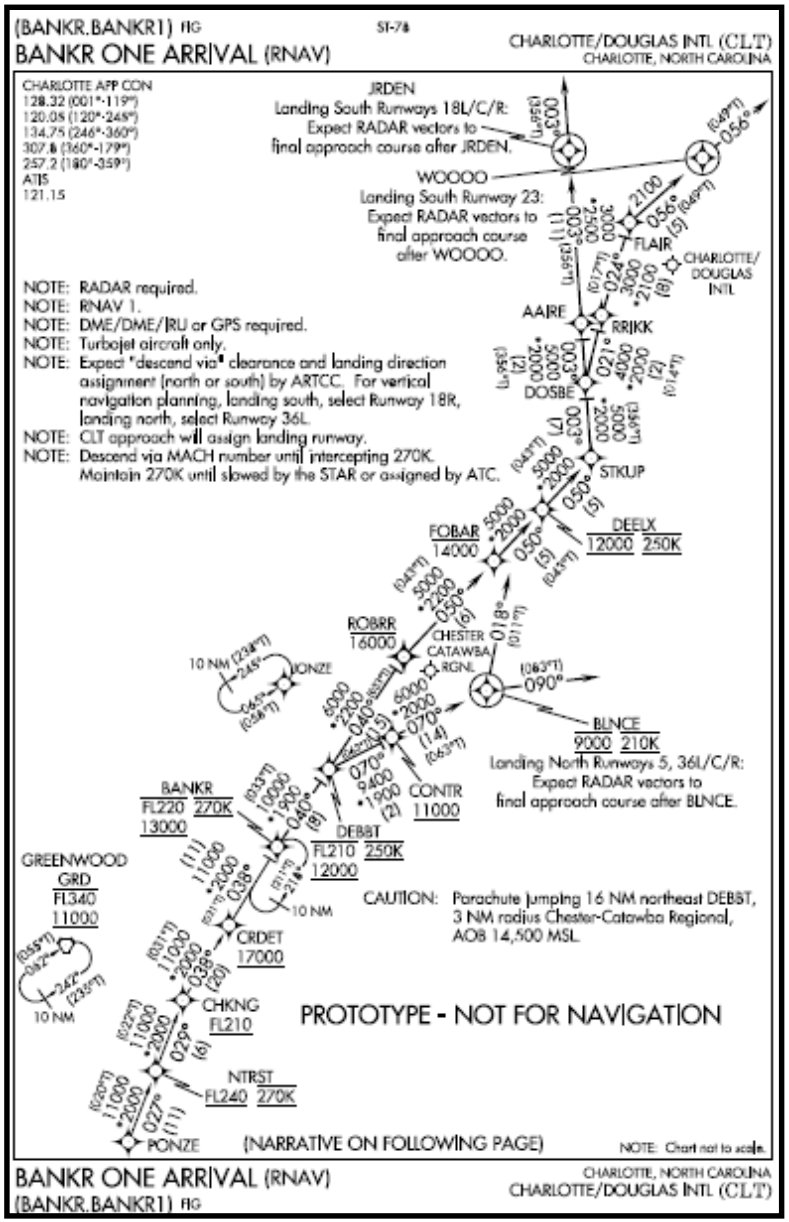
- **JONZE & BANKR replace existing ADENA STAR**
- Jets Only
- De-conflict with ATL departures
- Two enroute transitions – one for ATL departures
- OPD

JONZE RNAV STAR



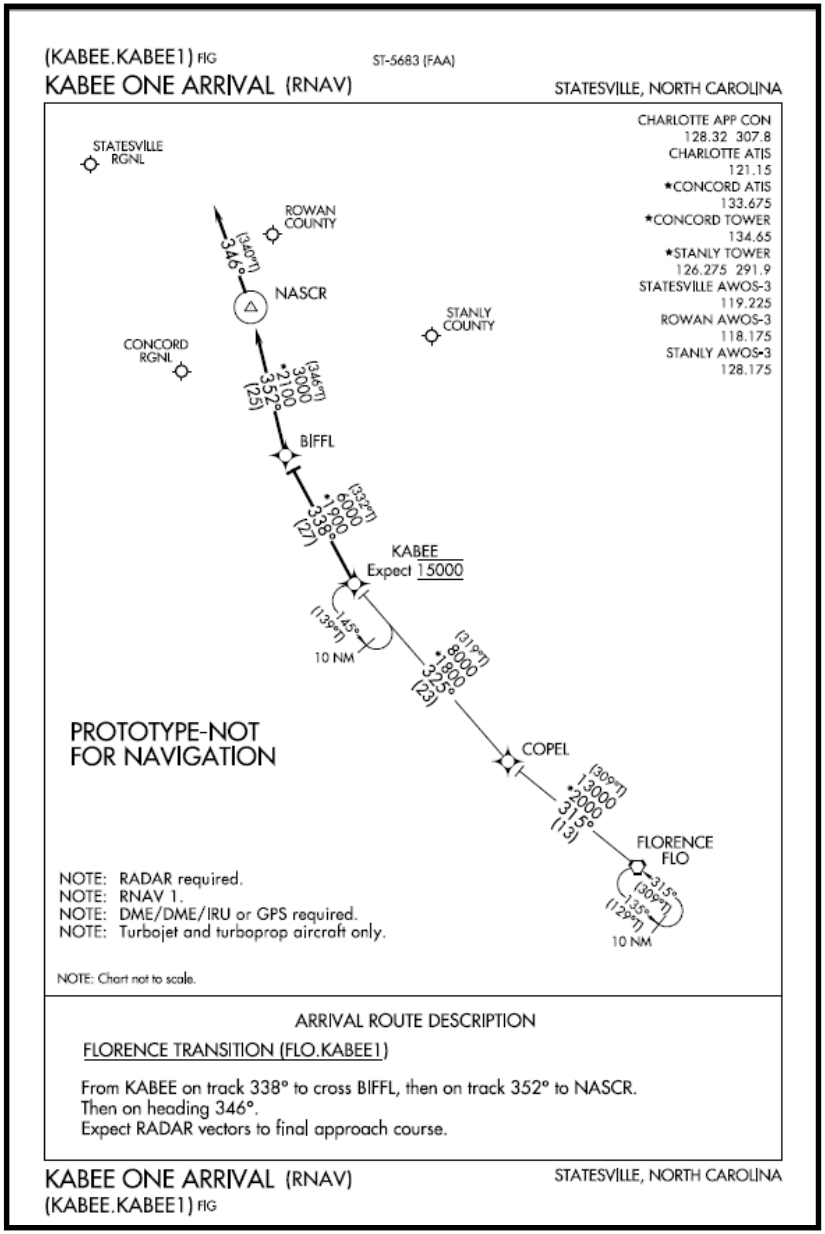
BANKR RNAV STAR

- **JONZE & BANKR replace existing ADENA STAR**
- Jets.
- OPD



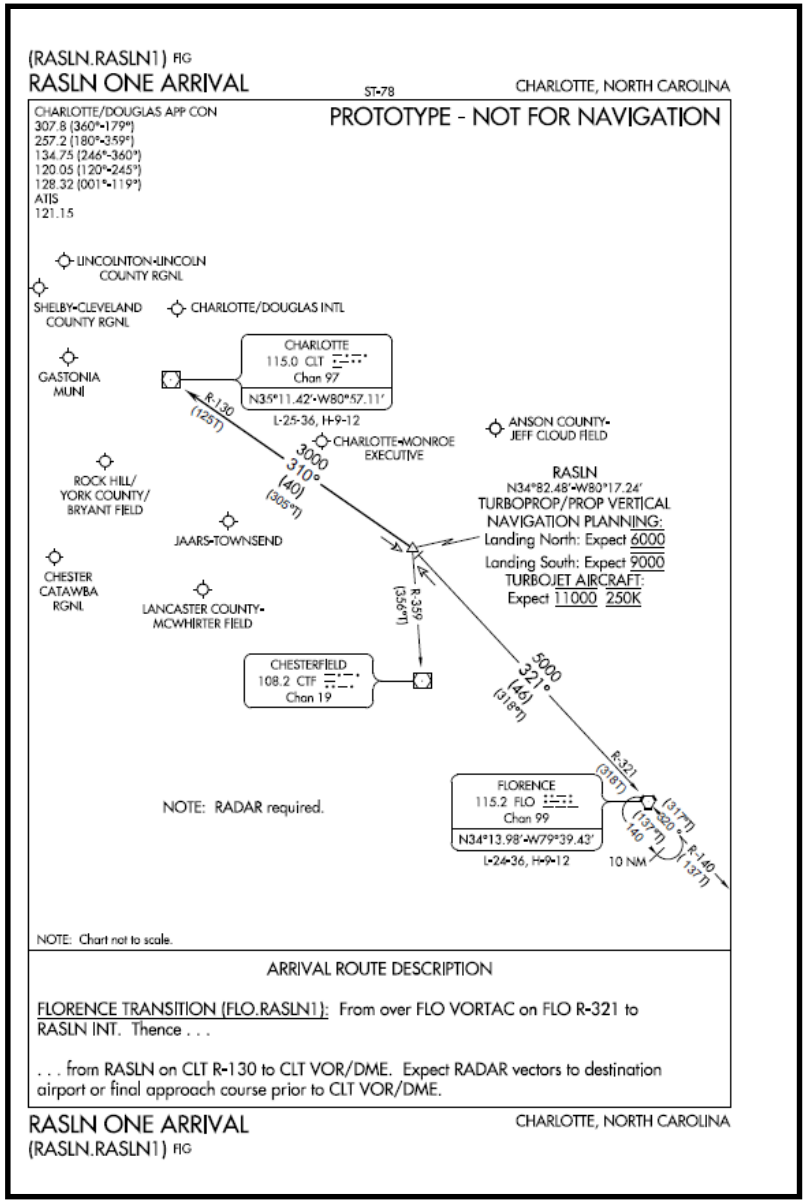
KABEE RNAV

- RNAV Procedure
- Replaces southern transition of the current NASCR STAR
- Serves JQF, RUQ, KSVH and KVUJ



RASLN CONV STAR

- Conventional Procedure from southeast
- Replace CTF STAR



7/21/16 NFDC PREF Routing & Implementation TMIs

- NFDC Pref Routing will be distributed via the Flight Filers Telcon in July.
- Currently in discussion with facilities to determine TMI requirements
- Utilizing lessons learned from previous Metroplex implementations
- TBFM Ops Team is working to identify impact based on new adaptation changes

Additional Industry Outreach

- Industry Day - May 16, 2016
- Dispatcher's Telcons
  - June 1, 2016
  - July 6, 2016

The Big Day!

- Onsite implementation teams at CLT, ZTL, ZDC & Eastern Service Center
- TBFM SMEs at Facilities
- Open Conference bridge
  - Daily Telcons at 6:30am, 10:30am and 1:30pm – May 31st only
  - May 31 through June 2 --- 6:00am - 4:00pm EST

    Dial In Access: (USA only) 888-335-6670
    Dial In Access: (Direct Dial) 405-225-2375
    Dial In Access (Alternate USA Only) 888-924-3230
    Dial In Access (Alternative Direct Dial) 609-916-1975

    Participant Passcode: 853231
    Chairperson Passcode: 962439
- Collect feedback forms

CLT Metroplex Leads Contact Information

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