



2013 Low Level Route Survey

For 80th FTW Sheppard AFB, TX



Customer

80th FTW Sheppard AFB, TX



T-38 Talon



T-6 Texan II



Customer

80th FTW Sheppard AFB, TX

- Multinational training environment
- Multinational manned and managed
- Undergraduate Pilot Training (UPT)
- Pilot Instructor Training (PIT)
- Introduction To Fighter Fundamentals (IFF)
- 250 sorties a day
- 80,000 flight hours a year



Customer

80th FTW Sheppard AFB, TX

The 80th Flying Training Wing at Sheppard AFB conducts extensive low-level training within 100 miles of the base.

Training is conducted from 1,500 to 500' AGL, at speeds up to 450 knots for T-38 aircraft and 250 knots for T-6 aircraft.

Military pilots use the routes to maintain proficiency by simulating wartime missions. Actual wartime missions require high speed low-level penetrations, to avoid detection by the enemy.

MTRs are not only used by Sheppard training aircraft, but also by various other fighter, bomber, and transport aircraft.



Mission Objectives

- Primary Mission Objective -- To locate and plot the EXACT location and height of any obstacles above 200 feet AGL within the areas of the low level training routes designated by the 80th FTW. Aircrews will use current Sectional Charts as reference for determining whether or not an obstacle has already been identified.
- Secondary Mission Objective -- Improve proficiency of mission staff and aircrews under search conditions. Provide qualification missions for aircrew members in training.



Points of Contact

- IC Maj Steve Robertson
 - ❖ Phone 940 232 4635
 - ❖ Email Stephen.Robertson@iem.com
- Deputy IC Lt Col Rick Woolfolk
 - ❖ Phone 940 391 3728
 - ❖ Email R.Woolfolk1@verizon.net
- SAFB POC
 - Capt Adam Leckie
 - ❖ Phone 940-676-4970
 - ❖ Email Adam.leckie@us.af.mil
 - SAFB Main Office Phone 940-676-4970 (Commercial)



Mission Basics

- Deconfliction requires that we fly when Sheppard does not. This means we fly on weekends except Federal Holidays
- Standard crew of three is preferred, minimum crew is two for any sortie to be flown
- There must be a current mission pilot on the sortie, others may be trainees
- Detailed planning is a must – plan to launch early when it is cool



Mission Basics

- Typical mission is one 2.5 - 3.5 hour sortie. Some sorties may include a fuel stop before RTB. Some sorties are paired back to back with a lunch/fuel stop in between. Whenever the engine is shut down another sortie is required.
- Normal cruise speed to/from the route at a cooler altitude
- Route survey is NLT 1000'AGL @ a recommended 100 KTS ground speed, track spacing will vary with MTR route. Search speed may be increased at the discretion of the MP as long as ability to locate uncharted towers is maintained



Mission Basics

- Locate and plot the EXACT location and estimated height of any new obstacles above 200'AGL , any charted obstacles that have been removed, and verify charted obstacles in the Low Level routes
- Fly over the top of the obstacle to locate it. You may briefly descend to 500' AGL to estimate the obstacle height then return to NLT 1000' AGL. Never descend below the top of the tower.



Mission Basics

Kneeboard sheets for every route with turn points are posted at

<http://dentoncap.org/low-level-route-surveys/>

In the Sheppard AFB Low Level Route Mission section

(Note: Former NAV Routes are now numbered SR routes)

Other documents posted there include:

- Low Level Route Sighting Sheet
- Observer – Scanner Work Sheet
- PIREP kneeboard form
- This briefing presentation



Mission Basics

- Weather
 - CAP aircraft may fly IFR to reach the survey area but will not conduct the route survey unless the flight visibility is at least 5 miles and ceilings are at least 3000'AGL.
 - The MP will abort the sortie if the weather falls below these minimums while conducting the survey.
- Lights On for Safety
 - All sorties will be flown with all aircraft exterior lights turned on.



Mission Basics

Guide Wires

Guide wires extend as far as $\frac{1}{2}$ mile beyond towers. CAP aircraft will not descend below 500' AGL or below the top of any tower while attempting to measure the tower's height.



[Surviving The Wires Environment](#)



Mission Basics

Types of Towers

Lattice Tower-
also referred to
as a self-support
tower or SST



Monopole Tower- A
monopole tower is a single
tube tower. It requires one
foundation and typically
does not exceed 200' AGL.



Mission Basics

Types of Towers

Guyed Tower - Guyed towers used to be the cheapest tower to construct, but require the greatest amount of land. For taller heights (300' and greater) it is much cheaper to build a guyed tower. Most radio and television towers are guyed towers. A guyed tower is a straight tower supported by guy wires to the ground which anchor the tower.





Mission Basics

Types of Towers



Wind Turbines – large 1.5 to 3.5MW wind turbines typically used in this area are 200' to 300' AGL with blades reaching another 120 to 150'. Usually arrayed in wind farms.

Document the approximate total area of any new wind farms located



Mission Basics

Types of Towers



MET towers or Meteorological towers are used to gather wind data necessary for site evaluation and development of wind turbine projects. They can be erected very rapidly and may be on site from a few days to up to a year or longer. At this time there is no standardized notification system in place to indicate when and where these towers are erected.

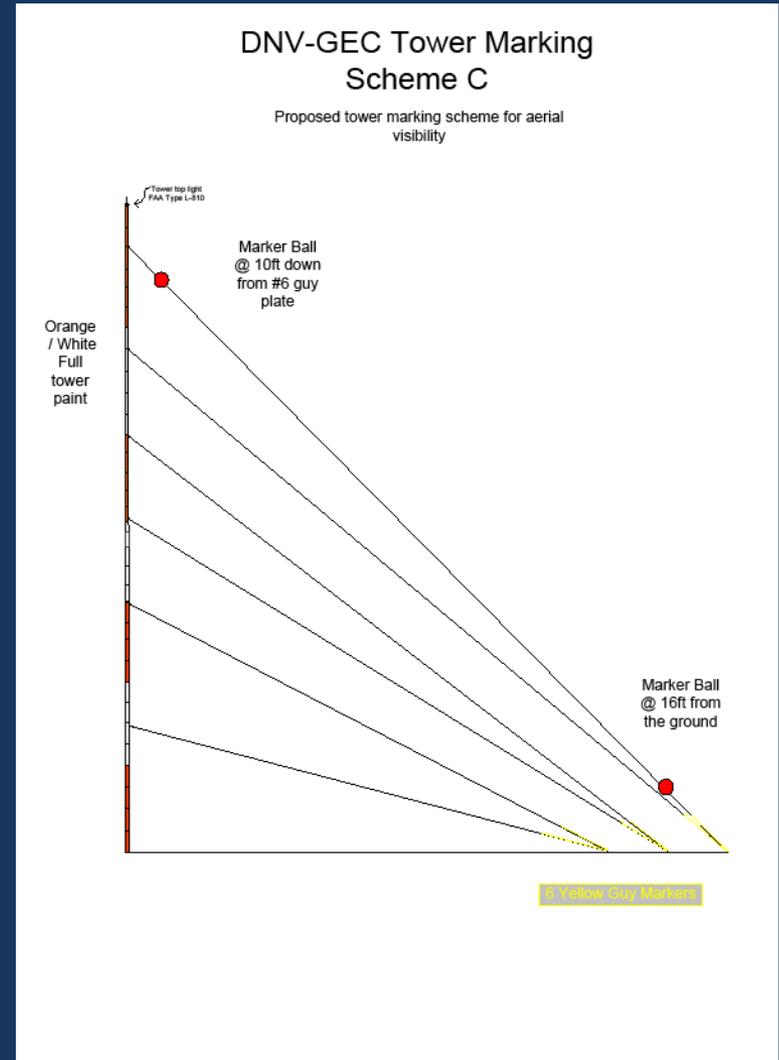


Mission Basics

Types of Towers

MET towers generally vary in height from 100, 150, 200 and 250 feet tall.

There are no standards for markings and towers less than 200 feet tall are not required to be lighted.

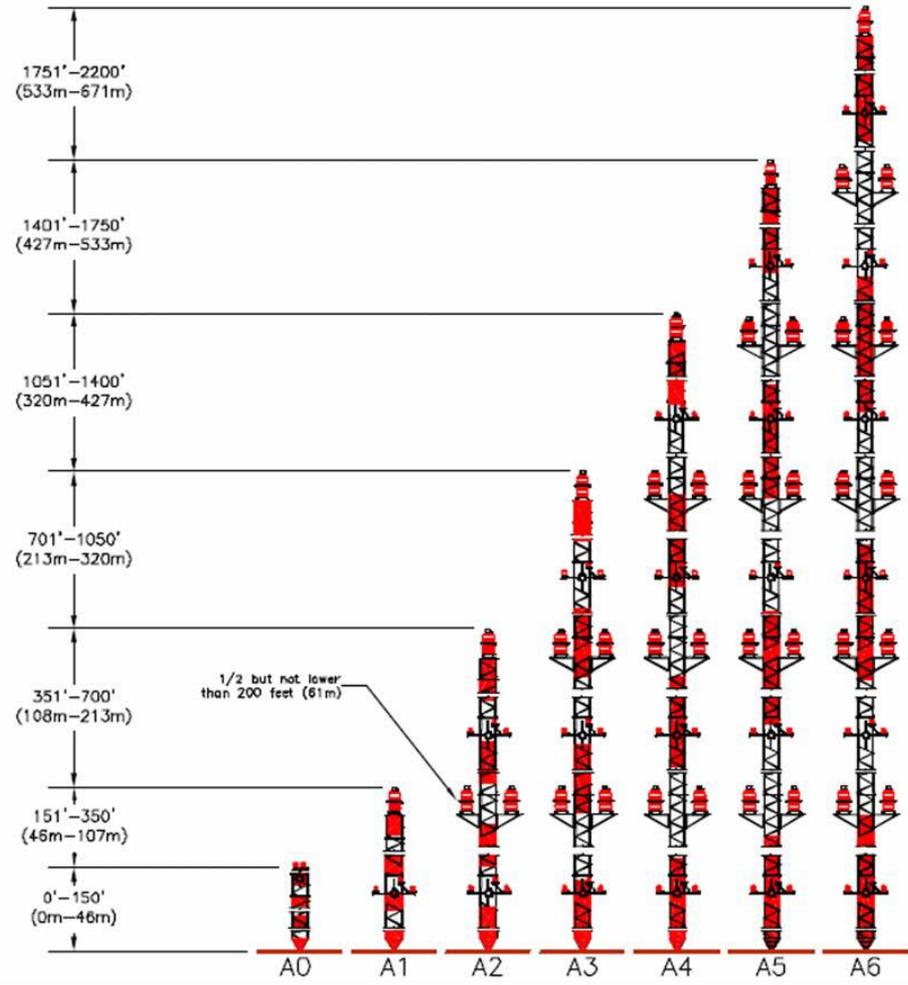




Estimating Height by Lighting

RED OBSTRUCTION LIGHTING STANDARDS (FAA Style A)

Day Protection = Aviation Orange/White Paint
 Night Protection = 2,000cd Red Beacon and sidelights



– L-864 Flashing Beacon



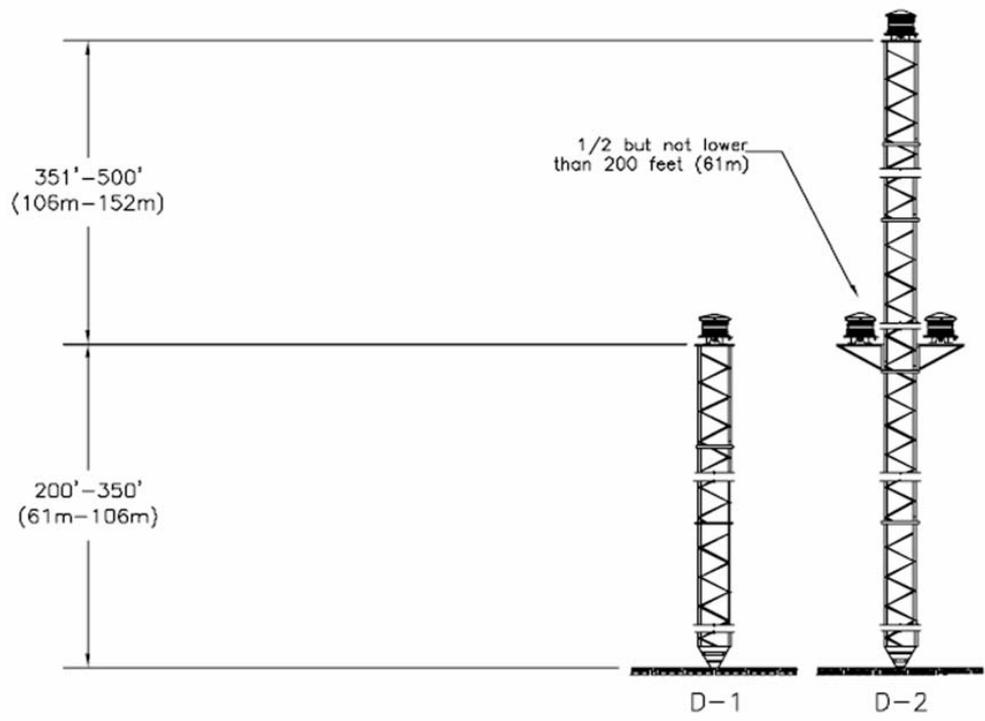
– L-810 Obstruction Light



Estimating Height by Lighting

MEDIUM INTENSITY WHITE OBSTRUCTION LIGHTING STANDARDS (FAA Style D)

Day/Twilight Protection = 20,000cd White Strobe
Night Protection = 2,000cd White Strobe
Painting of tower is typically not required.





Mission Safety

Bird strikes

- While not considered a big issue for light general aviation aircraft, bird strikes have been responsible for some major accidents and more than 300 fatalities since the age of flight began. According to an FAA study, more than 16,000 collisions occurred during a recent seven-year period over the United States, Puerto Rico, and the U.S. Virgin Islands. Nearly 80 percent occurred less than 1,000 feet above the ground
- **Most general aviation aircraft windshields are NOT required to be able to withstand bird strikes.**



Mission Safety

The Air Force Bird Aircraft Strike Hazard Team and FAA's *Aviation News* from January 1996 offer this guidance for avoiding bird strikes:

- Strikes are most likely in August, September, and October - particularly in migratory flyways. These tend to be the larger birds. Keep a lookout, just as you would for other flying objects.
- Dawn and dusk are the times with the highest probability of a bird encounter.
- Turn on landing or recognition lights. This helps birds see oncoming aircraft.
- Plan to climb. Birds almost invariably dive away, but there are exceptions.



Mission Safety

The Air Force Bird Aircraft Strike Hazard Team and FAA's *Aviation News* from January 1996 offer this guidance for avoiding bird strikes:

- Slow down. This will allow birds more time to get out of your way and will lessen the impact force if you do hit one.
- If a collision seems likely, duck below the glareshield to avoid being hit by the bird and flying plexiglass. Advise passengers to do the same. Protect your eyes and head.
- If a collision occurs, fly the aircraft first. Assess the damage and decide whether you can make it to an airport or you should make an off-airport landing. Declare an emergency - it doesn't cost anything. Even if no damage is visible, divert to the nearest airport and have a mechanic look at the airplane.



Mission Safety

According to a 2012 report recently published in the Journal of Applied Ecology, aircraft lights make it easier for birds to see and avoid aircraft, possibly helping to reduce the risk of bird strikes.

Scientists from the U.S. Department of Agriculture, Indiana State University and Purdue University tested the response of Canada geese to three remote-controlled aircraft -- one with lights off, one with lights on, and one painted to resemble a bird of prey.

They found geese responded more quickly to avoid the aircraft with its lights on. The research "could set the aviation industry on the right track to developing lighting systems that will reduce the rate of bird strikes," the report said.



Mission Safety

Bird strikes





Mission Safety

- Watch for signs of heat related problems
- You can fly with windows open at any speed
- Hydrate – Hydrate – Hydrate

The Pee Chart

How dehydrated are you?



(Highly Dehydrated)

Go drink a large bottle of water immediately!!!



You are still seriously dehydrated. Drinking more now will make you feel a lot better.



Moderately dehydrated. You lose fluid on a regular basis throughout the day. Drink more water to get hydrated.



Almost there. Get some more water in your system to help flush all those toxins from your body. Stay hydrated and healthy!



Great job. Now don't let yourself get dehydrated. Drink at least 8-12 large glasses of water throughout the day.

***Caffeinated drinks dehydrate - limit your consumption.**

***Sport drinks can provide supplementary electrolytes, but Water is the Key!**

Drink one sport drink for every three to four bottles of water. Don't wait to get thirsty. If you're thirsty, you're a quart low.



Mission Safety

Take the PLEDGE

- **P** Peek into each gas tank - verify it has enough fuel to get you there (& back)
- **L** Look at the weather - do not fly when inclement WX is forecast
- **E** Elude VFR into IMC - get your instrument rating and stay clear of clouds
- **D** Do Not Stall - Use the mantra "AIRSPEED & LINEUP - AIRSPEED & LINEUP"
- **G** Ground Hurts - Stop Buzzing! Nobody is impressed when you crash.
- **E** Exclaim GUMPS! Checklist your aircraft for takeoffs and landings



iPLEDGE

Remember PLEDGE

Peek at each gas tank
Look at weather
Elude VFR into IMC
Do not stall • Keep up speed
Ground hurts • No buzzing
Exclaim • Shout "GUMPS"
on approach



TXAA Pledge for Life
i PLEDGE:

1. To Eyeball Each Gas Tank
2. To Check Weather Before Flight
3. NO VFR Into IMC
4. No Stalls – Keep Up Speed
5. No Buzzing
6. Shout "Gumps" On Approach

– And do the checks each time –

•

"NOT TO CRUNCH IT OR DIE WHEN I FLY"
For ME, my PASSENGERS, my FAMILY

i PLEDGE

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Mission Safety

- Safety is of paramount importance
- Never compromise your safety
- ORM Uploaded to eServices Required
- Weight & Balance Uploaded to eServices Required
- FAA VFR Flight Plan Required
- *Close your Flight Plan*
- Suggestions that improve safety are always welcome



VFR Flight Plans

Form Approved: OMB No. 2120-0026
09/30/2006

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		(FAA USE ONLY) <input type="checkbox"/> PILOT BRIEFING <input type="checkbox"/> VNR		TIME STARTED	SPECIALIST INITIALS	
FLIGHT PLAN		<input type="checkbox"/> STOPOVER				
1. TYPE	2. AIRCRAFT IDENTIFICATION	3. AIRCRAFT TYPE / SPECIAL EQUIPMENT	4. TRUE AIRSPEED	5. DEPARTURE POINT	6. DEPARTURE TIME	7. CRUISING ALTITUDE
<input checked="" type="checkbox"/> VFR <input type="checkbox"/> IFR <input type="checkbox"/> DVFR	CAP4238	C182/G	120 KTS	KADM	PROPOSED (Z) 1700 ACTUAL (Z)	2000'
8. ROUTE OF FLIGHT ADM070009/D2+30 ADM225040						
9. DESTINATION (Name of airport and city)		10. EST. TIME ENROUTE		11. REMARKS		
KDTO		HOURS 03	MINUTES 30	CAP/USAF LOW LEVEL ROUTE SURVEY *NOTE-MAY ADD SPOT INFO HERE IF PERTINENT Aircraft N7636N		
12. FUEL ON BOARD		13. ALTERNATE AIRPORT(S)		14. PILOT'S NAME, ADDRESS & TELEPHONE NUMBER & AIRCRAFT HOME BASE		15. NUMBER ABOARD
HOURS 04	MINUTES 30			Steve Robertson, 940 232 4635, KDTO		3
				17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)		
				Rick Woolfolk, 940 391 3728		
16. COLOR OF AIRCRAFT		CIVIL AIRCRAFT PILOTS. FAR Part 91 requires you file an IFR flight plan to operate under instrument flight rules in controlled airspace. Failure to file could result in a civil penalty not to exceed \$1,000 for each violation (Section 901 of the Federal Aviation Act of 1958, as amended). Filing of a VFR flight plan is recommended as a good operating practice. See also Part 99 for requirements concerning DVFR flight plans.				
WHITE/RED/BLUE						

- Route is entry point reference a VOR radial/distance
- /D (for delay) (time in grid) Example /D2+30
- Exit point reference a VOR radial/distance
- Full Route of Flight example: ADM070009/D2+30 ADM225040
- Remarks : CAP/USAF LOW LEVEL ROUTE SURVEY and N-number
- Destination Contact: Your FRO



VFR Flight Plans

Don't forget to close your VFR flight plan with FSS. There have been several instances recently when CAP aircraft have failed to close their flight plan and FSS has had to initiate search procedures at 30 minutes overdue.

- **CAP4230** filed VFR to WPA, (Wiley Post), ETA was 5/7/11 1800z closed flight plan at 1845z **45 minutes past ETA.**
- **CAP3072** filed VFR to SKX, (Taos), ETA was 2/26/12 0115z closed Flight plan 0150z **35 minutes past ETA.**
- **CAP3039** filed VFR to ALM, (Alamogordo), ETA was 2/25/12 2359z closed Flight plan 0032z **33 minutes past ETA.**
- **CAP2151** filed VFR to SGS, (South St. Paul), ETA was 2/10/12 1829z closed Flight plan 1853z **34 minutes past ETA**
- **CAP2152** filed VFR to SGS, (South St. Paul), ETA was 2/10/12 1829z closed Flight plan 1853z **34 minutes past ETA**



Communication

- Before departing the MP will contact the IC
- All participants will be checked in via CAPSTAR
- Current safety briefing will be checked and anyone who is not current will not be allowed to participate
- There will be no High Bird for these sorties
- It is anticipated that most communication will be via cell phone, email, TEXT message, or local flight following



Communication

Contact FSS every hour for altimeter setting, update your position, provide PIREP



Contact Flight Service on the charted frequency (or 122.2),
Flight Watch on 122.0, or call 1-800-WX-BRIEF after landing to give
a pirep!

Nearest VOR or Airport: _____

Observation Time: _____ (Zulu) or _____ (Minutes Ago)

Altitude: _____ MSL

Aircraft Type: _____

Note: Not all items are required; you can give a pirep with only one item!

Cloud Coverage (Circle One):

CLR	FEW	SCT	BKN	OVC
0	>0 or ≤2/8	3/8-4/8	5/8-7/8	8/8

Cloud Type (Circle One):

Cirrus Cumulus Stratus

Cloud Height: Bases: _____ Tops: _____

Visibility: _____ Statute Miles

Restrictions to Visibility (Circle One):

Haze Mist Fog Dust Sand Other: _____
(smoke, spray, volcanic ash)

Precipitation Type (Circle One):

Rain Drizzle Snow Hail

Precipitation Intensity (Circle One):

Light Moderate Heavy

Temperature: _____ Celsius

Wind Direction: _____ Speed: _____ Knots

Turbulence (Circle One):

Light Moderate Severe
Light Chop Moderate Chop Extreme

Icing (Circle One):

Trace Light Moderate Severe

Remarks:

www.asf.org/skyspotter

FOLD HERE
for keyboard format



Paperwork Flow

- The IC will load sorties into WMIRS and obtain a sortie number.
Mission Numbers will change each month by adding a letter to the end
Mission Symbol is A99
- Route assignments will be emailed to the Squadron's PO
- *Each new month the squadron will upload a current Aircraft Inspection Form to the Mission Files in WMIRS for the aircraft used*
- **Do not fly if the sortie is not GREEN**
- *Sorties sometimes get missed in the approval process. If the sortie is not green on the day to be flown contact the IC or Deputy IC who will call the NOC for approval*



Paperwork Flow

- The MP will update sorties in WMIRS with aircrew names
- **Check aircraft discrepancies in WMIRS and CAPERS**
- eFlight release from LLRS IC or Deputy IC only:
Rick Woolfolk: 940-391-3728
Steve Robertson: 940-232 4635
- *If other CAP personnel are providing support such as local flight following let us know so they can be signed into the mission via CAPSTAR.*



Paperwork Flow

BEFORE calling for a Flight Release at the start of the day's sorties the MP will:

1. Complete the following sections in the e104
 - Manifest, Qualifications, Aircraft
 - Cell phone number(s) in crew contact line
 - Briefing including NA in boxes as appropriate
 - Current and forecast weather (actual weather not just VFR)

2. Upload into the appropriate location in the e104:
 - W&B
 - ORM



Paperwork Flow

At the completion of the day's sorties the MP will:

1. Update WMIRS with Tach & Hobbs time, fuel dollars and gallons.
2. Complete the Debriefing Section of the e104 including hobbs hours, tach hours, fuel gallons & dollars, Summary Section, and Results/Deliverables Section (photos/route survey sheets completed, etc.)
3. Upload into the appropriate location in WMIRS and the e104:
 - TXWG Fuel Receipt
 - Route Survey Sighting Sheets into the e104 Other box
4. Upload any photos to WMIRS
5. Update CAPERS tach and hobbs time for maintenance tracking
6. Write up any A/C discrepancies in both WMIRS and CAPERS



ORM

- Required mission paperwork
- Increased safety awareness

OPERATIONAL RISK MANAGEMENT MATRIX						
Pilot Name: _____		Date: _____		Mission #: _____		A/C #: _____
Sortie: _____						
HAZARD	LOW RISK	PTS.	MODERATE RISK	PTS.	HIGH RISK*	PTS. VALUE
MAN SUGGESTED VALUES						
Experience / Training	≥ 1,000 hours PIC ≥ 50 hours mission time	0	≥ 250 + 1,000 hours PIC ≥ 25 + 50 hours mission time	10	≥ 250 hours PIC ≥ 25 hours mission time	20
Pilot Currency	≥ 10 hours within last 30 days	0	≥ 5 + 10 hours within last 30 days	10	≥ 5 hours within last 30 days	20
Health / Crew Read	Good health and proper crew rest	0	Fair health and for some signs of fatigue	10	Poor health and / or serious fatigue	No Go
MACHINE SUGGESTED VALUES						
Maintenance Factors	Fully Functional	0	Partially Non-Functional	15	Fully Non-Functional	No Go
Performance Factors	≥ 2,500 + 7,000' AGL search altitude	0	≥ 7,000' AGL search altitude	10	≥ 2,500' AGL search altitude	25
A/A & A/G Comms	Good comms and/or high bird available	0	Some bird ops or faulty comms and/or no high bird	10	Poor comms and no high bird	15
MISSION SUGGESTED VALUES						
Operations Tempo	1 - 2 total search aircraft	0	3 - 4 total search aircraft	10	≥ 4 total search aircraft	20
Search Complexity	Simple tasks, no new technology	0	Complex tasks, no new technology	10	Complex tasks, new technology	20
ENVIRONMENT SUGGESTED VALUES						
Weather (current & forecast, including winds aloft)	lang: none Ceiling: none Hazards: none Winds: ≤ 5 kts. Visibility: ≥ 5 mi.	0	lang: none Ceiling: ≤ 1,500' Hazards: lite-mod. Winds: > 5 ≤ 15 kts. Visibility: > 3 < 5 mi.	0 20 10 5 10	lang: 2 light Ceiling: < 500' Hazards: mod-sev. Winds: > 15 kts. Visibility: < 3 mi.	No Go 75 50 50 100
Terrain	Low, flat	0	Foot hills / hilly areas	25	Mountainous	50
Night Ops		0	VFR	25	IFR	75
Airfield	Familiar	0	Unfamiliar	25		
ADDITIONAL CIRCUMSTANCES SUGGESTED VALUES						
CAPP 5 & 91	No forced landings or simulated engine cuts	0	Forced landings and/or simulated engine cuts	50		
Overwater			Within gliding distance of land	50	Outside gliding distance of land	100
CD Overwater			With immersion suit Water temp < 60° F	75	Without immersion suit Water temp < 60° F	No Go
TOTAL CALCULATED RISK ASSESSMENT:						0
OVERALL RISK ASSESSMENT						Initials
Low Risk = 0 to 75 [†]						Date / Time
Moderate Risk = 75 to 150 [†]						FRD / MC / IC
High Risk = > 151 [†]						Squadron DO / DOS / CC
No Go						Wing DO / DOS / CC
Mission can be rejected by any direct participant at any level						Mission can be rejected by any direct participant at any level

Notes: * Implement suitable controls for any item in the high range. † Approvals are granted in ascending order of command and only with PIC concurrence. All approvals are optional, based upon local procedures and established Wing policies.

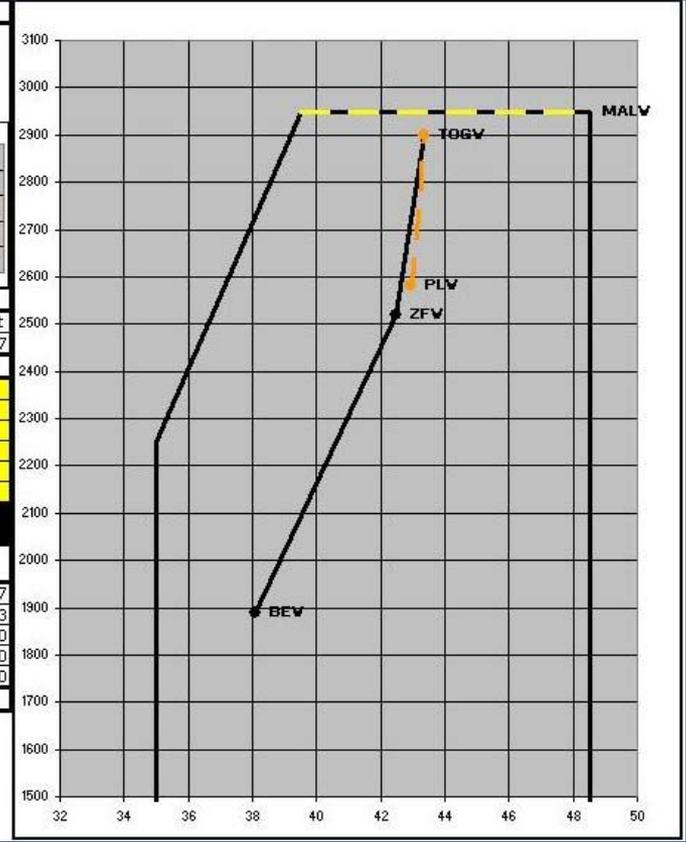
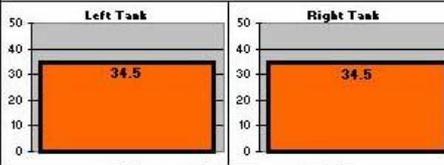
CAP AF - ORM 100-38 - AUG 06 LOCAL REPRODUCTION AUTHORIZED © CIVIL AIR PATROL 2006 ALL RIGHTS RESERVED.



Weight & Balance

Required for each sortie

Flight Details				REMARKS			
02/18/2009 21:20				- - Database Currency Date: 12/28/2008			
Registration #	N4736N		Gear Pos				
Aircraft Type	C182Q	CPF4238	RD/WT/BL				
Usable Fuel Tank Configuration (US gals)							
Full Fuel	92.0	3/4	69.0				
Middle Tab		1/2	46.0				
Bottom Tab	64.0	1/4	23.0				
Custom Fuel							
		TOT Fuel	69.0				
Taxi Fuel	-1.7						
Fuel Burn (13.5 GPH)	12.0	FOB (NR)	5:25				
Reserve (Minutes)	60	FOB (WR)	4:25				
Loading Details - (Avail. Useful Load = 49 lbs)				Safety Details / Crew Manifest			
	Wt (lbs)	Arm	Moment		Wt (lbs)	Arm	Moment
Basic Empty WT	1890.7	38.1	71976.7	Zero Fuel (ZFW)	2520.7	42.5	107106.7
Usable Fuel (lbs)	390.0	46.5	18135.0				
				POS	NAME	CAPID	RMKS
R 1	Seat 1	200.0	41.0	MP	Woolfolk, R	233124	
	Seat 2	180.0	41.0	MO	Faas, J	281354	
R 2	Seat 3	200.0	74.0	MS	Thomas, C	292770	
	Seat 4		74.0				
R 3	Seat 5		97.0				
	Seat 6		97.0				
R 4							
Prepositioned Equipment Button							
Baggage	Wt (lbs)	Add. Wt (lbs)	Arm	Moment	Ramp Wt		
A - 120	25.0	25.0	95.0	4750.0	2910.7	43.0	125241.7
B - 80			116.0		Taxi Fuel	-10.2	46.5
C - 80			129.0		Takeoff Wt (TOGW)	2900.5	43.3
					Planned Fuel Burn	-318.0	46.5
					Landing Wt (PLW)	2582.5	43.0
					Useful Load	49.5	





CAPF e104

MP fills out these e104 sections before sortie

DEBRIEFING INFORMATION				
<input type="checkbox"/> Flight Plan Closed	ATD 00:00	ATA 00:00	Tach Start 0	Tach End 0
Hobbs Start 0	Hobbs To/From 0	Hobbs In Air 0	Hobbs Total 0	Hobbs End 0
Fuel Used (Gal) 0	Oil Used (Qt) 0	Fuel & Oil Cost 0	Receipt #	<input type="checkbox"/> Wing Paid
Summary				
Results/Comments				
Weather Conditions				
Remarks				
Sortie Effectiveness <input type="checkbox"/> Successful <input type="checkbox"/> Marginal <input type="checkbox"/> Unsuccessful Reason (if not successful):				
<input type="checkbox"/> Weather <input type="checkbox"/> Aircraft Maintenance <input type="checkbox"/> Crew Unavailable <input type="checkbox"/> Customer Cancellation				
Attachments & Documentation <input type="checkbox"/> AIF ORM Matrix <input type="checkbox"/> AIF ARCHER Log <input type="checkbox"/> CAPF 104a SAR <input type="checkbox"/> CAPF 104b Reconnaissance <input type="checkbox"/> ICSP 2-14 Unit Log <input type="checkbox"/> Receipts <input type="checkbox"/> Other				
DEBRIEFING OFFICERS				
<input type="checkbox"/> Phone Debriefing	Debriefer (Name & CAPID) - 0		Time & Date Debriefed 13:45 - 05/26/2010	

MISSION FLIGHT PLAN/BRIEFING FORM				Tracking Number
MISSION DATA SECTION				
Mission Number REQ-10-38	Mission Name	Mission Symbol	Mission Date 05/30/2010	
MANIFEST, QUALIFICATIONS & AIRCRAFT DETAILS				
Pilot in Command (Name & CAPID) Stephen C Robertson - 423262		<input type="checkbox"/> MP <input type="checkbox"/> TMP <input type="checkbox"/> MPC <input type="checkbox"/> WS <input type="checkbox"/> COM <input type="checkbox"/> IFR <input type="checkbox"/> Night <input type="checkbox"/> LES <input type="checkbox"/> Trainee		
Crew Member / Passenger 1 (Name & CAPID) Pat L Golden Jr - 442405		<input type="checkbox"/> MCP <input type="checkbox"/> MP <input type="checkbox"/> TMP <input type="checkbox"/> MPC <input type="checkbox"/> COM <input type="checkbox"/> IFR <input type="checkbox"/> Night <input type="checkbox"/> WS <input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> LES <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Member / Passenger 2 (Name & CAPID) James Grant - 471364		<input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> WS <input type="checkbox"/> LES <input type="checkbox"/> ARCHOPR <input type="checkbox"/> ARCHTRK <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Member / Passenger 3 (Name & CAPID)		<input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> WS <input type="checkbox"/> LES <input type="checkbox"/> ARCHOPR <input type="checkbox"/> ARCHTRK <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Member / Passenger 4 (Name & CAPID)		<input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> WS <input type="checkbox"/> LES <input type="checkbox"/> ARCHOPR <input type="checkbox"/> ARCHTRK <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Member / Passenger 5 (Name & CAPID)		<input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> WS <input type="checkbox"/> LES <input type="checkbox"/> ARCHOPR <input type="checkbox"/> ARCHTRK <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Member / Passenger 6 (Name & CAPID)		<input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> WS <input type="checkbox"/> LES <input type="checkbox"/> ARCHOPR <input type="checkbox"/> ARCHTRK <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Member / Passenger 7 (Name & CAPID)		<input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> WS <input type="checkbox"/> LES <input type="checkbox"/> ARCHOPR <input type="checkbox"/> ARCHTRK <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Contact (Phone, E-mail, etc.)				
Tail Number N4736N	Callign 4238	Type 182Q	TAG (Knots) 120	Color/Description <input type="checkbox"/> CAP Member Owned RWB
Fuel (In Hours) 4:30	Aircraft & Aircrew Equipment <input checked="" type="checkbox"/> Transponder <input checked="" type="checkbox"/> VOR <input checked="" type="checkbox"/> DME <input type="checkbox"/> Autopilot <input type="checkbox"/> GPS Apollo GUID <input checked="" type="checkbox"/> CAP FM Radio <input type="checkbox"/> Tactical Repeater <input type="checkbox"/> Backup DF <input type="checkbox"/> L-Tronics DF			
Home Base KDTO	<input checked="" type="checkbox"/> ARCHER Airborne System <input type="checkbox"/> ARCHER Ground Station <input type="checkbox"/> Digital Camera <input type="checkbox"/> ADIS <input type="checkbox"/> Satellite Phone <input type="checkbox"/> Survival Kit <input type="checkbox"/> Life Raft & Vests <input type="checkbox"/> Other			
RELEASING OFFICERS				
<input type="checkbox"/> Phone Briefing	Briefer (Name & CAPID)		Flight Release Officer (Name & CAPID)	



CAPF e104

BRIEFING INFORMATION					
WMRS Sortie # D16	WMRS Sortie Type LL		WMRS Sortie Purpose LLRS + Special photograph		
WMRS Area of Operations 34.97 CC CD DC D	Dep. Airport ADM	Dest. Airport DTO	ETD 18:30	ETE 3.1	
Base Telephone NA		Base NA	Frequencies AirGround NA		Air/Air NA
Base Callign NA					
Required Radio Checks & Contacts FSS every hour					
Other Aircraft in Area (Location & Callign) NA			Ground Teams in Area (Location & Callign) NA		
Sortie Objectives Low level route survey					
Sortie Deliverables Locate new or removed obstacles above 200'AGL					
Actions To Be Taken On Objectives & Deliverables Notate on Route Evaluation Sheet					
Route of Flight KADM-34.97 CC CD DC DD-KDTO					
Altitude Assignment & Restrictions 1000'AGL in grid			Airspeed Expected & Restrictions		
Aircraft Separation (Adjoining Areas) NA					
Emergency / Alternate Fields KADM, KDUC					
Military Low Altitude Training Route VR1145, VR1146, VR140, VR163					
Hazards To Flight Towers, local traffic					
Current Local	Weather (Current & Forecast) Current En Route		Current Area of Operations		
Forecast Local	Forecast En Route		Forecast Area of Operations		

BRIEFING INFORMATION CONTINUED		
<input type="checkbox"/> Flight Plan Required	<input type="checkbox"/> Flight Plan Filed	<input type="checkbox"/> Flight Plan Opened
<input type="checkbox"/> CRM Matrix Complete	Risk Assessment <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High	<input type="checkbox"/> Risk Assessment Approval
Special Instructions (including Risk Mitigation Procedures)		
CREW NOTES		

MP fills out these e104 sections before sortie

Fill out weather section before launch. Use actual weather not just VFR



CAPF e104

MP fills out these e104 sections after sortie

Summarize obstacles found and sighting sheets completed

DEBRIEFING INFORMATION				
<input type="checkbox"/> Flight Plan Closed	ATD 00:00	ATA 00:00	Tach Start 0	Tach End 0
Hobbs Start 0	Hobbs To/From 0	Hobbs In Air 0	Hobbs Total 0	Hobbs End 0
Fuel Used (Gal) 0	Oil Used (Qt) 0	Fuel & Oil Cost 0	Receipt #	<input type="checkbox"/> Wing Paid
Summary				
Results/Deliverables				
Weather Conditions				
Remarks				
Sortie Effectiveness <input type="checkbox"/> Successful <input type="checkbox"/> Marginal <input type="checkbox"/> Unsuccessful <input type="checkbox"/> Not Flown <input type="checkbox"/> Not Required Reason (if not successful):				
<input type="checkbox"/> Weather <input type="checkbox"/> Aircraft Maintenance <input type="checkbox"/> Equipment Failure <input type="checkbox"/> Crew Unavailable <input type="checkbox"/> Customer Cancellation <input type="checkbox"/> Other				
Attachments & Documentation <input type="checkbox"/> AIF ORM Matrix <input type="checkbox"/> AIF ARCH/ER Log <input type="checkbox"/> CAPF 104a SAR Results Worksheet <input type="checkbox"/> CAPF 104b Reconnaissance <input type="checkbox"/> ICSP 2-14 Unit Log <input type="checkbox"/> Receipts <input type="checkbox"/> Other				
DEBRIEFING OFFICERS				
<input type="checkbox"/> Phone Briefing	Debriefer (Name & CAPID) - 0		Time & Date Debriefed 13:45 - 05/26/2010	

CAP FORM 104, AUG 09 OPR/ROUTING: DO PAGE 4 OF 4 PAGES

MISSION FLIGHT PLAN/BRIEFING FORM				Tracking Number
MISSION DATA SECTION				
Mission Number REQ-10-38	Mission Name	Mission Symbol	Mission Date 05/30/2010	
MANIFEST, QUALIFICATIONS & AIRCRAFT DETAILS				
Pilot in Command (Name & CAPID) Stephen C Robertson - 423262		<input type="checkbox"/> MP <input type="checkbox"/> TMP <input type="checkbox"/> MPC <input type="checkbox"/> WS <input type="checkbox"/> COM <input type="checkbox"/> IFR <input type="checkbox"/> Night <input type="checkbox"/> LES <input type="checkbox"/> Trainee		
Crew Member / Passenger 1 (Name & CAPID) Pat L Golden Jr - 442405		<input type="checkbox"/> MCP <input type="checkbox"/> MP <input type="checkbox"/> TMP <input type="checkbox"/> MPC <input type="checkbox"/> COM <input type="checkbox"/> IFR <input type="checkbox"/> Night <input type="checkbox"/> WS <input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> LES <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Member / Passenger 2 (Name & CAPID) James Grant - 471364		<input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> WS <input type="checkbox"/> LES <input type="checkbox"/> ARCH/OPR <input type="checkbox"/> ARCH/TRK <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Member / Passenger 3 (Name & CAPID)		<input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> WS <input type="checkbox"/> LES <input type="checkbox"/> ARCH/OPR <input type="checkbox"/> ARCH/TRK <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Member / Passenger 4 (Name & CAPID)		<input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> WS <input type="checkbox"/> LES <input type="checkbox"/> ARCH/OPR <input type="checkbox"/> ARCH/TRK <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Member / Passenger 5 (Name & CAPID)		<input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> WS <input type="checkbox"/> LES <input type="checkbox"/> ARCH/OPR <input type="checkbox"/> ARCH/TRK <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Member / Passenger 6 (Name & CAPID)		<input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> WS <input type="checkbox"/> LES <input type="checkbox"/> ARCH/OPR <input type="checkbox"/> ARCH/TRK <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Member / Passenger 7 (Name & CAPID)		<input type="checkbox"/> MO <input type="checkbox"/> MS <input type="checkbox"/> ADIS <input type="checkbox"/> AP <input type="checkbox"/> HRO <input type="checkbox"/> WS <input type="checkbox"/> LES <input type="checkbox"/> ARCH/OPR <input type="checkbox"/> ARCH/TRK <input type="checkbox"/> Trainee <input type="checkbox"/> Other		
Crew Contact (Phone, E-mail, etc.)				
Tail Number N4736N	Callign 4238	Type 182Q	TAG (Knots) 120	Color/Description <input type="checkbox"/> CAP Member Owned RWB
Fuel (In Hours) 4:30	Aircraft & Aircrew Equipment <input checked="" type="checkbox"/> Transponder <input checked="" type="checkbox"/> VOR <input checked="" type="checkbox"/> DME <input type="checkbox"/> Autopilot <input type="checkbox"/> GPS Apollo GUID <input checked="" type="checkbox"/> CAP FM Radio <input type="checkbox"/> Tactical Repeater <input type="checkbox"/> Backup DF <input type="checkbox"/> L-Tronics DF			
Home Base KDTO	<input checked="" type="checkbox"/> ARCH/ER Airborne System <input type="checkbox"/> ARCH/ER Ground Station <input type="checkbox"/> Digital Camera <input type="checkbox"/> ADIS <input type="checkbox"/> Satellite Phone <input type="checkbox"/> Survival Kit <input type="checkbox"/> Life Raft & Vests <input type="checkbox"/> Other			
RELEASING OFFICERS				
<input type="checkbox"/> Phone Briefing	Briefer (Name & CAPID)		Flight Release Officer (Name & CAPID)	

CAP FORM 104, AUG 09 OPR/ROUTING: DO PAGE 1 OF 4 PAGES
PREVIOUS EDITIONS WILL NOT BE USED AFTER 30 SEP 09



Route Survey Sighting Sheets

- Available on website
- Fill out all fields
- Report changes only
- Uncharted towers
- Missing towers
- Location information sufficient that a ground team can locate the obstacle
- Upload Sighting Sheets in to the e104 "Other" box for each sortie

CIVIL AIR PATROL MTR ROUTE SURVEY SHEET

NOTE: IAW AFM 13-203 report only towers/obstructions that are within 100' of the floor and with 2NM of the lateral MTR boundary.

TYPE OR PRINT LEGIBLY. PROVIDE ENOUGH INFORMATION AND DESCRIPTION FOR A GROUND TEAM TO LOCATE AND VERIFY OBSERVATIONS

DATE		MTR ROUTE AND POINTS			
STRUCTURE TYPE	LOCATION BY LAT/LONG	NEAREST CITY/TOWN	ESTIMATED HEIGHT AGL	ESTIMATED HEIGHT MSL	DESCRIPTION AND LIGHTING
<input type="checkbox"/> Cell tower <input type="checkbox"/> Radio tower <input type="checkbox"/> MET tower <input type="checkbox"/> Wind turbine <input type="checkbox"/> Other <input type="checkbox"/> Multiple	N W				
<input type="checkbox"/> Cell tower <input type="checkbox"/> Radio tower <input type="checkbox"/> MET tower <input type="checkbox"/> Wind turbine <input type="checkbox"/> Other <input type="checkbox"/> Multiple	N W				
<input type="checkbox"/> Cell tower <input type="checkbox"/> Radio tower <input type="checkbox"/> MET tower <input type="checkbox"/> Wind turbine <input type="checkbox"/> Other <input type="checkbox"/> Multiple	N W				
<input type="checkbox"/> Cell tower <input type="checkbox"/> Radio tower <input type="checkbox"/> MET tower <input type="checkbox"/> Wind turbine <input type="checkbox"/> Other <input type="checkbox"/> Multiple	N W				
<input type="checkbox"/> Cell tower <input type="checkbox"/> Radio tower <input type="checkbox"/> MET tower <input type="checkbox"/> Wind turbine <input type="checkbox"/> Other <input type="checkbox"/> Multiple	N W				
<input type="checkbox"/> Cell tower <input type="checkbox"/> Radio tower <input type="checkbox"/> MET tower <input type="checkbox"/> Wind turbine <input type="checkbox"/> Other <input type="checkbox"/> Multiple	N W				

CONTACT INFORMATION

CAP UNIT	PIC NAME	PHONE
	EMAIL ADDRESS	

V1.1 2011



Training Opportunities

Mission Aircrew Training for MS, MO, and MP

Depending on the complexity of the sortie we will try to pair a MP SET or IP crew in the following priority:

- MP Trainees
- MO Renewals/Requals
- MO Trainees
- MS Renewals/Requals
- MS Trainees



Questions?



Let's Fly!

