

FEDERAL AVIATION ADMINISTRATION
 FLIGHT STANDARDS SERVICE
 STANDARD TERMINAL ARRIVAL (STAR)

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated. Distances are in nautical miles (NM). Graphic depictions attached.

Arrival Name HTROD (RNAV)	Number TWO	STAR Computer Code CRACKN.HTROD2	Superseded Number ONE	Dated 09/13/2018	Effective Date 10 OCT 2019
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TRANSITION ROUTES:

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	MAA	Crossing Altitudes / Fixes
SUBWY	SUBWY.HTROD2	SUBWY	SUBWY						
			COLTZ	359.90	48.00	15000	2800		
			BUCKN	349.40	36.89	10000	2800		BETWEEN FL240 AND FL270
			FIYUR	348.48	13.58	10000	2400		AT/ABOVE FL200
			CRACKN	336.93	26.35	8000	2500		BETWEEN 15000 AND FL210

ARRIVAL ROUTE DESCRIPTION:

FROM CRACKN ON TRACK 326.26/14.27 TO CROSS BEERR BETWEEN 12000 AND 15000, THEN ON TRACK 327.15/13.67 TO CROSS HTROD AT 12000 AND AT 250 KIAS.
 LANDING RWY 22L, 21L/R: FROM HTROD ON TRACK 037.61/4.16 TO FFORK, THEN ON TRACK 037.17/9.82 TO CROSS MODLT AT 12000 AND AT 210 KIAS, THEN ON TRACK 035.72. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.
 LANDING RWY 22R: FROM HTROD ON TRACK 326.35/12.87 TO TRPRS, THEN ON TRACK 035.52/4.77 TO CROSS SEEGR AT 12000 AND AT 210 KIAS, THEN ON TRACK 033.32. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

PROCEDURAL DATA NOTES:

- NOTE: RADAR REQUIRED
- NOTE: RNAV 1
- NOTE: DME/DME/IRU OR GPS REQUIRED
- NOTE: USE RUNWAY 21L TRANSITION OR AS ASSIGNED BY ATC. EXPECT RUNWAY ASSIGNMENT FROM DETROIT APP CON NO LATER THAN 10 NM FROM HTROD.
- NOTE: JET AIRCRAFT DESCEND VIA MACH NUMBER UNTIL INTERCEPTING 280 KIAS. MAINTAIN 280 KIAS UNTIL SLOWED BY THE STAR.
- NOTE: FOR USE WHEN DTW LANDING SOUTH. WHEN DTW LANDING NORTH OR WEST, FILE AND EXPECT THE CRACKN RNAV STAR.

FIXES AND/OR HOLDING PATTERNS:

- CHART HOLDING AT CRACKN: HOLD SE, LT, 336.93 INBOUND, 10 NM LEGS.
- CHART HOLDING AT BUCKN: HOLD S, LT, 349.40 INBOUND, 10 NM LEGS.

COMMUNICATIONS:

DTW ATIS, DETROIT APP CON.

AIRPORTS SERVED:

DETROIT METROPOLITAN WAYNE COUNTY, DETROIT, MI (KDTW)

LOST COMMUNICATIONS PROCEDURE:

REMARKS:

15000 MEA TO REMOVE CRITICAL DME.



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Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
HTROD (RNAV)	TWO	CRAKN.HTROD2	ONE	09/13/2018	10 OCT 2019

ADDITIONAL FLIGHT DATA:

DME/DME ASSESSMENT: SAT (RNP 2.0)
 REFERENCE MAGNETIC VARIATION = KDTW 07W/2020
 CHART AT MODLT TERMINUS: KDTW LDG RWY 21L/R, 22L
 CHART AT SEEGR TERMINUS: KDTW LDG RWY 22R
 DO NOT CHART MOCAs.

FLIGHT INSPECTED BY:

CHARLES D CUNNINGHAM
 Name
 FICO
 Organization
 6/12/19
 Date

Digitally signed by

JACOB POWERS

Jul 17, 2019

Signature

DEVELOPED BY:

MIKE FERRELL
 Name
 CLEVELAND ARTCC METROPLEX LEAD
 Organization
 03/18/2019
 Date

Digitally signed by

JACOB POWERS

Jul 17, 2019

Signature

APPROVED BY:

PAT MULQUEEN
 Name
 AJV-A440
 Organization
 Date

Digitally signed by

JACOB POWERS

Jul 17, 2019

Signature

CHANGES:

1. RENAMED THATZ WP TO FIYUR WP; ALTITUDE RESTRICTION CHANGED FROM BETWEEN FL200 AND FL230 TO AT/ABOVE FL200.
2. CHANGED MEA OF FIYUR-CRAKN LEG FROM 10000 TO 8000.
3. CHANGED NAME OF MYMOM WP TO BUCKN WP.
4. CHANGED CHART NOTE FROM "FOR USE WHEN DTW IS IN SOUTH FLOW. WHEN DTW IS IN NORTH FLOW, FILE AND EXPECT THE CRAKN RNAV STAR" TO "FOR USE WHEN DTW LANDING SOUTH. WHEN DTW LANDING NORTH OR WEST, FILE AND EXPECT THE CRAKN RNAV STAR."
5. CHANGED CHART NOTE FROM "USE RUNWAY 21L TRANSITION OR AS ASSIGNED BY ATC. EXPECT RUNWAY ASSIGNMENT FROM DETROIT TRACON PRIOR TO BEERR" TO "USE RUNWAY 21L TRANSITION OR AS ASSIGNED BY ATC. EXPECT RUNWAY ASSIGNMENT FROM DETROIT APP CON NO LATER THAN 10 NM FROM HTROD."
6. MOVED SEEGR 3.2 NM SOUTH.
7. MOVED TRPRS 0.26 NM SE.
8. REMOVED RECOMMENDED NAVAID.

REASONS:

- 1, 3. WAYPOINT NAME CHANGE NEEDED TO AVOID CONFUSION; ATC REQUEST.
2. LOWER MEA NEEDED FOR PROPS AND TURBOPROPS.
4. CHANGED WORDING OF CHART NOTE TO LANDING DIRECTION AND STANDARDIZED FOR ALL PROCEDURES.
5. IDENTIFY WHEN TO EXPECT RUNWAY ASSIGNMENT REFERENCE WAYPOINT.
- 6, 7. CHANGED TO ALIGN WITH CHANGES TO RNAV(RNP) W RWY 22R.
8. NO LONGER REQUIRED.



FEDERAL AVIATION ADMINISTRATION
 FLIGHT STANDARDS SERVICE
 STAR (DATA RECORD)

Arrival Name HTROD (RNAV)	Number TWO	STAR Computer Code CRAKN.HTROD2	Superseded Number ONE	Dated 09/13/2018	Effective Date 10 OCT 2019
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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
En Route Transition									
SUBWY	394152.08N / 0821034.16W	Y		IF					SUBWY.HTROD2
COLTZ	402931.82N / 0821820.39W	Y	FB	TF	352.90	48.00			
BUCKN	410441.94N / 0823305.56W	Y	FB	TF	342.40	36.89	FL240BFL270	AT 280K	
FIYUR	411734.93N / 0823849.02W	Y	FB	TF	341.48	13.58	AT/ABOVE FL200		
CRAKN	414022.53N / 0825626.04W	Y	FB	TF	329.93	26.35	15000BFL210	AT 280K	

Common Route									
CRAKN	414022.53N / 0825626.04W	Y		IF			15000BFL210	AT 280K	CRAKN.HTROD2
BEERR	415110.86N / 0830853.66W	Y	FB	TF	319.26	14.27	12000B15000		
HTROD	420140.41N / 0832039.07W	Y	FB	TF	320.15	13.67	AT 12000	AT 250K	

Runway Transition									
HTROD	420140.41N / 0832039.07W	Y		IF			AT 12000	AT 250K	
FFORK	420515.28N / 0831748.37W	Y	FB	TF	030.61	04.16			
MODLT	421344.82N / 0831109.72W	Y	FO	TF	030.17	09.82	AT 12000	AT 210K	
KDTW:RWY 21L,RWY 21R,RWY 22L				FM	028.72				

Runway Transition									
HTROD	420140.41N / 0832039.07W	Y		IF			AT 12000	AT 250K	
TRPRS	421125.99N / 0833155.82W	Y	FB	TF	319.35	12.87			
SEEGR	421537.49N / 0832851.78W	Y	FO	TF	028.52	04.77	AT 12000	AT 210K	
KDTW:RWY 22R				FM	026.32				

