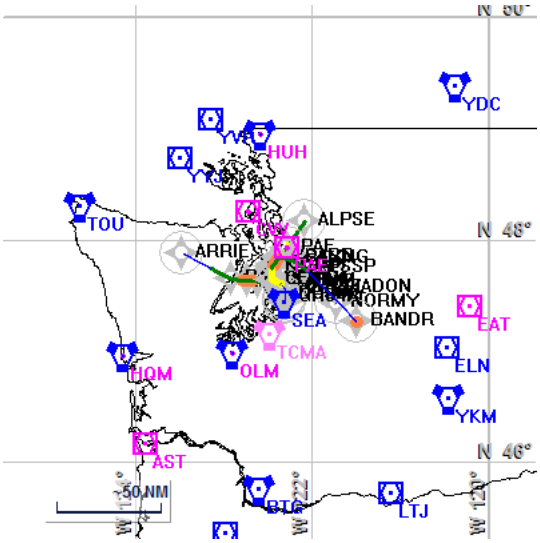

Name:	Jeanette Roller
Project Name:	KSEA
Output File:	KSEA ATOME1 SID BEARB ALPSE 20170327_0824
Procedure Name:	ATOME1
Software:	RNAV-Pro™
Version:	2.39
Date/Time:	3/27/2017 8:25:22 AM
Input File:	KSEA ATOME SID BEARB ALPSE 20160512_1224.txt
Databases:	AIRNAV Date: 3/19/2017 CIFP Date: 8/18/2016 DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	
DME/DME	✓	**No Critical DMEs Exist**
Radars	?	
Comms	?	
TERPS	?	

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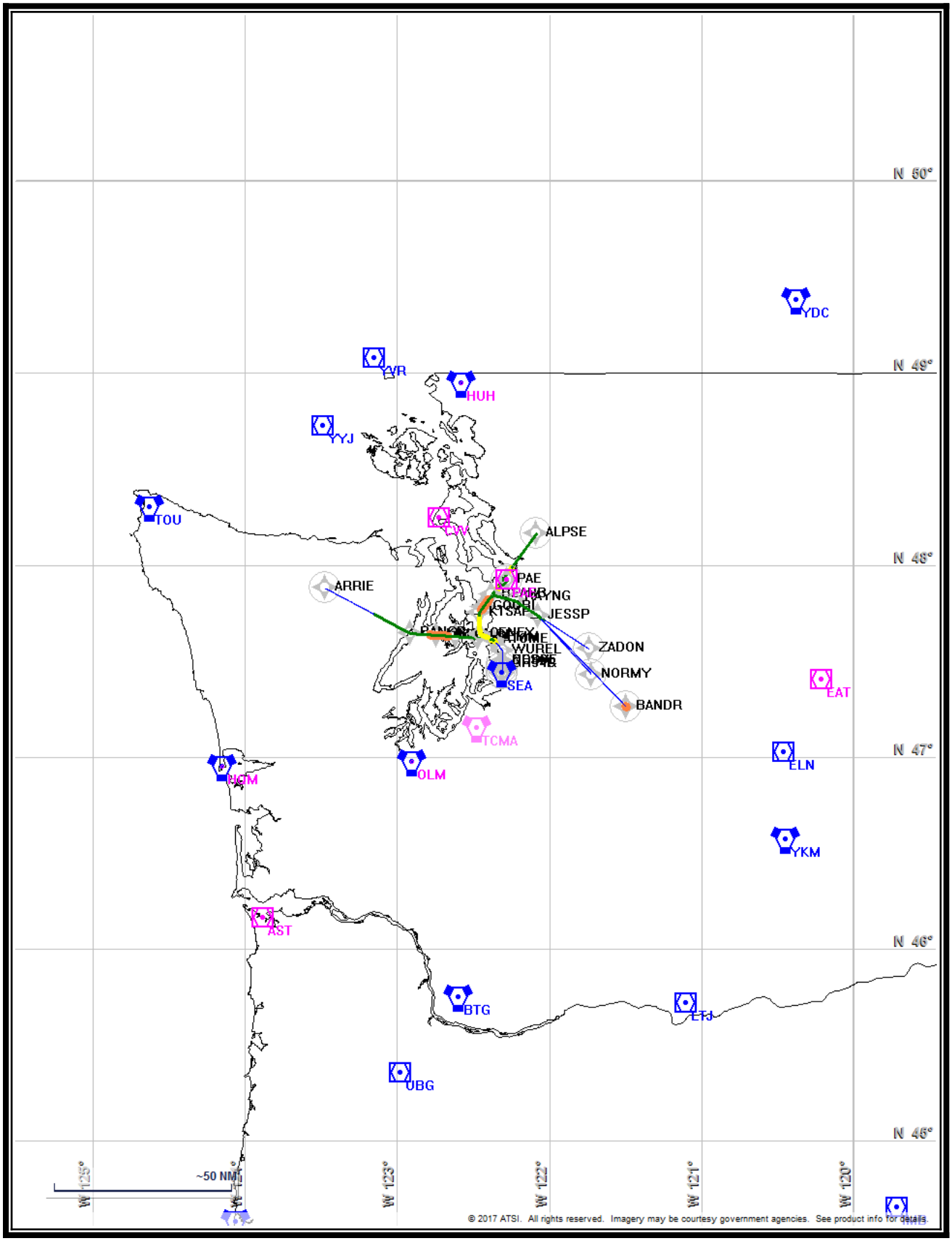
N 50°
N 49°
N 48°
N 47°
N 46°
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W 125°
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W 121°
W 120°
~50 NM
YDC
YVR
HUH
YYJ
TOU
CYV
ALPSE
ARRIE
PAE
KTSAP
JESSP
WUREL
ZADON
NORMY
BANDR
SEA
TCMA
EAT
ELN
OLM
HQM
YKM
AST
BTG
ETJ
UBG
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
BEARB	WP	N 47° 50' 40.15" W 122° 22' 42.44"	7800.0	VNAV	180.0	Fly By	TF
ALPSE	WP	N 48° 10' 0.00" W 122° 5' 0.00"	10900.0	VNAV	180.0	Fly Over	TF

Flyability	Return To Summary
Settings:	**Flight Type:** Departure Transition **Selected Airport:** KSEA **Aircraft Category:** Cat D **Climb Gradient:** *None assigned* **Ground Speeds:** Table: **200.0 Kts** up to **11000.0 ft** **240.0 Kts** up to **18000.0 ft** **260.0 Kts** up to **24000.0 ft** **340.0 Kts** up to **99900.0 ft** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan
Entire track is fly-able	

DME/DME	Return To Summary
Settings:	**RNP:** 2.0 **Flight Mode:** Manual **Line of Sight (DTED Level 0 Max):** Evaluated **DME Restrictions:** Evaluated **Inertial Drift:** Enabled **Initial Drift:** 0.558 NM **INS Drift Rate:** 8.000 NM/Hour **Range Mode:** OSV **Co-Frequencies:** Evaluated **RNP Edges:** Evaluated **Min DME Range:** 3.0 NM **Allowed Gap Length:** 4.0 NM **DME Types:** VOR/DME, VORTAC, Standalone, and User **DME Include Angles:** 30 to 150 **Critical DMEs:** Allowed **DoD Facilities:** Not included **Foreign Facilities:** Not included **Low DMEs:** Included **Terminal DMEs:** Included **Flight Check DMEs:** Selected **Higher Altitudes:** Evaluated **Near Maximum Altitude:** Evaluated

Total Number of DMEs Used: 4

Maximum DME Error: 0.417 NM.

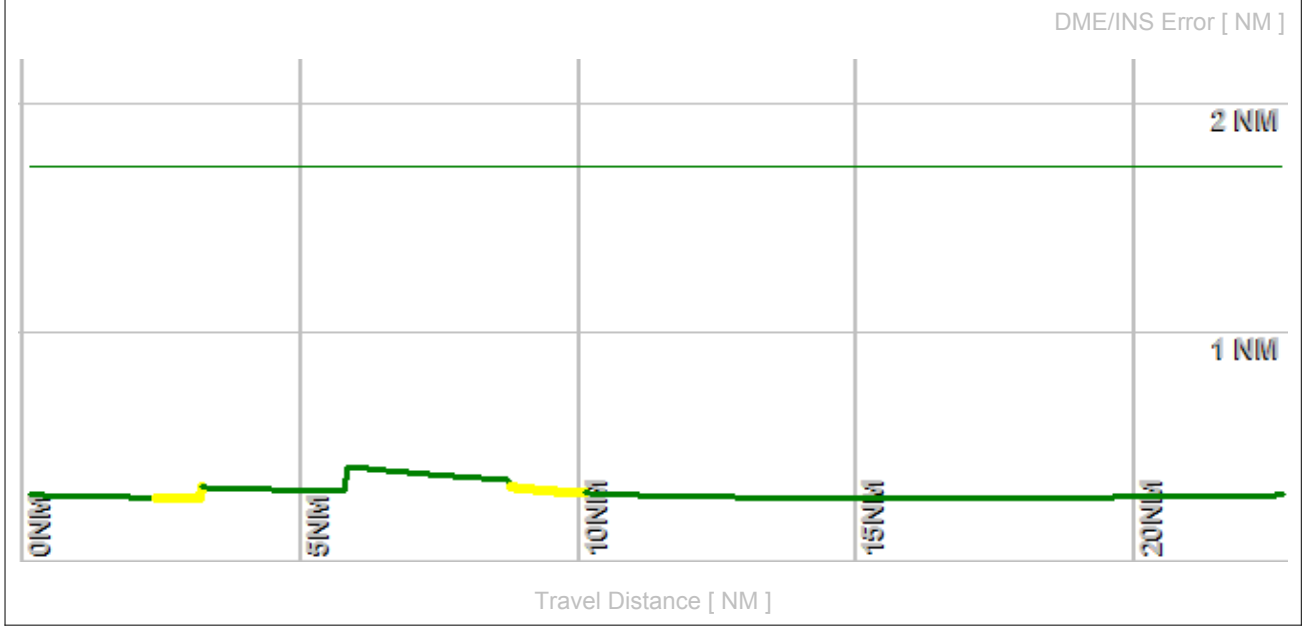
No Critical DMEs were found.

Available DMEs: PAE, CVV, OLM, SEA

Foreign DMEs within range: YDC, YVR, YYJ

DME/DME (Continued)

Return To Summary



DME/DME (Continued)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L + ESV	User	NO	0.578	Enabled	75.5%	75.5%
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L + ESV	User	NO	1.121	Enabled	100.0%	100.0%
3	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H + ESV	User	NO	0.436	Enabled	11.5%	11.5%
4	SEA	N 47° 26' 7.34" W 122° 18' 34.62" 19 E	H	Database	NO	0.480	Enabled	13.0%	13.0%
	Total Coverage							100.0%	100.0%

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	CVV	SEA	PAE	OLM		

Available DMEs by Waypoints		Return To Summary
Waypoint Before	**Waypoint After**	**DME List**
BEARB	ALPSE	OLM, CVV, PAE, and SEA

User Data

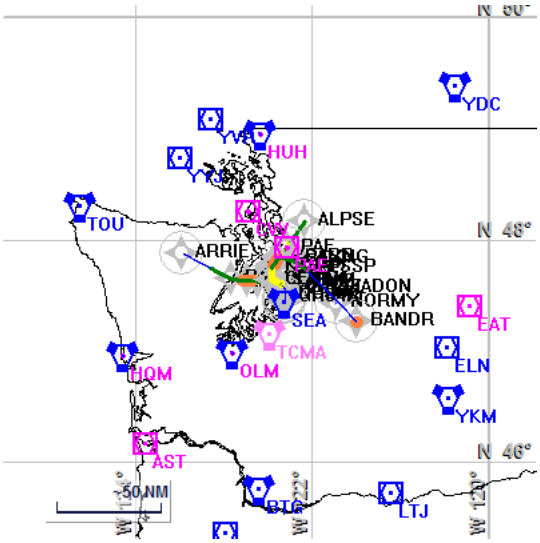
Return To Summary

User Data Files

#	File Name
1	UserDMEs_KSEA ATOME1 SID BEARB ALPSE 20160526_2119.udt

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L	678.5	110.60	PAE	Used
	ESV:	Bearing [True]: 207.0° to 234.0° Bearing [Mag]: 187.0° to 214.0°		Arc Distance: Out to 76.0 NM Altitude: 8900.0 to 20000.0 ft			
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L	200.0	117.20	CVV	Used
	Restriction:	Bearing [True]: 145.0° to 179.0° Bearing [Mag]: 126.0° to 160.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 349.0° to 19.0° Bearing [Mag]: 330.0° to 360.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 269.0° to 279.0° Bearing [Mag]: 250.0° to 260.0°		Distance: Beyond 30.0 NM Altitude: Below 3400.0 ft			
	ESV:	Bearing [True]: 178.0° to 204.0° Bearing [Mag]: 159.0° to 185.0°		Arc Distance: Out to 71.0 NM Altitude: 8800.0 to 20000.0 ft			
	ESV:	Bearing [True]: 145.0° to 192.0° Bearing [Mag]: 126.0° to 173.0°		Arc Distance: Out to 51.0 NM Altitude: 2700.0 to 20000.0 ft			
3	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H	10.0	117.70	HQM	Not Used
	ESV:	Bearing [True]: 54.0° to 81.0° Bearing [Mag]: 35.0° to 62.0°		Arc Distance: Out to 77.0 NM Altitude: 6900.0 to 16000.0 ft			
	ESV:	Bearing [True]: 38.0° to 62.0° Bearing [Mag]: 19.0° to 43.0°		Arc Distance: Out to 78.0 NM Altitude: 7700.0 to 16000.0 ft			
4	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H	82.9	113.00	HUH	Not Used
	Restriction:	Bearing [True]: 175.0° to 185.0° Bearing [Mag]: 155.0° to 165.0°		Distance: Beyond 15.0 NM Altitude: Below 6000.0 ft			
	ESV:	Bearing [True]: 176.0° to 187.0° Bearing [Mag]: 156.0° to 167.0°		Arc Distance: Out to 94.0 NM Altitude: 8200.0 to 16000.0 ft			
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H	200.0	113.40	OLM	Used
	Restriction:	Bearing [True]: 242.0° to 277.0° Bearing [Mag]: 223.0° to 258.0°		Distance: Beyond 20.0 NM Altitude: Below 4100.0 ft			
	Restriction:	Bearing [True]: 277.0° to 302.0° Bearing [Mag]: 258.0° to 283.0°		Distance: Beyond 30.0 NM Altitude: Below 4100.0 ft			
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°		Distance: Beyond 10.0 NM Altitude: Below 6000.0 ft			
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°		Distance: Beyond 20.0 NM Altitude: Below 7000.0 ft			
	ESV:	Bearing [True]: 358.0° to 38.0° Bearing [Mag]: 339.0° to 19.0°		Arc Distance: Out to 63.0 NM Altitude: 7000.0 to 16000.0 ft			



Name:	Jeanette Roller
Project Name:	KSEA
Output File:	KSEA ATOME1 SID BEARB PAE 20170327_0825
Procedure Name:	ATOME1
Software:	RNAV-Pro™
Version:	2.39
Date/Time:	3/27/2017 8:26:11 AM
Input File:	KSEA ATOME SID BEARB PAE 20160512_1226.txt
Databases:	AIRNAV Date: 3/19/2017 CIFP Date: 8/18/2016 DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	
DME/DME	✓	**No Critical DMEs Exist**
Radars	?	
Comms	?	
TERPS	?	

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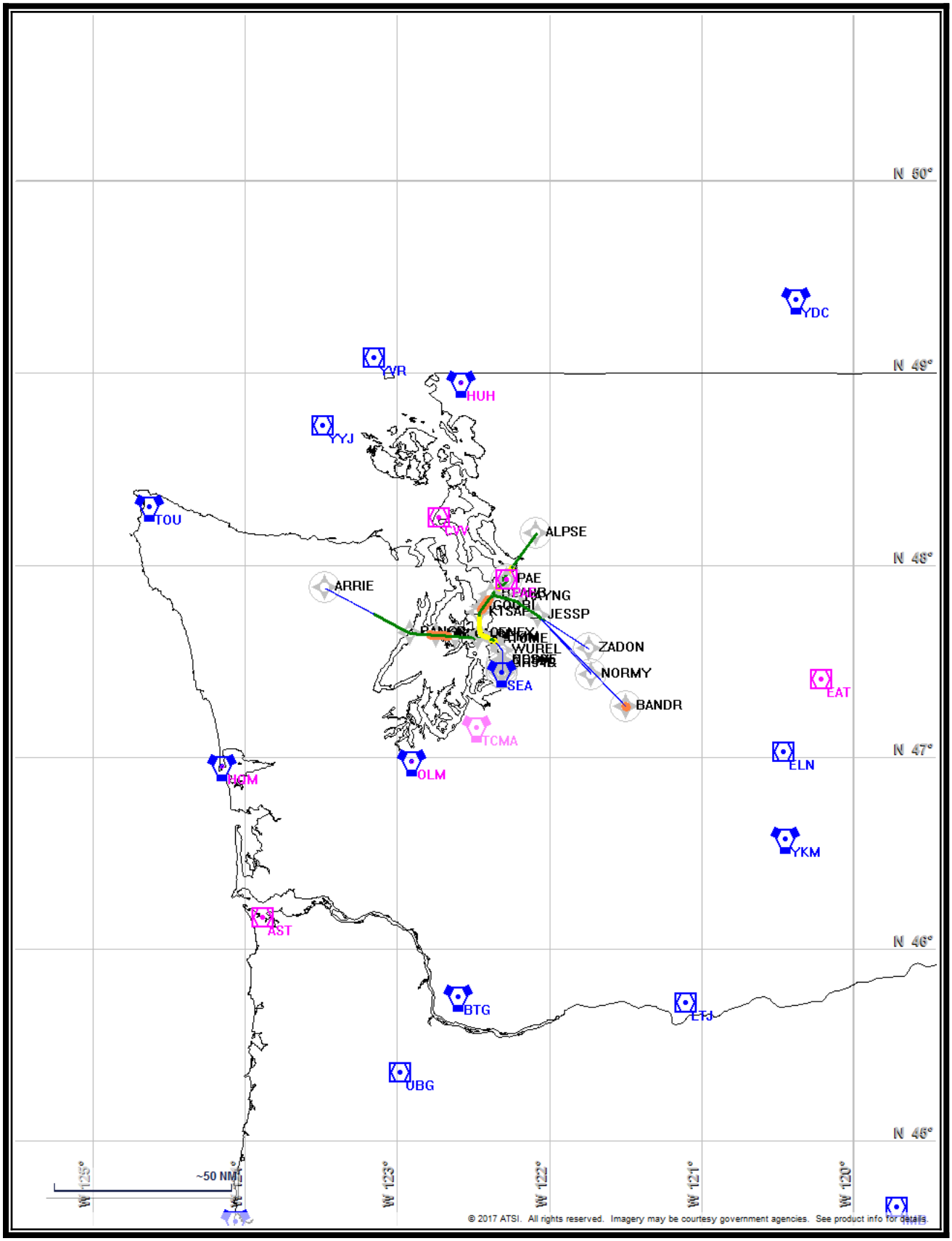
N 50°
N 49°
N 48°
N 47°
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W 125°
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YDC
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ZADON
NORMY
BANDR
WUREL
SEA
EAT
TCMA
ELN
OLM
HQM
YKM
AST
BTG
ETJ
UBG
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
BEARB	WP	N 47° 50' 40.15" W 122° 22' 42.44"	7800.0	VNAV	180.0	Fly By	TF
PAE	WP	N 47° 55' 11.40" W 122° 16' 40.08"	9100.0	VNAV	180.0	Fly Over	TF

Flyability	Return To Summary
Settings:	**Flight Type:** Departure Transition **Selected Airport:** KSEA **Aircraft Category:** Cat D **Climb Gradient:** *None assigned* **Ground Speeds:** Table: **200.0 Kts** up to **11000.0 ft** **240.0 Kts** up to **18000.0 ft** **260.0 Kts** up to **24000.0 ft** **340.0 Kts** up to **99900.0 ft** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan
Entire track is fly-able	

DME/DME	Return To Summary
Settings:	**RNP:** 2.0 **Flight Mode:** Manual **Line of Sight (DTED Level 0 Max):** Evaluated **DME Restrictions:** Evaluated **Inertial Drift:** Enabled **Initial Drift:** 0.558 NM **INS Drift Rate:** 8.000 NM/Hour **Range Mode:** OSV **Co-Frequencies:** Evaluated **RNP Edges:** Evaluated **Min DME Range:** 3.0 NM **Allowed Gap Length:** 4.0 NM **DME Types:** VOR/DME, VORTAC, Standalone, and User **DME Include Angles:** 30 to 150 **Critical DMEs:** Allowed **DoD Facilities:** Not included **Foreign Facilities:** Not included **Low DMEs:** Included **Terminal DMEs:** Included **Flight Check DMEs:** Selected **Higher Altitudes:** Evaluated **Near Maximum Altitude:** Evaluated

Total Number of DMEs Used: 4

Maximum DME Error: 0.411 NM.

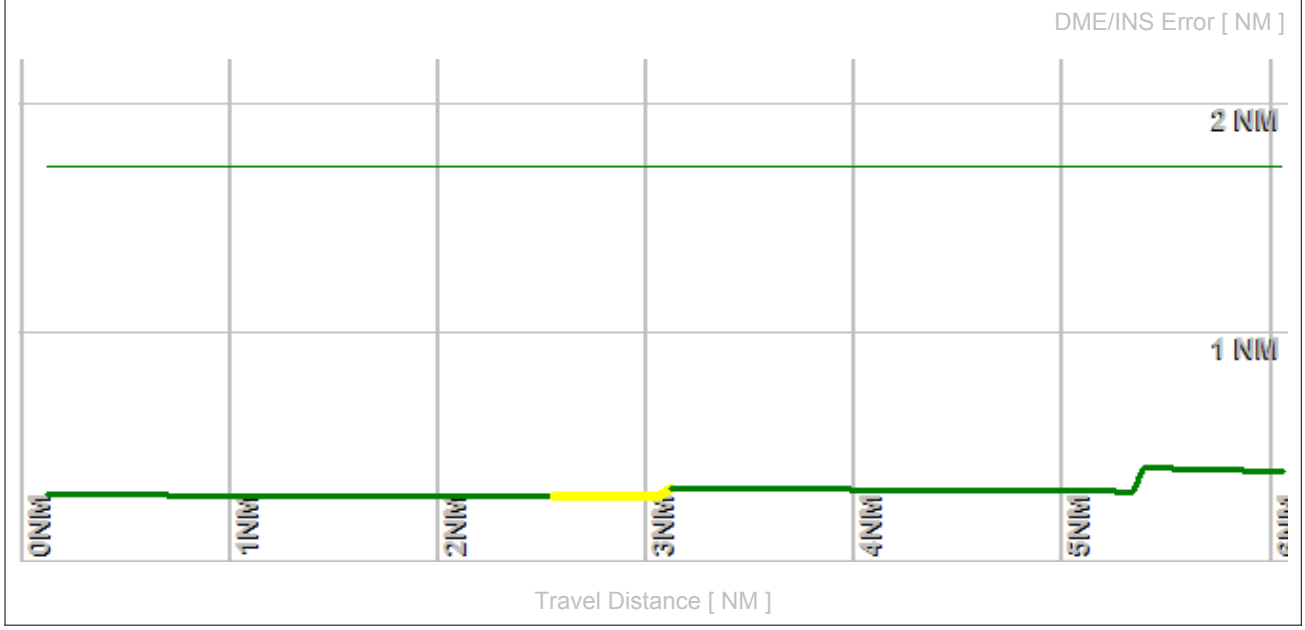
No Critical DMEs were found.

Available DMEs: PAE, CVV, OLM, SEA

Foreign DMEs within range: YDC, YVR, YYJ

DME/DME (Continued)

Return To Summary



DME/DME (Continued)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L + ESV	User	NO	0.411	Enabled	50.5%	50.5%
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L + ESV	User	NO	0.640	Enabled	100.0%	100.0%
3	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H + ESV	User	NO	0.458	Enabled	37.6%	37.6%
4	SEA	N 47° 26' 7.34" W 122° 18' 34.62" 19 E	H	Database	NO	0.337	Enabled	11.9%	11.9%
	Total Coverage							100.0%	100.0%

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	CVV	SEA	OLM	PAE		

Available DMEs by Waypoints		Return To Summary
Waypoint Before	**Waypoint After**	**DME List**
BEARB	PAE	OLM, CVV, PAE, and SEA

User Data

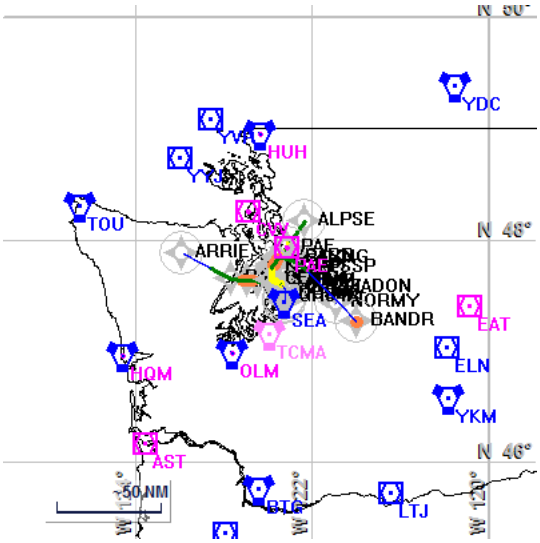
Return To Summary

User Data Files

#	File Name
1	UserDMEs_KSEA ATOME1 SID BEARB ALPSE 20160526_2119.udt

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L	678.5	110.60	PAE	Used
	ESV:	Bearing [True]: 207.0° to 234.0° Bearing [Mag]: 187.0° to 214.0°		Arc Distance: Out to 76.0 NM Altitude: 8900.0 to 20000.0 ft			
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L	200.0	117.20	CVV	Used
	Restriction:	Bearing [True]: 145.0° to 179.0° Bearing [Mag]: 126.0° to 160.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 349.0° to 19.0° Bearing [Mag]: 330.0° to 360.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 269.0° to 279.0° Bearing [Mag]: 250.0° to 260.0°		Distance: Beyond 30.0 NM Altitude: Below 3400.0 ft			
	ESV:	Bearing [True]: 178.0° to 204.0° Bearing [Mag]: 159.0° to 185.0°		Arc Distance: Out to 71.0 NM Altitude: 8800.0 to 20000.0 ft			
	ESV:	Bearing [True]: 145.0° to 192.0° Bearing [Mag]: 126.0° to 173.0°		Arc Distance: Out to 51.0 NM Altitude: 2700.0 to 20000.0 ft			
3	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H	10.0	117.70	HQM	Not Used
	ESV:	Bearing [True]: 54.0° to 81.0° Bearing [Mag]: 35.0° to 62.0°		Arc Distance: Out to 77.0 NM Altitude: 6900.0 to 16000.0 ft			
	ESV:	Bearing [True]: 38.0° to 62.0° Bearing [Mag]: 19.0° to 43.0°		Arc Distance: Out to 78.0 NM Altitude: 7700.0 to 16000.0 ft			
4	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H	82.9	113.00	HUH	Not Used
	Restriction:	Bearing [True]: 175.0° to 185.0° Bearing [Mag]: 155.0° to 165.0°		Distance: Beyond 15.0 NM Altitude: Below 6000.0 ft			
	ESV:	Bearing [True]: 176.0° to 187.0° Bearing [Mag]: 156.0° to 167.0°		Arc Distance: Out to 94.0 NM Altitude: 8200.0 to 16000.0 ft			
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H	200.0	113.40	OLM	Used
	Restriction:	Bearing [True]: 242.0° to 277.0° Bearing [Mag]: 223.0° to 258.0°		Distance: Beyond 20.0 NM Altitude: Below 4100.0 ft			
	Restriction:	Bearing [True]: 277.0° to 302.0° Bearing [Mag]: 258.0° to 283.0°		Distance: Beyond 30.0 NM Altitude: Below 4100.0 ft			
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°		Distance: Beyond 10.0 NM Altitude: Below 6000.0 ft			
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°		Distance: Beyond 20.0 NM Altitude: Below 7000.0 ft			
	ESV:	Bearing [True]: 358.0° to 38.0° Bearing [Mag]: 339.0° to 19.0°		Arc Distance: Out to 63.0 NM Altitude: 7000.0 to 16000.0 ft			



Name:	Jeanette Roller
Project Name:	KSEA
Output File:	KSEA ATOME1 SID JESSP NORMY 20170327_0826
Procedure Name:	ATOME1
Software:	RNAV-Pro™
Version:	2.39
Date/Time:	3/27/2017 8:27:02 AM
Input File:	KSEA ATOME SID JESSP NORMY 20160512_1215.txt
Databases:	AIRNAV Date: 3/19/2017
	CIFP Date: 8/18/2016
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	
DME/DME	✓	**No Critical DMEs Exist**
Radars	?	
Comms	?	
TERPS	?	

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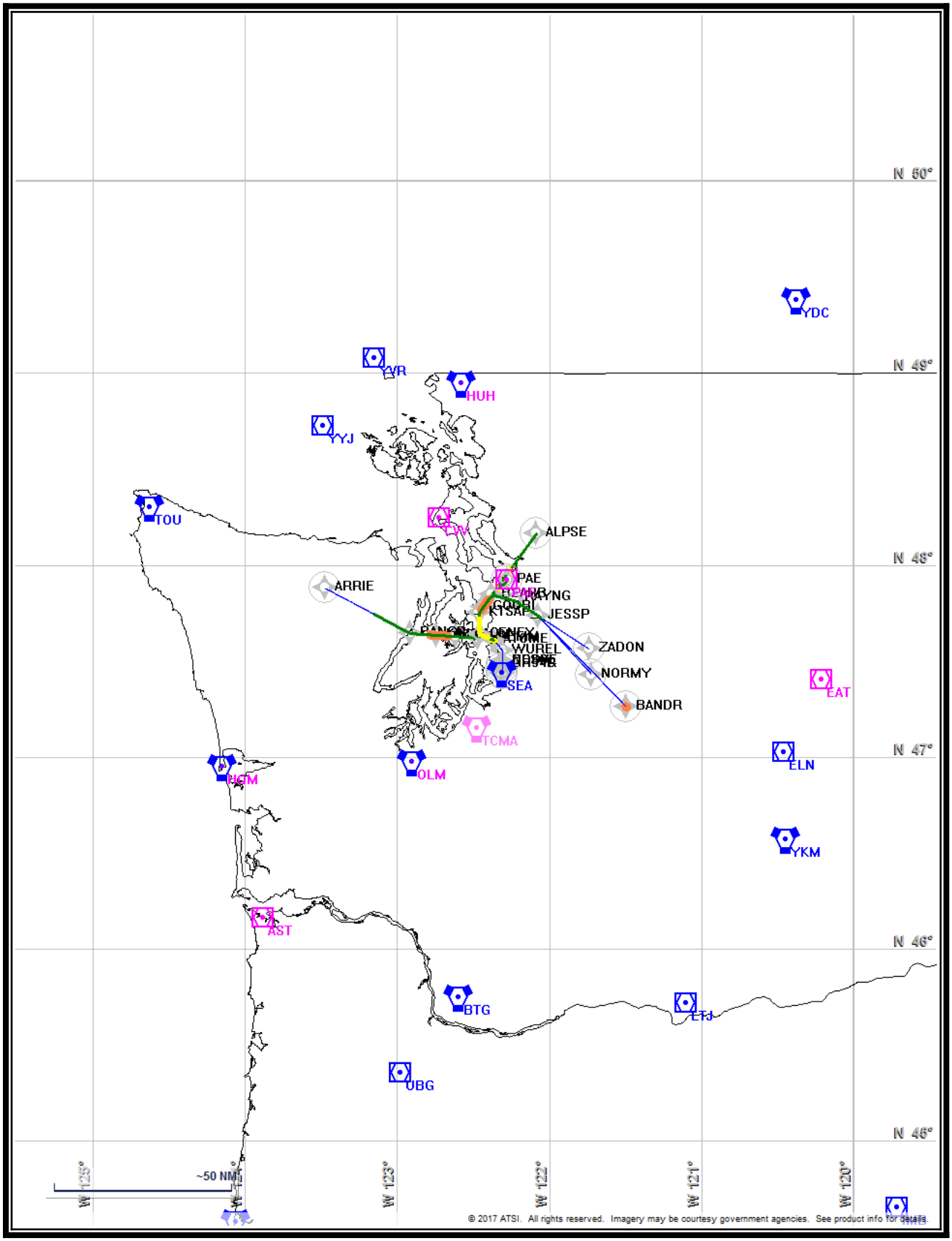
N 50°
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W 122°
W 121°
W 120°
~50 NM
YDC
YVR
HUH
YYJ
TOU
CLV
ALPSE
ARRIE
PAE
KTSAP
JESSP
ZADON
WUREL
NORMY
BANDR
SEA
TCMA
OLM
HQM
EAT
ELN
YKM
AST
BTG
ETJ
UBG
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
JESSP	WP	N 47° 44' 12.80" W 122° 4' 35.04"	10000.0	VNAV	210.0	Fly By	TF
NORMY	WP	N 47° 25' 46.39" W 121° 43' 16.41"	12300.0	VNAV	210.0	Fly Over	TF

Flyability	Return To Summary
Settings:	**Flight Type:** Departure Transition **Selected Airport:** KSEA **Aircraft Category:** Cat D **Climb Gradient:** *None assigned* **Ground Speeds:** Table: **200.0 Kts** up to **11000.0 ft** **240.0 Kts** up to **18000.0 ft** **260.0 Kts** up to **24000.0 ft** **340.0 Kts** up to **99900.0 ft** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan
Entire track is fly-able	

DME/DME	Return To Summary
Settings:	**RNP:** 2.0 **Flight Mode:** Manual **Line of Sight (DTED Level 0 Max):** Evaluated **DME Restrictions:** Evaluated **Inertial Drift:** Enabled **Initial Drift:** 0.558 NM **INS Drift Rate:** 8.000 NM/Hour **Range Mode:** OSV **Co-Frequencies:** Evaluated **RNP Edges:** Evaluated **Min DME Range:** 3.0 NM **Allowed Gap Length:** 4.0 NM **DME Types:** VOR/DME, VORTAC, Standalone, and User **DME Include Angles:** 30 to 150 **Critical DMEs:** Allowed **DoD Facilities:** Not included **Foreign Facilities:** Not included **Low DMEs:** Included **Terminal DMEs:** Included **Flight Check DMEs:** Selected **Higher Altitudes:** Evaluated **Near Maximum Altitude:** Evaluated

Total Number of DMEs Used: 2

Maximum DME Error: 1.094 NM.

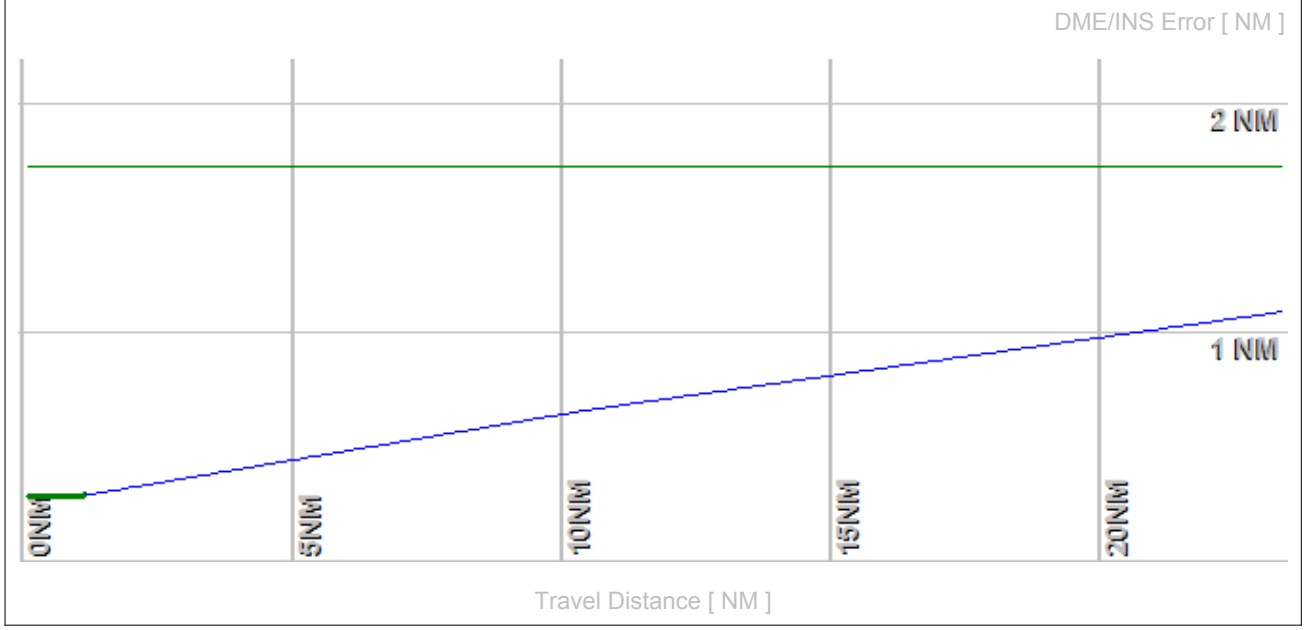
No Critical DMEs were found.

Available DMEs: PAE, OLM

Foreign DMEs within range: YDC, YVR, YYJ

DME/DME (Continued)

Return To Summary



DME/DME (Continued)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L + ESV	User	NO	1.407	Enabled	5.2%	4.8%
2	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H + ESV	User	NO	1.407	Enabled	5.2%	4.8%
	Total Coverage							5.2%	4.8%

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	OLM	PAE				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 47° 43' 17.64" W 122° 3' 30.81"	N 47° 25' 48.74" W 121° 43' 19.10"	22.2

VOR: SEA	Available from N 47° 43' 17.64" W 122° 3' 30.81" to N 47° 25' 48.74" W 121° 43' 19.10"
VOR: BFI	Available from N 47° 43' 17.64" W 122° 3' 30.81" to N 47° 25' 48.74" W 121° 43' 19.10"
VOR: TCMA	Available from N 47° 43' 17.64" W 122° 3' 30.81" to N 47° 25' 48.74" W 121° 43' 19.10"
VOR: TCM	Available from N 47° 43' 17.64" W 122° 3' 30.81" to N 47° 25' 48.74" W 121° 43' 19.10"
VOR: SEA	Available from N 47° 43' 17.64" W 122° 3' 30.81" to N 47° 25' 48.74" W 121° 43' 19.10"
VOR: PAE	Available from N 47° 43' 17.64" W 122° 3' 30.81" to N 47° 25' 48.74" W 121° 43' 19.10"

Available DMEs by Waypoints		Return To Summary
Waypoint Before	**Waypoint After**	**DME List**
JESSP	NORMY	OLM and PAE

User Data

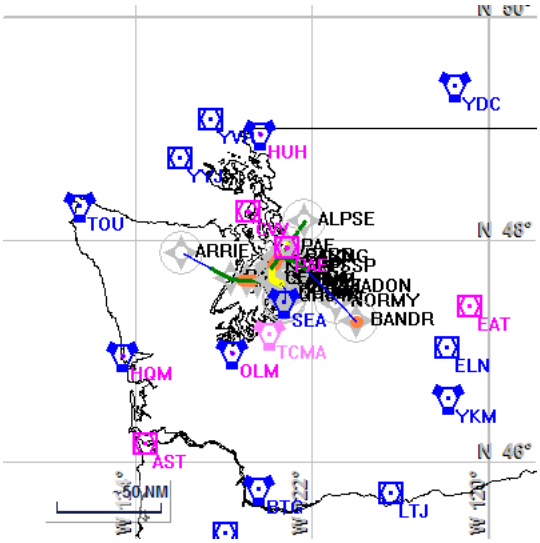
Return To Summary

User Data Files

#	File Name
1	UserDMEs_KSEA ATOME1 SID BEARB ALPSE 20160526_2119.udt

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L	678.5	110.60	PAE	Used
	ESV:	Bearing [True]: 207.0° to 234.0° Bearing [Mag]: 187.0° to 214.0°		Arc Distance: Out to 76.0 NM Altitude: 8900.0 to 20000.0 ft			
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L	200.0	117.20	CVV	Not Used
	Restriction:	Bearing [True]: 145.0° to 179.0° Bearing [Mag]: 126.0° to 160.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 349.0° to 19.0° Bearing [Mag]: 330.0° to 360.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 269.0° to 279.0° Bearing [Mag]: 250.0° to 260.0°		Distance: Beyond 30.0 NM Altitude: Below 3400.0 ft			
	ESV:	Bearing [True]: 178.0° to 204.0° Bearing [Mag]: 159.0° to 185.0°		Arc Distance: Out to 71.0 NM Altitude: 8800.0 to 20000.0 ft			
	ESV:	Bearing [True]: 145.0° to 192.0° Bearing [Mag]: 126.0° to 173.0°		Arc Distance: Out to 51.0 NM Altitude: 2700.0 to 20000.0 ft			
3	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H	10.0	117.70	HQM	Not Used
	ESV:	Bearing [True]: 54.0° to 81.0° Bearing [Mag]: 35.0° to 62.0°		Arc Distance: Out to 77.0 NM Altitude: 6900.0 to 16000.0 ft			
	ESV:	Bearing [True]: 38.0° to 62.0° Bearing [Mag]: 19.0° to 43.0°		Arc Distance: Out to 78.0 NM Altitude: 7700.0 to 16000.0 ft			
4	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H	82.9	113.00	HUH	Not Used
	Restriction:	Bearing [True]: 175.0° to 185.0° Bearing [Mag]: 155.0° to 165.0°		Distance: Beyond 15.0 NM Altitude: Below 6000.0 ft			
	ESV:	Bearing [True]: 176.0° to 187.0° Bearing [Mag]: 156.0° to 167.0°		Arc Distance: Out to 94.0 NM Altitude: 8200.0 to 16000.0 ft			
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H	200.0	113.40	OLM	Used
	Restriction:	Bearing [True]: 242.0° to 277.0° Bearing [Mag]: 223.0° to 258.0°		Distance: Beyond 20.0 NM Altitude: Below 4100.0 ft			
	Restriction:	Bearing [True]: 277.0° to 302.0° Bearing [Mag]: 258.0° to 283.0°		Distance: Beyond 30.0 NM Altitude: Below 4100.0 ft			
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°		Distance: Beyond 10.0 NM Altitude: Below 6000.0 ft			
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°		Distance: Beyond 20.0 NM Altitude: Below 7000.0 ft			
	ESV:	Bearing [True]: 358.0° to 38.0° Bearing [Mag]: 339.0° to 19.0°		Arc Distance: Out to 63.0 NM Altitude: 7000.0 to 16000.0 ft			



Name:	Jeanette Roller
Project Name:	KSEA
Output File:	KSEA ATOME1 SID JESSP ZADON 20170327_0827
Procedure Name:	ATOME1
Software:	RNAV-Pro™
Version:	2.39
Date/Time:	3/27/2017 8:27:57 AM
Input File:	KSEA ATOME SID JESSP ZADON 20160512_1221.txt
Databases:	AIRNAV Date: 3/19/2017
	CIFP Date: 8/18/2016
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	
DME/DME	✓	**No Critical DMEs Exist**
Radars	?	
Comms	?	
TERPS	?	

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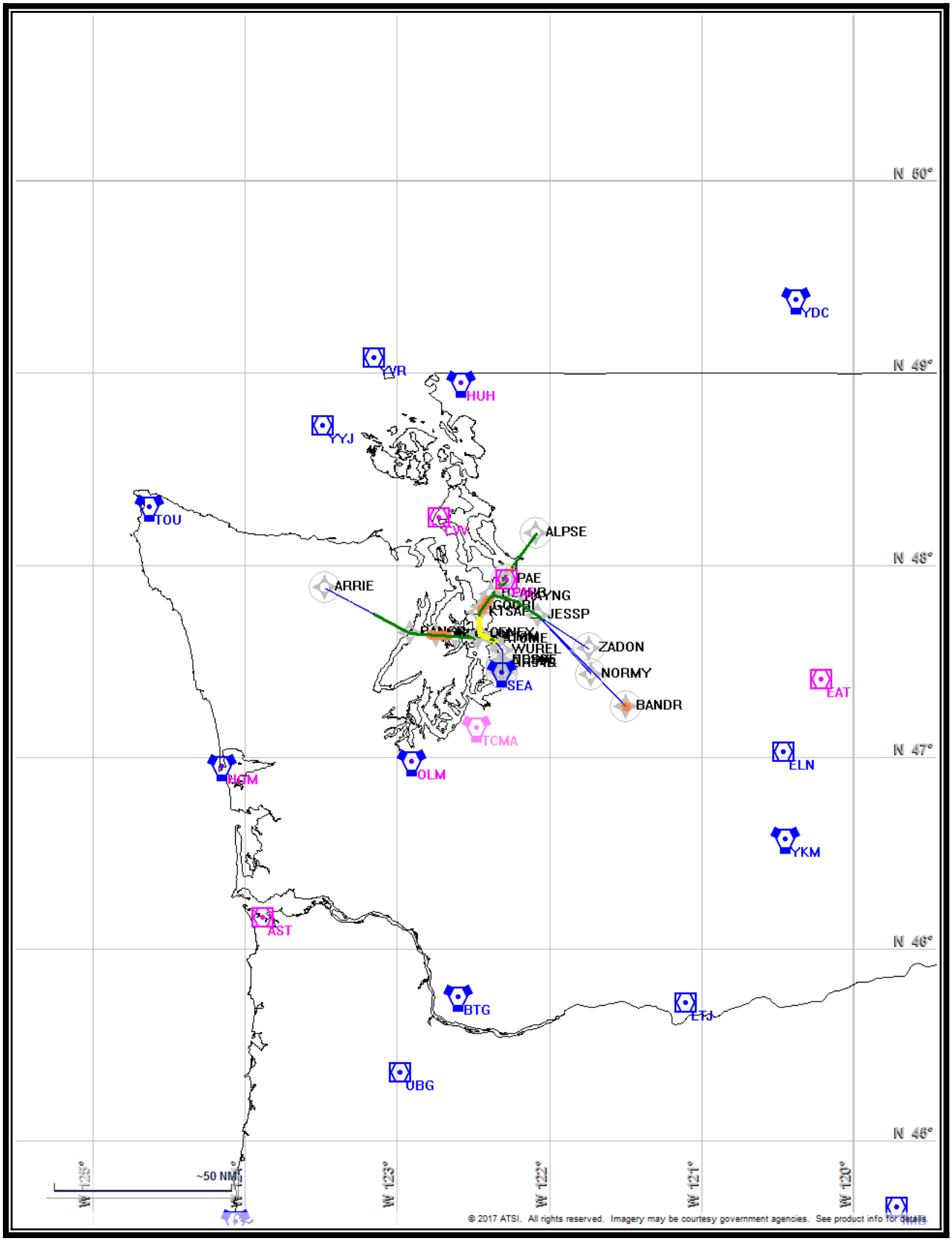
N 50°
N 49°
N 48°
N 47°
N 46°
N 45°
W 125°
W 124°
W 123°
W 122°
W 121°
W 120°
~50 NM
YDC
YVR
HUH
YYJ
TOU
CLV
ALPSE
ARRIE
PAE
KTSAP
JESSP
WUREL
ZADON
NORMY
BANDR
SEA
TCMA
OLM
HQM
EAT
ELN
YKM
AST
BTG
ETJ
UBG
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
JESSP	WP	N 47° 44' 12.80" W 122° 4' 35.04"	10000.0	VNAV	210.0	Fly By	TF
ZADON	WP	N 47° 33' 44.00" W 121° 44' 19.00"	11700.0	VNAV	210.0	Fly Over	TF

Flyability	Return To Summary
Settings:	**Flight Type:** Departure Transition **Selected Airport:** KSEA **Aircraft Category:** Cat D **Climb Gradient:** *None assigned* **Ground Speeds:** Table: **200.0 Kts** up to **11000.0 ft** **240.0 Kts** up to **18000.0 ft** **260.0 Kts** up to **24000.0 ft** **340.0 Kts** up to **99900.0 ft** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan
Entire track is fly-able	

DME/DME	Return To Summary
Settings:	**RNP:** 2.0 **Flight Mode:** Manual **Line of Sight (DTED Level 0 Max):** Evaluated **DME Restrictions:** Evaluated **Inertial Drift:** Enabled **Initial Drift:** 0.558 NM **INS Drift Rate:** 8.000 NM/Hour **Range Mode:** OSV **Co-Frequencies:** Evaluated **RNP Edges:** Evaluated **Min DME Range:** 3.0 NM **Allowed Gap Length:** 4.0 NM **DME Types:** VOR/DME, VORTAC, Standalone, and User **DME Include Angles:** 30 to 150 **Critical DMEs:** Allowed **DoD Facilities:** Not included **Foreign Facilities:** Not included **Low DMEs:** Included **Terminal DMEs:** Included **Flight Check DMEs:** Selected **Higher Altitudes:** Evaluated **Near Maximum Altitude:** Evaluated

Total Number of DMEs Used: 2

Maximum DME Error: 0.853 NM.

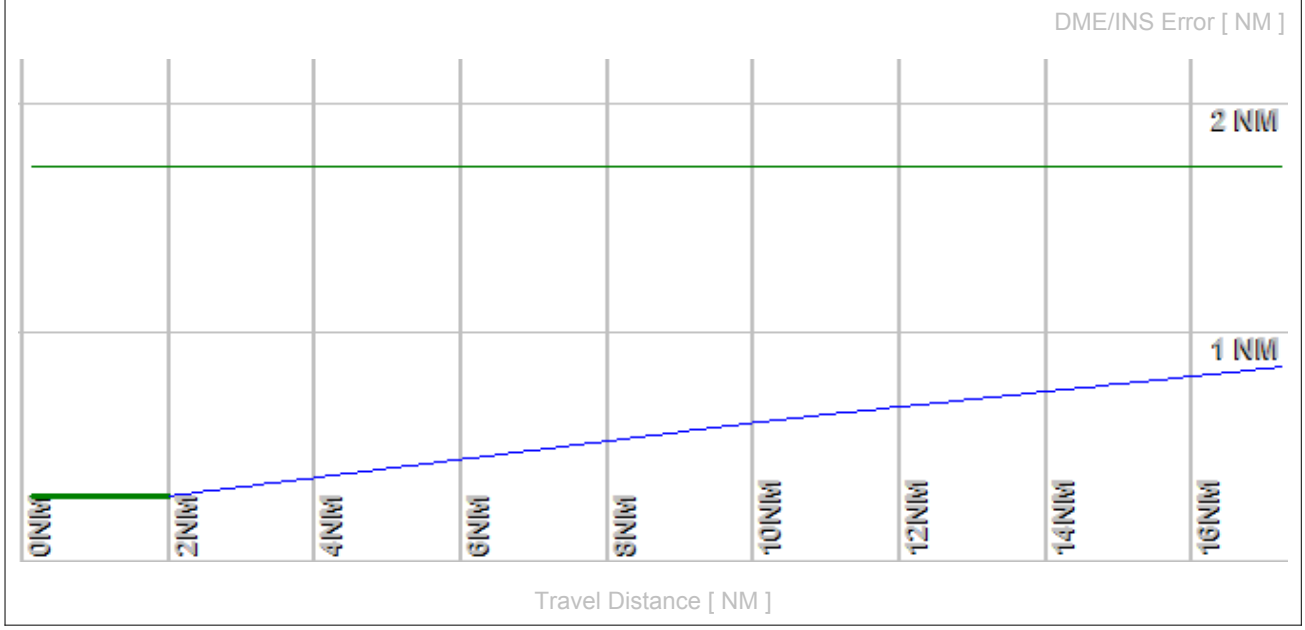
No Critical DMEs were found.

Available DMEs: PAE, OLM

Foreign DMEs within range: YDC, YVR, YYJ

DME/DME (Continued)

Return To Summary



DME/DME (Continued)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L + ESV	User	NO	1.202	Enabled	12.1%	11.3%
2	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H + ESV	User	NO	1.202	Enabled	12.1%	11.3%
	Total Coverage							12.1%	11.3%

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	OLM	PAE				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 47° 43' 0.01" W 122° 2' 13.43"	N 47° 33' 44.45" W 121° 44' 19.86"	15.2

VOR: SEA	Available from N 47° 43' 0.01" W 122° 2' 13.43" to N 47° 33' 44.45" W 121° 44' 19.86"
VOR: BFI	Available from N 47° 43' 0.01" W 122° 2' 13.43" to N 47° 33' 44.45" W 121° 44' 19.86"
VOR: TCMA	Available from N 47° 43' 0.01" W 122° 2' 13.43" to N 47° 33' 44.45" W 121° 44' 19.86"
VOR: TCM	Available from N 47° 43' 0.01" W 122° 2' 13.43" to N 47° 33' 44.45" W 121° 44' 19.86"
VOR: SEA	Available from N 47° 43' 0.01" W 122° 2' 13.43" to N 47° 33' 44.45" W 121° 44' 19.86"
VOR: PAE	Available from N 47° 43' 0.01" W 122° 2' 13.43" to N 47° 33' 44.45" W 121° 44' 19.86"

Available DMEs by Waypoints		Return To Summary
Waypoint Before	**Waypoint After**	**DME List**
JESSP	ZADON	OLM and PAE

User Data

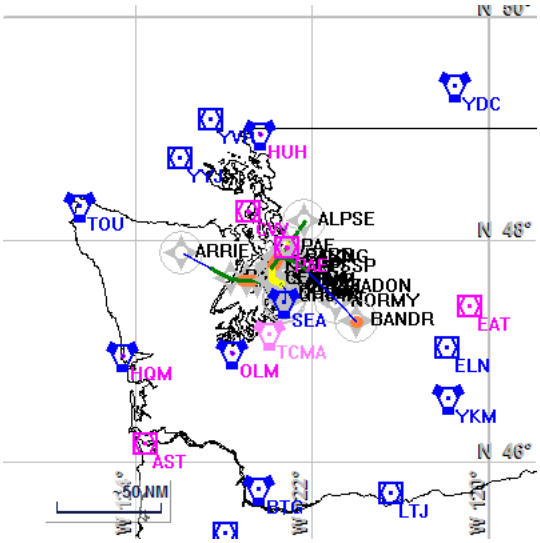
Return To Summary

User Data Files

#	File Name
1	UserDMEs_KSEA ATOME1 SID BEARB ALPSE 20160526_2119.udt

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L	678.5	110.60	PAE	Used
	ESV:	Bearing [True]: 207.0° to 234.0° Bearing [Mag]: 187.0° to 214.0°		Arc Distance: Out to 76.0 NM Altitude: 8900.0 to 20000.0 ft			
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L	200.0	117.20	CVV	Not Used
	Restriction:	Bearing [True]: 145.0° to 179.0° Bearing [Mag]: 126.0° to 160.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 349.0° to 19.0° Bearing [Mag]: 330.0° to 360.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 269.0° to 279.0° Bearing [Mag]: 250.0° to 260.0°		Distance: Beyond 30.0 NM Altitude: Below 3400.0 ft			
	ESV:	Bearing [True]: 178.0° to 204.0° Bearing [Mag]: 159.0° to 185.0°		Arc Distance: Out to 71.0 NM Altitude: 8800.0 to 20000.0 ft			
	ESV:	Bearing [True]: 145.0° to 192.0° Bearing [Mag]: 126.0° to 173.0°		Arc Distance: Out to 51.0 NM Altitude: 2700.0 to 20000.0 ft			
3	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H	10.0	117.70	HQM	Not Used
	ESV:	Bearing [True]: 54.0° to 81.0° Bearing [Mag]: 35.0° to 62.0°		Arc Distance: Out to 77.0 NM Altitude: 6900.0 to 16000.0 ft			
	ESV:	Bearing [True]: 38.0° to 62.0° Bearing [Mag]: 19.0° to 43.0°		Arc Distance: Out to 78.0 NM Altitude: 7700.0 to 16000.0 ft			
4	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H	82.9	113.00	HUH	Not Used
	Restriction:	Bearing [True]: 175.0° to 185.0° Bearing [Mag]: 155.0° to 165.0°		Distance: Beyond 15.0 NM Altitude: Below 6000.0 ft			
	ESV:	Bearing [True]: 176.0° to 187.0° Bearing [Mag]: 156.0° to 167.0°		Arc Distance: Out to 94.0 NM Altitude: 8200.0 to 16000.0 ft			
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H	200.0	113.40	OLM	Used
	Restriction:	Bearing [True]: 242.0° to 277.0° Bearing [Mag]: 223.0° to 258.0°		Distance: Beyond 20.0 NM Altitude: Below 4100.0 ft			
	Restriction:	Bearing [True]: 277.0° to 302.0° Bearing [Mag]: 258.0° to 283.0°		Distance: Beyond 30.0 NM Altitude: Below 4100.0 ft			
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°		Distance: Beyond 10.0 NM Altitude: Below 6000.0 ft			
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°		Distance: Beyond 20.0 NM Altitude: Below 7000.0 ft			
	ESV:	Bearing [True]: 358.0° to 38.0° Bearing [Mag]: 339.0° to 19.0°		Arc Distance: Out to 63.0 NM Altitude: 7000.0 to 16000.0 ft			



Name:	Jeanette Roller
Project Name:	KSEA
Output File:	KSEA ATOME1 SID RW34C ARRIE 20170327_0829
Procedure Name:	ATOME1
Software:	RNAV-Pro™
Version:	2.39
Date/Time:	3/27/2017 8:29:36 AM
Input File:	KSEA ATOME SID RW34C ARRIE 20160513.txt
Databases:	AIRNAV Date: 3/19/2017 CIFP Date: 8/18/2016 DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	**Please Check Flyability Results**
DME/DME	✓	**1 Critical DME Exists: PAE**
Radars	?	
Comms	?	
TERPS	?	

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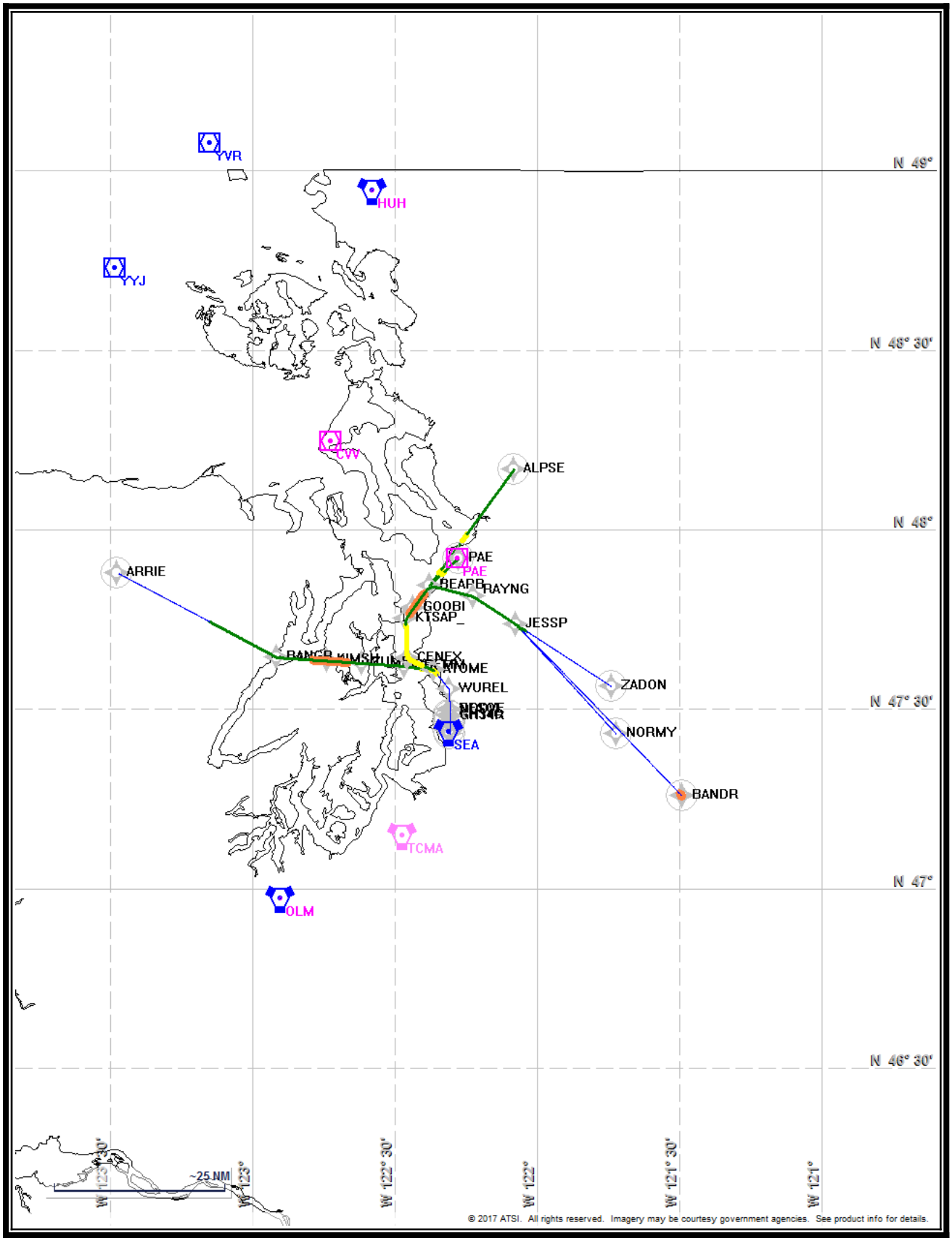
YVR
HUH
YYJ
CYW
ALPSE
PAE
PAE
BEAPB
RAYNG
GOOBI
KTSAP_
JESSP
ARRIE
CENEX
ATOME
WUREL
ZADON
NORMY
BANDR
SEA
TCMA
OLM
N 49°
N 48° 30'
N 48°
N 47° 30'
N 47°
N 46° 30'
W 123° 30'
W 123°
W 122° 30'
W 122°
W 121° 30'
W 121°
~25 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW34C(...	WP	N 47° 26' 16.69" W 122° 18' 40.36"	363.0	VNAV	0.0	Fly Over	TF
RW16C(...	WP	N 47° 27' 49.71" W 122° 18' 39.55"	464.6	VNAV	130.0	Fly Over	VA
GH34C	WP	N 47° 28' 50.92" W 122° 18' 39.01"	975.0	VNAV	145.0	Fly Over	DF
NESOE	WP	N 47° 29' 55.64" W 122° 18' 38.45"	1503.8	VNAV	145.0	Fly By	TF
WUREL	WP	N 47° 33' 19.52" W 122° 18' 36.66"	3169.8	VNAV	145.0	Fly By	TF
ATOME	WP	N 47° 36' 27.23" W 122° 21' 47.61"	4500.0	VNAV	145.0	Fly By	TF
BREMM	WP	N 47° 37' 12.00" W 122° 28' 6.00"	4500.0	VNAV	180.0	Fly By	TF
ZUMBI	WP	N 47° 37' 40.68" W 122° 37' 2.50"	6000.0	VNAV	180.0	Fly By	TF
KIMSH	WP	N 47° 38' 4.70" W 122° 44' 24.63"	7200.0	VNAV	180.0	Fly By	TF
BANGR	WP	N 47° 38' 38.05" W 122° 54' 53.69"	9000.0	VNAV	180.0	Fly By	TF
ARRIE	WP	N 47° 52' 47.61" W 123° 28' 33.00"	11600.0	VNAV	180.0	Fly Over	TF

Climb Gradient: 500.0 ft/NM up to 940.0 ft MSL

Flyability	Return To Summary
Settings:	**Flight Type:** Runway Departure **Selected Airport:** KSEA **Aircraft Category:** Cat D **Climb Gradient:** 500.0 ft/NM up to 940.0 ft MSL **Ground Speeds:** Departure: **120.0 Kts** out to **10.0 NM** Table: **200.0 Kts** up to **11000.0 ft** **240.0 Kts** up to **18000.0 ft** **260.0 Kts** up to **24000.0 ft** **340.0 Kts** up to **99900.0 ft** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan
Flight Track comes into contact with terrain. Minimum AGL along route was -56.95 Ft. Flight Track contacted terrain (DTED 0 MAX) between AER and DER or within 2/3 NM of DER.	

DME/DME	Return To Summary
Settings:	**RNP:** 2.0 **Flight Mode:** Manual **Line of Sight (DTED Level 0 Max):** Evaluated **DME Restrictions:** Evaluated **Inertial Drift:** Enabled **Initial Drift:** 0.165 NM **INS Drift Rate:** 8.000 NM/Hour **Range Mode:** OSV **Co-Frequencies:** Evaluated **RNP Edges:** Evaluated **Min DME Range:** 3.0 NM **Allowed Gap Length:** 4.0 NM **DME Types:** VOR/DME, VORTAC, Standalone, and User **DME Include Angles:** 30 to 150 **Critical DMEs:** Allowed **DoD Facilities:** Not included **Foreign Facilities:** Not included **Low DMEs:** Included **Terminal DMEs:** Included **Flight Check DMEs:** Selected **Higher Altitudes:** Evaluated **Near Maximum Altitude:** Evaluated **Minimum MSL DMEs Avail:** 4283 ft

Total Number of DMEs Used: 5

Maximum DME Error: 0.982 NM.

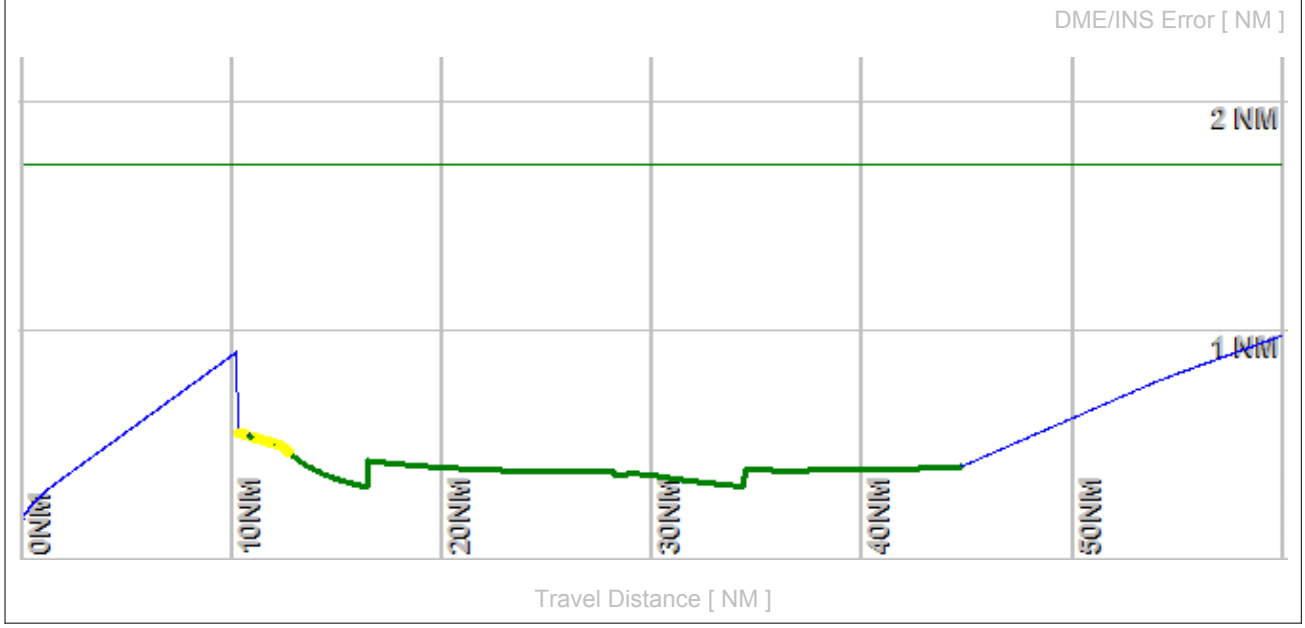
1 Critical DME was found.

Available DMEs: PAE, CVV, SEA, OLM, HQM

Foreign DMEs within range: YDC, YVR, YYJ, YZT

DME/DME (Continued)

Return To Summary



DME/DME (Continued)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L + ESV	User	YES	**Drift Time**	Enabled	49.4%	54.3%
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L + ESV	User	NO	1.309	Enabled	37.9%	41.6%
3	SEA	N 47° 26' 7.34" W 122° 18' 34.62" 19 E	H	Database	NO	0.982	Enabled	6.5%	6.9%
4	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H + ESV	User	NO	0.982	Enabled	2.6%	3.0%
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H + ESV	User	NO	0.982	Enabled	7.6%	8.8%
	Total Coverage							52.0%	57.3%

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.6						
2.6	PAE					
3.7	PAE	CVV				
6.8	PAE	CVV	SEA			
10.6	PAE	CVV	SEA			
14.9	PAE	CVV	SEA			
21.2	PAE	CVV	OLM			
26.2	PAE	CVV	OLM	HQM		
32.7	PAE	CVV	OLM	HQM		

Inertial Drift Segments

#	Start Location	End Location	Length [NM]

Available DMEs by Waypoints		Return To Summary
Waypoint Before	**Waypoint After**	**DME List**
RW34C(AER)	RW16C(DER)	
RW16C(DER)	GH34C	
GH34C	NESOE	PAE
NESOE	WUREL	CVV and PAE
WUREL	ATOME	CVV, PAE, and SEA
ATOME	BREMM	CVV, PAE, and SEA
BREMM	ZUMBI	CVV, PAE, and SEA
ZUMBI	KIMSH	OLM, CVV, and PAE
KIMSH	BANGR	OLM, HQM, CVV, and PAE
BANGR	ARRIE	OLM, HQM, CVV, and PAE

User Data

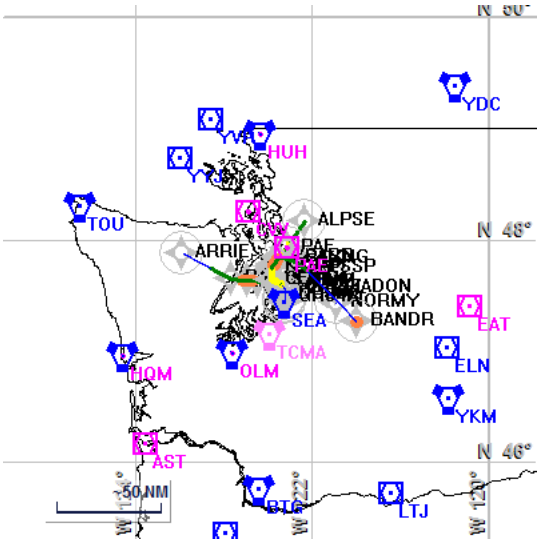
Return To Summary

User Data Files

#	File Name
1	UserDMEs_KSEA ATOME1 SID BEARB ALPSE 20160526_2119.udt

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L	678.5	110.60	PAE	Used
	ESV:	Bearing [True]: 207.0° to 234.0° Bearing [Mag]: 187.0° to 214.0°		Arc Distance: Out to 76.0 NM Altitude: 8900.0 to 20000.0 ft			
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L	200.0	117.20	CVV	Used
	Restriction:	Bearing [True]: 145.0° to 179.0° Bearing [Mag]: 126.0° to 160.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 349.0° to 19.0° Bearing [Mag]: 330.0° to 360.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 269.0° to 279.0° Bearing [Mag]: 250.0° to 260.0°		Distance: Beyond 30.0 NM Altitude: Below 3400.0 ft			
	ESV:	Bearing [True]: 178.0° to 204.0° Bearing [Mag]: 159.0° to 185.0°		Arc Distance: Out to 71.0 NM Altitude: 8800.0 to 20000.0 ft			
	ESV:	Bearing [True]: 145.0° to 192.0° Bearing [Mag]: 126.0° to 173.0°		Arc Distance: Out to 51.0 NM Altitude: 2700.0 to 20000.0 ft			
3	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H	10.0	117.70	HQM	Used
	ESV:	Bearing [True]: 54.0° to 81.0° Bearing [Mag]: 35.0° to 62.0°		Arc Distance: Out to 77.0 NM Altitude: 6900.0 to 16000.0 ft			
	ESV:	Bearing [True]: 38.0° to 62.0° Bearing [Mag]: 19.0° to 43.0°		Arc Distance: Out to 78.0 NM Altitude: 7700.0 to 16000.0 ft			
4	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H	82.9	113.00	HUH	Not Used
	Restriction:	Bearing [True]: 175.0° to 185.0° Bearing [Mag]: 155.0° to 165.0°		Distance: Beyond 15.0 NM Altitude: Below 6000.0 ft			
	ESV:	Bearing [True]: 176.0° to 187.0° Bearing [Mag]: 156.0° to 167.0°		Arc Distance: Out to 94.0 NM Altitude: 8200.0 to 16000.0 ft			
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H	200.0	113.40	OLM	Used
	Restriction:	Bearing [True]: 242.0° to 277.0° Bearing [Mag]: 223.0° to 258.0°		Distance: Beyond 20.0 NM Altitude: Below 4100.0 ft			
	Restriction:	Bearing [True]: 277.0° to 302.0° Bearing [Mag]: 258.0° to 283.0°		Distance: Beyond 30.0 NM Altitude: Below 4100.0 ft			
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°		Distance: Beyond 10.0 NM Altitude: Below 6000.0 ft			
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°		Distance: Beyond 20.0 NM Altitude: Below 7000.0 ft			
	ESV:	Bearing [True]: 358.0° to 38.0° Bearing [Mag]: 339.0° to 19.0°		Arc Distance: Out to 63.0 NM Altitude: 7000.0 to 16000.0 ft			



Name:	Jeanette Roller
Project Name:	KSEA
Output File:	KSEA ATOME1 SID RW34R BANDR 20170327_0830
Procedure Name:	ATOME1
Software:	RNAV-Pro™
Version:	2.39
Date/Time:	3/27/2017 8:30:38 AM
Input File:	KSEA ATOME SID RW34R BANDR 20160512_1206.txt
Databases:	AIRNAV Date: 3/19/2017
	CIFP Date: 8/18/2016
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	**Please Check Flyability Results**
DME/DME	✓	**2 Critical DMEs Exist: PAE OLM**
Radars	?	
Comms	?	
TERPS	?	

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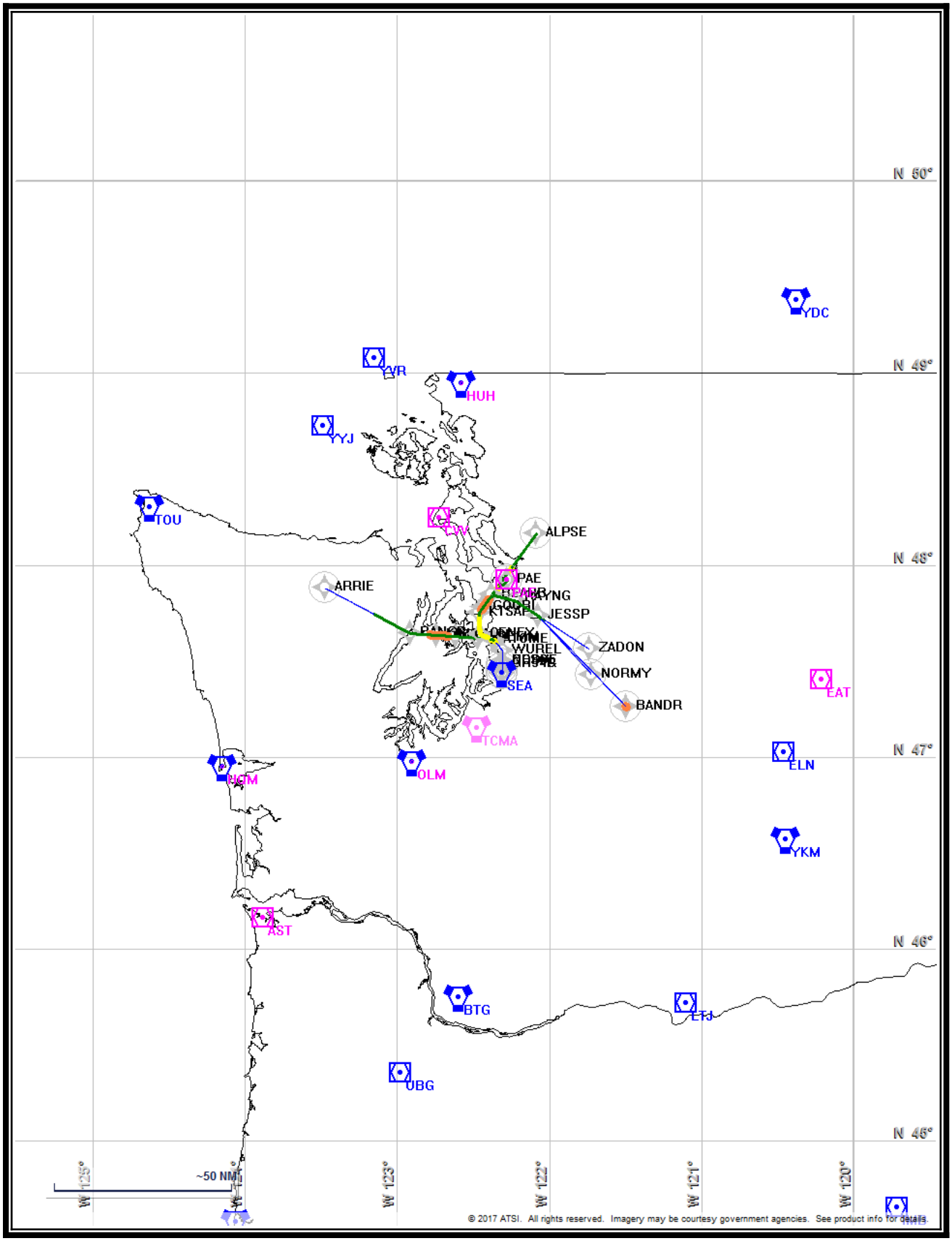
N 50°
N 49°
N 48°
N 47°
N 46°
N 45°
W 125°
W 124°
W 123°
W 122°
W 121°
W 120°
~50 NM
YDC
YVR
HUH
YYJ
TOU
CLV
ALPSE
ARRIE
PAE
JESSP
ZADON
NORMY
BANDR
WUREL
SEA
TCMA
EAT
ELN
OLM
HQM
YKM
AST
BTG
ETJ
UBG
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW34R(...	WP	N 47° 25' 52.22" W 122° 18' 28.94"	346.8	VNAV	0.0	Fly Over	TF
RW16L(...	WP	N 47° 27' 49.66" W 122° 18' 27.90"	467.5	VNAV	130.0	Fly Over	VA
GH34R	WP	N 47° 28' 50.53" W 122° 18' 27.37"	975.0	VNAV	145.0	Fly Over	DF
DODVE	WP	N 47° 29' 55.59" W 122° 18' 26.80"	1506.7	VNAV	145.0	Fly By	TF
WUREL	WP	N 47° 33' 19.52" W 122° 18' 36.66"	3173.9	VNAV	145.0	Fly By	TF
ATOME	WP	N 47° 36' 27.23" W 122° 21' 47.61"	4500.0	VNAV	145.0	Fly By	TF
CENEX	WP	N 47° 38' 25.12" W 122° 27' 27.36"	4500.0	VNAV	180.0	Fly By	TF
KTSAP_	WP	N 47° 45' 6.58" W 122° 27' 45.08"	6200.0	VNAV	180.0	Fly By	TF
GOOBI	WP	N 47° 46' 48.92" W 122° 26' 12.36"	6700.0	VNAV	180.0	Fly By	TF
BEARB	WP	N 47° 50' 40.15" W 122° 22' 42.44"	7800.0	VNAV	180.0	Fly By	TF
RAYNG	WP	N 47° 48' 50.79" W 122° 13' 36.15"	9200.0	VNAV	210.0	Fly By	TF
JESSP	WP	N 47° 44' 12.80" W 122° 4' 35.04"	10000.0	VNAV	210.0	Fly By	TF
BANDR	WP	N 47° 15' 30.14" W 121° 29' 32.11"	13700.0	VNAV	210.0	Fly Over	TF

Climb Gradient: 500.0 ft/NM up to 940.0 ft MSL

Flyability	Return To Summary
Settings:	**Flight Type:** Runway Departure **Selected Airport:** KSEA **Aircraft Category:** Cat D **Climb Gradient:** 500.0 ft/NM up to 940.0 ft MSL **Ground Speeds:** Departure: **120.0 Kts** out to **10.0 NM** Table: **200.0 Kts** up to **11000.0 ft** **240.0 Kts** up to **18000.0 ft** **260.0 Kts** up to **24000.0 ft** **340.0 Kts** up to **99900.0 ft** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan
Required IAS at Fly-By WP CENEX could not be reached with given A/C acceleration performance. Flight Track comes into contact with terrain. Minimum AGL along route was -66.59 Ft. Flight Track contacted terrain (DTED 0 MAX) between AER and DER or within 2/3 NM of DER.	

DME/DME	Return To Summary
Settings:	**RNP:** 2.0 **Flight Mode:** Manual **Line of Sight (DTED Level 0 Max):** Evaluated **DME Restrictions:** Evaluated **Inertial Drift:** Enabled **Initial Drift:** 0.165 NM **INS Drift Rate:** 8.000 NM/Hour **Range Mode:** OSV **Co-Frequencies:** Evaluated **RNP Edges:** Evaluated **Min DME Range:** 3.0 NM **Allowed Gap Length:** 4.0 NM **DME Types:** VOR/DME, VORTAC, Standalone, and User **DME Include Angles:** 30 to 150 **Critical DMEs:** Allowed **DoD Facilities:** Not included **Foreign Facilities:** Not included **Low DMEs:** Included **Terminal DMEs:** Included **Flight Check DMEs:** Selected **Higher Altitudes:** Evaluated **Near Maximum Altitude:** Evaluated **Minimum MSL DMEs Avail:** 4291 ft

Total Number of DMEs Used: 4

Maximum DME Error: 1.549 NM.

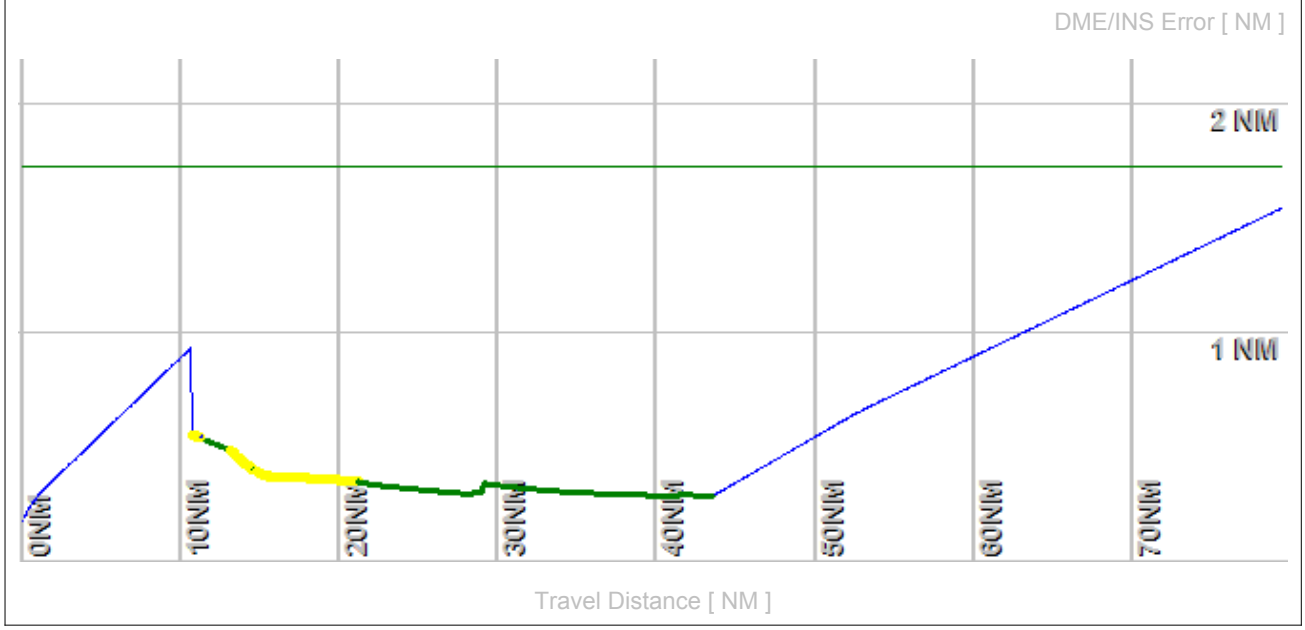
2 Critical DMEs were found.

Available DMEs: PAE, CVV, SEA, OLM

Foreign DMEs within range: YDC, YVR, YYJ

DME/DME (Continued)

Return To Summary



DME/DME (Continued)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L + ESV	User	YES	**Drift Time**	Enabled	25.6%	25.6%
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L + ESV	User	NO	1.549	Enabled	28.0%	28.4%
3	SEA	N 47° 26' 7.34" W 122° 18' 34.62" 19 E	H	Database	NO	1.549	Enabled	9.6%	10.1%
4	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H + ESV	User	YES	**Drift Time**	Enabled	17.0%	18.3%
	Total Coverage							40.1%	41.2%

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
2.0						
3.0	PAE					
4.0	PAE	CVV				
7.2	PAE	CVV	SEA			
11.0	PAE	CVV	SEA			
14.6	PAE	CVV	SEA			
21.4	PAE	CVV	SEA			
24.1	PAE	OLM	CVV	SEA		
27.4	PAE	OLM	CVV	SEA		
34.2	PAE	OLM	CVV	SEA		
41.9	PAE	OLM				
69.5	PAE	OLM				

Inertial Drift Segments

#	Start Location	End Location	Length [NM]

Available DMEs by Waypoints		Return To Summary
Waypoint Before	**Waypoint After**	**DME List**
RW34R(AER)	RW16L(DER)	
RW16L(DER)	GH34R	
GH34R	DODVE	PAE
DODVE	WUREL	CVV and PAE
WUREL	ATOME	CVV, PAE, and SEA
ATOME	CENEX	CVV, PAE, and SEA
CENEX	KTSAP_	CVV, PAE, and SEA
KTSAP_	GOOBI	CVV, PAE, and SEA
GOOBI	BEARB	OLM, CVV, PAE, and SEA
BEARB	RAYNG	OLM, CVV, PAE, and SEA
RAYNG	JESSP	OLM, CVV, PAE, and SEA
JESSP	BANDR	OLM and PAE

User Data

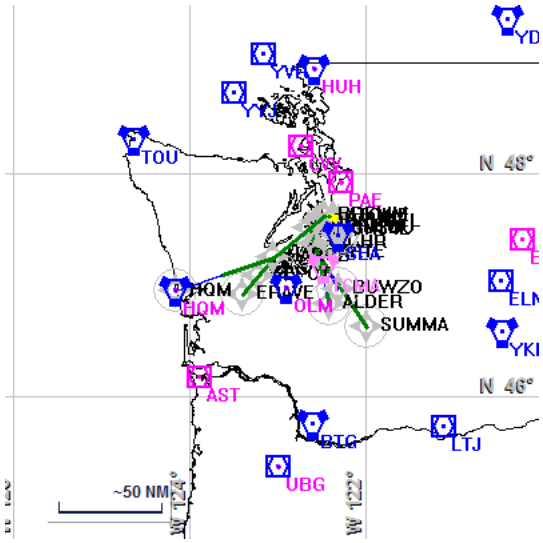
Return To Summary

User Data Files

#	File Name
1	UserDMEs_KSEA ATOME1 SID BEARB ALPSE 20160526_2119.udt

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L	678.5	110.60	PAE	Used
	ESV:	Bearing [True]: 207.0° to 234.0° Bearing [Mag]: 187.0° to 214.0°		Arc Distance: Out to 76.0 NM Altitude: 8900.0 to 20000.0 ft			
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L	200.0	117.20	CVV	Used
	Restriction:	Bearing [True]: 145.0° to 179.0° Bearing [Mag]: 126.0° to 160.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 349.0° to 19.0° Bearing [Mag]: 330.0° to 360.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 269.0° to 279.0° Bearing [Mag]: 250.0° to 260.0°		Distance: Beyond 30.0 NM Altitude: Below 3400.0 ft			
	ESV:	Bearing [True]: 178.0° to 204.0° Bearing [Mag]: 159.0° to 185.0°		Arc Distance: Out to 71.0 NM Altitude: 8800.0 to 20000.0 ft			
	ESV:	Bearing [True]: 145.0° to 192.0° Bearing [Mag]: 126.0° to 173.0°		Arc Distance: Out to 51.0 NM Altitude: 2700.0 to 20000.0 ft			
3	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H	10.0	117.70	HQM	Not Used
	ESV:	Bearing [True]: 54.0° to 81.0° Bearing [Mag]: 35.0° to 62.0°		Arc Distance: Out to 77.0 NM Altitude: 6900.0 to 16000.0 ft			
	ESV:	Bearing [True]: 38.0° to 62.0° Bearing [Mag]: 19.0° to 43.0°		Arc Distance: Out to 78.0 NM Altitude: 7700.0 to 16000.0 ft			
4	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H	82.9	113.00	HUH	Not Used
	Restriction:	Bearing [True]: 175.0° to 185.0° Bearing [Mag]: 155.0° to 165.0°		Distance: Beyond 15.0 NM Altitude: Below 6000.0 ft			
	ESV:	Bearing [True]: 176.0° to 187.0° Bearing [Mag]: 156.0° to 167.0°		Arc Distance: Out to 94.0 NM Altitude: 8200.0 to 16000.0 ft			
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H	200.0	113.40	OLM	Used
	Restriction:	Bearing [True]: 242.0° to 277.0° Bearing [Mag]: 223.0° to 258.0°		Distance: Beyond 20.0 NM Altitude: Below 4100.0 ft			
	Restriction:	Bearing [True]: 277.0° to 302.0° Bearing [Mag]: 258.0° to 283.0°		Distance: Beyond 30.0 NM Altitude: Below 4100.0 ft			
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°		Distance: Beyond 10.0 NM Altitude: Below 6000.0 ft			
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°		Distance: Beyond 20.0 NM Altitude: Below 7000.0 ft			
	ESV:	Bearing [True]: 358.0° to 38.0° Bearing [Mag]: 339.0° to 19.0°		Arc Distance: Out to 63.0 NM Altitude: 7000.0 to 16000.0 ft			



Name:	Jeanette Roller
Project Name:	KSEA
Output File:	KSEA ATOME1 SID DRUMR SUMMA 20170327_0911
Procedure Name:	ATOME1
Software:	RNAV-Pro™
Version:	2.39
Date/Time:	3/27/2017 9:12:18 AM
Input File:	KSEA ATOME SID DRUMR SUMMA 20160513_1037.txt
Databases:	AIRNAV Date: 3/19/2017
	CIFP Date: 8/18/2016
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	
DME/DME	✓	**No Critical DMEs Exist**
Radars	?	
Comms	?	
TERPS	?	

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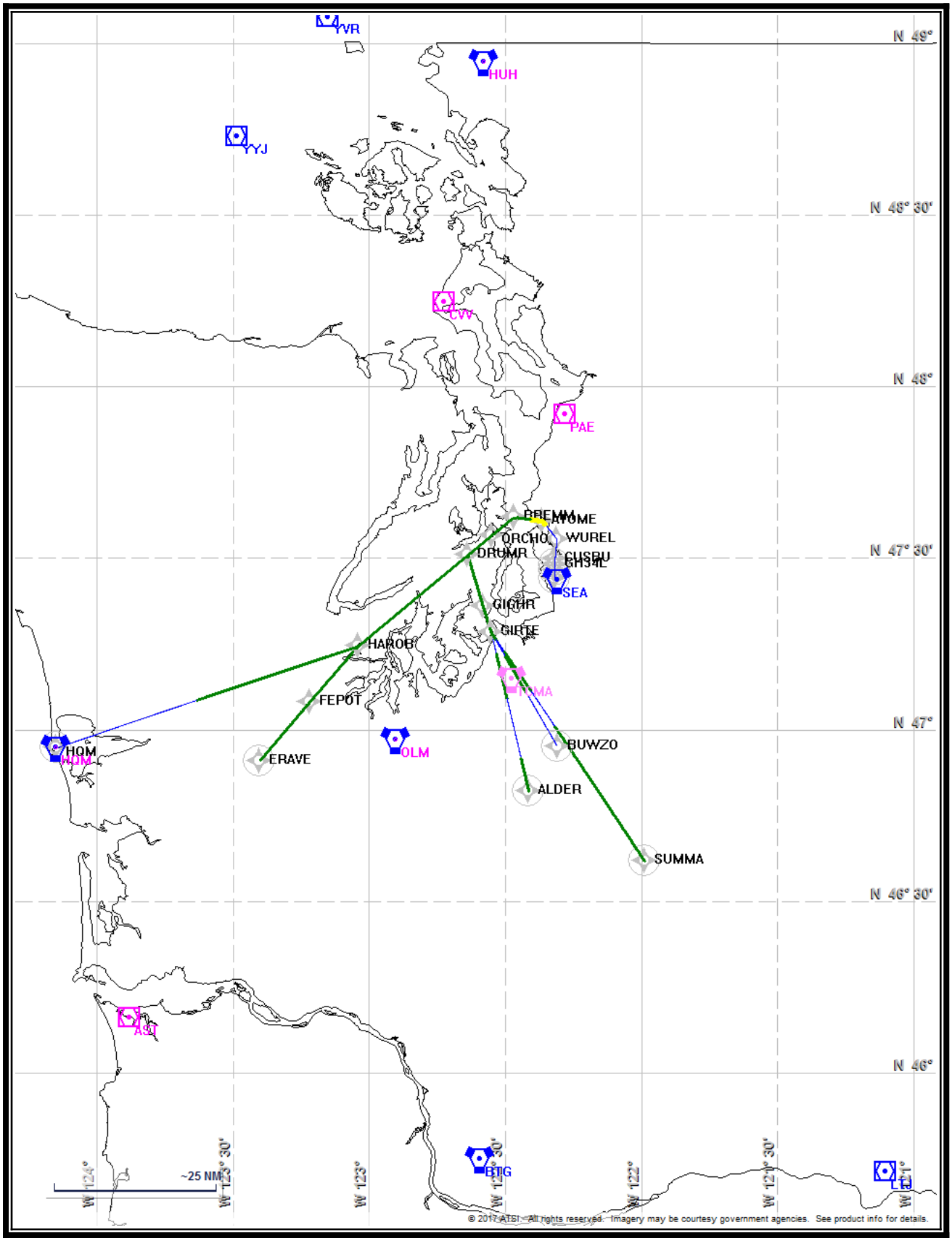
YVR
HUH
YYJ
CVV
PAE
ATOME
WUREL
CUSBU
SEA
ORCHO
DRUMR
GIGIR
GIRTE
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OLM
ERAVE
BUWZO
ALDER
SUMMA
HQM
N 49°
N 48° 30'
N 48°
N 47° 30'
N 47°
N 46° 30'
N 46°
W 124°
W 123° 30'
W 123°
W 122° 30'
W 122°
W 121° 30'
W 121°
~25 NM
BTG
LJ
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
DRUMR	WP	N 47° 30' 31.92" W 122° 38' 16.44"	6900.0	VNAV	180.0	Fly By	TF
GIGHR	WP	N 47° 21' 39.61" W 122° 34' 56.99"	9100.0	VNAV	210.0	Fly By	TF
GIRTE	WP	N 47° 17' 3.43" W 122° 33' 6.29"	9600.0	VNAV	210.0	Fly By	TF
SUMMA	WP	N 46° 37' 4.29" W 121° 59' 17.96"	14200.0	VNAV	210.0	Fly Over	TF

Flyability	Return To Summary
Settings:	**Flight Type:** Departure Transition **Selected Airport:** KSEA **Aircraft Category:** Cat D **Climb Gradient:** *None assigned* **Ground Speeds:** Table: **200.0 Kts** up to **11000.0 ft** **240.0 Kts** up to **18000.0 ft** **260.0 Kts** up to **24000.0 ft** **340.0 Kts** up to **99900.0 ft** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan
Entire track is fly-able	

DME/DME	Return To Summary
Settings:	**RNP:** 2.0 **Flight Mode:** Manual **Line of Sight (DTED Level 0 Max):** Evaluated **DME Restrictions:** Evaluated **Inertial Drift:** Enabled **Initial Drift:** 0.558 NM **INS Drift Rate:** 8.000 NM/Hour **Range Mode:** OSV **Co-Frequencies:** Evaluated **RNP Edges:** Evaluated **Min DME Range:** 3.0 NM **Allowed Gap Length:** 4.0 NM **DME Types:** VOR/DME, VORTAC, Standalone, and User **DME Include Angles:** 30 to 150 **Critical DMEs:** Allowed **DoD Facilities:** Not included **Foreign Facilities:** Not included **Low DMEs:** Included **Terminal DMEs:** Included **Flight Check DMEs:** Selected **Higher Altitudes:** Evaluated **Near Maximum Altitude:** Evaluated

Total Number of DMEs Used: 6

Maximum DME Error: 0.615 NM.

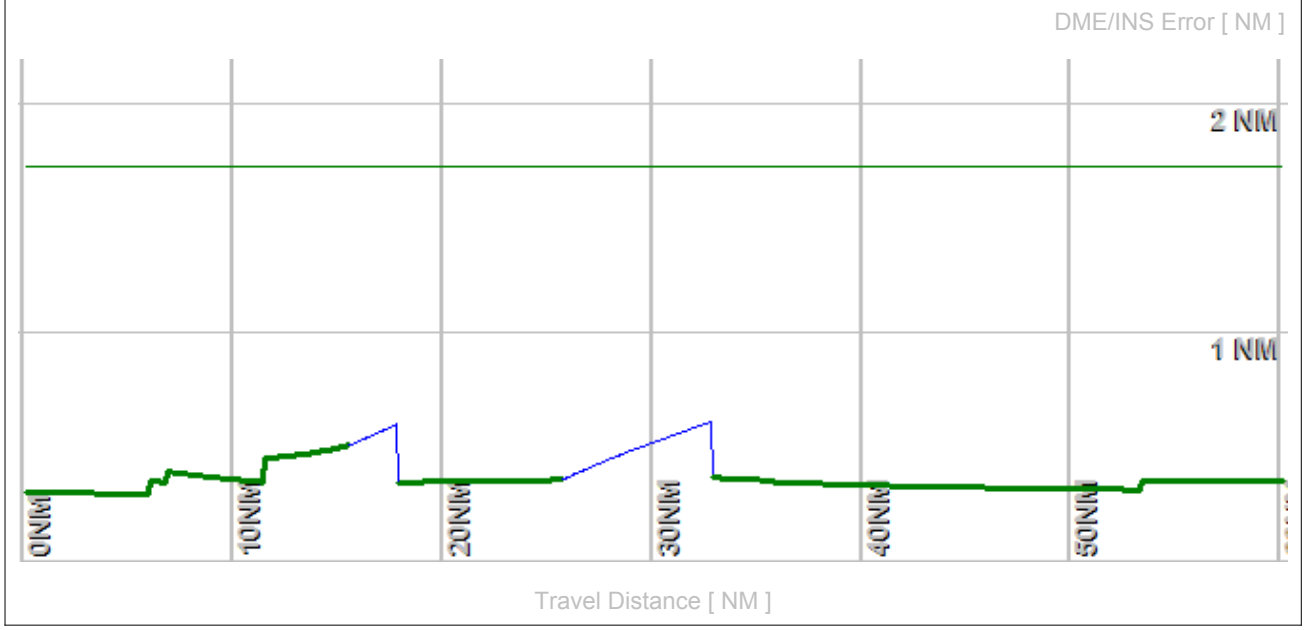
No Critical DMEs were found.

Available DMEs: PAE, CVV, HQM, OLM, HUH, UBG

Foreign DMEs within range: YDC, YVR, YYJ

DME/DME (Continued)

Return To Summary



DME/DME (Continued)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L + ESV	User	NO	0.640	Enabled	10.9%	10.0%
2	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H + ESV	User	NO	1.086	Enabled	56.4%	54.0%
3	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H + ESV	User	NO	1.172	Enabled	15.9%	14.5%
4	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L + ESV	User	NO	0.615	Enabled	8.4%	7.7%
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H + ESV	User	NO	0.615	Enabled	35.1%	37.0%
6	UBG	N 45° 21' 11.62" W 122° 58' 41.36" 21 E	H + ESV	User	NO	1.524	Enabled	41.4%	45.3%
	Total Coverage							84.1%	84.2%

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	HQM	CVV	PAE	OLM	HUH	
9.1	HQM	PAE	OLM			
13.5	HQM	UBG	OLM	HUH		

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 47° 15' 38.79" W 122° 31' 54.60"	N 47° 13' 40.76" W 122° 30' 13.36"	2.3

VOR: SEA	Available from N 47° 15' 38.79" W 122° 31' 54.60" to N 47° 13' 40.76" W 122° 30' 13.36"
VOR: BFI	Available from N 47° 15' 38.79" W 122° 31' 54.60" to N 47° 13' 40.76" W 122° 30' 13.36"
VOR: TCMA	Available from N 47° 15' 38.79" W 122° 31' 54.60" to N 47° 13' 40.76" W 122° 30' 13.36"
VOR: OLM	Available from N 47° 15' 38.79" W 122° 31' 54.60" to N 47° 13' 40.76" W 122° 30' 13.36"
VOR: TCM	Available from N 47° 15' 38.79" W 122° 31' 54.60" to N 47° 13' 40.76" W 122° 30' 13.36"
VOR: SEA	Available from N 47° 15' 38.79" W 122° 31' 54.60" to N 47° 13' 40.76" W 122° 30' 13.36"

DME/DME (Continued)

Return To Summary

Inertial Drift Segments (Continued)

#	Start Location	End Location	Length [NM]
2	N 47° 6' 49.12" W 122° 24' 21.61"	N 47° 0' 41.29" W 122° 19' 8.93"	7.1
	VOR: SEA	Available from N 47° 6' 49.12" W 122° 24' 21.61" to N 47° 0' 41.29" W 122° 19' 8.93"	
	VOR: BFI	Available from N 47° 6' 49.12" W 122° 24' 21.61" to N 47° 0' 41.29" W 122° 19' 8.93"	
	VOR: TCMA	Available from N 47° 6' 49.12" W 122° 24' 21.61" to N 47° 0' 41.29" W 122° 19' 8.93"	
	VOR: OLM	Available from N 47° 6' 49.12" W 122° 24' 21.61" to N 47° 0' 41.29" W 122° 19' 8.93"	
	VOR: TCM	Available from N 47° 6' 49.12" W 122° 24' 21.61" to N 47° 0' 41.29" W 122° 19' 8.93"	
	VOR: SEA	Available from N 47° 6' 49.12" W 122° 24' 21.61" to N 47° 0' 41.29" W 122° 19' 8.93"	

Available DMEs by Waypoints		Return To Summary
Waypoint Before	**Waypoint After**	**DME List**
DRUMR	GIGHR	OLM, HUH, HQM, CVV, and PAE
GIGHR	GIRTE	OLM, HQM, and PAE
GIRTE	SUMMA	UBG, OLM, HUH, and HQM

User Data

Return To Summary

User Data Files

#	File Name
1	UserDMEs_KSEA ATOME1 SID BEARB ALPSE 20160526_2119.udt
2	UserDMEs_KSEA ATOME1 SID RW34L HQM 20160513_1116.udt

User DMEs

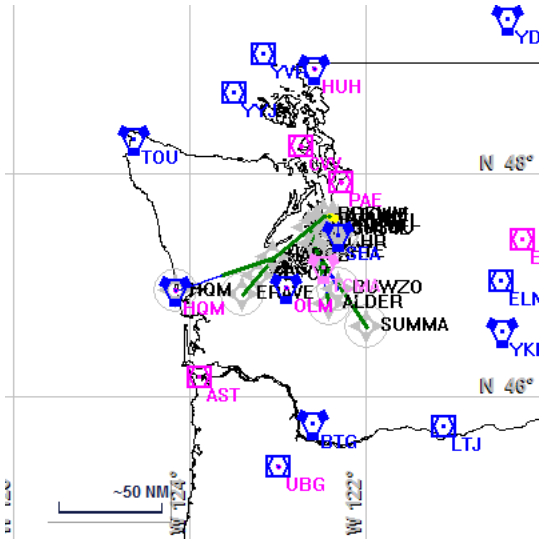
#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L	678.5	110.60	PAE	Used
	ESV:	Bearing [True]: 207.0° to 234.0° Bearing [Mag]: 187.0° to 214.0°		Arc Distance: Out to 76.0 NM Altitude: 8900.0 to 20000.0 ft			
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L	200.0	117.20	CVV	Used
	Restriction:	Bearing [True]: 145.0° to 179.0° Bearing [Mag]: 126.0° to 160.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 349.0° to 19.0° Bearing [Mag]: 330.0° to 360.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 269.0° to 279.0° Bearing [Mag]: 250.0° to 260.0°		Distance: Beyond 30.0 NM Altitude: Below 3400.0 ft			
	ESV:	Bearing [True]: 178.0° to 204.0° Bearing [Mag]: 159.0° to 185.0°		Arc Distance: Out to 71.0 NM Altitude: 8800.0 to 20000.0 ft			
	ESV:	Bearing [True]: 145.0° to 192.0° Bearing [Mag]: 126.0° to 173.0°		Arc Distance: Out to 51.0 NM Altitude: 2700.0 to 20000.0 ft			
3	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H	10.0	117.70	HQM	Used
	ESV:	Bearing [True]: 54.0° to 81.0° Bearing [Mag]: 35.0° to 62.0°		Arc Distance: Out to 77.0 NM Altitude: 6900.0 to 16000.0 ft			
	ESV:	Bearing [True]: 38.0° to 62.0° Bearing [Mag]: 19.0° to 43.0°		Arc Distance: Out to 78.0 NM Altitude: 7700.0 to 16000.0 ft			
	ESV:	Bearing [True]: 67.0° to 106.0° Bearing [Mag]: 48.0° to 87.0°		Arc Distance: Out to 95.0 NM Altitude: 9300.0 to 16000.0 ft			
4	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H	82.9	113.00	HUH	Used
	Restriction:	Bearing [True]: 175.0° to 185.0° Bearing [Mag]: 155.0° to 165.0°		Distance: Beyond 15.0 NM Altitude: Below 6000.0 ft			
	ESV:	Bearing [True]: 176.0° to 187.0° Bearing [Mag]: 156.0° to 167.0°		Arc Distance: Out to 94.0 NM Altitude: 8200.0 to 16000.0 ft			
	ESV:	Bearing [True]: 169.0° to 187.0° Bearing [Mag]: 149.0° to 167.0°		Arc Distance: Out to 112.0 NM Altitude: 10000.0 to 20000.0 ft			

User Data (Continued)

Return To Summary

User DMEs (Continued)

#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H	200.0	113.40	OLM	Used
	Restriction:	Bearing [True]: 242.0° to 277.0° Bearing [Mag]: 223.0° to 258.0°			Distance: Beyond 20.0 NM Altitude: Below 4100.0 ft		
	Restriction:	Bearing [True]: 277.0° to 302.0° Bearing [Mag]: 258.0° to 283.0°			Distance: Beyond 30.0 NM Altitude: Below 4100.0 ft		
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°			Distance: Beyond 10.0 NM Altitude: Below 6000.0 ft		
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°			Distance: Beyond 20.0 NM Altitude: Below 7000.0 ft		
	ESV:	Bearing [True]: 358.0° to 38.0° Bearing [Mag]: 339.0° to 19.0°			Arc Distance: Out to 63.0 NM Altitude: 7000.0 to 16000.0 ft		
6	UBG	N 45° 21' 11.62" W 122° 58' 41.36" 21 E	H	1440.0	117.40	UBG	Used
	ESV:	Bearing [True]: 11.0° to 32.0° Bearing [Mag]: 350.0° to 11.0°			Arc Distance: Out to 107.0 NM Altitude: 11500.0 to 20000.0 ft		



Name:	Jeanette Roller
Project Name:	KSEA
Output File:	KSEA ATOME1 SID GIRTE ALDER 20170327_0913
Procedure Name:	ATOME1
Software:	RNAV-Pro™
Version:	2.39
Date/Time:	3/27/2017 9:13:30 AM
Input File:	KSEA ATOME SID GIRTE ALDER 20160512_1230.txt
Databases:	AIRNAV Date: 3/19/2017
	CIFP Date: 8/18/2016
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	
DME/DME	✓	**No Critical DMEs Exist**
Radars	?	
Comms	?	
TERPS	?	

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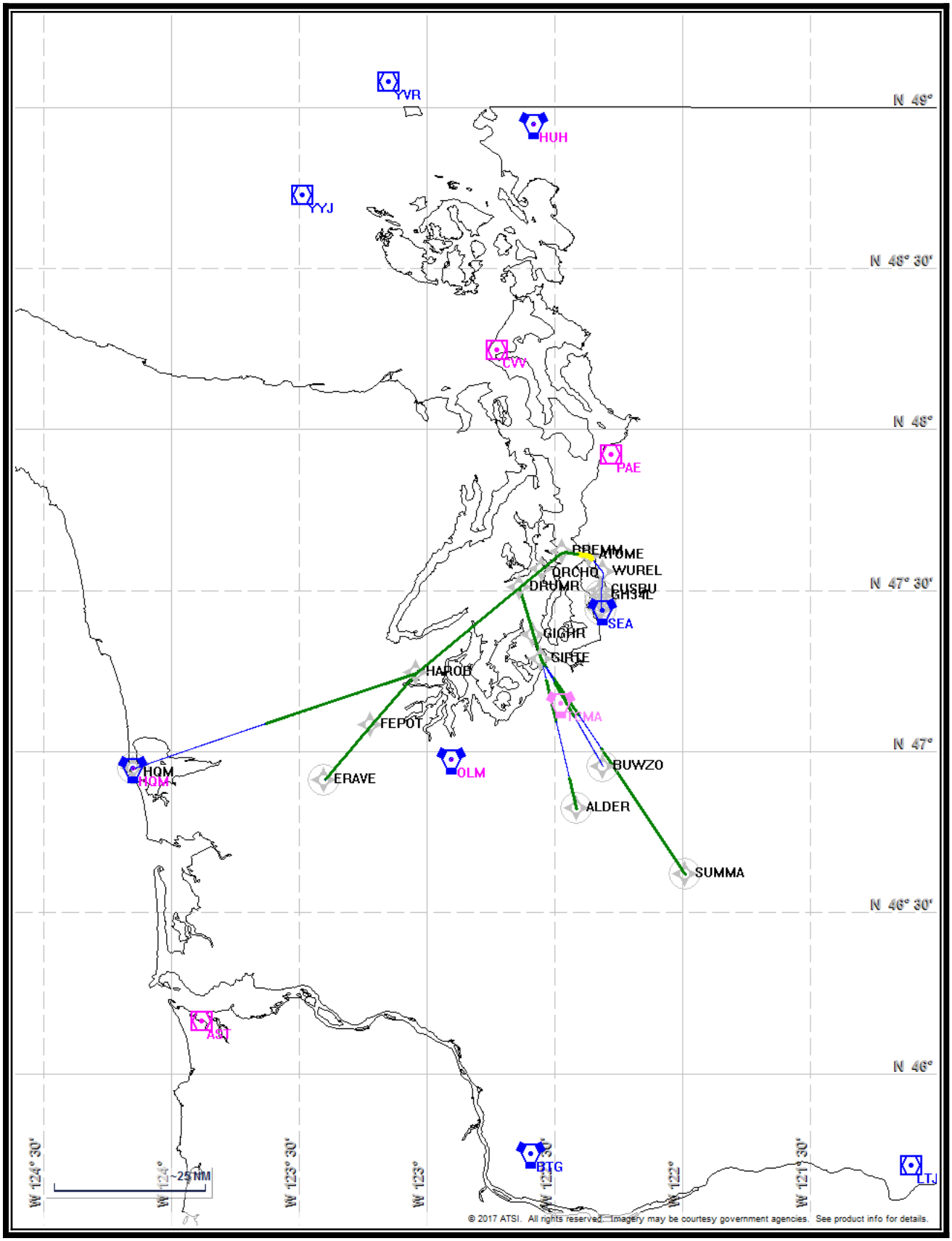
YVR
HUH
YYJ
CVV
PAE
BREMM
ATOME
ORCHQ
WUREL
DRUMR
CUSBU
GH34L
SEA
GIGHR
GIRTE
HAROB
FEPOT
PUMA
HQM
HQM
ERAVE
OLM
BUWZO
ALDER
SUMMA
AST
BTG
LTJ
N 49°
N 48° 30'
N 48°
N 47° 30'
N 47°
N 46° 30'
N 46°
W 124° 30'
W 124°
W 123° 30'
W 123°
W 122°
W 121° 30'
~25 NM
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Flight Plan

Return To Summary

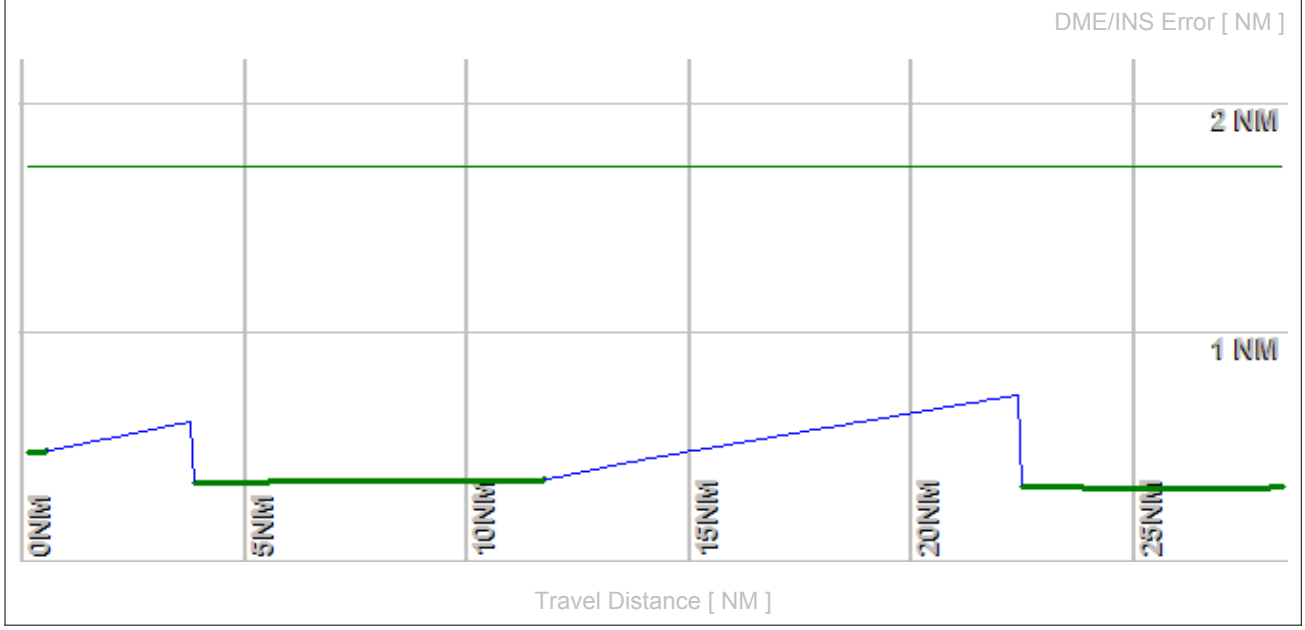
Name	Type	Lat/Lon	Alt [ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
GIRTE	WP	N 47° 17' 3.43" W 122° 33' 6.29"	9600.0	VNAV	210.0	Fly By	TF
ALDER	WP	N 46° 49' 17.62" W 122° 24' 51.19"	12500.0	VNAV	210.0	Fly Over	TF

Flyability	Return To Summary
Settings:	**Flight Type:** Departure Transition **Selected Airport:** KSEA **Aircraft Category:** Cat D **Climb Gradient:** *None assigned* **Ground Speeds:** Table: **200.0 Kts** up to **11000.0 ft** **240.0 Kts** up to **18000.0 ft** **260.0 Kts** up to **24000.0 ft** **340.0 Kts** up to **99900.0 ft** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan
Entire track is fly-able	

DME/DME	Return To Summary
Settings:	**RNP:** 2.0 **Flight Mode:** Manual **Line of Sight (DTED Level 0 Max):** Evaluated **DME Restrictions:** Evaluated **Inertial Drift:** Enabled **Initial Drift:** 0.558 NM **INS Drift Rate:** 8.000 NM/Hour **Range Mode:** OSV **Co-Frequencies:** Evaluated **RNP Edges:** Evaluated **Min DME Range:** 3.0 NM **Allowed Gap Length:** 4.0 NM **DME Types:** VOR/DME, VORTAC, Standalone, and User **DME Include Angles:** 30 to 150 **Critical DMEs:** Allowed **DoD Facilities:** Not included **Foreign Facilities:** Not included **Low DMEs:** Included **Terminal DMEs:** Included **Flight Check DMEs:** Selected **Higher Altitudes:** Evaluated **Near Maximum Altitude:** Evaluated
Total Number of DMEs Used: 4 Maximum DME Error: 0.731 NM. No Critical DMEs were found. **Available DMEs:** HQM, OLM, HUH, UBG **Foreign DMEs within range:** YDC, YVR, YYJ	

DME/DME (Continued)

Return To Summary



DME/DME (Continued)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H + ESV	User	NO	0.756	Enabled	33.4%	30.8%
2	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H + ESV	User	NO	0.731	Enabled	19.9%	21.5%
3	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H + ESV	User	NO	1.303	Enabled	30.4%	27.8%
4	UBG	N 45° 21' 11.62" W 122° 58' 41.36" 21 E	H + ESV	User	NO	0.928	Enabled	19.1%	20.9%
	Total Coverage							51.4%	50.5%

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	OLM	HQM	HUH	UBG		

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 47° 16' 30.69" W 122° 32' 56.47"	N 47° 13' 21.27" W 122° 31' 59.72"	3.2
	VOR: SEA	Available from N 47° 16' 30.69" W 122° 32' 56.47" to N 47° 13' 21.27" W 122° 31' 59.72"	
	VOR: BFI	Available from N 47° 16' 30.69" W 122° 32' 56.47" to N 47° 13' 21.27" W 122° 31' 59.72"	
	VOR: TCMA	Available from N 47° 16' 30.69" W 122° 32' 56.47" to N 47° 13' 21.27" W 122° 31' 59.72"	
	VOR: OLM	Available from N 47° 16' 30.69" W 122° 32' 56.47" to N 47° 13' 21.27" W 122° 31' 59.72"	
	VOR: TCM	Available from N 47° 16' 30.69" W 122° 32' 56.47" to N 47° 13' 21.27" W 122° 31' 59.72"	
	VOR: SEA	Available from N 47° 16' 30.69" W 122° 32' 56.47" to N 47° 13' 21.27" W 122° 31' 59.72"	

DME/DME (Continued)

Return To Summary

Inertial Drift Segments (Continued)

#	Start Location	End Location	Length [NM]
2	N 47° 5' 34.49" W 122° 29' 40.40"	N 46° 55' 6.98" W 122° 26' 34.25"	10.7
VOR: SEA	Available from N 47° 5' 34.49" W 122° 29' 40.40" to N 46° 55' 6.98" W 122° 26' 34.25"		
VOR: BFI	Available from N 47° 5' 34.49" W 122° 29' 40.40" to N 46° 55' 6.98" W 122° 26' 34.25"		
VOR: TCMA	Available from N 47° 5' 34.49" W 122° 29' 40.40" to N 46° 55' 6.98" W 122° 26' 34.25"		
VOR: OLM	Available from N 47° 5' 34.49" W 122° 29' 40.40" to N 46° 55' 6.98" W 122° 26' 34.25"		
VOR: TCM	Available from N 47° 5' 34.49" W 122° 29' 40.40" to N 46° 55' 6.98" W 122° 26' 34.25"		
VOR: SEA	Available from N 47° 5' 34.49" W 122° 29' 40.40" to N 46° 55' 6.98" W 122° 26' 34.25"		

Available DMEs by Waypoints		Return To Summary
Waypoint Before	**Waypoint After**	**DME List**
GIRTE	ALDER	UBG, OLM, HUH, and HQM

User Data

Return To Summary

User Data Files

#	File Name
1	UserDMEs_KSEA ATOME1 SID BEARB ALPSE 20160526_2119.udt
2	UserDMEs_KSEA ATOME1 SID RW34L HQM 20160513_1116.udt

User DMEs

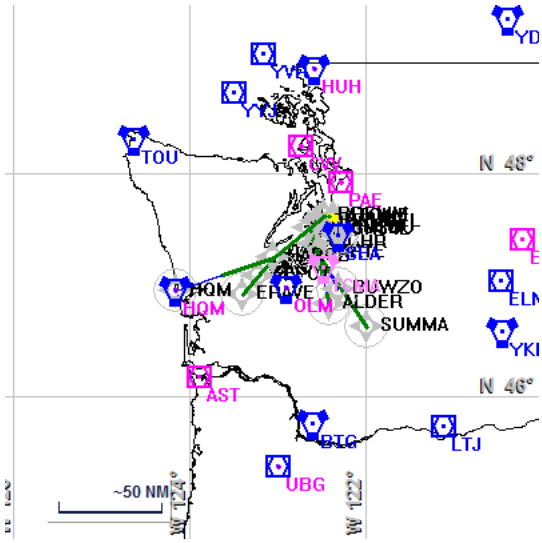
#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L	678.5	110.60	PAE	Not Used
	ESV:	Bearing [True]: 207.0° to 234.0° Bearing [Mag]: 187.0° to 214.0°		Arc Distance: Out to 76.0 NM Altitude: 8900.0 to 20000.0 ft			
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L	200.0	117.20	CVV	Not Used
	Restriction:	Bearing [True]: 145.0° to 179.0° Bearing [Mag]: 126.0° to 160.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 349.0° to 19.0° Bearing [Mag]: 330.0° to 360.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 269.0° to 279.0° Bearing [Mag]: 250.0° to 260.0°		Distance: Beyond 30.0 NM Altitude: Below 3400.0 ft			
	ESV:	Bearing [True]: 178.0° to 204.0° Bearing [Mag]: 159.0° to 185.0°		Arc Distance: Out to 71.0 NM Altitude: 8800.0 to 20000.0 ft			
	ESV:	Bearing [True]: 145.0° to 192.0° Bearing [Mag]: 126.0° to 173.0°		Arc Distance: Out to 51.0 NM Altitude: 2700.0 to 20000.0 ft			
3	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H	10.0	117.70	HQM	Used
	ESV:	Bearing [True]: 54.0° to 81.0° Bearing [Mag]: 35.0° to 62.0°		Arc Distance: Out to 77.0 NM Altitude: 6900.0 to 16000.0 ft			
	ESV:	Bearing [True]: 38.0° to 62.0° Bearing [Mag]: 19.0° to 43.0°		Arc Distance: Out to 78.0 NM Altitude: 7700.0 to 16000.0 ft			
	ESV:	Bearing [True]: 67.0° to 106.0° Bearing [Mag]: 48.0° to 87.0°		Arc Distance: Out to 95.0 NM Altitude: 9300.0 to 16000.0 ft			
4	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H	82.9	113.00	HUH	Used
	Restriction:	Bearing [True]: 175.0° to 185.0° Bearing [Mag]: 155.0° to 165.0°		Distance: Beyond 15.0 NM Altitude: Below 6000.0 ft			
	ESV:	Bearing [True]: 176.0° to 187.0° Bearing [Mag]: 156.0° to 167.0°		Arc Distance: Out to 94.0 NM Altitude: 8200.0 to 16000.0 ft			
	ESV:	Bearing [True]: 169.0° to 187.0° Bearing [Mag]: 149.0° to 167.0°		Arc Distance: Out to 112.0 NM Altitude: 10000.0 to 20000.0 ft			

User Data (Continued)

Return To Summary

User DMEs (Continued)

#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H	200.0	113.40	OLM	Used
	Restriction:	Bearing [True]: 242.0° to 277.0° Bearing [Mag]: 223.0° to 258.0°			Distance: Beyond 20.0 NM Altitude: Below 4100.0 ft		
	Restriction:	Bearing [True]: 277.0° to 302.0° Bearing [Mag]: 258.0° to 283.0°			Distance: Beyond 30.0 NM Altitude: Below 4100.0 ft		
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°			Distance: Beyond 10.0 NM Altitude: Below 6000.0 ft		
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°			Distance: Beyond 20.0 NM Altitude: Below 7000.0 ft		
	ESV:	Bearing [True]: 358.0° to 38.0° Bearing [Mag]: 339.0° to 19.0°			Arc Distance: Out to 63.0 NM Altitude: 7000.0 to 16000.0 ft		
6	UBG	N 45° 21' 11.62" W 122° 58' 41.36" 21 E	H	1440.0	117.40	UBG	Used
	ESV:	Bearing [True]: 11.0° to 32.0° Bearing [Mag]: 350.0° to 11.0°			Arc Distance: Out to 107.0 NM Altitude: 11500.0 to 20000.0 ft		



Name:	Jeanette Roller
Project Name:	KSEA
Output File:	KSEA ATOME1 SID GIRTE BUWZO 20170327_0914
Procedure Name:	ATOME1
Software:	RNAV-Pro™
Version:	2.39
Date/Time:	3/27/2017 9:14:53 AM
Input File:	KSEA ATOME SID GIRTE BUWZO 20160512_1232.txt
Databases:	AIRNAV Date: 3/19/2017
	CIFP Date: 8/18/2016
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	
DME/DME	✓	**No Critical DMEs Exist**
Radars	?	
Comms	?	
TERPS	?	

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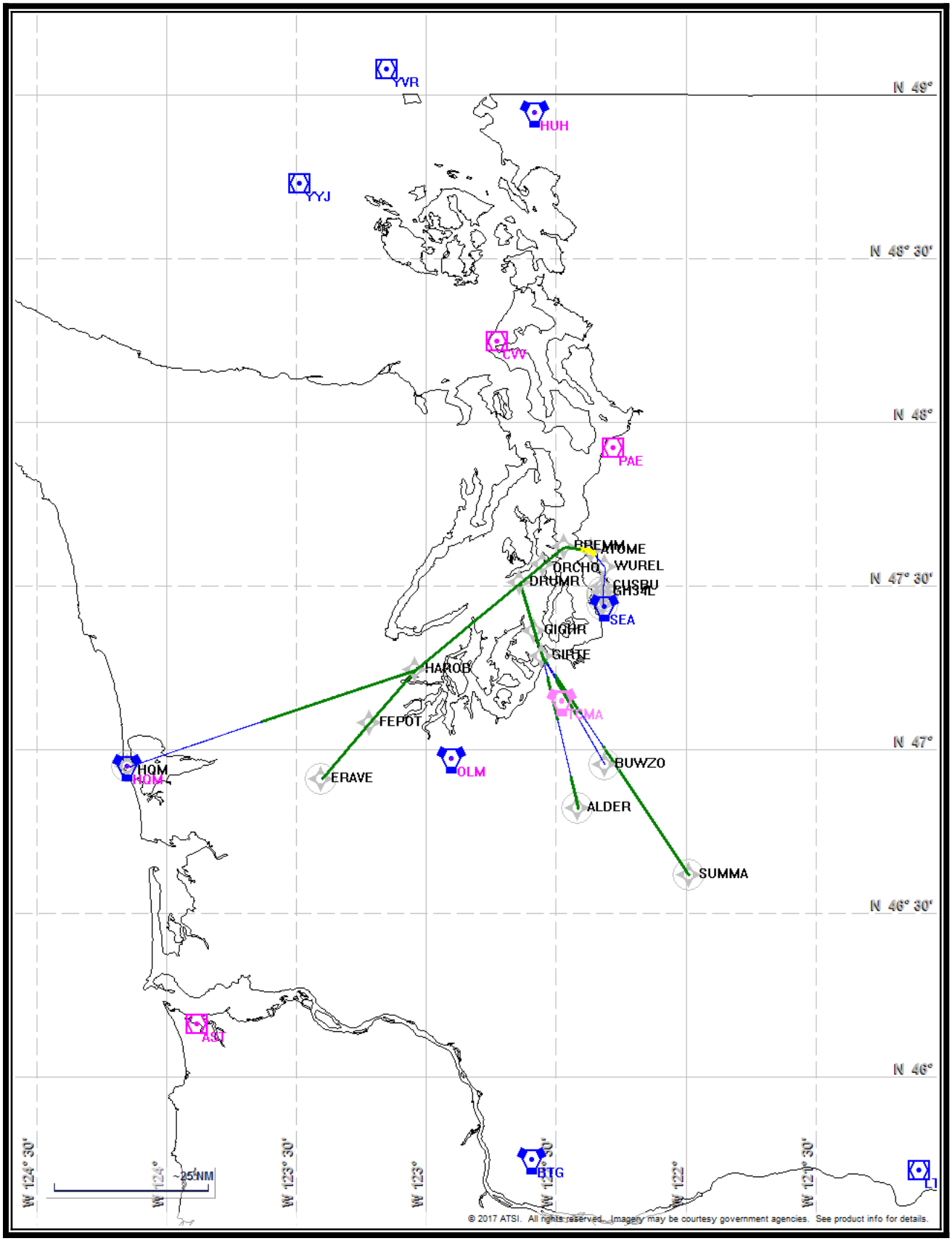
YVR
HUH
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PAE
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DRUMR
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N 47° 30'
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N 46° 30'
N 46°
W 124° 30'
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W 123° 30'
W 123°
W 122° 30'
W 122°
~25NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
GIRTE	WP	N 47° 17' 3.43" W 122° 33' 6.29"	9600.0	VNAV	210.0	Fly By	TF
BUWZO	WP	N 46° 57' 8.19" W 122° 18' 34.62"	11400.0	VNAV	210.0	Fly Over	TF

Flyability	Return To Summary
Settings:	**Flight Type:** Departure Transition **Selected Airport:** KSEA **Aircraft Category:** Cat D **Climb Gradient:** *None assigned* **Ground Speeds:** Table: **200.0 Kts** up to **11000.0 ft** **240.0 Kts** up to **18000.0 ft** **260.0 Kts** up to **24000.0 ft** **340.0 Kts** up to **99900.0 ft** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan
Entire track is fly-able	

DME/DME	Return To Summary
Settings:	**RNP:** 2.0 **Flight Mode:** Manual **Line of Sight (DTED Level 0 Max):** Evaluated **DME Restrictions:** Evaluated **Inertial Drift:** Enabled **Initial Drift:** 0.558 NM **INS Drift Rate:** 8.000 NM/Hour **Range Mode:** OSV **Co-Frequencies:** Evaluated **RNP Edges:** Evaluated **Min DME Range:** 3.0 NM **Allowed Gap Length:** 4.0 NM **DME Types:** VOR/DME, VORTAC, Standalone, and User **DME Include Angles:** 30 to 150 **Critical DMEs:** Allowed **DoD Facilities:** Not included **Foreign Facilities:** Not included **Low DMEs:** Included **Terminal DMEs:** Included **Flight Check DMEs:** Selected **Higher Altitudes:** Evaluated **Near Maximum Altitude:** Evaluated

Total Number of DMEs Used: 3

Maximum DME Error: 0.750 NM.

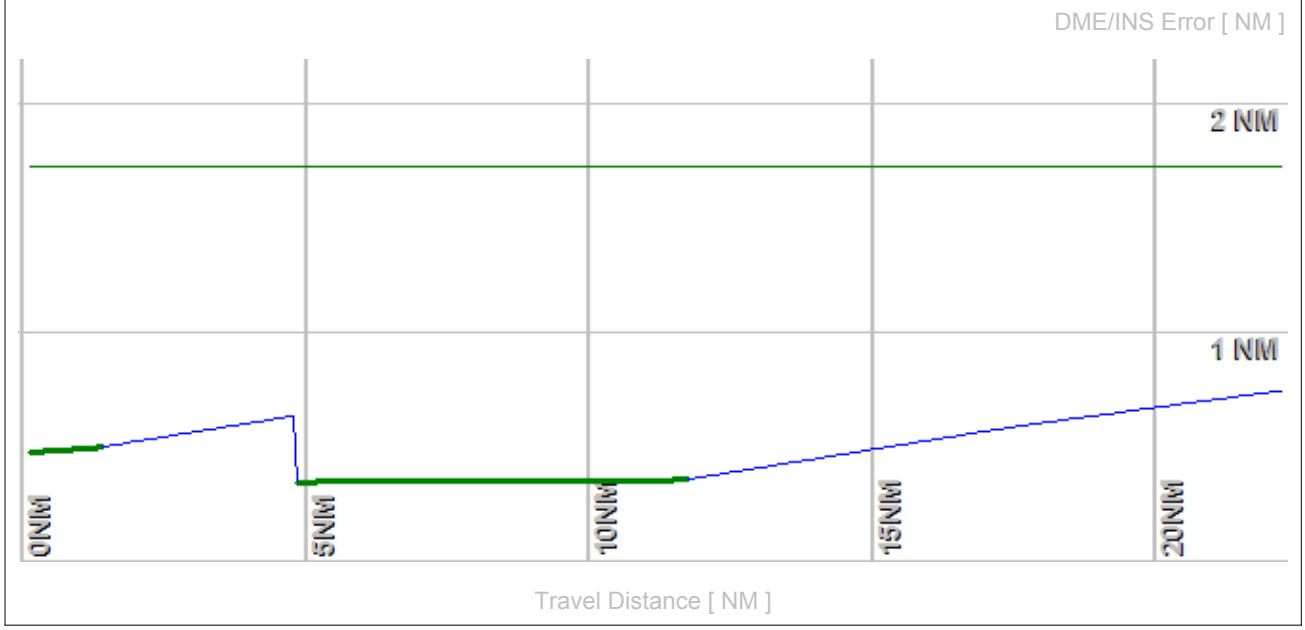
No Critical DMEs were found.

Available DMEs: HQM, OLM, HUH

Foreign DMEs within range: YDC, YVR, YYJ

DME/DME (Continued)

Return To Summary



DME/DME (Continued)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H + ESV	User	NO	0.767	Enabled	38.3%	37.0%
2	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H + ESV	User	NO	0.750	Enabled	6.2%	6.0%
3	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H + ESV	User	NO	1.305	Enabled	32.1%	31.0%
	Total Coverage							38.3%	37.0%

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	OLM	HQM	HUH			

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 47° 15' 48.76" W 122° 32' 11.46"	N 47° 12' 47.02" W 122° 29' 58.18"	3.4

VOR: SEA	Available from N 47° 15' 48.76" W 122° 32' 11.46" to N 47° 12' 47.02" W 122° 29' 58.18"
VOR: BFI	Available from N 47° 15' 48.76" W 122° 32' 11.46" to N 47° 12' 47.02" W 122° 29' 58.18"
VOR: TCMA	Available from N 47° 15' 48.76" W 122° 32' 11.46" to N 47° 12' 47.02" W 122° 29' 58.18"
VOR: OLM	Available from N 47° 15' 48.76" W 122° 32' 11.46" to N 47° 12' 47.02" W 122° 29' 58.18"
VOR: TCM	Available from N 47° 15' 48.76" W 122° 32' 11.46" to N 47° 12' 47.02" W 122° 29' 58.18"
VOR: SEA	Available from N 47° 15' 48.76" W 122° 32' 11.46" to N 47° 12' 47.02" W 122° 29' 58.18"

DME/DME (Continued)

Return To Summary

Inertial Drift Segments (Continued)

#	Start Location	End Location	Length [NM]
2	N 47° 6' 34.27" W 122° 25' 25.85"	N 46° 57' 9.83" W 122° 18' 35.80"	10.5
	VOR: SEA	Available from N 47° 6' 34.27" W 122° 25' 25.85" to N 46° 57' 9.83" W 122° 18' 35.80"	
	VOR: BFI	Available from N 47° 6' 34.27" W 122° 25' 25.85" to N 46° 57' 9.83" W 122° 18' 35.80"	
	VOR: TCMA	Available from N 47° 6' 34.27" W 122° 25' 25.85" to N 46° 57' 9.83" W 122° 18' 35.80"	
	VOR: OLM	Available from N 47° 6' 34.27" W 122° 25' 25.85" to N 46° 57' 9.83" W 122° 18' 35.80"	
	VOR: TCM	Available from N 47° 6' 34.27" W 122° 25' 25.85" to N 46° 57' 9.83" W 122° 18' 35.80"	
	VOR: SEA	Available from N 47° 6' 34.27" W 122° 25' 25.85" to N 46° 57' 9.83" W 122° 18' 35.80"	

Available DMEs by Waypoints		Return To Summary
Waypoint Before	**Waypoint After**	**DME List**
GIRTE	BUWZO	OLM, HUH, and HQM

User Data

Return To Summary

User Data Files

#	File Name
1	UserDMEs_KSEA ATOME1 SID BEARB ALPSE 20160526_2119.udt
2	UserDMEs_KSEA ATOME1 SID RW34L HQM 20160513_1116.udt

User DMEs

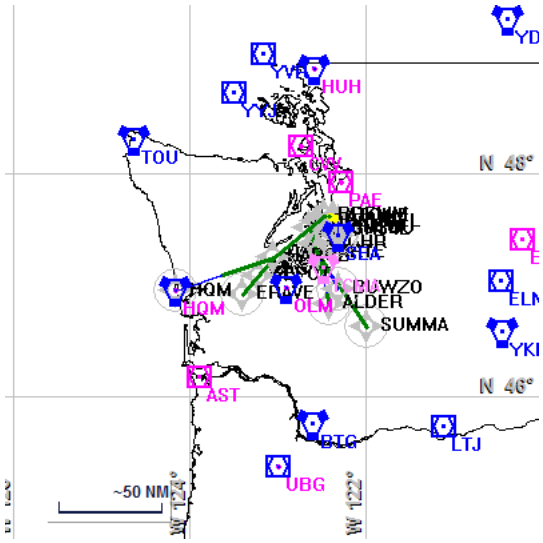
#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L	678.5	110.60	PAE	Not Used
	ESV:	Bearing [True]: 207.0° to 234.0° Bearing [Mag]: 187.0° to 214.0°		Arc Distance: Out to 76.0 NM Altitude: 8900.0 to 20000.0 ft			
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L	200.0	117.20	CVV	Not Used
	Restriction:	Bearing [True]: 145.0° to 179.0° Bearing [Mag]: 126.0° to 160.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 349.0° to 19.0° Bearing [Mag]: 330.0° to 360.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 269.0° to 279.0° Bearing [Mag]: 250.0° to 260.0°		Distance: Beyond 30.0 NM Altitude: Below 3400.0 ft			
	ESV:	Bearing [True]: 178.0° to 204.0° Bearing [Mag]: 159.0° to 185.0°		Arc Distance: Out to 71.0 NM Altitude: 8800.0 to 20000.0 ft			
	ESV:	Bearing [True]: 145.0° to 192.0° Bearing [Mag]: 126.0° to 173.0°		Arc Distance: Out to 51.0 NM Altitude: 2700.0 to 20000.0 ft			
3	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H	10.0	117.70	HQM	Used
	ESV:	Bearing [True]: 54.0° to 81.0° Bearing [Mag]: 35.0° to 62.0°		Arc Distance: Out to 77.0 NM Altitude: 6900.0 to 16000.0 ft			
	ESV:	Bearing [True]: 38.0° to 62.0° Bearing [Mag]: 19.0° to 43.0°		Arc Distance: Out to 78.0 NM Altitude: 7700.0 to 16000.0 ft			
	ESV:	Bearing [True]: 67.0° to 106.0° Bearing [Mag]: 48.0° to 87.0°		Arc Distance: Out to 95.0 NM Altitude: 9300.0 to 16000.0 ft			
4	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H	82.9	113.00	HUH	Used
	Restriction:	Bearing [True]: 175.0° to 185.0° Bearing [Mag]: 155.0° to 165.0°		Distance: Beyond 15.0 NM Altitude: Below 6000.0 ft			
	ESV:	Bearing [True]: 176.0° to 187.0° Bearing [Mag]: 156.0° to 167.0°		Arc Distance: Out to 94.0 NM Altitude: 8200.0 to 16000.0 ft			
	ESV:	Bearing [True]: 169.0° to 187.0° Bearing [Mag]: 149.0° to 167.0°		Arc Distance: Out to 112.0 NM Altitude: 10000.0 to 20000.0 ft			

User Data (Continued)

Return To Summary

User DMEs (Continued)

#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H	200.0	113.40	OLM	Used
	Restriction:	Bearing [True]: 242.0° to 277.0° Bearing [Mag]: 223.0° to 258.0°			Distance: Beyond 20.0 NM Altitude: Below 4100.0 ft		
	Restriction:	Bearing [True]: 277.0° to 302.0° Bearing [Mag]: 258.0° to 283.0°			Distance: Beyond 30.0 NM Altitude: Below 4100.0 ft		
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°			Distance: Beyond 10.0 NM Altitude: Below 6000.0 ft		
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°			Distance: Beyond 20.0 NM Altitude: Below 7000.0 ft		
	ESV:	Bearing [True]: 358.0° to 38.0° Bearing [Mag]: 339.0° to 19.0°			Arc Distance: Out to 63.0 NM Altitude: 7000.0 to 16000.0 ft		
6	UBG	N 45° 21' 11.62" W 122° 58' 41.36" 21 E	H	1440.0	117.40	UBG	Not Used
	ESV:	Bearing [True]: 11.0° to 32.0° Bearing [Mag]: 350.0° to 11.0°			Arc Distance: Out to 107.0 NM Altitude: 11500.0 to 20000.0 ft		



Name:	Jeanette Roller
Project Name:	KSEA
Output File:	KSEA ATOME1 SID HAROB ERAVE 20170327_0915
Procedure Name:	ATOME1
Software:	RNAV-Pro™
Version:	2.39
Date/Time:	3/27/2017 9:16:13 AM
Input File:	KSEA ATOME SID HAROB ERAVE 20160512_1557.txt
Databases:	AIRNAV Date: 3/19/2017 CIFP Date: 8/18/2016 DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	
DME/DME	✓	**No Critical DMEs Exist**
Radars	?	
Comms	?	
TERPS	?	

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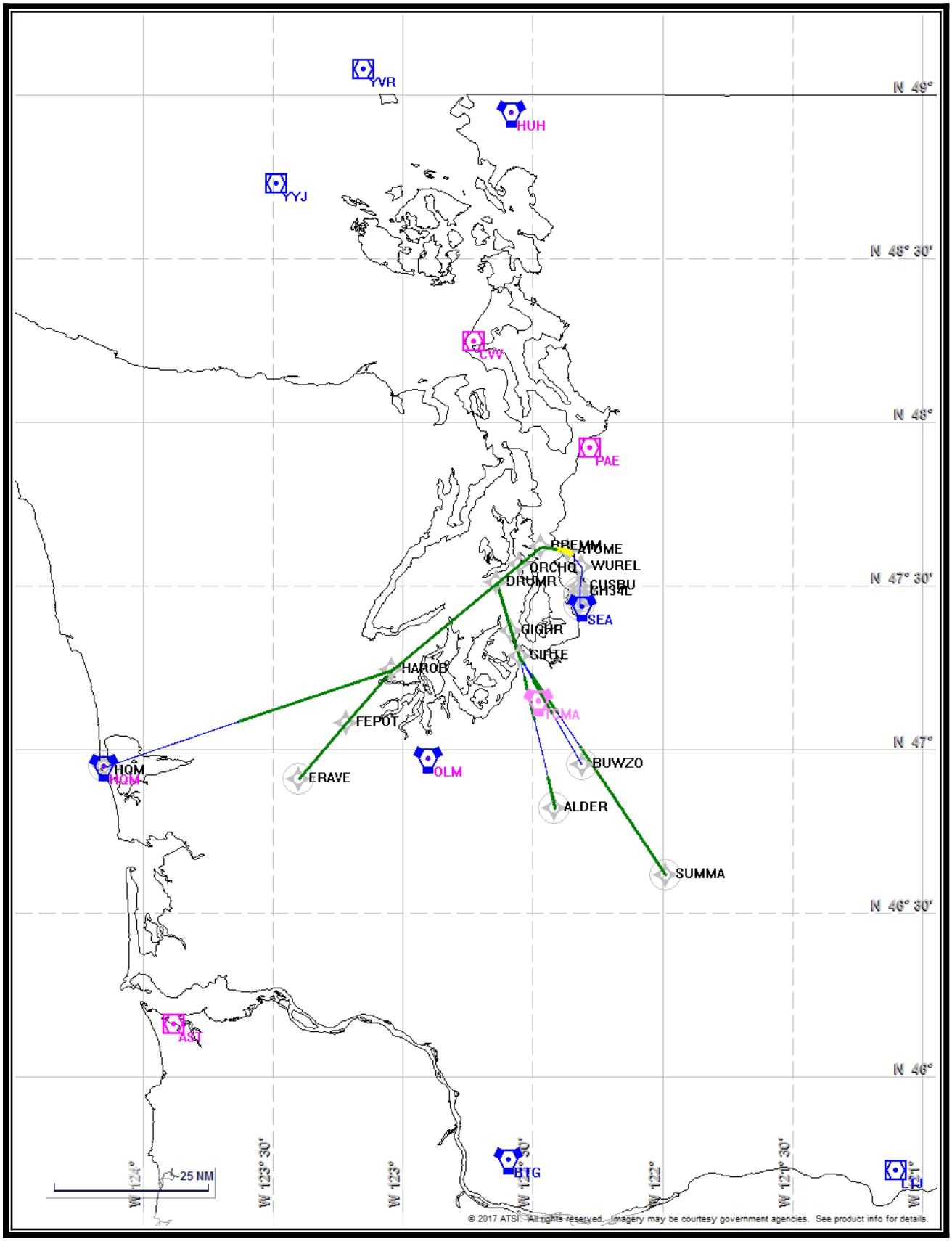
YVR
HUH
YYJ
CVV
PAE
N 49°
N 48° 30'
N 48°
N 47° 30'
N 47°
N 46° 30'
N 46°
PREMM
ATOME
ORCHQ
WUREL
DRUMR
CUSBU
GH34L
SEA
GIGHR
GIRTE
HAROB
FEPOT
TOMA
BUWZO
ALDER
SUMMA
ERAVE
OLM
HQM
HQM
AST
BTG
TIJ
25 NM
W 124°
W 123° 30'
W 123°
W 122° 30'
W 122°
W 121° 30'
W 121°
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Flight Plan

Return To Summary

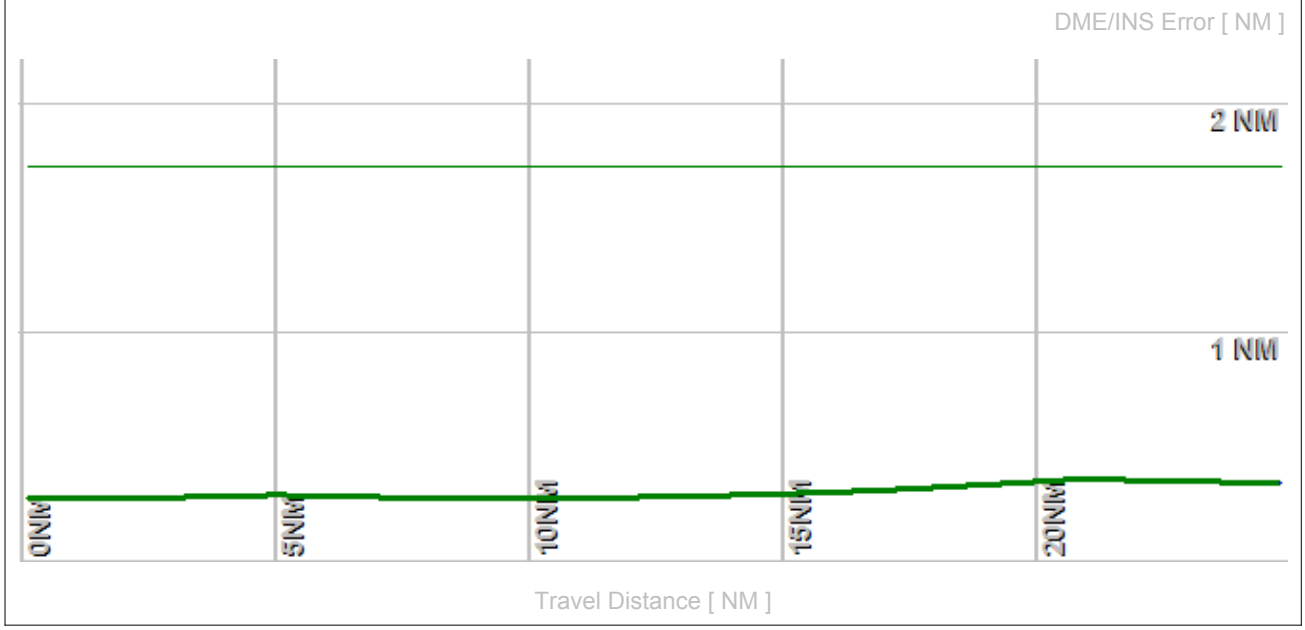
Name	Type	Lat/Lon	Alt [ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
HAROB	WP	N 47° 14' 36.00" W 123° 2' 27.00"	10000.0	VNAV	180.0	Fly By	TF
FEPOT	WP	N 47° 4' 51.00" W 123° 13' 8.00"	11200.0	VNAV	210.0	Fly By	TF
ERAVE	WP	N 46° 54' 35.00" W 123° 24' 6.00"	12400.0	VNAV	210.0	Fly Over	TF

Flyability	Return To Summary
Settings:	**Flight Type:** Departure Transition **Selected Airport:** KSEA **Aircraft Category:** Cat D **Climb Gradient:** *None assigned* **Ground Speeds:** Table: **200.0 Kts** up to **11000.0 ft** **240.0 Kts** up to **18000.0 ft** **260.0 Kts** up to **24000.0 ft** **340.0 Kts** up to **99900.0 ft** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan
Entire track is fly-able	

DME/DME	Return To Summary
Settings:	**RNP:** 2.0 **Flight Mode:** Manual **Line of Sight (DTED Level 0 Max):** Evaluated **DME Restrictions:** Evaluated **Inertial Drift:** Enabled **Initial Drift:** 0.558 NM **INS Drift Rate:** 8.000 NM/Hour **Range Mode:** OSV **Co-Frequencies:** Evaluated **RNP Edges:** Evaluated **Min DME Range:** 3.0 NM **Allowed Gap Length:** 4.0 NM **DME Types:** VOR/DME, VORTAC, Standalone, and User **DME Include Angles:** 30 to 150 **Critical DMEs:** Allowed **DoD Facilities:** Not included **Foreign Facilities:** Not included **Low DMEs:** Included **Terminal DMEs:** Included **Flight Check DMEs:** Selected **Higher Altitudes:** Evaluated **Near Maximum Altitude:** Evaluated
Total Number of DMEs Used: 3 Maximum DME Error: 0.363 NM. No Critical DMEs were found. **Available DMEs:** PAE, CVV, HQM, OLM **Foreign DMEs within range:** YDC, YVR, YYJ	

DME/DME (Continued)

Return To Summary



DME/DME (Continued)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H + ESV	User	NO	0.429	Enabled	36.6%	35.7%
2	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H + ESV	User	NO	0.449	Enabled	84.9%	83.6%
3	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L + ESV	User	NO	0.874	Enabled	77.5%	79.6%
	Total Coverage							99.5%	99.5%

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	OLM	PAE	HQM	CVV		
12.1	OLM	PAE	HQM			

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 46° 54' 40.94" W 123° 23' 59.70"	N 46° 54' 37.71" W 123° 24' 3.13"	0.1

VOR: HQM	Available from N 46° 54' 40.94" W 123° 23' 59.70" to N 46° 54' 37.71" W 123° 24' 3.13"
VOR: OLM	Available from N 46° 54' 40.94" W 123° 23' 59.70" to N 46° 54' 37.71" W 123° 24' 3.13"

Available DMEs by Waypoints		Return To Summary
Waypoint Before	**Waypoint After**	**DME List**
HAROB	FEPOT	OLM, HQM, CVV, and PAE
FEPOT	ERAVE	OLM, HQM, and PAE

User Data

Return To Summary

User Data Files

#	File Name
1	UserDMEs_KSEA ATOME1 SID BEARB ALPSE 20160526_2119.udt
2	UserDMEs_KSEA ATOME1 SID RW34L HQM 20160513_1116.udt

User DMEs

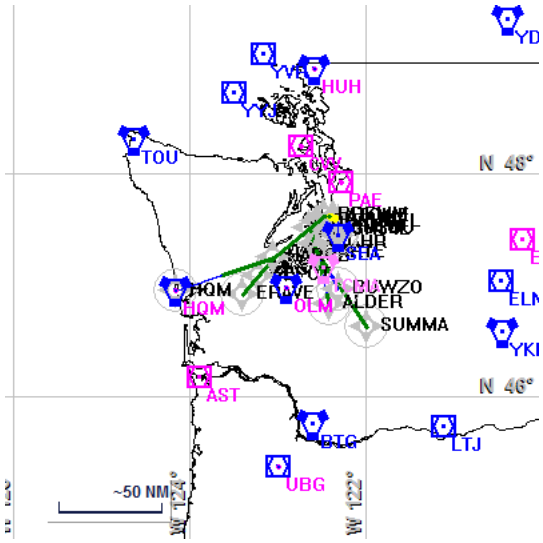
#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L	678.5	110.60	PAE	Used
	ESV:	Bearing [True]: 207.0° to 234.0° Bearing [Mag]: 187.0° to 214.0°			Arc Distance: Out to 76.0 NM Altitude: 8900.0 to 20000.0 ft		
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L	200.0	117.20	CVV	Not Used
	Restriction:	Bearing [True]: 145.0° to 179.0° Bearing [Mag]: 126.0° to 160.0°			Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft		
	Restriction:	Bearing [True]: 349.0° to 19.0° Bearing [Mag]: 330.0° to 360.0°			Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft		
	Restriction:	Bearing [True]: 269.0° to 279.0° Bearing [Mag]: 250.0° to 260.0°			Distance: Beyond 30.0 NM Altitude: Below 3400.0 ft		
	ESV:	Bearing [True]: 178.0° to 204.0° Bearing [Mag]: 159.0° to 185.0°			Arc Distance: Out to 71.0 NM Altitude: 8800.0 to 20000.0 ft		
	ESV:	Bearing [True]: 145.0° to 192.0° Bearing [Mag]: 126.0° to 173.0°			Arc Distance: Out to 51.0 NM Altitude: 2700.0 to 20000.0 ft		
3	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H	10.0	117.70	HQM	Used
	ESV:	Bearing [True]: 54.0° to 81.0° Bearing [Mag]: 35.0° to 62.0°			Arc Distance: Out to 77.0 NM Altitude: 6900.0 to 16000.0 ft		
	ESV:	Bearing [True]: 38.0° to 62.0° Bearing [Mag]: 19.0° to 43.0°			Arc Distance: Out to 78.0 NM Altitude: 7700.0 to 16000.0 ft		
	ESV:	Bearing [True]: 67.0° to 106.0° Bearing [Mag]: 48.0° to 87.0°			Arc Distance: Out to 95.0 NM Altitude: 9300.0 to 16000.0 ft		
4	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H	82.9	113.00	HUH	Not Used
	Restriction:	Bearing [True]: 175.0° to 185.0° Bearing [Mag]: 155.0° to 165.0°			Distance: Beyond 15.0 NM Altitude: Below 6000.0 ft		
	ESV:	Bearing [True]: 176.0° to 187.0° Bearing [Mag]: 156.0° to 167.0°			Arc Distance: Out to 94.0 NM Altitude: 8200.0 to 16000.0 ft		
	ESV:	Bearing [True]: 169.0° to 187.0° Bearing [Mag]: 149.0° to 167.0°			Arc Distance: Out to 112.0 NM Altitude: 10000.0 to 20000.0 ft		

User Data (Continued)

Return To Summary

User DMEs (Continued)

#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H	200.0	113.40	OLM	Used
	Restriction:	Bearing [True]: 242.0° to 277.0° Bearing [Mag]: 223.0° to 258.0°			Distance: Beyond 20.0 NM Altitude: Below 4100.0 ft		
	Restriction:	Bearing [True]: 277.0° to 302.0° Bearing [Mag]: 258.0° to 283.0°			Distance: Beyond 30.0 NM Altitude: Below 4100.0 ft		
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°			Distance: Beyond 10.0 NM Altitude: Below 6000.0 ft		
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°			Distance: Beyond 20.0 NM Altitude: Below 7000.0 ft		
	ESV:	Bearing [True]: 358.0° to 38.0° Bearing [Mag]: 339.0° to 19.0°			Arc Distance: Out to 63.0 NM Altitude: 7000.0 to 16000.0 ft		
6	UBG	N 45° 21' 11.62" W 122° 58' 41.36" 21 E	H	1440.0	117.40	UBG	Not Used
	ESV:	Bearing [True]: 11.0° to 32.0° Bearing [Mag]: 350.0° to 11.0°			Arc Distance: Out to 107.0 NM Altitude: 11500.0 to 20000.0 ft		



Name:	Jeanette Roller
Project Name:	KSEA
Output File:	KSEA ATOME1 SID RW34L HQM 20170327_0917
Procedure Name:	ATOME1
Software:	RNAV-Pro™
Version:	2.39
Date/Time:	3/27/2017 9:17:38 AM
Input File:	KSEA ATOME SID RW34L HQM 20160511_1546.txt
Databases:	AIRNAV Date: 3/19/2017
	CIFP Date: 8/18/2016
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	**Please Check Flyability Results**
DME/DME	**No Critical DMEs Exist**
Radars	
Comms	
TERPS	

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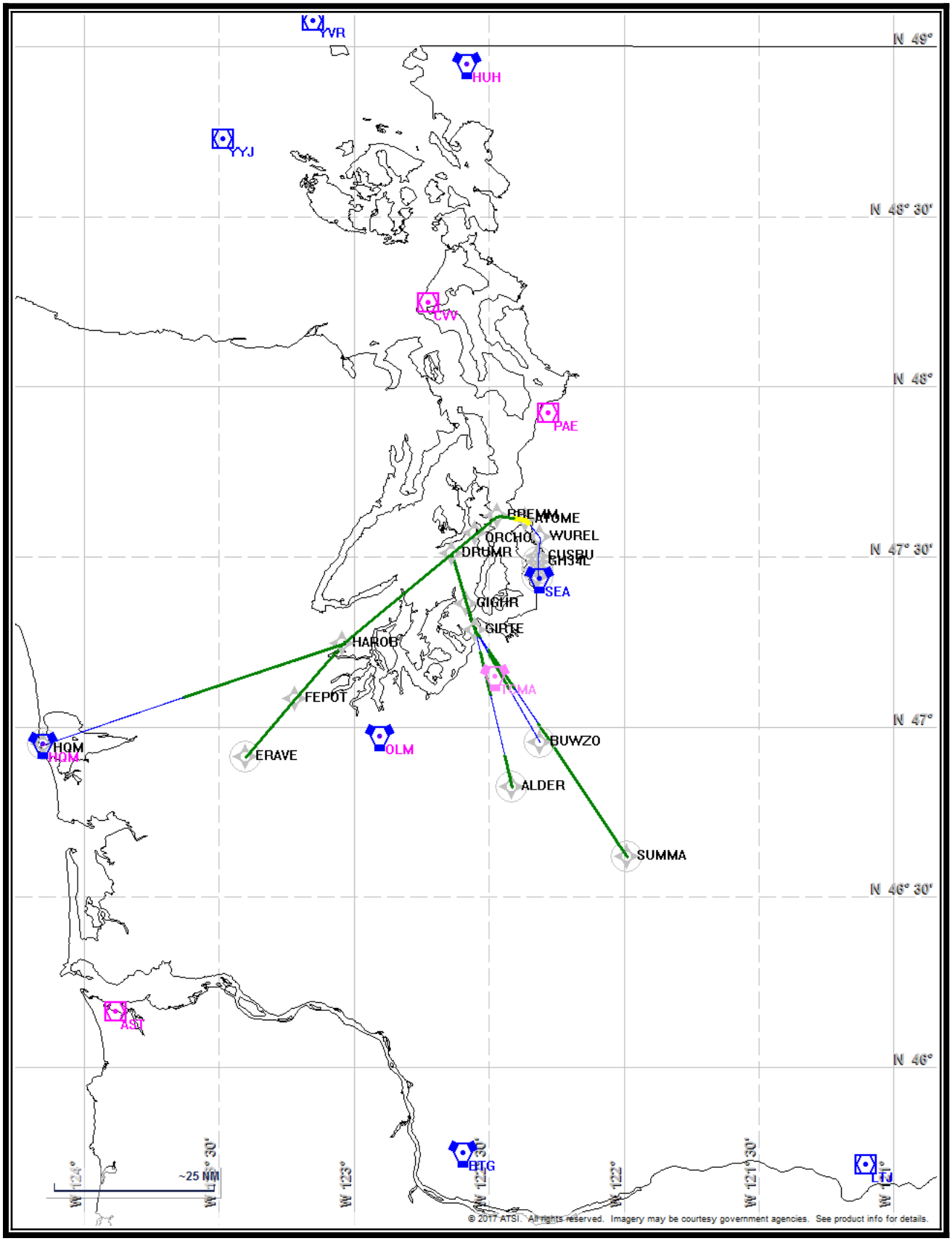
YVR
HUH
YYJ
CVV
PAE
ATOME
WUREL
ORCHO
DRUMR
GUSBU
GH34L
SEA
GIGHR
SIRTE
HAROB
FEPOT
TOMA
HQM
ERAVE
OLM
BUWZO
ALDER
SUMMA
AST
BTG
LTJ
N 49°
N 48° 30'
N 48°
N 47° 30'
N 47°
N 46° 30'
N 46°
W 124°
W 123° 30'
W 123°
W 122° 30'
W 122°
W 121° 30'
W 121°
~25 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW34L(...	WP	N 47° 26' 25.92" W 122° 19' 5.01"	356.3	VNAV	0.0	Fly Over	TF
RW16R(...	WP	N 47° 27' 49.81" W 122° 19' 4.29"	450.0	VNAV	130.0	Fly Over	VA
GH34L	WP	N 47° 28' 52.77" W 122° 19' 3.75"	975.0	VNAV	145.0	Fly Over	DF
CUSBU	WP	N 47° 29' 54.68" W 122° 19' 3.23"	1480.8	VNAV	145.0	Fly By	TF
WUREL	WP	N 47° 33' 19.52" W 122° 18' 36.66"	3161.1	VNAV	145.0	Fly By	TF
ATOME	WP	N 47° 36' 27.23" W 122° 21' 47.61"	4500.0	VNAV	145.0	Fly By	TF
BREMM	WP	N 47° 37' 12.00" W 122° 28' 6.00"	4500.0	VNAV	180.0	Fly By	TF
ORCHO	WP	N 47° 34' 0.02" W 122° 32' 57.68"	5600.0	VNAV	180.0	Fly By	TF
DRUMR	WP	N 47° 30' 31.92" W 122° 38' 16.44"	6900.0	VNAV	180.0	Fly By	TF
HAROB	WP	N 47° 14' 36.00" W 123° 2' 27.00"	10000.0	VNAV	180.0	Fly By	TF
HQM	WP	N 46° 56' 49.35" W 124° 8' 57.37"	14800.0	VNAV	180.0	Fly Over	TF

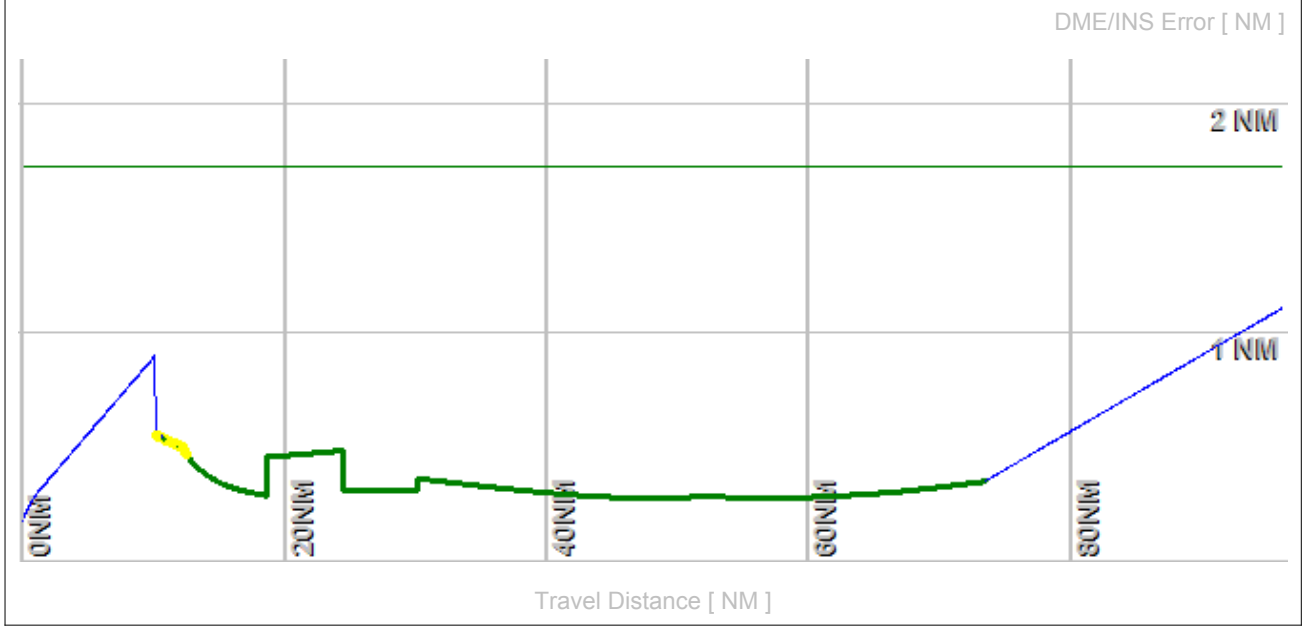
Climb Gradient: 500.0 ft/NM up to 940.0 ft MSL

Flyability	Return To Summary
Settings:	**Flight Type:** Runway Departure **Selected Airport:** KSEA **Aircraft Category:** Cat D **Climb Gradient:** 500.0 ft/NM up to 940.0 ft MSL **Ground Speeds:** Departure: **120.0 Kts** out to **10.0 NM** Table: **200.0 Kts** up to **11000.0 ft** **240.0 Kts** up to **18000.0 ft** **260.0 Kts** up to **24000.0 ft** **340.0 Kts** up to **99900.0 ft** **Wind Settings:** *None assigned* **Descent During a Turn:** Allowed **VNAV Mode:** Flight Plan
Flight Track comes into contact with terrain. Minimum AGL along route was -63.65 Ft. Flight Track contacted terrain (DTED 0 MAX) between AER and DER or within 2/3 NM of DER.	

DME/DME	Return To Summary
Settings:	**RNP:** 2.0 **Flight Mode:** Manual **Line of Sight (DTED Level 0 Max):** Evaluated **DME Restrictions:** Evaluated **Inertial Drift:** Enabled **Initial Drift:** 0.165 NM **INS Drift Rate:** 8.000 NM/Hour **Range Mode:** OSV **Co-Frequencies:** Evaluated **RNP Edges:** Evaluated **Min DME Range:** 3.0 NM **Allowed Gap Length:** 4.0 NM **DME Types:** VOR/DME, VORTAC, Standalone, and User **DME Include Angles:** 30 to 150 **Critical DMEs:** Allowed **DoD Facilities:** Not included **Foreign Facilities:** Not included **Low DMEs:** Included **Terminal DMEs:** Included **Flight Check DMEs:** Selected **Higher Altitudes:** Evaluated **Near Maximum Altitude:** Evaluated **Minimum MSL DMEs Avail:** 4286 ft
Total Number of DMEs Used: 5 Maximum DME Error: 1.111 NM. No Critical DMEs were found. **Available DMEs:** PAE, CVV, SEA, HQM, OLM **Foreign DMEs within range:** YDC, YVR, YYJ	

DME/DME (Continued)

Return To Summary



DME/DME (Continued)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L + ESV	User	NO	1.426	Enabled	34.3%	36.7%
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L + ESV	User	NO	1.111	Enabled	14.7%	14.0%
3	SEA	N 47° 26' 7.34" W 122° 18' 34.62" 19 E	H	Database	NO	1.111	Enabled	6.8%	6.7%
4	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H + ESV	User	NO	1.135	Enabled	28.0%	29.0%
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H + ESV	User	NO	1.672	Enabled	40.8%	45.0%
	Total Coverage							62.3%	65.7%

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.4						
2.5	PAE					
3.4	PAE	CVV				
6.6	PAE	CVV	SEA			
10.4	PAE	CVV	SEA			
14.2	PAE	CVV	SEA			
19.4	PAE	CVV				
24.5	PAE	HQM	CVV	OLM		
46.8	PAE	HQM	CVV	OLM		

Inertial Drift Segments

#	Start Location	End Location	Length [NM]

Available DMEs by Waypoints		Return To Summary
Waypoint Before	**Waypoint After**	**DME List**
RW34L(AER)	RW16R(DER)	
RW16R(DER)	GH34L	
GH34L	CUSBU	PAE
CUSBU	WUREL	CVV and PAE
WUREL	ATOME	CVV, PAE, and SEA
ATOME	BREMM	CVV, PAE, and SEA
BREMM	ORCHO	CVV, PAE, and SEA
ORCHO	DRUMR	CVV and PAE
DRUMR	HAROB	OLM, HQM, CVV, and PAE
HAROB	HQM	OLM, HQM, CVV, and PAE

User Data

Return To Summary

User Data Files

#	File Name
1	UserDMEs_KSEA ATOME1 SID BEARB ALPSE 20160526_2119.udt
2	UserDMEs_KSEA ATOME1 SID RW34L HQM 20160513_1116.udt

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	PAE	N 47° 55' 12.03" W 122° 16' 41.82" 20 E	L	678.5	110.60	PAE	Used
	ESV:	Bearing [True]: 207.0° to 234.0° Bearing [Mag]: 187.0° to 214.0°		Arc Distance: Out to 76.0 NM Altitude: 8900.0 to 20000.0 ft			
2	CVV	N 48° 14' 40.90" W 122° 43' 27.90" 19 E	L	200.0	117.20	CVV	Used
	Restriction:	Bearing [True]: 145.0° to 179.0° Bearing [Mag]: 126.0° to 160.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 349.0° to 19.0° Bearing [Mag]: 330.0° to 360.0°		Distance: Beyond 30.0 NM Altitude: Below 2200.0 ft			
	Restriction:	Bearing [True]: 269.0° to 279.0° Bearing [Mag]: 250.0° to 260.0°		Distance: Beyond 30.0 NM Altitude: Below 3400.0 ft			
	ESV:	Bearing [True]: 178.0° to 204.0° Bearing [Mag]: 159.0° to 185.0°		Arc Distance: Out to 71.0 NM Altitude: 8800.0 to 20000.0 ft			
	ESV:	Bearing [True]: 145.0° to 192.0° Bearing [Mag]: 126.0° to 173.0°		Arc Distance: Out to 51.0 NM Altitude: 2700.0 to 20000.0 ft			
3	HQM	N 46° 56' 49.35" W 124° 8' 57.37" 19 E	H	10.0	117.70	HQM	Used
	ESV:	Bearing [True]: 54.0° to 81.0° Bearing [Mag]: 35.0° to 62.0°		Arc Distance: Out to 77.0 NM Altitude: 6900.0 to 16000.0 ft			
	ESV:	Bearing [True]: 38.0° to 62.0° Bearing [Mag]: 19.0° to 43.0°		Arc Distance: Out to 78.0 NM Altitude: 7700.0 to 16000.0 ft			
	ESV:	Bearing [True]: 67.0° to 106.0° Bearing [Mag]: 48.0° to 87.0°		Arc Distance: Out to 95.0 NM Altitude: 9300.0 to 16000.0 ft			
4	HUH	N 48° 56' 43.03" W 122° 34' 45.32" 20 E	H	82.9	113.00	HUH	Not Used
	Restriction:	Bearing [True]: 175.0° to 185.0° Bearing [Mag]: 155.0° to 165.0°		Distance: Beyond 15.0 NM Altitude: Below 6000.0 ft			
	ESV:	Bearing [True]: 176.0° to 187.0° Bearing [Mag]: 156.0° to 167.0°		Arc Distance: Out to 94.0 NM Altitude: 8200.0 to 16000.0 ft			
	ESV:	Bearing [True]: 169.0° to 187.0° Bearing [Mag]: 149.0° to 167.0°		Arc Distance: Out to 112.0 NM Altitude: 10000.0 to 20000.0 ft			

User Data (Continued)

Return To Summary

User DMEs (Continued)

#	Name	Lat/Lon/MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
5	OLM	N 46° 58' 17.90" W 122° 54' 6.60" 19 E	H	200.0	113.40	OLM	Used
	Restriction:	Bearing [True]: 242.0° to 277.0° Bearing [Mag]: 223.0° to 258.0°			Distance: Beyond 20.0 NM Altitude: Below 4100.0 ft		
	Restriction:	Bearing [True]: 277.0° to 302.0° Bearing [Mag]: 258.0° to 283.0°			Distance: Beyond 30.0 NM Altitude: Below 4100.0 ft		
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°			Distance: Beyond 10.0 NM Altitude: Below 6000.0 ft		
	Restriction:	Bearing [True]: 17.0° to 62.0° Bearing [Mag]: 358.0° to 43.0°			Distance: Beyond 20.0 NM Altitude: Below 7000.0 ft		
	ESV:	Bearing [True]: 358.0° to 38.0° Bearing [Mag]: 339.0° to 19.0°			Arc Distance: Out to 63.0 NM Altitude: 7000.0 to 16000.0 ft		
6	UBG	N 45° 21' 11.62" W 122° 58' 41.36" 21 E	H	1440.0	117.40	UBG	Not Used
	ESV:	Bearing [True]: 11.0° to 32.0° Bearing [Mag]: 350.0° to 11.0°			Arc Distance: Out to 107.0 NM Altitude: 11500.0 to 20000.0 ft		