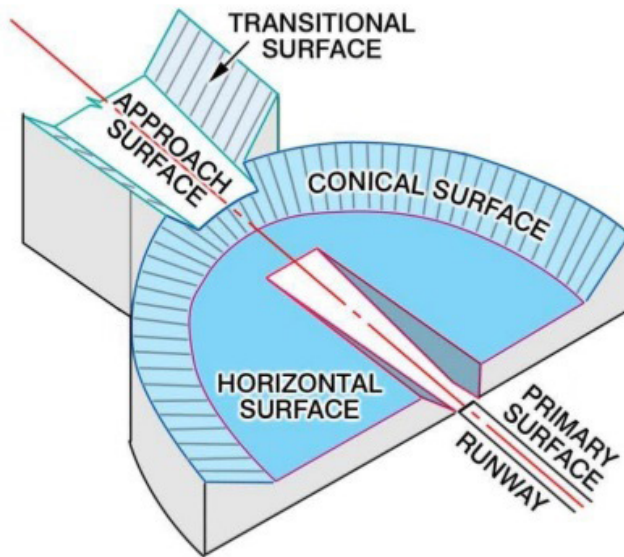


Figure 3-3: Part 77 surfaces



at the airport, including land use that produces a bird-strike hazard, lights that could cause a visual hazard, activity that produces smoke or haze, etc. The Airport should continue to work with local and state governments to prevent incompatible land uses using the SJCC and other means. As explained above, numerous buildings on both sides of the runway are within the Building Restriction Line (BRL) and encroach into the overlying airspace.

3.2.5.2 Instrument Procedures

ORS has three Instrument Approach Procedures (IAPs) and a Departure Procedure (DP). All are RNAV (GPS) procedures and require that aircraft using them be equipped with the appropriate GPS equipment to fly the procedures. GPS, a type of satellite navigation system, is becoming the most common type of area navigation and is replacing older equipment that utilizes ground-based nav aids such as VOR, VORTAC, and NDB stations.

The three instrument approach procedures at ORS are the RNAV RWY 16 approach, the RNAV RWY 34 approach, and the RNAV -A approach (**Figures 3-4.A, 3-4.B, and 3-4.C**, respectively). All three approach procedures have non-standard minimum criteria for takeoff

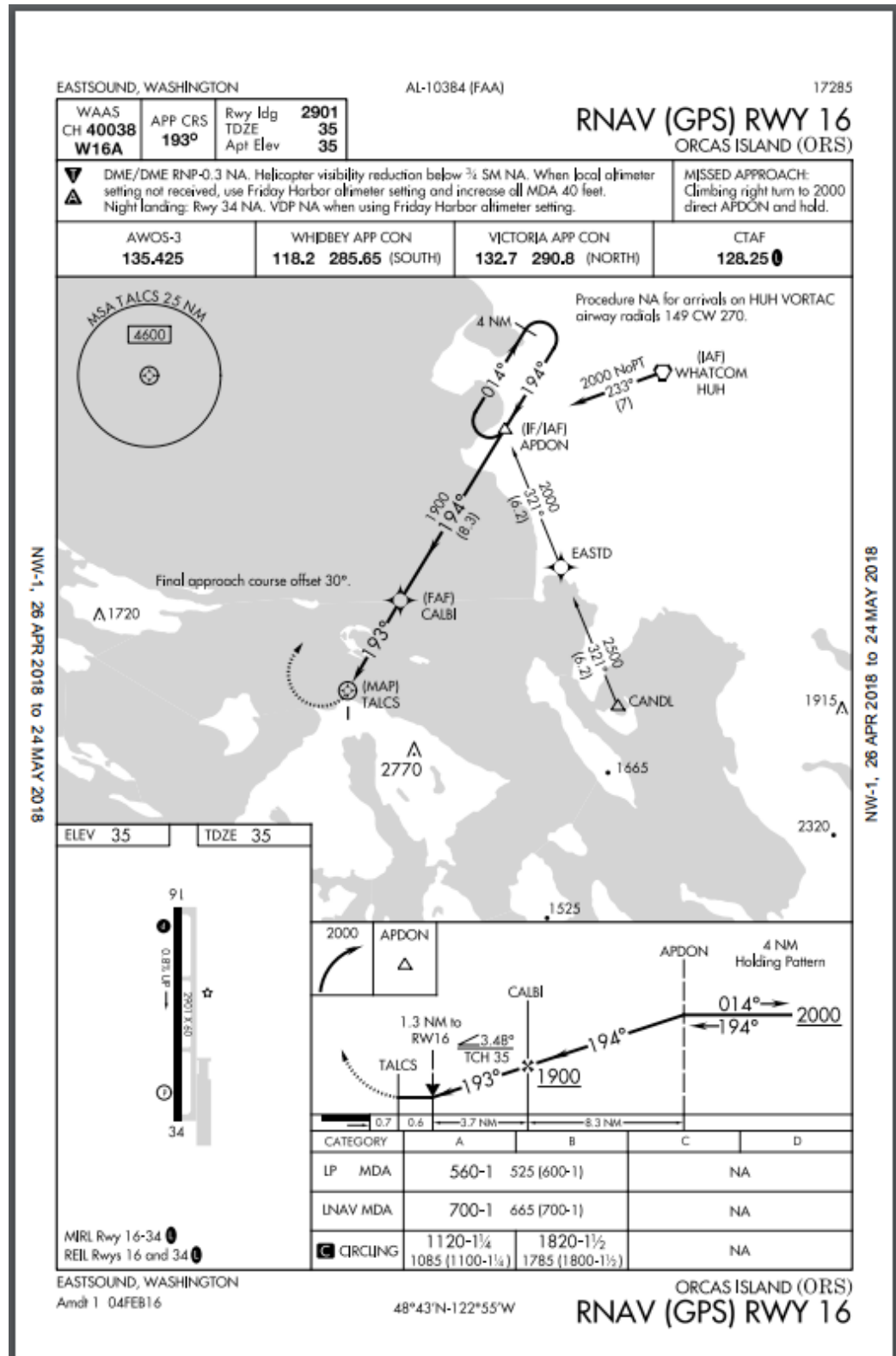
operations, and all three have non-standard minimum criteria before ORS can be listed as an alternate airport in an IFR flight plan. In each case, flight visibility and cloud height requirements are greater than standard criteria because of obstructions in the surrounding airspace. Night landings on Runway 34 are not authorized using any of these instrument procedures.

The FEGBA TWO departure is an RNAV Standard Instrument Departure (SID) for ORS that allows GPS-equipped aircraft to take off to the south and transition to the enroute phase of an IFR flight (**Figure 3-4.D**). It requires contact with ATC for radar vectors into controlled airspace, and it requires a lateral navigation accuracy of one nautical mile (RNAV-1) for its use. It also has non-standard takeoff minimums due to obstructions in the surrounding airspace. Any modifications to the runway location or orientation at ORS must consider the effects that such changes will have on these instrument procedures. It is unlikely any small shift in the runway would have a major effect on the minimums of the existing instrument procedures. Due to terrain, instrument procedure minimums are unlikely to improve.



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Figure 3-4.A: RNAV (GPS) runway 16 approach plate



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Figure 3-4.B: RNAV (GPS) runway 34 approach plate

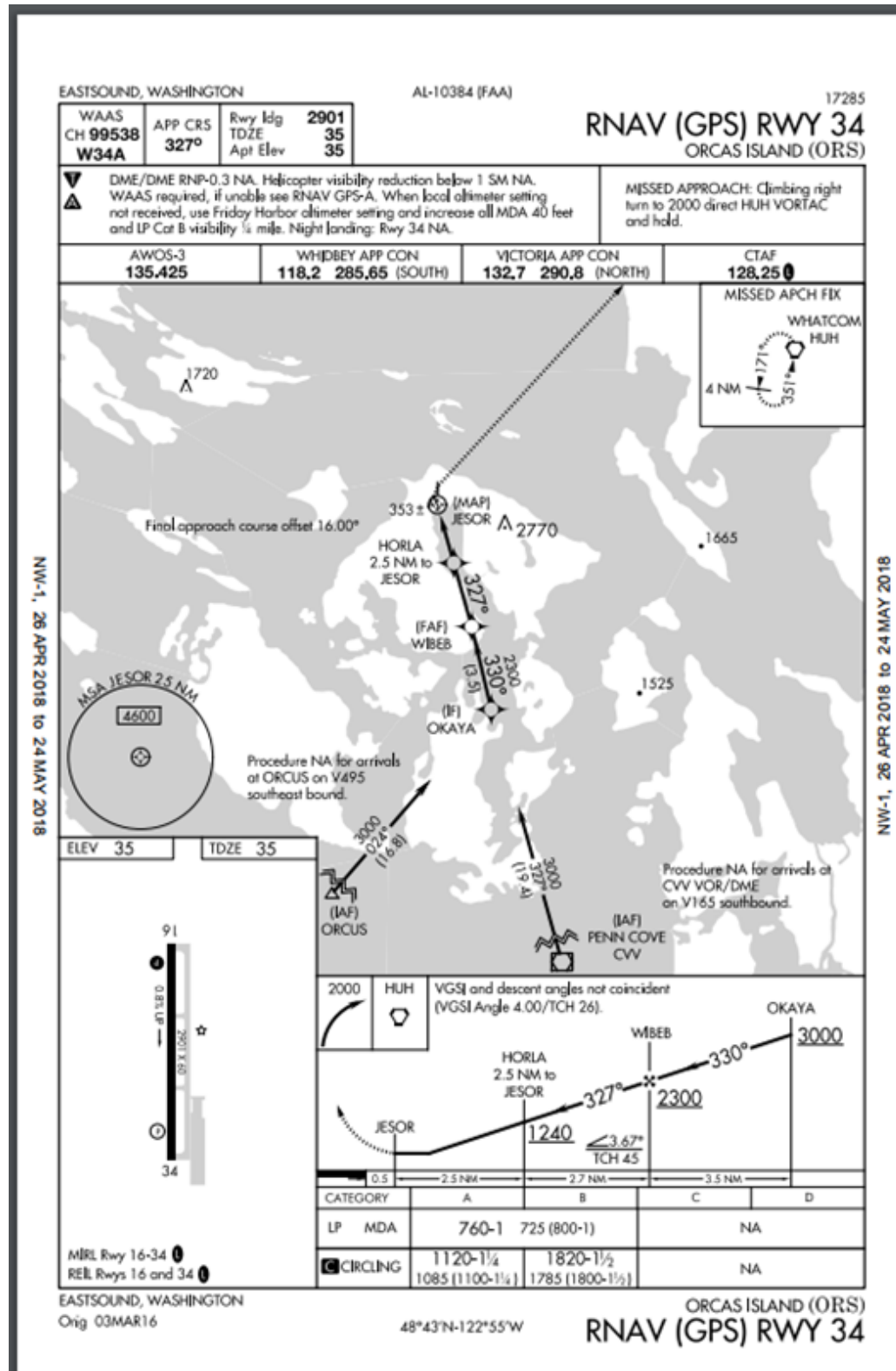
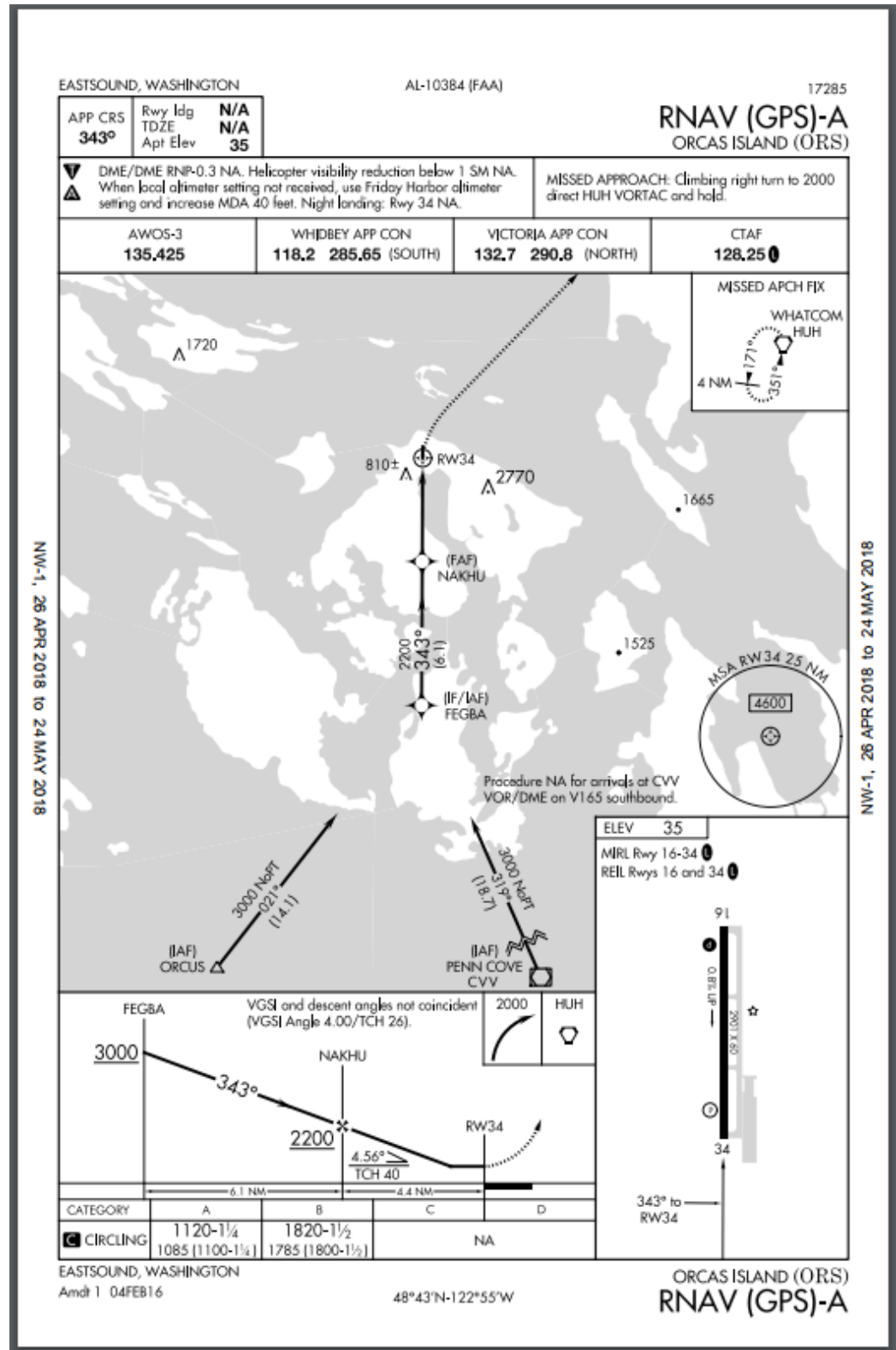


Figure 3-4.C: RNAV (GPS)-A approach plate

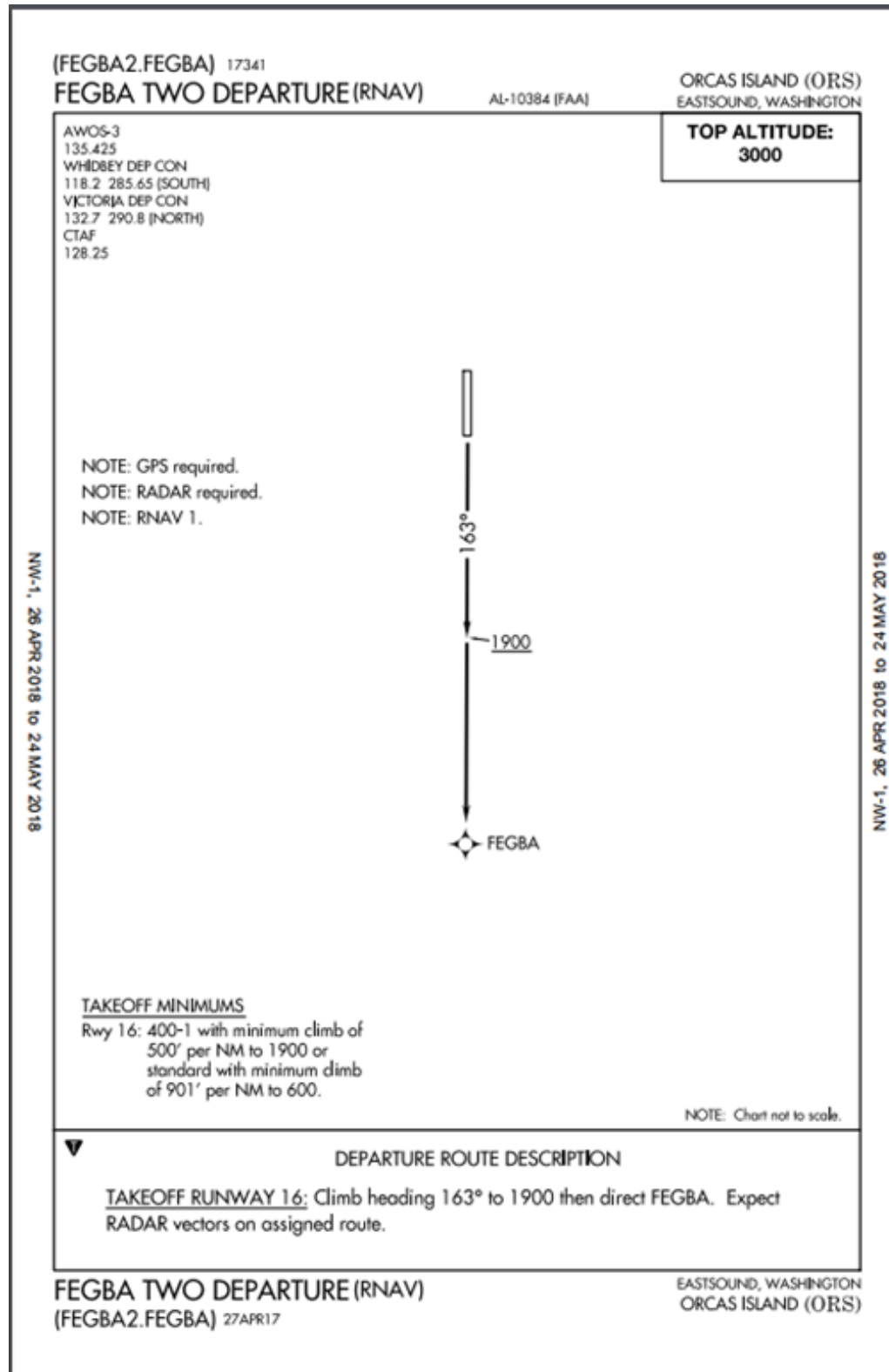


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Figure 3-4.D: FEGBA two departure plate



3.3 AIRPORT SUPPORT FACILITIES AND REQUIREMENTS

3.3.1 Airport Terminal

The airport terminal building at ORS contains offices for the scheduled airline operators, a small passenger waiting area, ticket counter with baggage scale, restroom facilities, the airport manager's office, a conference room, pilot briefing facilities, the AWOS electronic equipment, and storage areas. ORS does not have a separate GA terminal for GA pilots and instead, uses this shared space for both air taxi customers and GA. No passenger security screening is required due to service by aircraft with less than 10 passengers. Bags are retrieved by passengers plane-side as passengers depart the aircraft.

The existing terminal building does not have sufficient space or accommodations to adequately serve the purposes for which it is being used. ORS needs a new terminal building to meet its needs which include an expanded passenger waiting area, at a minimum two ticket counters and passenger check-in area, air taxi equipment storage, baggage claim, a pilot lounge with briefing facilities, a conference room, restroom facilities, and an airport manager's office. Care should be taken to locate the new terminal where conflicts with Part 77 surfaces and obstacle free areas are avoided and vehicular access and parking can be accommodated.

3.3.2 Aircraft Hangars, Aprons, and Tie-Down Facilities

There is a need for additional hangars and tie-down areas for based aircraft and transient aircraft, particularly during the busy summer months.

The area on the west side of the airport terminal building is used by scheduled airlines to embark and disembark passengers. The area between the terminal building and the self-serve fuel facility to the north is equipped with tie-downs and is available for use by small aircraft. All these areas are asphalt-paved. An additional paved tie-down area is available south of the terminal. This area can accommodate larger aircraft. As shown in **Figure 3-5**, much of the aircraft parking and tie-down spaces are within the Object Free Area.

The grass area between the self-serve fuel facility and the helipad contains 21 tie-downs that are frequently used by pilots of transient aircraft for camping. Particularly during the summer months, it is common to see numerous airplanes with a tent pitched nearby (**Figure 3-6**). An additional grassed area with tie-downs, constructed in 2011, is located at the far south end of the airfield.

The number of based aircraft is expected to double during the planning period. Transient aircraft operations are estimated to increase as well. Additional hangars and tie-down spaces for based and transient aircraft are needed to meet these needs.

Figure 3-5: ORS hangars, aprons, and tie-down facilities

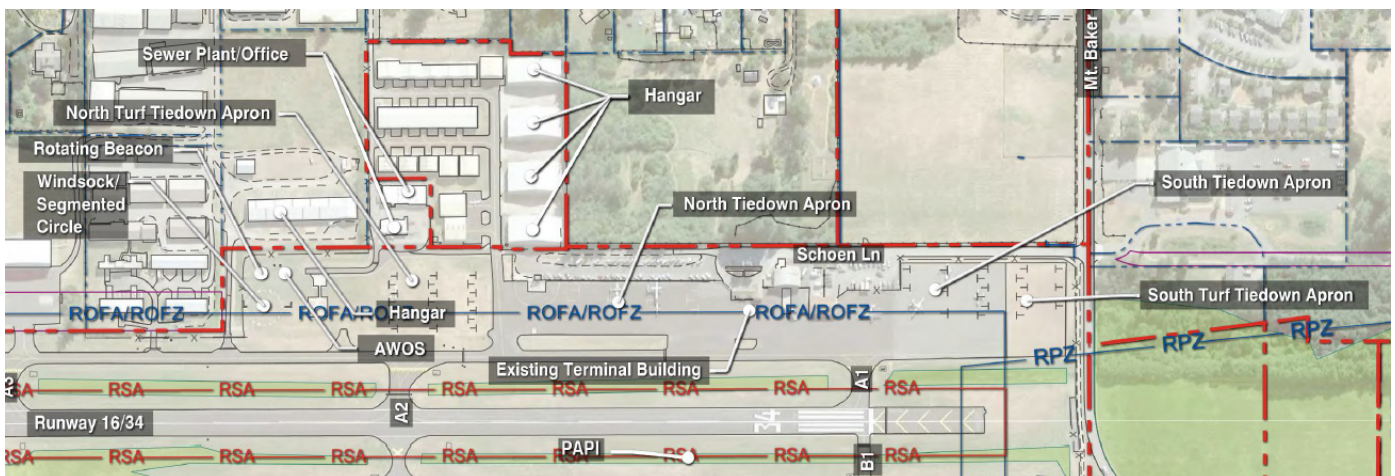




Figure 3-6: ORS transient aircraft campsite



3.3.3 Maintenance Facilities and Equipment

ORS has three pieces of airfield mowing equipment with cutting widths from 48 inches to 60 inches. This equipment is adequate for vegetation maintenance, but is not large enough to be efficient. The Airport does not currently have snow removal equipment, even though snow is a common occurrence during the winter months. The Airport intends to purchase snow removal equipment in the future. The equipment is currently kept in a storage unit at the end of a row of t-hangars. Storage facilities for the maintenance equipment are not adequate. A dedicated equipment storage building should be planned to accommodate existing and future equipment.

3.3.4 Aircraft Deice Building

A significant number of times each winter, aircraft used for scheduled air taxi service cannot be kept overnight at ORS, due to the anticipated accumulation of frost, ice, or snow during the night, forcing the delay or cancellation of a scheduled flight. In the winter, due to a lack of deicing facilities, Kenmore Air chooses to deadhead to Friday Harbor

Airport each evening instead of remaining overnight at ORS. ORS desires to construct an aircraft deice facility to serve such aircraft and increase revenue. The proposed facility would use infrared lights to heat the aircraft and remove frost, ice, or snow accumulation. No chemicals would be used to treat the aircraft. Improvements at the airport should include a location for this facility convenient for air taxi aircraft. Options for this facility are discussed in the Alternatives chapter.

3.3.5 Cargo Facilities

Cargo facilities used by UPS and FedEx are exceeding current capacity and should be expanded. Many times, cargo is processed outside in the weather due to capacity constraints. A dedicated cargo area with a cargo processing facility accessible to trucks and a cargo apron accessible by aircraft should be provided.

3.3.6 Surface Access

Access to the airport terminal is from Mount Baker Road via Schoen Lane. Mount Baker Road is the designated truck route around the community of Eastsound and is the main access



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route from one side of Orcas Island to the other. It is intersected by North Beach Road, which provides access to hangars on the east side of the airport. To the west, Mount Baker Road also provides access to the west side of the airport via local streets (Seaview Street and Nina Lane). Mount Baker Road is in good condition while most of the other local streets used for airport access are in fair to poor condition. These are two-lane roads without shoulders. According to 2014 San Juan County traffic data the Federal Functional Class for Mt. Baker Road is a *Major Collector* and the Annual Average Daily Traffic count for the section of it between Lover's Lane and North Beach Road is "High" (2,000-3,000 vehicles per day).

The central business district in Eastsound is an easy $\frac{3}{4}$ -mile walk from the Airport terminal and can be conveniently reached from any of the tie-down areas used by transient aircraft at the airport. A nature trail located along the east side of the Runway 34 RPZ provides a pleasant access route for pedestrians traveling into town. Any plans that result in a major reconfiguration of airport facilities should include accommodations for these pedestrians so that convenient access to Eastsound is maintained.

3.3.7 Vehicle Parking

The airport terminal has a circle drive for dropping off or picking up passengers. The parking lot in front of the terminal building has parking spaces for nine vehicles. To the south of the terminal building there are four spaces used to park rental cars. Parking for approximately 60 transient vehicles is available adjacent to Schoen Lane north of the terminal. The transient parking is frequently at or near capacity. Many cars parked in the transient parking area belong to people who own second homes on the island. Parking plans for reconfiguration of landside facilities should include convenient and expanded parking for these airport users.

3.3.8 Utilities

A backup generator was installed in 2017 to provide power to the terminal, AWOS, and

critical airfield facilities in the event of a power failure. Water is supplied to the terminal building via a two-inch PVC line from the north, and there is no water service nearby to meet fire protection needs. The nearest waterline of sufficient size to meet fire protection requirements is located along the south side of Mount Baker Road 800 feet south of the terminal building. Plans for landside improvements at the airport must provide for the fire protection needs of airport facilities and structures. Development of the area west of the runway will require water, waste water, electric, and communications utilities. The availability of existing utilities west of the runway is unknown.

3.3.9 Security and Fencing

Most fencing around the airport is in place to prevent wildlife intrusion to the airfield. Deer guards on Schoen Lane at Mt. Baker Road and on Cessna Road at North Beach Road allow vehicle access while discouraging wildlife. The wildlife fence in the future RSA for Runway 16 will need to be relocated.

3.3.10 Fuel Storage Facilities

ORS has an underground 10,000-gallon 100LL fuel storage facility. The facility is meeting the current fuel needs, but has not been upgraded to a new above ground style system, which is safer for the environment. It is more difficult to quickly detect leaks with an underground storage system. When the fuel storage facility meets its useful life, it should be replaced with an above ground tank. ORS should consider adding jet-A fuel as air taxi aircraft begin to remain overnight.

3.4 SUMMARY

This chapter has outlined the facilities required to meet the forecasted demand over the 20-year planning horizon. **Tables 3-5 to 3-7** summarize the corrective actions to meet design standards, existing and forecasted capacity and needed services. These needs and corrective actions will be addressed in Chapter 4 Alternatives.

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Table 3-5: Airfield design standard deficiencies

Design Standard Not Met	Corrective Action
Runway	
Runway Width	Widen Runway by 15 feet
Runway Shoulder Width	Construct 10-foot shoulders during Rwy widening
Runway Safety Area Width	Increase RSA width by 30 feet
Runway Safety Area Length Beyond RW End	Increase RSA length by 60 feet on each end of Rwy
Runway Object Free Area Width	Increase ROFA width by 250 feet
Runway Object Free Area Length Beyond RW End	Increase ROFA length by 60 feet on each end of Rwy
Runway-to-Parallel Taxiway Separation Distance	Increase separation distance by 90 feet
Runway-to-Aircraft Parking Area Separation Distance	Increase separation distance by 56 feet
Runway Protection Zone for Runway 34	Eliminate conflict between RPZ and Mt. Baker Rd.
Parallel Taxiway (A)	
Taxiway Safety Area	Increase TSA width by 30 feet
Taxiway Object Free Area	Increase TOFA width by 42 feet
Taxiway A1	
Taxiway Safety Area	Increase TSA width by 30 feet
Taxiway Object Free Area	Increase TOFA width by 42 feet
Taxiway A2	
Taxiway Safety Area	Increase TSA width by 30 feet
Taxiway Object Free Area	Increase TOFA width by 42 feet
Taxiway A3	
Taxiway Safety Area	Increase TSA width by 30 feet
Taxiway Object Free Area	Increase TOFA width by 42 feet
Taxiway A4	
Taxiway Safety Area	Increase TSA width by 30 feet
Taxiway Object Free Area	Increase TOFA width by 42 feet

Table 3-6: Airport capacity deficiencies

Capacity Issue	Corrective Action
Existing hangars and tie-downs	Conduct hangar siting and apron capacity study, and prepare layout
Cargo facilities	Construct single cargo facility for UPS and FedEx package processing
Auto parking	Expand transient auto parking
Terminal building	Construct new terminal
Airport equipment storage	Construct equipment storage facility

Table 3-7: Airport service deficiencies

Service Issue	Corrective Action
Lack of deice facility	Construct large drive thru hangar with infrared heating
Jet-A fuel	Consider installation of Jet-A fuel tank