

## LOCAL FLYING ORDERS - COMOX

### AIRPORT OPERATING AGREEMENT

1. ACGP Gliding Operations at CYQQ are subject to 19 Wing Flying Orders. All aircrew shall read and comply with WFOs.

### AIRFIELD OPERATING AREAS

2. **General.** Tow aircraft operations may be conducted from any runway on the airfield. Normal gliding operations are authorized from four glider operating areas (Box 18, Box 36, Box 12, and Box 30) depicted in yellow in Figure 1 below.
3. Simultaneous gliding operations from more than one area will not be approved.

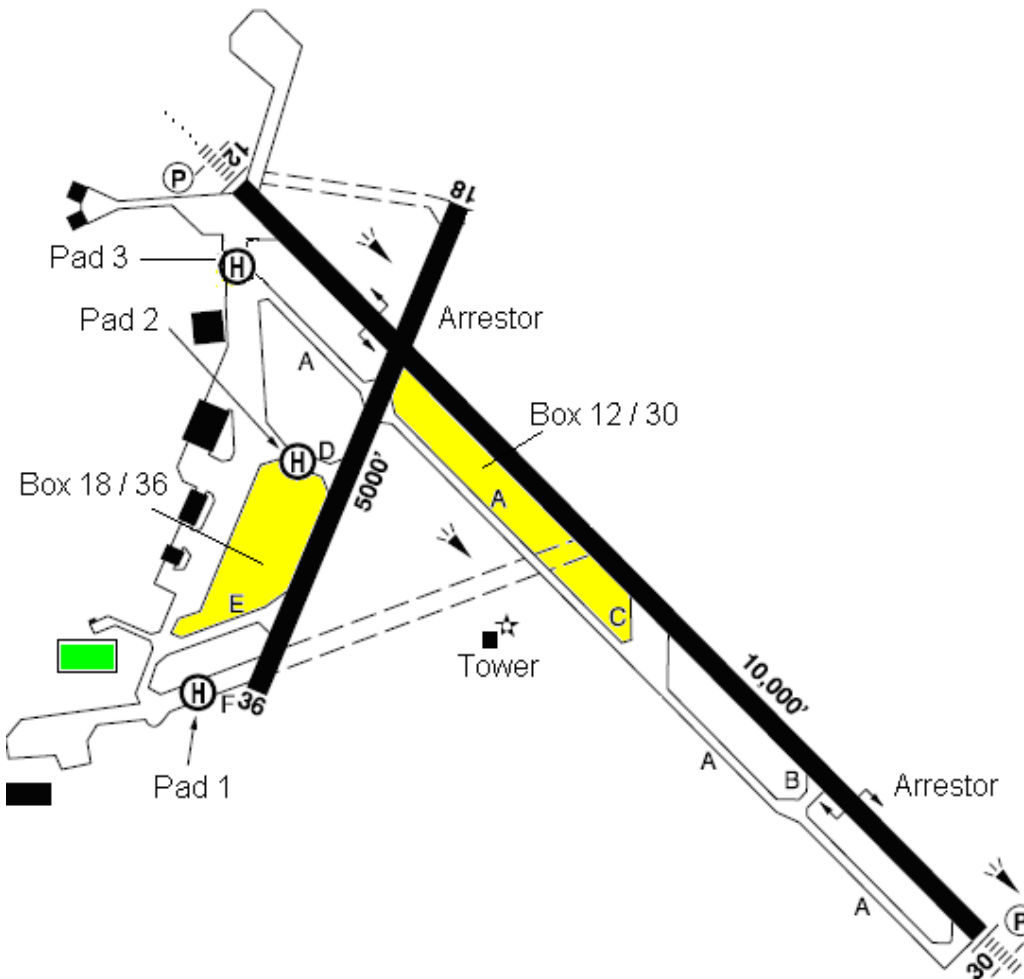


Figure 1 - Glider Operating Areas

## LOCAL FLYING ORDERS - NANAIMO

### AIRPORT OPERATING AGREEMENT

1. An Operating Agreement (OA) between RCA Ops (Pac) and the Nanaimo Airport Commission is in effect at this site. A copy of this agreement shall be kept at the local gliding site and referred to as necessary by the Site Commander or their designate. The contents of agreement are, in part, reflected in the SOPs detailed in these Nanaimo Gliding Site Local Flying Orders.

### AERODROME DESCRIPTION

2. **Airfield Layout.** The general airfield layout is as depicted in Figure 1 below. Note that this pictorial is provided for information only and does not replace or supersede information provided in the current Canada Flight Supplement.

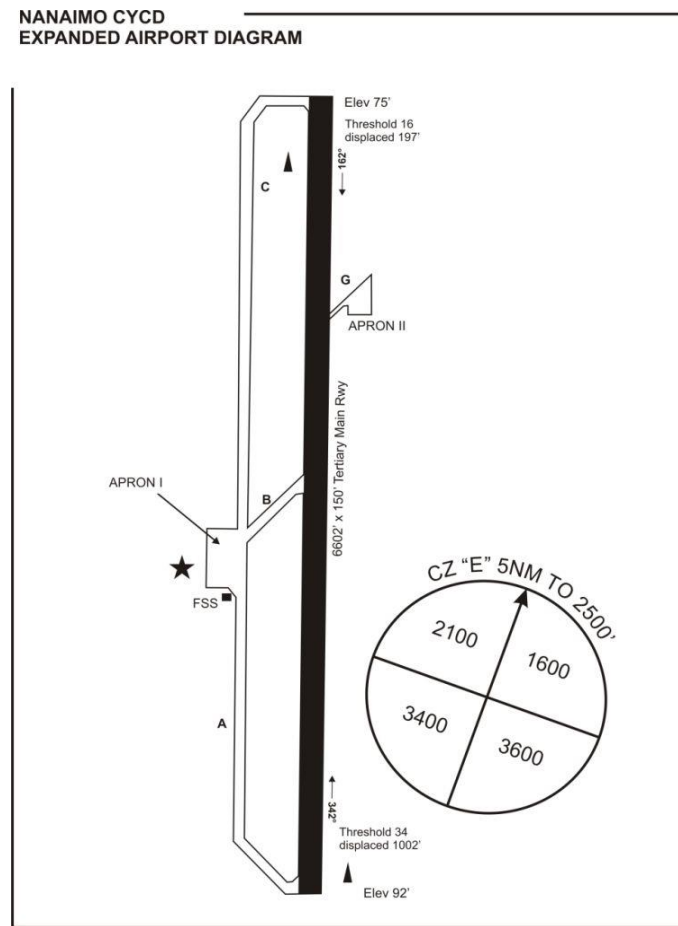


Figure 1 - General Airfield Layout

3. **Aerodrome / Area Hazards**. Pilots shall be aware of the following hazards on the aerodrome. Most of these hazards are depicted in Figure 2:

- a. Wind Anemometer tower - located west of the primary grass landing strip, adjacent to Taxiway Alpha, approximately mid length;
- b. PAPI Lights - located east of the secondary grass landing area, adjacent to the main runway, approximately 1500 feet south of Taxiway Bravo;
- c. Ditch – bisecting / crossing the secondary grass landing area, in close proximity to the PAPI lights;
- d. Taxi/Runway signage – at various locations outside the perimeter of the glider operating area;
- e. ILS Antenna Array & Building – located approximately 500 feet south of the threshold of the paved surface of Runway 34; and
- f. Airport perimeter fence and highway.

4. Pilots are also advised that the first 1000 feet of the grass area north of Taxiway Bravo is the designated Waste Water Treatment Area for the airport, and should be considered unsuitable for landing, except in an emergency where there are no other suitable options.



Figure 2 - Aerodrome Hazards

## GROUND OPERATIONS

5. **LCO Site Location.** LCO locations are as follows:
  - a. **Runway 34 Operations.** The LCO site shall be located on the infield, adjacent to Taxiway Alpha, opposite the two Nanaimo Flying Club Hangars. To comply with A-CR-CCP-242/PT-005, the LCO site shall be set back a minimum of 75 feet from the centreline of the closest glider landing lane; and
  - b. **Runway 16 Operations.** The LCO site shall be located on the infield approximately adjacent to the midpoint of APRON 1. To comply with A-CR-CCP-242/PT-005, the LCO site shall be set back a minimum of 75 feet from the centreline of the closest glider landing lane.
6. **Protection of Taxiway Lights.** In order to avoid damage to airport lighting, plastic buckets shall be placed overtop of taxiway lights on both sides of taxiway Alpha for 34 Ops, and taxiway Bravo for 16 Ops.
7. **Control of Personnel.** Ground crews and visiting cadets are to be well supervised at all times. Personnel are to remain clear of the landing area unless given specific instructions by the LCO. The LCO shall exercise positive control over all ground crew movements for the purpose of glider launches, glider recoveries, or rope retrievals.
8. **Pedestrian Traffic.** Taxiway Alpha is controlled by the FSS and a clearance is required to cross or operate on it. This applies to movement of both personnel, and equipment. A radio call requesting permission to use the taxi way shall be made on 122.60 Mhz prior to proceeding.
9. The terminal apron area is a restricted area and pedestrian traffic shall be minimized. ACGP personnel crossing the apron shall wear a high visibility vest and exit from the apron airside area using the closest available gate, normally nearest the FSS. Accessing washrooms in the terminal using the gate adjacent to the FSS is preferable to crossing the apron to the refueling facility.
10. Cross walks for taxiway Alpha shall be designated and marked with cones.
11. **Vehicle Movements.** Only RCA Ops (Pac) vehicles are permitted on airside, and these shall be equipped with a rotating amber beacon and a VHF radio capable of transmitting and receiving on the appropriate frequencies.
12. When there is a requirement to cross a runway or taxiway the driver must be a licensed pilot or be in possession of a Nanaimo AVOP (Airside Vehicle Operators Permit).

13. A clearance is required to cross or proceed on TAXIWAYS or RUNWAYS and an appropriate call shall be made on 122.60 Mhz before proceeding. Vehicles or aircraft shall not be parked within 26 meters of the centerline of Taxiway Alpha.

## **AIR TRAFFIC CONTROL**

14. **General.** The Nanaimo Airport is surrounded by a Class E Control Zone, 5 NM in radius and extends to 2500' ASL. This is an MF area and all radio calls shall be made to Nanaimo Radio 13:30Z – 05:30Z, and to Nanaimo Traffic at other times.

15. **Communications.** VHF frequencies at NANAIMO are:

- a. MF (Nanaimo Radio). 122.10 Mhz
- b. GND OPS (Nanaimo Radio) 122.60 Mhz.
- c. LWIS 128.425Mhz
- d. VICTORIA TML 120.80Mhz

16. **Local Procedures.** Terminal Class C airspace lies above the Nanaimo Control Zone beginning at 2500' ASL. Aircraft operating within this airspace require a Mode C transponder. The tow aircraft and transponder equipped gliders shall obtain codes from Nanaimo Radio at the beginning of daily operations. Tow pilots shall advise Nanaimo Radio of their intentions to climb above 2500' ASL and request permission to remain on the MF if possible. Nanaimo Radio will usually coordinate with Victoria TML to make this possible.

17. The LCO shall maintain a continuous listening watch on both the MF 122.1 and Gnd Ops 122.6.

18. Simultaneous takeoffs and landings from the grass runway and the hard surface runway are not authorized. Once an aircraft has announced they are taxiing to position on the runway, they have the right-of-way and departures from the grass are prohibited until that aircraft has completed its take-off.

19. Tow pilots shall not initiate the take-off roll until after they have made their radio call to the FSS unless it is prudent for safety, or it will prevent a glider from landing in the secondary solely because of radio frequency congestion. Maintaining operational tempo and efficiency are not sufficient reasons for bypassing the traffic advisory provided by FSS personnel.

20. Intentions to take-off from the grass will be broadcast on the mandatory frequency (MF) and including the following:

- a. The tow altitude;  
*“Nanaimo Radio, Tug 1 plus 1 departing grass 34 for 2300 ft”*
  - b. If planned that an emergency exercise will occur;  
*“Nanaimo Radio, Tug 2 plus 1 departing grass 24 for simulated rope break 800 ft”*
  - c. For runway 16 departures, the tow pattern to be flown;  
*“Nanaimo Radio, Tug 2 plus 1 departing grass 16, standard right departure for 2300 ft,” or*
  - d. *“Nanaimo Radio, Tug 2 plus 1 departing grass 16, Ladysmith Harbour departure for 2300 ft.”*
21. After release the glider will broadcast it’s location and altitude. *“NANAIMO RADIO GLIDER 5 OFF TOW AT 2500 BOX 34”*.
22. Appropriate calls shall be made by all aircraft when joining the circuit and landing.

## **DECONFLICTING WITH COMMERCIAL AIR TRAFFIC**

23. The Nanaimo Airport Commission is a not-for-profit authority responsible for maintaining financially self-sustaining operations, and fees from commercial airline operations are essential to the viability of the airport. The ACGP will assist in facilitating the efficient flow of commercial air traffic through the following procedures:

- a. The LCO shall have a schedule of airline arrivals and departures and all pilots shall maintain a continuous listening watch on the MF 122.1 for position reports from inbound commercial traffic. The FSS may also provide updates regarding the ETA of inbound commercial traffic, which shall be acknowledged by the LCO, tow and glider pilots;
- b. the LCO and pilots shall act to reduce or eliminate the chance of a glider being in the landing circuit at the same time a commercial aircraft is approaching for landing on the main runway. This may be achieved by delaying a launch or holding the glider on tow. A hold on tow may be initiated by the glider pilot, tow pilot or LCO;
- c. a glider holding on tow shall not release without LCO or tow pilot approval, except in an emergency. In the case of a radio failure while holding on tow, the glider pilot may either wait for a visual release signal from the tow aircraft or initiate the release using their own judgement; and

- d. tow pilots and the LCO are to monitor, communicate, and coordinate as necessary with FSS and commercial air traffic to ensure gliding operations do not impede the flow of commercial aircraft departures.

24. When actions to de-conflict with commercial traffic are ineffective and a glider and another aircraft are in their landing patterns at the same time, normal CARs right-of-way rules apply.

## **AIRFIELD OPERATING AREAS**

25. Airfield operating areas are detailed in Figure 3.

26. Normal operations will be conducted from the GRASS INFIELD RWYS 34/16 in the area bounded by TAXI WAY BRAVO (to the north) and TAXI WAY ALPHA (to the south).

27. The primary landing lane is in the west side of the infield grass area and is 2000 feet long by 100 feet wide.

28. The secondary landing lane is in the east side of the infield grass area and is 1500 feet long by 75 feet wide for Runway 16 operations, and 1200 feet long by 75 feet wide for Runway 34 operations. Multiple hazards depicted in Figure 2 are adjacent to the secondary landing lane and pilots must exercise caution to ensure they are avoided.

29. Launches and recoveries for both gliders and tow aircraft will be conducted from the primary grass lane.

30. The glider secondary landing lane lies within the main runway protected area (RPA) and anytime a glider or recovery crew is within the RPA, the main runway cannot be used by other aircraft, notwithstanding some pilots may do so. Routine use of the secondary landing lane poses operational and safety concerns that are not acceptable to the Nanaimo Airport Commission, therefore, the following restrictions apply:

- a. The secondary landing lane is available for use in urgent or emergency situations if the primary is unavailable, but planned, routine use is not authorized;
- b. the LCO shall ensure the primary landing lane is clear and available to a landing glider by the time it is established on final approach. If necessary, a launch will be aborted and the aircraft removed from the glider landing lane; and



- c. glider pilots entering downwind while a tow plane and glider are on the primary preparing for launch shall indicate the “primary” as their intended landing area when making their radio call. The “secondary” should be broadcast as the landing area only at the time it becomes apparent that it will be necessary.

31. The main paved runway shall only be used in emergency situations. Pilots electing to use the paved runway must immediately (consistent with safety of flight) broadcast their intentions on the Mandatory Frequency of 122.1 MHz, and shall use extreme caution with reference to other traffic which may be approaching the runway.

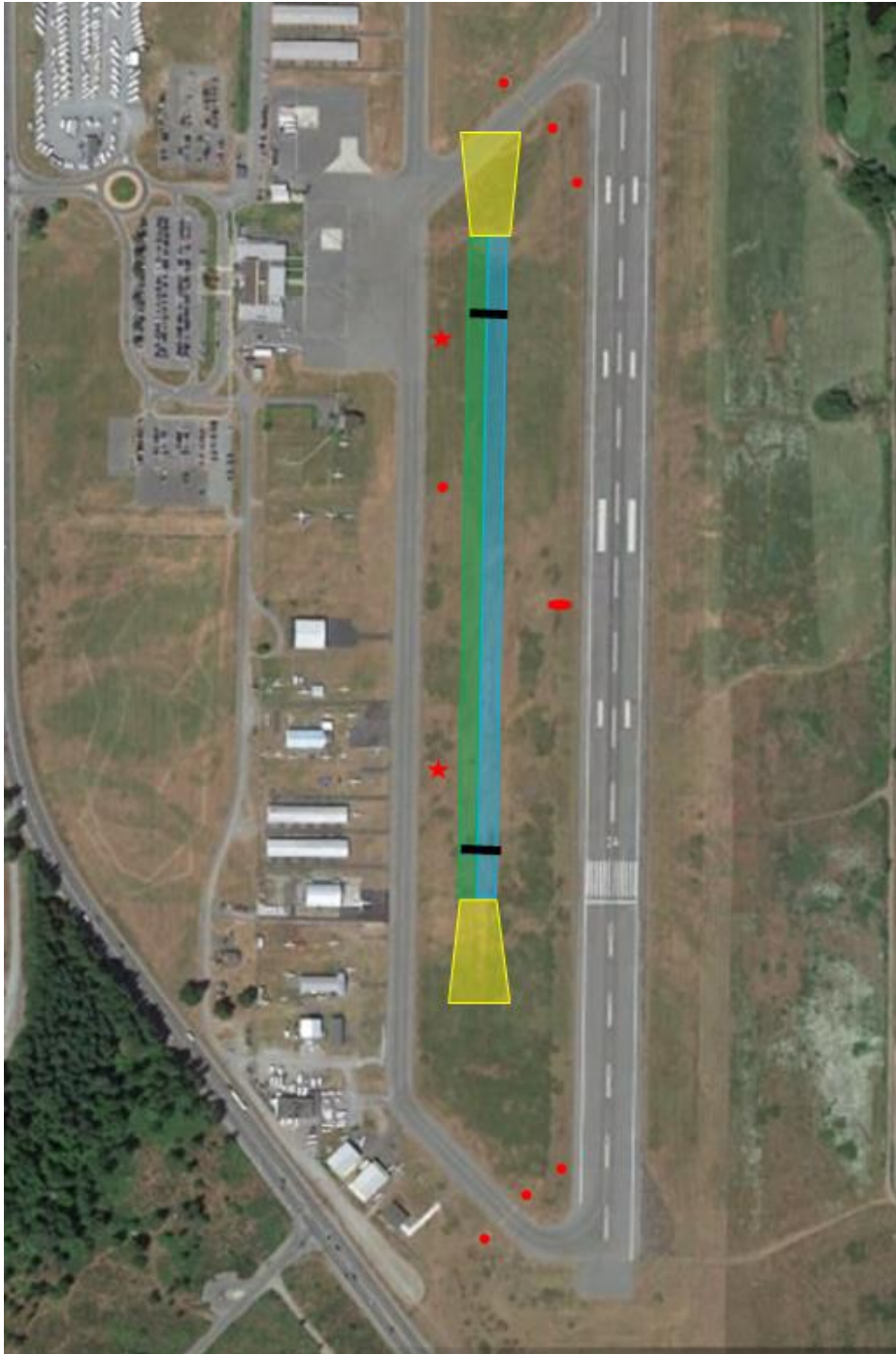


Figure 3 – Runway 16 / 34 Operating Areas

LEGEND	
	Primary Landing Lane
	Alternate Landing Lane
	Planned Touchdown Area
	Landing Lanes Under / Over Run
★	Launch Site
	Significant Obstacle

## TOWING AND CIRCUIT PATTERNS

32. **Runway 34.** The standard departure procedure shall be a left hand turn after take-off following one of the tow routes depicted in Figure 4. For noise abatement, tow pilots shall vary the initial departure path and crosswind leg to avoid constantly flying over the same residences. The initial crosswind turn and tow route will be selected by the tow pilot based on variables including tow height, wind, traffic, clouds and weather. As much as possible, the climb to altitude should occur over the less populated area west of the airport. The routes depicting the climb phase of the tow are approximations and may be adjusted as required by the tow pilot. Glider release should normally occur along or inside the western edge of the glider training area.

33. **Runway 16.** The standard departure procedure shall be a right hand turn after take-off following one of the tow routes depicted in Figure 5. For noise abatement, tow pilots shall vary the crosswind leg to avoid constantly flying over the same residences and the depicted noise sensitive areas. The initial crosswind turn and tow route will be selected by the tow pilot based on variables including tow height, wind, traffic, clouds and weather. As much as possible, the climb to altitude should occur over the less populated area south and west of the airport. The routes depicting the climb phase of the tow are approximations and may be adjusted as required by the tow pilot. Glider release should normally occur inside the glider training area or along the western edge.

## GLIDER TRAINING AREA

34. The glider training area is depicted in Figures 4 and 5. It is a rectangle parallel to runway 16/34, extending approximately ½ nm north and south of the airport, and 1½ nm to the west. Gliders shall remain within the designated training area after release. Tow aircraft will descend on the west side of the airport over the less populated areas within or immediately adjacent to the glider training area. Glider and tow aircraft circuits are depicted in Figure 4 and shall remain west of the runway at all times. The normal release height is 2400 ft ASL. Higher tows may be permitted IAW Para 16.

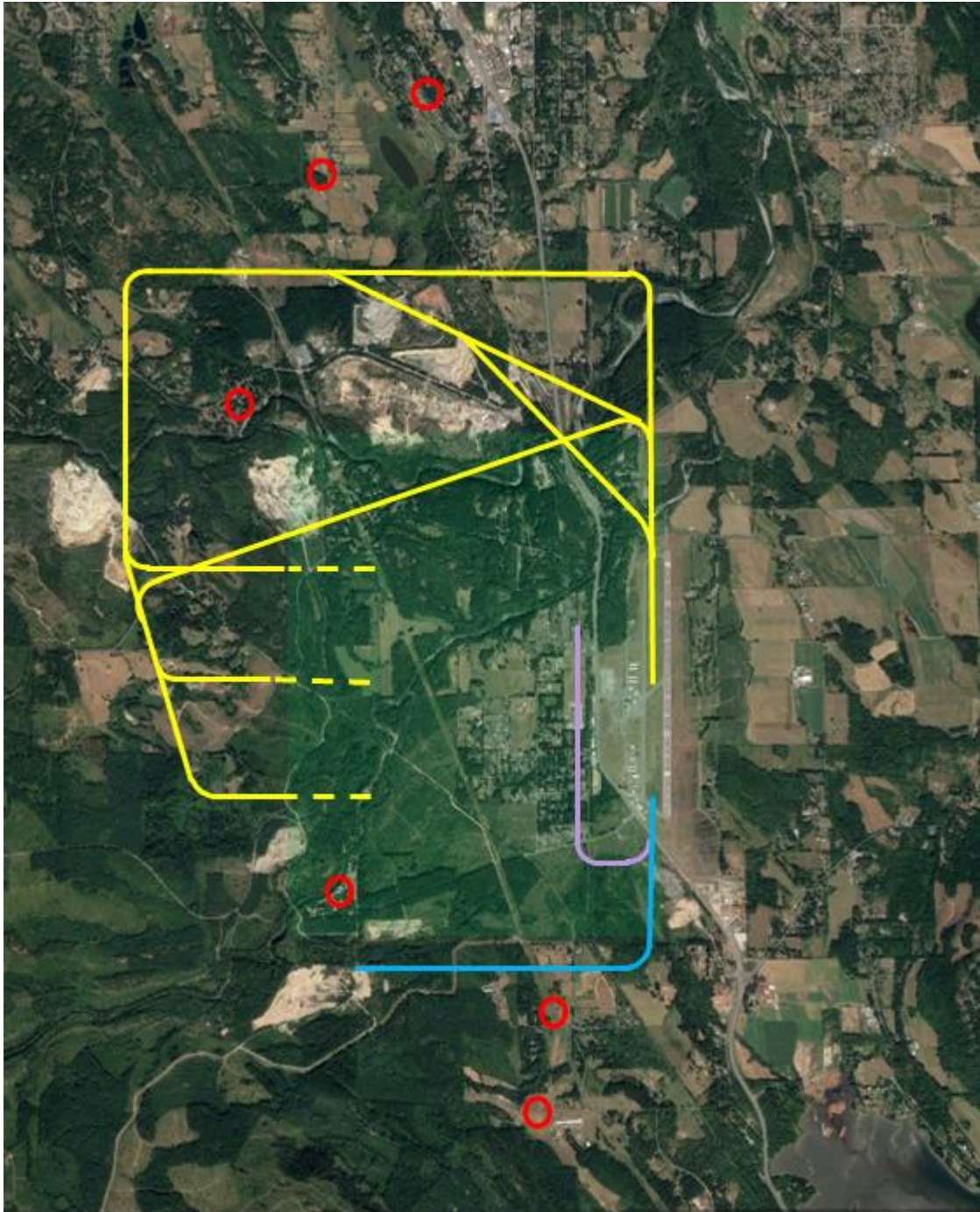







Figure 4 - Runway 34 Tow Patterns and Glider Practice Area

LEGEND	
	Glider Training Area
	Tow Departure Path
	Tow Plane Circuit
	Glider Circuit
	Noise Sensitive Areas



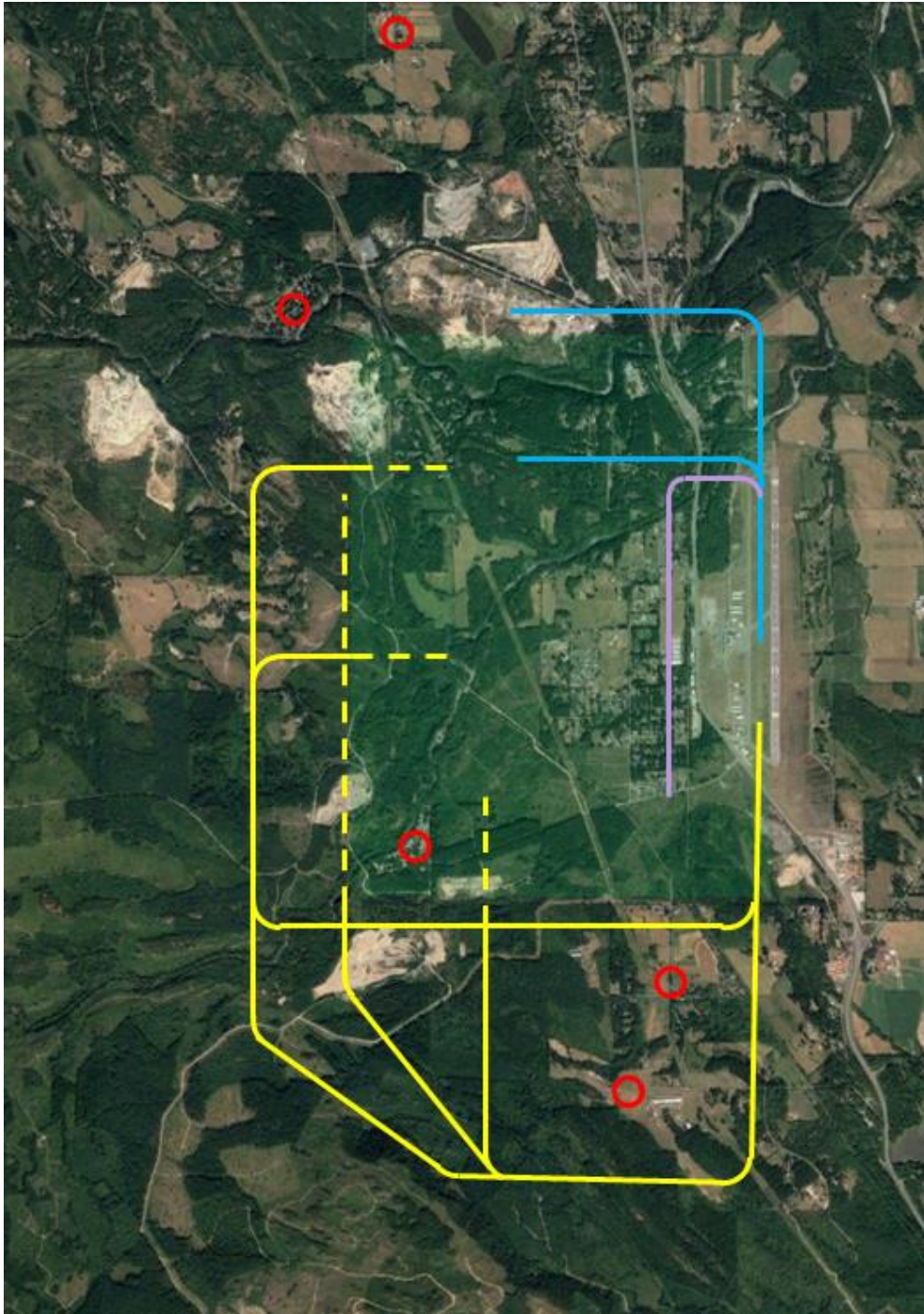


Figure 5 - Runway 16 Tow Patterns and Glider Practice Area

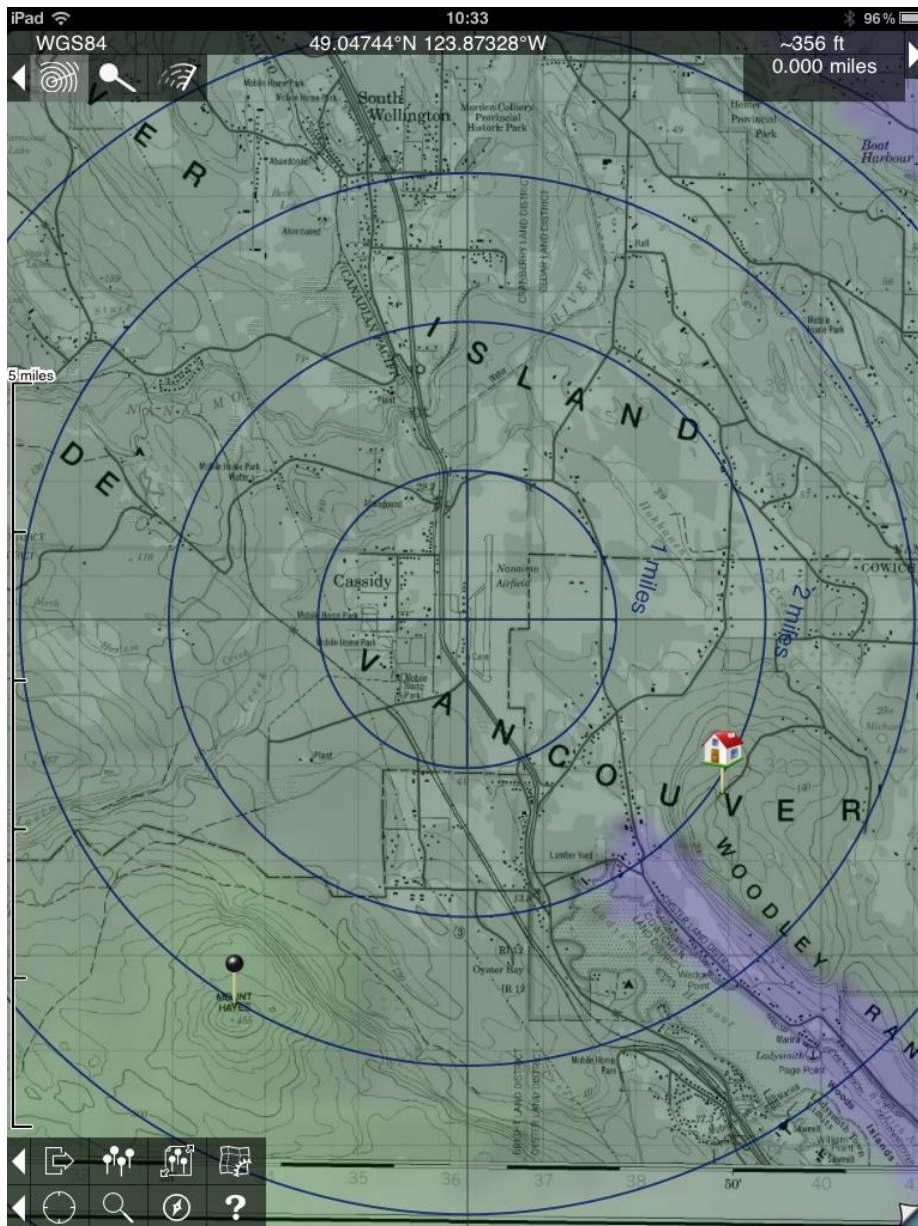
LEGEND	
	Glider Training Area
	Tow Departure Path
	Tow Plane Circuit
	Glider Circuit
○	Noise Sensitive Areas

## FLYING ACCIDENTS

35. The LCO will initiate an emergency response by notification to NANAIMO RADIO FSS.

## OTHER CONSIDERATIONS

36. **Visibility References.** Visibility references from the illustration below may be used to estimate prevailing visibility from the ground.



37. **Tow Rope Release.**

- a. **200 ft Rope.** Tow pilots shall fly at a sufficient altitude to ensure safe clearance of the tow rope from obstacles. Tow pilots are required to over fly the airport fence no lower than 200' AGL when approaching to land runway 34. The tow rope may be dropped at the launch site prior to entering the round out, or it shall remain attached for landing. The tow plane will normally backtrack to the launch position, and if the rope is attached, ground crews will use a gaff to re-position it for launch.
- b. **400 ft Rope.** A low level (200' AGL) pass overhead the grass runway shall used for release when using 400' x-country ropes. **DO NOT ATTEMPT TO LAND WITH THE ROPE ATTACHED!**

38. **Refuelling.** The Primary re-fuel point for RCA Ops (Pac) tow planes shall be the Nanaimo Flying Club. A “fob” is required to gain access to the fuel terminal located inside the club house. Alternately, if no fuel is available at the club, fuel is available from the FBO located at the north end of APRON I. A credit card is required for fuel purchases.

39. **Tie Down Areas.** ACGP Aircraft shall be tied down using the purpose-installed tie-downs located on Nanaimo Airport land immediately south of the FSS Building.

40. **Noise Abatement.** Tow plane pilots shall avoid noise sensitive areas as indicated in the Nanaimo VTPC. Avoid over flying these areas below 1000' ASL. Vary tow patterns as necessary to mitigate noise complaints. Visiting tow pilots shall be briefed by local staff prior to towing operations at the site.

41. **Wake Turbulence.** The pilot in command of RCA Ops (Pac) aircraft shall ultimately be responsible for wake turbulence avoidance. However, the LCO may cancel a launch if it is considered unsafe.

42. **Grass Runway Operations.** The infield grass Runway 16 / 34 is intended for glider ops only and its boundaries shall be demarked by orange cones. Gliding Site staff are responsible for placing and removing these cones at the beginning and end of each operational day. This also applies to any operational signage.

43. The Nanaimo section of the CFS publishes, in the CAUTION block, a restriction which prohibits the use of the grass operating area by aircraft not associated with ACGP gliding operations. Should a non-ACGP aircraft attempt to use this area during periods of ACGP operations, ACGP supervisors shall note the date and time of the incident, the aircraft registration, and provide written notification to the D/RCA Ops O as soon as practicable, but no later than the end of the flying day.

44. **Communication with FSS and Airport Personnel.** FSS or Airport Authority personnel raising safety or operational concerns relating to glider ops should be directed to the Site Commander. When concerns are minor and can easily and immediately be addressed, the LCO may take the appropriate corrective measures and later advise the SC. More significant concerns shall be addressed by the SC, and if necessary gliding ops will cease until this occurs. The SC shall consult with the Chain of Command or Duty FSO as appropriate, and in all cases provide a report to the GW Ops O and D/RCA Ops O.

45. ACGP personnel identifying safety concerns shall raise the issue through the CoC and the CF Flight Safety System. ACGP personnel, including the LCO, are not authorized to contact or engage in discussion with any non-CF person or agency on matters relating to the ACGP or FS, with exception of matters jeopardizing or likely to immediately jeopardize safety. The SC is authorized to discuss urgent concerns with outside agencies and people, but shall provide a report to the GW Ops O and the D RCA Ops O. More complex or significant matters should be immediately referred to the CoC or Duty FSO.

46. **Nanaimo Airport Safety Management System (SMS).** An SMS system is in effect at Nanaimo Airport. All staff are required to read and sign the Nanaimo Airport Safety Management System Orientation Package, and be familiar with it's contents prior to Airside Operations at the airport.



## AERODROME HAZARDS

4. Pilots shall be aware of the following hazards on the aerodrome as depicted in Figure 2:
- a. HAZARD 1; the EOD training area. Except in an emergency, this area shall not be over-flown below 1500 feet ASL when active;
  - b. HAZARD 2; the 25 meter range. Except in an emergency, this area shall not be over-flown below 1500 feet ASL when active;
  - c. HAZARD 3; the explosives storage area. Except in an emergency, this area shall not be over-flown below 1500 feet ASL at any time;
  - d. HAZARD 4; the CF-18 Quick Reaction Area (QRA) shall not be over-flown;
  - e. HAZARD 5; parachute landing areas on Box 36 and in the infield area east of Runway 36 (pea bowl); and
  - f. HAZARD 6; Airfield Signs. Pilots should be aware of the presence of numerous frangible airfield signs in the grass areas.
  - g. HAZARD 7; Arming Pad. Except in an emergency, this area shall not be over-flown below 1500 feet ASL when occupied;
  - h. HAZARD 8; Spot 9. The high power run up spot for Buffalo aircraft. Exercise extreme caution and confirm with ATC that a running aircraft is at low power before attempting to pass behind.



Figure 2 - Aerodrome Hazards

## GROUND OPERATIONS

5. **Tow Aircraft Start Clearance.** IAW Wing Flying Orders, clearance from Comox Ground is required prior to engine start. Tow pilots shall contact Ground on 119.75 immediately prior to start, requesting engine start, and advising call sign, location, fuel on board in lbs, souls on board, and flight intentions.
6. **Taxiing on 15 Hangar Ramp.** The 15 Hangar Ramp is congested, especially when other tow aircraft are secured in designated tie-downs. To avoid a collision with fixed infrastructure or other aircraft, tow pilots who are manoeuvring on the ramp:
  - a. shall maintain a heads-up visual scan while manoeuvring;
  - b. shall maintain a very slow taxi speed (walking pace); and
  - c. shall follow established taxi lines.
7. **Taxiing in Front of Running Aircraft.** IAW Wing Flying Orders, when a tow pilot must taxi past ground crew who are positioned in front of a starting / running

aircraft adjacent to the line of taxi, he/she will not proceed past the ground personnel until receiving a positive indication that the personnel are aware of the presence of the tow aircraft. Ground crew will indicate such awareness by making eye contact with the tow pilot and giving a “thumbs up” signal.

8. **Tow Aircraft Run-Ups.** Tow pilots should expect to conduct their pre-flight run-up on Taxiway Echo, or on the ramp holding short of Taxiway Echo. Dependant on other traffic, Comox Ground may occasionally direct the completion of the run-up in an alternate location. Regardless, tow pilots shall ensure that run-ups are conducted in a suitable and safe location.

9. **Control of Personnel.** Ground crews and cadets are to be well supervised at all times. Personnel are to remain clear of the landing and take-off areas unless given specific instructions by the LCO. Personnel not actively engaged in glider operations are to remain in designated safe zones clear of aircraft operating areas. Personnel may not leave the safe zone without permission of the LCO.

10. **Vehicle Movements.** Vehicle movements on the airfield shall be restricted to necessary operational and emergency response vehicles. Airport vehicle operations are controlled by the ATC Ground Controller, except when operating inside an active gliding box under the control of the LCO. Only personnel holding a valid DND 404 and Ramp DDC may operate vehicles on the airfield.

11. IAW Wing Flying Orders, vehicle speeds are restricted as detailed below:

- a. within 15 metres of an aircraft or hangar – 6 kph (walking pace).
- b. ramp areas – 25 kph; and
- c. taxiways and runways – 50 kph.

12. Vehicles operating within the glider box under direction of the LCO, including the ERV, towing, and recovery vehicles shall be equipped with a VHF radio on the ground frequency. FM radios shall be used in vehicles not directly involved in gliding ops and operating solely under ATC control.

13. **Ground Coordination - Launch Control Officer (LCO).** The LCO is responsible for coordinating ground movements of ACGP gliders, vehicles and personnel as approved by ATC. Specifically, the LCO shall:

- a. continuously monitor Tower 126.2 and Ground 119.75;
- b. coordinate all personnel and vehicle activity;

- c. obtain ATC clearance for personnel to move within 200' of a runway, which includes glider recovery crews entering the secondary landing lane for Box 12/30;
- d. ensure the recovery of gliders from the grass landing strips so as to allow subsequent glider landings;
- e. coordinate the movement of gliders to the designated parking areas;
- f. coordinate the retrieval of tow ropes as required;
- g. coordinate the movement of tow planes within the assigned area;
- h. coordinate the movement of personnel or equipment as directed by ATC; and
- i. co-ordinate with Ground prior to moving personnel and equipment between the ramp and the designated Box area at the commencement and end of gliding operations.

14. **LCO Signs and Signals.** To help ensure directions from the LCO are clearly and accurately conveyed, the following signs and signals shall be used:

- a. **Green Paddle.** For authorizing movements of gliders, personnel, and vehicles as follows:
  - (1) gliders from the parking area for launch positioning on the take-off surface;
  - (2) personnel to approach a tow aircraft on the take-off surface;
  - (3) recovery crews or vehicles to move from the launch site to a landed glider; and
  - (4) recovery crews or vehicles to move a glider across a landing lane or Twy A.
- b. **Red Paddle.** To signal a glider launch or recover crew, or vehicle, to:
  - (1) remain in place; and
  - (2) stop.
- c. **Yellow "LAUNCH" Sign.** To inform a glider pilot they are authorized to proceed with their launch sequence and take-off.

- d. Yellow “WAIT” Sign. To inform a glider pilot they must wait for authorization to proceed with the launch sequence. The glider pilot may complete the pre-take-off checks and attach the tow rope, but shall not proceed to the “all clear above and behind” check until receiving the “LAUNCH” sign.
  - e. Yellow “800 MODIFIED” Sign. To inform the glider pilot that ATC has approved their simulated emergency exercise with a release altitude of approximately 800 ft AGL, likely leading to a modified circuit. The launch is not authorized to proceed until the “LAUNCH” sign is also displayed by the LCO.
  - f. Yellow “400-600 DOWNWIND” Sign. To inform a glider pilot that ATC has approved their simulated emergency exercise with a release altitude of approximately 400-600 ft AGL, expecting the glider to turn 180 degrees after release for a landing in the opposite direction to the established circuit. The launch is not authorized to proceed until the “LAUNCH” sign is also displayed by the LCO.
  - g. Other Directions and Approvals. All other ground movements and air exercises shall be directed or approved by the LCO using direct voice communication, or by radio with assistance from ATC.
  - h. Bull Horn. To provide the LCO with an enhanced ability to use direct voice communication with glider ground handling and recovery crews, the LCO stand should have a readily available bull horn. Use of the bull horn shall be limited to only those occasions when urgent voice communication may assist in maintaining safety.
15. **LCO Coordination - Box 18 / Box 36.** Box 18 / Box 36 includes the grass area west of Runway 18/36 bounded by Runway 18/36, taxiway ECHO, the ramp and taxiway DELTA. The LCO will control personnel within this area as follows:
- a. ensure ground clearance is received prior to moving personnel or equipment into the box for glider ops setup and that further clearance is obtained prior to positioning personnel or equipment along the edge of runway 18/36;
  - b. ensure tower clearance has been received prior to moving any tow planes and or gliders onto Runway 18/36 for the purpose of initial launch preparation. Once a tow aircraft is in position on the runway or after a landing tow aircraft has passed the launch point in preparation for a subsequent launch, the LCO may move personnel and gliders onto the runway without requesting tower clearance;

- c. ensure that prior to a launch request all personnel not required for the launch are clear of Runway 18/36;
- d. ensure that following launch, all personnel immediately clear the runway;
- e. ensure that following a landing on the grass, the glider is moved to the grass parking area adjacent to the west side of Runway 18/36; and
- f. ensure that the threshold lights for Runway 36 are protected from tow rope damage.

16. **LCO Coordination - Box 12 / Box 30.** Box 12 / Box 30 includes the grass landing strips and taxiway ALPHA between taxiway CHARLIE and the intersection of Runway 18/36. The LCO will coordinate the movement of personnel and equipment within this area as follows:

- a. request ATC Ground clearance to move personnel, aircraft and equipment to the grass on the edge of taxiway ALPHA just north of the TACAN installation for the purpose of launch preparation;
- b. request tower clearance prior to moving personnel, aircraft and equipment onto taxiway ALPHA prior to the initial launch;
- c. ensure that prior to a launch request, all personnel not required for launch are clear of taxiway ALPHA;
- d. ensure that following a glider landing on the primary grass landing strip the glider will be moved to the grass parking area adjacent to the south side of taxiway ALPHA or onto the abandoned runway;
- e. ensure that ATC clearance is obtained each time ground crews must enter the secondary landing lane, including for glider recovery;
- f. ensure gliders are expeditiously removed from the secondary landing lane as they are within the 200' runway protected area; and
- g. ensure that personnel do not cross taxiway ALPHA when a tow aircraft or glider is on final for taxiway ALPHA.

## AIR TRAFFIC CONTROL

17. **General.** The 19 Wing Comox Control Zone is Class D airspace controlled by Comox Tower. The control zone is an irregular rectangular shape from surface to 6000 ft ASL. The control zone, transition routes, and associated VFR call up points are depicted in Figure 3.

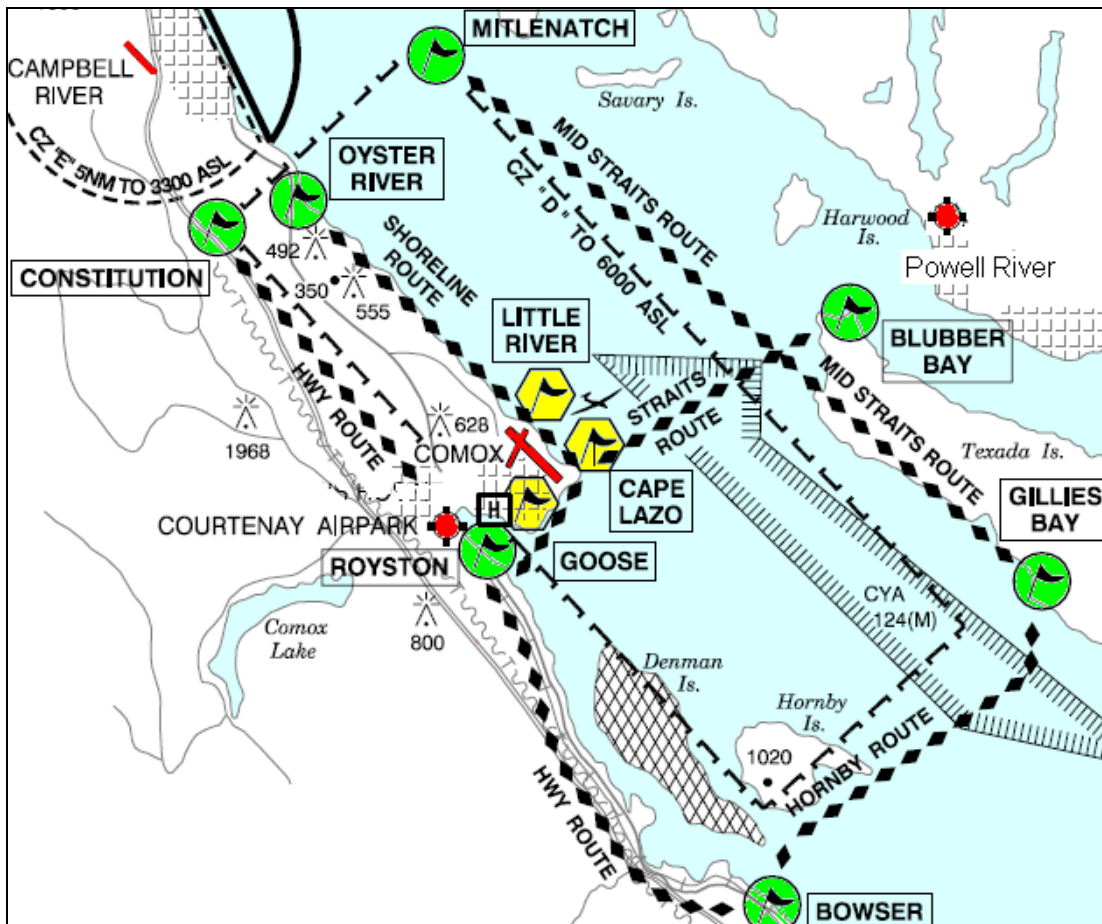


Figure 3 - Comox Control Zone

18. Movement of aircraft, vehicles and personnel within 200 feet of controlled aerodrome surfaces must be cleared by either the Tower Controller or the Ground Controller. All personnel involved with ground and air operations shall comply with all instructions issued by ATC. Radio communications between ATC, tow planes and gliders shall be maintained both in the air and on the ground.

19. **Communications.** VHF frequencies at Comox are:

- a. Tower 126.2
- b. Ground 119.75

- c. Terminal 123.7
- d. ATIS 118.6

20. **Wake Turbulence Separation**. Wake turbulence separation criteria applicable when towing gliders, and when not towing gliders, are depicted in Figure 4.

21. **Wake Turbulence Separation – Towing Gliders**. The safe conduct of glider operations at Comox requires strict adherence to wake turbulence separation criteria. ATC MANOPS procedures will be applied to glider operations as follows:

- a. three minute separation will be applied in the following circumstances:
  - (1) any takeoff behind a medium or heavy aircraft where the tow plane starts its takeoff roll from a point significantly further along the runway in the direction of takeoff than the preceding aircraft, or
  - (2) any takeoff after a medium or heavy aircraft has overflown the runway in either direction (i.e., low or missed approach).
- b. two minute separation will be applied to a tow plane with glider in tow which takes off behind a medium category aircraft on a crossing runway; and
- c. ATC will advise when a takeoff clearance is being withheld for wake turbulence separation.

22. **Waiver of Wake Turbulence Separation**. Tow pilots may initiate a waiver of the wake turbulence separation when in their judgement (based on relative flight paths, aircraft types and meteorological conditions) there is no likelihood of encountering wake turbulence. Tow pilots shall not initiate a waiver in the following circumstances:

- a. behind a heavy aircraft;
- b. following a crossing runway departure by a medium or heavy aircraft;
- c. following a low or missed approach by a medium or heavy aircraft (except on a crossing runway); or
- d. behind a B737, CRJ, Aurora or Cormorant (and similar, large aircraft/helicopters) when taking off with a glider in tow.



Preceding Aircraft Category		Same Runway	Opposite Direction, Intersection, Low Approach	Crossing Runway	
				Point of Rtn is an issue	Point of Rtn not an issue
Heavy	Glider in Tow	3 Min	3 Min	2 Min	2 Min
	No Glider	2 Min	3 Min	2 Min	Caution
Medium	Glider in Tow	2 Min	3 Min	2 Min	Caution
	No Glider	Caution	3 Min	Caution	Caution
Not Waivable					
<b>Not waivable</b> behind 737, CRJ, EH10, P3, C130, DH8 or other larger medium category. <b>Waivable</b> behind a King Air, B1900 or Saab 340 or similar smaller medium category.					

Figure 4 – Wake Turbulence Chart

23. To minimize the additional radio calls when it is obvious that wake separation criteria will be applicable, tow pilots may request a waiver in their initial request for takeoff clearance, i.e., “TUG ONE PLUS ONE, TAKEOFF ALPHA 30, WAIVE WAKE TURBULENCE SEPARATION”. This abbreviated procedure will apply only during glider ops.

24. **Unusual Exercises.** The LCO shall advise ATC of any unusual exercises that are planned for a particular glider flight, or series of glider flights. This is especially applicable during the GPIC and GPIRC when standards pilots are simulating students flying erratically. This is to ensure ATC does not misconstrue a planned exercise as an unsafe or hazardous air incident.

25. **Simulated Rope Breaks.** The LCO shall confirm the planned release height and type of approach with the glider instructor. The LCO shall provide that information to ATC, and obtain ATC approval for the exercise prior to authorizing the glider launch. ATC approval of the exercise constitutes approval for the glider to release at or about the planned altitude. The glider pilot shall obtain a new ATC release clearance if a significant variance in the planned release altitude becomes necessary.

26. When planning a simulated rope break that is likely to result in a downwind landing, **the LCO shall ensure that there are no other gliders airborne prior to authorizing launch of the simulated rope break flight.**

27. **ATC Procedures - Tow Planes.** Tow planes will adhere to the following:
- a. all tow planes will continuously monitor 126.2;
  - b. the tow plane will obtain clearance prior to taxiing onto Taxiway Alpha. Tow planes that have just landed on Alpha may taxi directly into position for the next launch without further clearance;
  - c. the tow plane will obtain clearance to taxi onto Runway 36 or 18. Tow planes that have landed on Runway 36 or 18 may taxi directly into position without further clearance for the next launch from Runway 36 or 18. Following a Runway 18 landing during Alpha 12 ops, ATC clearance is required to taxi from Runway 18 onto Taxiway Alpha;
  - d. the tow plane will obtain take-off clearance for both the tow plane and the glider from tower for all operations;
  - e. the tow plane will call tower on turning base for sequencing or landing clearance. Tow pilots should modify their descent pattern to account for known traffic or as otherwise directed by ATC;
  - f. during operations from Runway 36 or 18, landing clearance for tow aircraft will only be granted when the runway is clear of all other traffic. If the runway is occupied, ATC may direct the tow plane into an orbit (holding pattern) on the east side of the runway centreline;
  - g. during operations from Alpha 12 or Alpha 30, tow aircraft may be sequenced for either taxiway Alpha or the main runway. Tow pilots shall read back the clearance or instruction including the designated landing surface;
  - h. the tow plane shall call tower on final, re-stating the intended landing surface, regardless of a landing clearance having been previously issued. If radio congestion prevents making a call on final, the tow pilot shall act IAW the last instruction or clearance. If a landing clearance was not previously issued, an over-shoot must be initiated with ATC being advised at the earliest opportunity; and
  - i. tow planes will use the following SSR transponder codes during Comox local flight operations:
    - (1) TUGG 1      C182 C-FCGS      0171
    - (2) TUGG 2      C182 C-FTUG      0172
    - (3) TUGG 3      C182 C-FTRY      0173
    - (4) TUGG 4      C182 C-FOAR      0174
    - (5) TUGG 5      C182 C-GRGS      0175

(6) TUGG 6      C182 C-FGZR      0176

28. **ATC Procedures - Gliders**. All gliders will adhere to the following:
- a. all gliders will continuously monitor 126.2;
  - b. take-off clearance for both aircraft will be obtained by the tow pilot;
  - c. glider release clearance will be obtained from tower by the glider pilot. The glider will release only after clearance is given by tower, and only after confirming that it is safe to do so;
  - d. during RGS student training, release clearance requests made by students shall identify whether the mission is a dual training flight with an instructor, or a solo flight. Example phraseology:
    - (1) Dual – “Glider X Dual requesting release at XXXX ft,” or
    - (2) Solo – “Glider X Solo requesting release at XXXX ft.”
  - e. the glider shall make their downwind radio call between the IP and the abeam point unless prevented from doing so by frequency congestion.
  - f. gliders experiencing a higher than normal rate of descent following release, due either to sink or the manouvers being performed, shall make a radio call to ATC from the practice area when they begin proceeding to their IP for joining the circuit. This will assist ATC in adjusting their normal timing for sequencing other traffic.
  - g. tower will provide an advisory of any pertinent traffic and wind information, and advise the glider pilot to land at his/her discretion;
  - h. gliders will monitor grass landing areas to determine where to land;
  - i. gliders landing downwind following a rope break will normally select the secondary grass landing area. Gliders conducting modified circuits following a rope break will normally select the primary grass landing area.
29. **Hold On Tow**. When the glider pilot requests clearance for release, ATC may occasionally direct that the glider remain on tow. Such direction is provided to avoid traffic conflicts with military or commercial traffic arriving at or departing from Comox.
30. When a glider is directed to hold on tow by ATC, the tow pilot shall set up a race-track pattern parallel to and outside of the boundary of the glider training

area. The approximate size and location of each orbit pattern is depicted in Figures 10 to 13. Orbit turn directions shall be right-hand (clockwise) for Box 30 and 36, but left-hand (counter clockwise) for Box 12 and 18.

31. ATC may provide an estimate of the hold duration based on information provided to them by terminal controllers, however, these estimates may have a variance of up to 4 minutes and therefore have limited value. They should only be requested for reasons of flight safety, such as nearing reserve fuel

32. **Establishing the Orbit – Two Tow Aircraft and Gliders.** When two pairs of tow aircraft and gliders are held on tow, the following procedures shall be followed for establishing and maintaining the orbit and safe separation of all aircraft:

- a. the first tow aircraft to reach the release area and have their glider instructed to remain on tow shall establish the orbit IAW Para 2;
- b. as the second tow aircraft and glider climbs to join the orbit, the tow pilots shall communicate and coordinate with each other or through ATC to ensure a minimum of 500 feet vertical separation is achieved. For example, if both aircraft are programmed for 2100 ft ASL releases, the first aircraft in the orbit would normally climb to 2600 ft ASL as the second is climbing toward 2100 ft ASL. However, if the second aircraft is programmed for a 2600 ft ASL release height, the first should maintain 2100 ft ASL and allow the second to climb above;
- c. the second tow aircraft joining an orbit shall have visual contact with the first tow aircraft and glider prior to reaching the same altitude. A position report request shall be made of necessary. Both tow pilots shall advise by radio when they have the other in-sight;
- d. the second aircraft to join the orbit shall slightly extend or shorten the legs of their orbit pattern until they are positioned approximately opposite to the first aircraft.

33. Gliders should only release in the designated release areas depicted in Figures 10 to 13, regardless of their location upon receiving ATC release *clearance*. Releasing in another area of the orbit pattern is only permitted with complying with an ATC *instruction*, or in an *emergency*.

34. **Glider Release – One Tow Aircraft and Glider In The Orbit.** At any point in the orbit, ATC may either clear the glider for release or request the glider to advise when ready for release. When only a single tow aircraft and glider are in the orbit, and the other tow aircraft and glider are either on the ground or in the early take-off phase, the orbit pattern may be truncated and the glider towed directly to the release area. This may result in the tow aircraft and glider flying a track opposite to the normal orbit direction, therefore, the tow pilot must be certain

there will be no potential conflict with another tow aircraft and glider. If there is any potential for conflict, the regular orbit pattern shall be maintained. In making this determination, the tow pilot must be mindful that students may be slow completing the release procedure, and give consideration to the descent profile and path they will take following release.

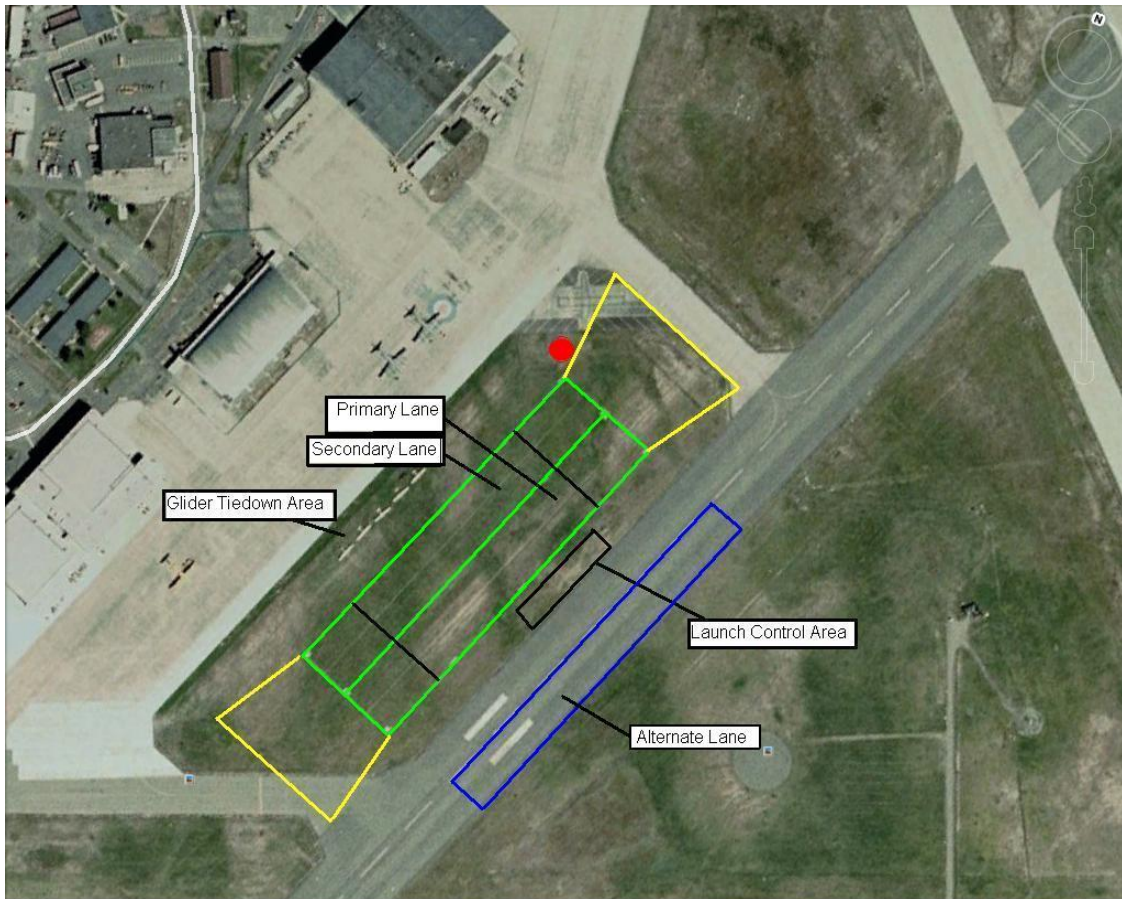
35. **Glider Release – Two Tow Aircraft and Gliders In The Orbit.** ATC may clear one or both of the gliders for release or request the gliders to advise when ready for release, without regard for their relative altitudes, positions in the orbit, or order of joining the orbit. To ensure the release of both gliders and the subsequent tow aircraft descents are conducted safely and orderly, tow pilots shall use the following release procedures:

- a. The established orbit pattern and direction shall be maintained by both tow aircraft, however, the tow aircraft which will be first to reach the release area may initiate their final turn to the release area earlier than normal;
- b. The higher tow aircraft must ensure their descent path is well clear of the lower aircraft, especially if they are the first to release;
- c. After the first tow aircraft and glider have released and are clear of the orbit area, the second tow aircraft may truncate their orbit pattern and tow their glider directly to the release area, regardless of direction.

36. **Runway Selection or Change.** Selection or changing of the runway in use will be requested by the LCO through the tower controller, based on current and anticipated wind and traffic, bearing in mind the unique wind limitations inherent in glider operations.

37. **Box 18 / Box 36- Glider Landing Lanes.** Box 18 / Box 36 provides 2 primary glider landing lanes designated PRIMARY and SECONDARY as shown in Figure 4. Preference is to land on the PRIMARY. Should both lanes be occupied, the alternate glider landing lane is the eastern half of Runway 18/36.

38. Each primary lane is 1000 feet long and approximately 150 feet wide. The alternate lane is 1000 feet long and 100 feet wide. All lanes meet the glider airfield criteria established at A-CR-CCP-242/PT-005.



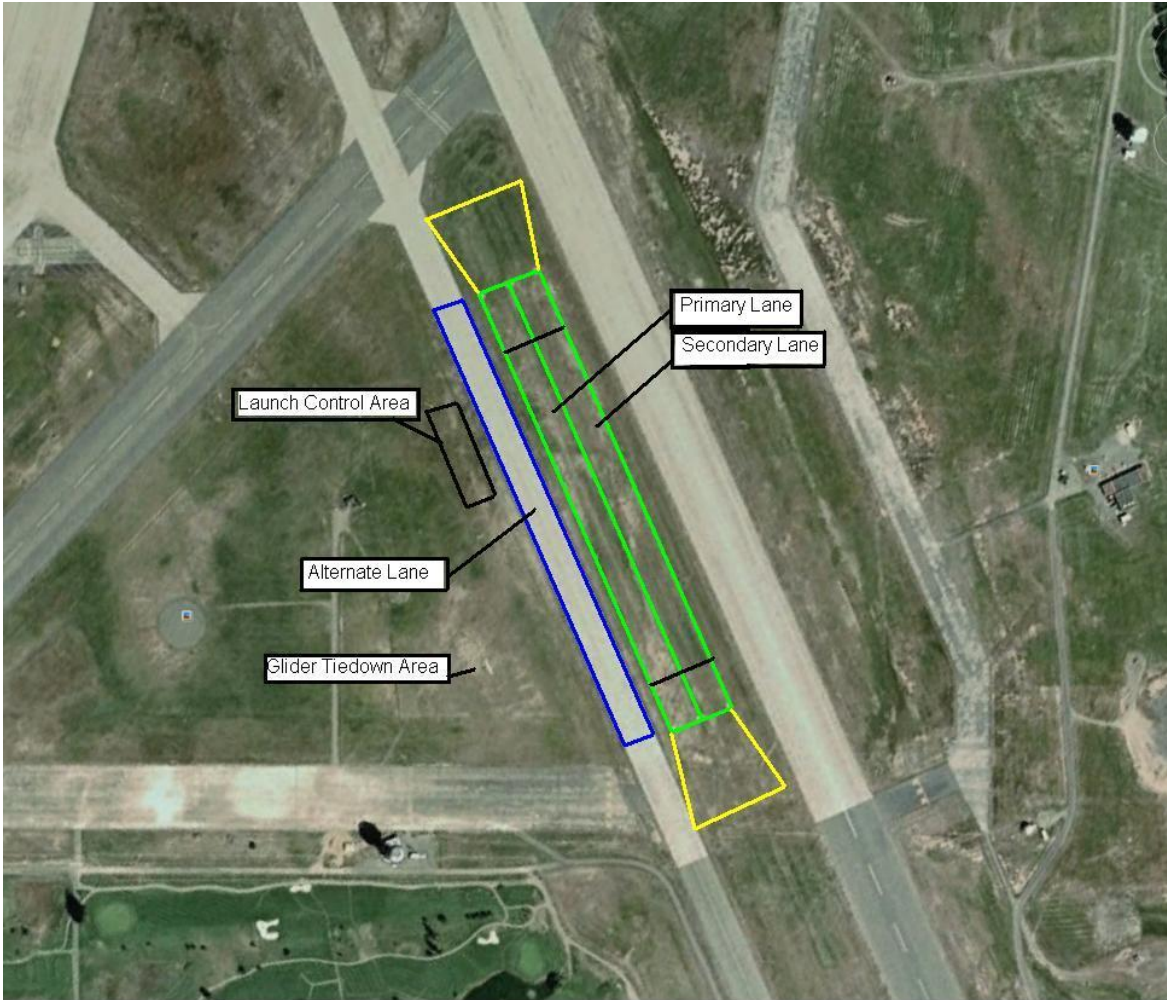
	<b>Primary Landing Lane</b>
	<b>Alternate Landing Lane</b>
	<b>Planned Touchdown Area</b>
	<b>Primary Lane - Under / Over Run</b>
	<b>Significant Obstacle</b>

Figure 5 - Box 18 / Box 36 Glider Landing Lanes

39. **Box 12 / Box 30- Glider Landing Lanes.** Box 12 / Box 30 provides 2 primary glider landing lanes designated PRIMARY and SECONDARY as shown in Figure 5. Preference is to land on the PRIMARY. Should both lanes be occupied, the alternate glider landing lane is Taxiway Alpha.

40. The primary and secondary lanes are 1,000 feet long and 100 feet wide. The alternate lane is 1,000 feet long and approximately 100 feet wide. All lanes meet the glider airfield criteria established at A-CR-CCP-242/PT-005.





	<b>Primary Landing Lane</b>
	<b>Alternate Landing Lane</b>
	<b>Planned Touchdown Area</b>
	<b>Primary Lane - Under / Over Run</b>

Figure 6 - Box 12 / Box 30 Glider Landing Lanes

41. **Box 12 / Box 30- Taxiway Alpha - Primary Landing Lane.** When basic glider pilot training is not being conducted, Taxiway Alpha may be used as the primary landing lane. The grass landing lane closest to Alpha is the secondary, and the outer landing lane is the alternate. Figure 6 approximately depicts the primary landing lane on Taxiway Alpha. Gliders may, however, touchdown anywhere on Taxiway Alpha between Taxiway Charlie and the intersection with Rwy 18/36 as necessary to facilitate stopping at the abandoned runway. The launch control area shall be positioned on the abandoned runway.



	<b>Primary Landing Lane</b>
	<b>Alternate Landing Lane</b>
	<b>Planned Touchdown Area</b>
★	<b>Launch Control Area</b>

Figure 7 - Box 12 / Box 30- Taxiway Alpha - Primary Landing Lane

**GLIDER TRAINING AREAS**

42. There are 3 designated glider training areas which are used dependant on the takeoff surface in use:

- a. Box 18/36 - Used when operations are conducted from either Rwy 18 or Rwy 36 (Figure 7);



- b. Box 12 - used when operations are conducted from Alpha 12 (Figure 8);  
and
- c. Box 30 - used when operations are conducted from Alpha 30 (Figure 9).

43. Vertical dimensions of the gliding training areas are surface to 3600ft asl. Gliding operations above 3600 ft asl may only be conducted with prior coordination and approval from Comox ATC.



Figure 8 - Training Area Boundaries for Box 18/36





Figure 9 - Training Area Boundaries for Box 12



Figure 10 - Training Area Boundaries for Box 30

## **RUNWAY SPECIFIC OPERATING PROCEDURES**

44. **Runway 18 Specific Procedures**. Due to the inherent inefficiency and noise concerns of Runway 18 operations, Runway 18 is infrequently used during RGS operations. Runway 18 will remain under tower control at all times. Tower clearance is required prior to moving any tow planes and or gliders onto Runway 18 for the purpose of initial launch preparation. Once a tow aircraft is in position on the runway or after a landing tow aircraft has passed the launch point in preparation for a subsequent launch, the LCO may move personnel and gliders

onto the runway without requesting tower clearance. The LCO will supervise Box 18 unless control is taken by tower:

- a. Standard Departure. (Figure 10) Tow planes and Gliders will take-off from Runway 18 starting just south of Taxiway DELTA. Tow planes will climb to a safe altitude and then commence a left-hand 270-degree orbit and continue to climb on a westerly heading beside the southern boundary of the glider training area until reaching the release point / altitude;
- b. Tow Patterns. (Figure 10) Tow planes will climb as detailed above, remaining clear of the glider training area at all times. After glider release, the tow plane will descend clear of the glider training area to arrive on a right base for Runway 18. The tow plane must judge the circuit so as not to conflict with gliders on right base for the grass;
- c. Glider Training Area. (Figure 7) Gliders shall remain in the glider training and shall not over-fly the glider circuit during upper air work;
- d. Landings - Tow planes. Tow planes will land on Runway 18, touching near the Runway 30 / 12 intersection so as to be slowed to taxi speed before reaching the launch point. No other activity can take place on Runway 18 while an aircraft is landing. Should the runway be occupied when a tow aircraft is ready to turn final, the tow pilot shall establish a holding pattern east of the extended runway centreline until the runway is clear for landing;
- e. Landings – Gliders. The gliders will normally land on the grass west of Runway 18. Two landing strips will be designated PRIMARY and SECONDARY, from east to west as depicted in Figure 4; and
- f. Parking Tow Planes/Gliders. All aircraft will park/hold on the grass adjacent to the west side of Runway 18 and downwind of the LCO stand.





Figure 11 - Rwy 18 Tow Plane Patterns

45. **Runway 36 Specific Procedures.** Rwy 36 will remain under tower control at all times. Twr clearance is required prior to moving any aircraft or personnel onto Rwy 36 for the purpose of initial launch preparation. Once a tow aircraft is in position on the runway or after a landing tow aircraft has passed the launch point in preparation for a subsequent launch, the LCO may move personnel and gliders onto the runway without requesting clearance. The LCO will supervise Box 36 unless control is taken by tower.

- a. When making their radio call for take-off clearance, the tow pilot shall request one of the following two departure profiles depicted in Figure 11:
  - (1) **“Left Turn”.** Tow planes and gliders will take-off from the west side of Runway 36, starting just south of Taxiway Delta. An initial shallow right turn will be made at a safe altitude, but no lower than 100 feet, to avoid direct overflight of Tee Pee Park, then turn to the left and fly approximately 1/2 mile off shore parallel to the shoreline to the BC

Ferry terminal, at which point a left turn is made towards the release point. Tower clearance is not required before crossing back over the approach to Rwy 12 unless specified in the takeoff clearance;

- (2) “Right Circling”. At a safe altitude the tow pilot will execute a 270° right-hand turn to arrive on a westward track overhead runway 30 at an altitude above 1100’ asl. The turn should be completed within the Kye Bay area, and shall not extend east to Cape Lazo without ATC approval. The small arms and EOD ranges shall not be overflown below 1500’ ASL when active. Overhead the departure end of Rwy 30, course shall be altered approximately 15° left, paralleling the glider training area to fly clear of the approach to Rwy 12. The glider may request release west of Anderton Rd.
- b. Tow Patterns. Tow planes will climb approximately following the pathways depicted in Figure 11. After glider release, the tow plane will descend to arrive on a left base for Rwy 36. Tow pilots must judge their circuit so as not to conflict with landing gliders, and shall remain outside the glider training area at all times;
- c. Glider Training Area. Gliders shall remain in the glider training area detailed at Figure 7. Gliders will not over-fly the glider circuit during upper air work and must not encroach on the approach to Runway 12 when entering left downwind for Rwy 36;
- d. Landings -Tow planes. Tow planes will land on Runway 36 so as to be at taxi speed before reaching the launch point. No other activity can take place on Runway 36 while an aircraft is landing. Should the runway be occupied when a tow aircraft is ready to turn final, the tow pilot shall establish a holding pattern east of the extended runway centreline until the runway is clear for landing;
- e. Landings-Gliders. Gliders will land on the grass west of Runway 36. Two landing strips are designated PRIMARY and SECONDARY from east to west as depicted in Figure 4; and
- f. Parking Tow Planes/Gliders. All aircraft will park/hold on the grass west of Runway 36, downwind from the LCO stand.



Figure 12 - Rwy 36 Tow Plane Patterns

46. **Alpha 12 Specific Procedures**. Alpha 12 operations make use of Taxiway Alpha and Box 12 as follows:

- a. **Take-Off**. Tow planes and gliders will take-off from Taxiway Alpha, between Runway 18/36 and Taxiway Charlie in the south-easterly direction, which is referred to as “Alpha 12”;
- b. When making the radio call for take-off clearance, the tow pilot shall request one of the following departure profiles depicted in Figure 12:
  - (1) **“Standard Departure”**. The tow plane will climb straight out to the departure end of Runway 12, and then alter track 15 degrees right of the extended runway centreline climbing in a south easterly direction until turning inbound to the south east corner of the glider training area;

- (2) “Straight Out”. The tow plane shall climb on a track that remains south of the runway centreline before turning inbound toward the south east corner of the glider training area, and
  - (3) “Left Circling”. The tow plane will climb straight out until approximately 1 nm off shore, and then execute a 270 ° left-hand orbit to arrive on a southbound track approximately ½ nm east of, and parallel to, the shoreline. The glider may request release south of the runway.
- c. ATC may request the tow plane to make an “early right turn” after take – off to facilitate the departure of other traffic from the main runway. In this case, the tow plane shall make a turn greater than 15° as soon as safely possible.
  - d. Tow Patterns. Tow planes will climb approximately following the pathways depicted in Figure 12. Holds on tow shall be initiated prior to crossing the shoreline whenever possible, and shall be flown well offshore to the east.
  - e. Tow Plane Circuits. (Figure 12) At glider release, the tow plane may request, or be assigned by ATC, either a right or left hand circuit, however, right hand circuits shall be flown unless otherwise specified by ATC. In both cases, the tow plane pilot must judge their descent path and circuit to ensure they do not conflict with other tow planes and gliders in climb, or with landing gliders.
    - (1) Right Hand. The tow plane will descend along the southern boundary of the glider training area and join a right base for Alpha 12 in the area of Anderton Rd. The base and final legs may be modified as necessary for efficiency and engine cooling requirements, however, the QRA shall not be overflown. Radio calls will be made on base and final.
    - (2) Left Hand. A left hand circuit will only be approved by ATC when there will be no interference to other air traffic, and the glider will be releasing at or east of the shoreline. The tow plane will descend over water, join the circuit on a crosswind leg remaining off shore until base leg for noise abatement, and make radio calls on downwind and final.
    - (3) Abbreviated Left Hand. An abbreviated left hand circuit pattern, depicted by the dashed line in Figure 12, may be used during spring and fall familiarization flying when approved by ATC. The tow plane will fly an abbreviated crosswind leg leading to a downwind leg that is over the base and beach.



- (4) Runway 18 Landing. When winds are within aircraft limits and traffic conditions permit, tow aircraft may land on Rwy 18 to permit simultaneous departures from Alpha 12. ATC may clear the tow aircraft to a left base for Rwy 18 immediately following the glider release, or may re-direct the tow aircraft to Rwy 18 following an initial clearance to a left downwind for Alpha or Rwy 12. Radio calls will be made on base and final. Tow pilots should not request a Rwy 18 landing when there is potential for conflict with a glider in or entering the Box 12 circuit, or when it will delay another aircraft intending to taxi on Rwy 18/36. Tow aircraft shall cross the Rwy 18 threshold at a minimum altitude of 200 ft AGL to ensure the trailing tow rope clears obstacles and threshold lighting. This may result in tow aircraft rolling beyond the Rwy 18/Twy A intersection, thereby requiring a backtrack which must be authorized by ATC.
- f. Glider Training Area. Gliders shall remain in the glider training area detailed at Figure 8. Gliders will not over-fly the glider circuit during upper air work;
- g. Landing-Tow planes. The tow planes will land on Taxiway Alpha so as to complete the rollout at or near the intersection of 18/36;
- h. Landings-Gliders. The gliders will normally land on one of the two designated landing areas on the grass. These will be designated PRIMARY and SECONDARY from south to north as depicted in Figure 5. When basic glider pilot training is not being conducted, gliders may use Taxiway Alpha as the primary, with the grass strips designated secondary and alternate as depicted in Figure 6; and
- i. Parking Tow planes/Gliders. Gliders will park/hold on the grass south of Taxiway Alpha downwind of the LCO stand, or on the abandoned runway behind the hold short line. Tow aircraft will park on the abandoned runway behind the hold short line.



Figure 13 – Rwy 12 Tow Plane Patterns

47. **Alpha 30 Specific Procedures**. Alpha 30 operations make use of Taxiway Alpha and Box 30 as follows:

- a. **Take-Off**. Tow planes and gliders will take-off from Taxiway Alpha, between Runway 18/36 and Taxiway Charlie in the north-westerly direction, which is referred to as “Alpha 30”;
- b. When making their radio call for take-off clearance, the tow pilot shall request one of the following departure profiles depicted in Figure 13:
  - (1) **Standard Departure**. The tow plane will climb straight out to the departure end of Runway 30 and then alter heading to track approximately 15 degrees left of the extended runway centreline, parallel to the glider training area. A further left turn to the southeast will be made for the glider to release along the western edge of the glider training area;

- (2) “Straight Out”. The tow plane shall climb on a track that remains south of the runway centreline before turning southeast bound to the glider release area, and
  - (3) “Right Circling”. At a safe altitude above 100’ agl the tow pilot will execute a 360° right-hand turn to arrive on a westward track overhead runway 30 at an altitude above 1100’ asl. The turn should be completed within the Kye Bay area, and shall not extend east to Cape Lazo without ATC approval. The explosive storage area, arming pad, small arms and EOD ranges shall not be overflowed below 1500’ ASL when active or occupied. At the departure end of Rwy 30, course shall be altered approximately 15° left, paralleling the glider training area to fly clear of the approach to Rwy 12. The glider may request release west of Anderton Rd.
- c. Tow Patterns. Tow planes will climb approximately following the pathways depicted in Figure 13. After glider release, the tow plane will descend clear of the training area to arrive on a left base for Alpha 30. Tow pilots must judge their circuit so as not to conflict with any gliders in the landing phase;
- d. Tow Plane Circuits. (Figure 13) At glider release, the tow plane may request, or be assigned by ATC, either a right or left hand circuit, however, left hand circuits shall be flown unless otherwise specified by ATC. In both cases, the tow plane pilot must judge their descent path and circuit to ensure they do not conflict with other tow planes and gliders in climb, or with landing gliders.
- (1) Left Hand. The tow plane will descend along the west and south boundaries of the glider training area to join the circuit on a left downwind leg for Alpha 30. The downwind leg may be extended eastward as necessary to allow for descent and traffic considerations. Radio calls will be made on base and final.
  - (2) Right Hand. A right hand circuit will only be approved by ATC when there will be no interference to other air traffic. The tow plane will descend west of the glider training area and join the circuit on a right crosswind for Alpha 30 in the area of Ryan Rd. The crosswind and downwind legs may be modified as necessary for traffic avoidance, efficiency and engine cooling requirements. Radio calls will be made on downwind and final.
- e. Glider Training Area. Gliders shall remain in the glider training area detailed at Figure 9. Gliders will not over-fly the glider circuit during upper air work;

- f. Landing-Tow planes. The tow planes will land on taxiway Alpha, complete the rollout and be at taxi speed before the abandoned runway intersection;
- g. Landings-Gliders. The gliders will normally land on one of the two designated landing areas on the grass. These will be designated PRIMARY and SECONDARY from south to north as depicted in Figure 5. When basic glider pilot training is not being conducted, gliders may use Taxiway Alpha as the primary, with the grass strips designated secondary and alternate as depicted in Figure 6; and
- h. Aircraft Parking. Gliders will be parked on the grass south of taxiway Alpha downwind of the LCO stand, or on the abandoned runway behind the hold short line. Tow aircraft may be parked on the abandoned runway behind the hold short line.

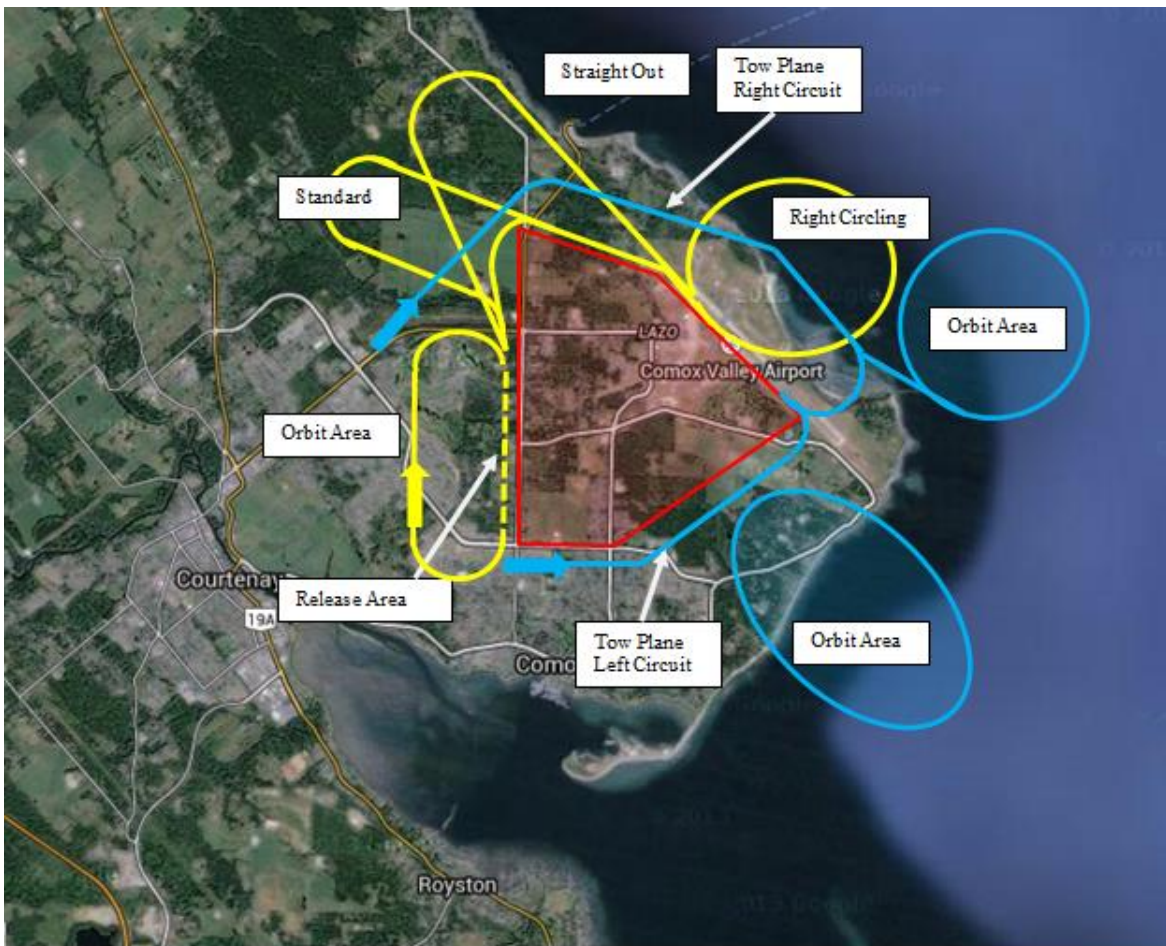


Figure 14 – Rwy 30 Tow Plane Patterns

## RESTRICTIONS

48. **Airspace Restrictions.** ATC will occasionally issue an instruction for the tow aircraft to alter course to remain clear of specified airspace, most often the departure or arrival path for runway 12/30. These restrictions are normally issued to facilitate the departure or arrival of other aircraft. When a restriction has been issued, the tow pilot shall obtain ATC clearance before entering or turning toward the restricted airspace, regardless of intent to remain within a specified “tow corridor” outside the restricted airspace, or belief there is no conflict with the other traffic. This ensures ATC is aware of the tow pilot’s intentions, allowing them to ensure there will be no conflict or inadvertent triggering of a TCAS alarm.

49. **Restrictions to Number of Airborne Gliders.** To ensure compliance with A-CR-CCP-242/PT-005 requirements for alternate landing areas and to control operational tempo at 19 Wing, gliding operations from Comox shall be limited to a maximum of 4 gliders and 2 tow aircraft airborne at any time. The practice of preparing up to five gliders for flight operations is permissible to maximize the time available for pre-flight preparations by instructors and students. Notwithstanding, ***the LCO shall ensure that no more than 4 gliders are airborne at any time.***

## AIRCRAFT FUELLING

50. **General.** Tow aircraft are fuelled at the RCA Ops (Pac) fuel pump on the west side of the 15 Hangar apron IAW the following procedures:

- a. all personnel involved in re-fuelling ACGP aircraft shall be trained and aware of the proper use of all associated equipment;
- b. personnel shall not remain in the aircraft during fuelling;
- c. the aircraft shall be chocked and properly bonded (grounded) to the re-fuelling cabinet prior to opening the aircraft fuel-tank filler caps;
- d. after fuelling, the pump shall be turned off and the ground wire disconnected; and
- e. fuelling activity shall not occur or shall cease if electrical storm activity occurs, or a thunderstorm alert is issued for, within 5NM of the aerodrome.

51. **Fuel Spills.** In the event of a fuel spill, the person on scene should immediately stop the source if it is safe to do so. The EMERGENCY SHUT-OFF, is located on the Northwest corner of 15 Hangar on the wall beside the main hangar doors. DEPRESS THE RED BUTTON to shut down the system and:



- a. obtain fire-fighting equipment and immediately notify a superior;
- b. get the containment kit, contain the spill as much as possible and remove aircraft from the site of the spill if possible;
- c. if the spill is over 22 litres (5 gallons), call the Wing Fire Hall at 8333;
- d. if the spill is less than 22 litres, **but the adjacent water drain has been contaminated**, call the Wing Environmental Officer at 8187; and
- e. if there is no contamination, clean up the spill IAW WHMIS directives.

## NOISE ABATEMENT

52. The entire Comox peninsula is a noise sensitive area at all times. To particularly minimize the impact of noise generated by continuous tow plane operations, the following procedures will be implemented to the maximum extent possible, subject to ATC coordination and approval, and without jeopardizing safety or compromising effectiveness:

- a. Tow Patterns. Tow pilots will vary their tow patterns to avoid continual over flight of the same track. Densely populated residential areas will be avoided as much as possible;
- b. Tow Plane Descent and Landing Patterns. Tow plane descent patterns will avoid overflying densely populated residential areas to the extent reasonably possible. When traffic and other ATC requirements allow, left circuits for Rwy 12 and right circuits for Rwy 30 should be utilized.
- c. Time Restrictions. In accordance with 19 Wing Flying Orders, during the summer / RGS period, continuous glider operations will be restricted to 0730 – 2030 (local time) daily, except Sunday. Exceptions to these times must be approved by the W Ops O; and
- d. Complaint Response. The D RCA Ops O or RGS PAO will normally respond to noise complaints relating to gliding operations. The public may make noise complaints through W Ops, or directly to RCA Ops.

## FLYING ACCIDENTS

53. Emergency response for both on and off base accidents is provided by 19 Wing. The LCO will initiate an emergency response by notification to the control tower using the ground frequency VHF 119.75.