CHAPTER FOUR:
FACILITY REQUIREMENTS

NEWPORT MUNICIPAL AIRPORT

AIRPORT MASTER PLAN UPDATE

FINAL REPORT – FEBRUARY 2018

WHPacific

INTRODUCTION

As discussed in Chapter two, airfield facilities are those related to the arrival, departure, and ground movement of aircraft. In Chapter four, the existing airfield facilities are evaluated to identify their functionality, condition, compliance with design standards, and capacity to accommodate future demand as projected in Chapter Three, *Aeronautical Activity Forecasts*. The analysis serves to identify facilities needed to meet existing demand as well as evaluate the adequacy of existing facilities in meeting future demand. Where differences between existing and future requisite infrastructure are noted, the *Facility Requirements* review identifies when those additional facilities may be required. Once any requirements have been established, alternatives for providing future facilities will be developed with input from the Planning Advisory Committee (PAC), Oregon Department of Aviation (ODA), and Federal Aviation Administration (FAA). The *Alternatives Analysis* will be documented in Chapter Five.

Facility needs will not be limited to facilities and services potentially funded or provided by the City, State, or FAA. The planning process will also anticipate facilities and services that could be provided by private entities. Actual facilities development will be demand-driven as use may accelerate beyond or lag behind forecasts at various times during the 20-year planning term. All requirements identified in this chapter will comply with existing FAA standards and recommendations. Any existing deviations from current design requirements will be documented and analyzed.

Mirroring the flow of the *Inventory* chapter, the following analysis focuses on four main categories of airport requirements: Airfield, Landside, Support Facilities, and Land Use Planning and Zoning. Within each of those categories are subsections that address specific items pertinent to the Airport. To begin with, industry-standard airport planning and development criteria are presented that will be applied to the analysis of existing airport facilities.

AIRPORT PLANNING AND DEVELOPMENT CRITERIA

Development and use of industry standard planning criteria ensures that recommended improvements and proposed developments align with a comprehensive view of air safety. The goals and objectives of the national, state, regional, and local air transportation systems, in addition to appropriate aviation industry segments and the airport sponsor's vision, combine to guide the development of relevant measures. Sources for airport planning criteria include:

- FAA – Design guidelines found in Advisory Circular (AC) 150/5300-13A, *Airport Design*, provide the planning criteria with respect to current and future critical or design aircraft for the runways, taxiways, and apron areas. Nearly all applicable criteria shown in this analysis are established by the FAA with additional general input from the sources cited below.
- Oregon Aviation Plan (OAP) – The OAP provides a distribution of airports by classification. Developed by the Oregon Department of Aviation (ODA), the report also provides a set of performance objectives based on these classifications. Included in the OAP is a list of recommendations and direction on how to meet the state's long-term commercial and general aviation (GA) needs.

- Transportation Security Administration (TSA) – Guidelines provided by the TSA are tailored to an airport's size and risk level. Although TSA does not regulate GA airports, such as the Newport Municipal Airport, it does provide guidance for security at GA airports.
- Business Aviation Industry – The National Business Aviation Association (NBAA) represents the industry and provides recommendations for airport facilities and services to accommodate business aviation needs.
- Community members, Airport Users, Planning Advisory Committee (PAC) – Stakeholders, via surveys and meeting participation, provide input specific to the Airport. The local airport community is an important source since its operational issues, community relationships, and future vision for the airport help shape the list of future facility needs. Users of the Airport are the most accurate source to understand safety and operation concerns that affect the flying public. This specifically includes the report from the City of Newport Regional Airport Review Task Force, which provided recommendations for various airport issues, some of which can be addressed in the master plan.

Federal Airport Design Criteria

The FAA specifies design standards by Airport Reference Code (ARC), Runway Design Code (RDC), and instrument approach visibility minimums. As discussed in the previous chapter, the ARC is a coding system used to relate airport design criteria to the operational (Aircraft Approach Category – AAC) and the physical characteristics (Airplane Design Group – ADG) of the airplanes intended to operate at an airport. Individual runways are designated by RDC, using the same coding system described for the ARC, to allow for greater planning flexibility for airports with more than one runway. The ARC is the most demanding RDC at a given airport.

The discussion In Chapter 3 showed the RDC for Runway 16-34 as currently B-II, which represents an aircraft grouping similar to the Cessna Citation. The aviation forecast indicates Runway 16-34 RDC will need to upgrade to C-I during the 20-year planning period covered in the master plan. An RDC of C-I represents a grouping of aircraft similar to the Gates Learjet 35. Since each RDC has its own ARC, the analysis in this chapter will consider both ARC designations and their impacts to the Airport's facility needs. Therefore, the resultant combined ARC for the Airport will be C-II to ensure both B-II and C-I aircraft are accommodated in the facility requirements.

In addition to the Airport Reference Code and Runway Design Code, airport design criteria factors in the type of all-weather landing aids that are in place or planned to be in place for each runway. In general terms, the shorter the distance pilots need to see ahead while approaching the airport, the higher are the standards for object separation and obstacle clearance. The separation and obstacle clearance values are reported as "visibility minimums" in fractions of miles or as "Runway Visual Range (RVR)" in hundreds of feet. For determining airport design criteria, instrument approach visibility minimums are divided into three categories:

- Visual and not lower than one-mile
- Not lower than ¾-mile
- Lower than ¾-mile

Newport Municipal Airport currently has one precision instrument approach to Runway 16, and nonprecision approaches to all other runways. The Runway 16 instrument landing system (ILS) has visibility minimums that are lower than one mile but not lower than ¾ mile.

In the 2004 Master Plan Update, forecasts indicated an ARC of B-III with lower visibility minimums. As part of this master plan, the visibility minimums for RW 16-34 were assessed for the current B-II ARC and the future C-II ARC to see if the previous recommendation to Lower then ¾-mile minimums could be achieved. Existing roads and neighborhoods at both the north (SE 62nd ST and part of Highway 101) and south (SE 98th CT) ends of the airport create challenges to lower visibility minimums. Since runway protection zones exist to maintain safety areas on the ground, the FAA does not currently allow public roads or houses in a RPZ. The costs to relocate each road, and any houses adjacent to those roads, would be prohibitively expensive. City staff assessed this analysis. **The recommendation is to maintain the visibility minimums depicted in this master plan.**

AIRFIELD REQUIREMENTS

Each airfield facility was reviewed applying the criteria identified in the previously. Analyses were conducted to identify requirements for the airfield facilities listed below and detailed in subsequent sections.

- Airfield Capacity
- Airfield Design Standards
    - Runway Orientation, Length, Width, and Pavement Strength
    - Taxiways
    - Airport Visual Aids
    - Airport Lighting
    - Radio Navigational Aids & Instrument Approach Procedures
    - Other Airfield Recommendations

Airfield Capacity

An airfield capacity analysis measures the extents of the airfield configuration by determining its Annual Service Volume (ASV). This measure is an estimate of an Airport's maximum annual capacity based on factors such as aircraft mix and weather conditions, among others. FAA Advisory Circular (AC) 150/5060-5, *Airport Capacity and Delay*, provides guidance on determining an airport's ASV. The annual capacity of two intersecting runways, such as at the Airport, is approximately 215,000 operations (takeoffs, landings, and training operations). The forecast projects annual operations of 31,350 by 2035, which is well below the maximum capacity of the existing airfield system.

In addition to ASV, *Airport Capacity and Delay* also provides guidance on determining peak hour capacity. For the Airport, the peak hourly capacity during visual flight rules (VFR) conditions is 77 operations, which is well above the anticipated peak hour activity of 23 by 2035. Therefore, the Airport is expected to have sufficient hourly capacity throughout the 20-year planning period. **Based on this analysis, projects that are specifically intended to increase airfield capacity are not needed.**

Airfield Design Standards

FAA AC 150/5300-13A (Change 1), *Airport Design,* sets forth the FAA's recommended standards for airport design, which are primarily safety-driven. Design standards are based on an Airport's design aircraft and specific to that airport. As discussed above, the current design aircraft for Runway 16-34 fits within the Aircraft Approach Category and Airplane Design Group classification B-II. The future design aircraft for Runway 16-34 will fall into the design category of Airport Reference Code C-I. For the entire airfield, the ARC of C-II will be used to ensure the existing B-II aircraft continue to be served with the same clearance and separation standards.

For Runway 16-34, the RDC would have a Runway Visual Range of 4,000 feet to reflect the Instrument Landing System approach with visibility minimums greater than ¾ statute mile. The crosswind Runway 2-20 currently has an instrument approach with visibility minimums greater than 1 statute mile, which, for the purposes of this analysis, is classified with the same requirements as a runway without instrument landing aids. **Table 4A** provides a summary of the classifications used to identify the standards that apply to an airport.

Table 4A. Runway Design Code Classifications

Aircraft Approach Category (AAC)		
AAC	Approach Speed (knots)	
A	less than 91	
B	91 to 120	
C	121 to 140	
D	140 to 165	
E	greater than 166	
Airplane Design Group (ADG)		
ADG	Tail Height (ft)	Wingspan (ft)
I	<20	<49
II	20 - <30	49 - <79
III	30 - <45	79 - <118
IV	45 - <60	118 - <171
V	60 - <66	171 - <214
VI	66 - <80	214 - <262
Approach Visibility Minimums		
RVR (ft)	Flight Visibility Category (statute mile)	
4000	lower than 1 mile but not lower than ¾ mile	
2400	lower than ¾ mile but not lower than ½ mile	
1600	lower than ½ mile but not lower than ¼ mile	
1200	lower than ¼ mile	

Source: FAA AC 150/5300-13A (Change 1)

The following airport design elements are associated with all airfields subject to FAA criteria like ONP. **Exhibit 4A** gives a visual representation of several design elements described below. The size or separation

from objects required for each design element varies according to the Runway Design Code. **Exhibit 4B** depicts the Part 77 imaginary surfaces defined here. **Table 4B** compares these requirements for the B-II and C-II classifications.

Runway Safety Area (RSA)

The RSA is a defined surface surrounding the runway that is specifically prepared and suitable for reducing the risk of damage to airplanes in the event of an airplane undershoot, overshoot, or an excursion from the runway. **Exhibit 4A** shows the RSA at the Airport.

Object Free Area (OFA)

The OFA is an area on the ground centered on the runway or taxiway centerline that is provided to enhance the safety of aircraft operations by ensuring a clear space around design aircraft wing span. No above ground objects are allowed except for those needed for air navigation or aircraft ground maneuvering purposes (all such equipment is constructed on frangible bases for safety purposes). **Exhibit 4A** shows the OFA at the Airport.

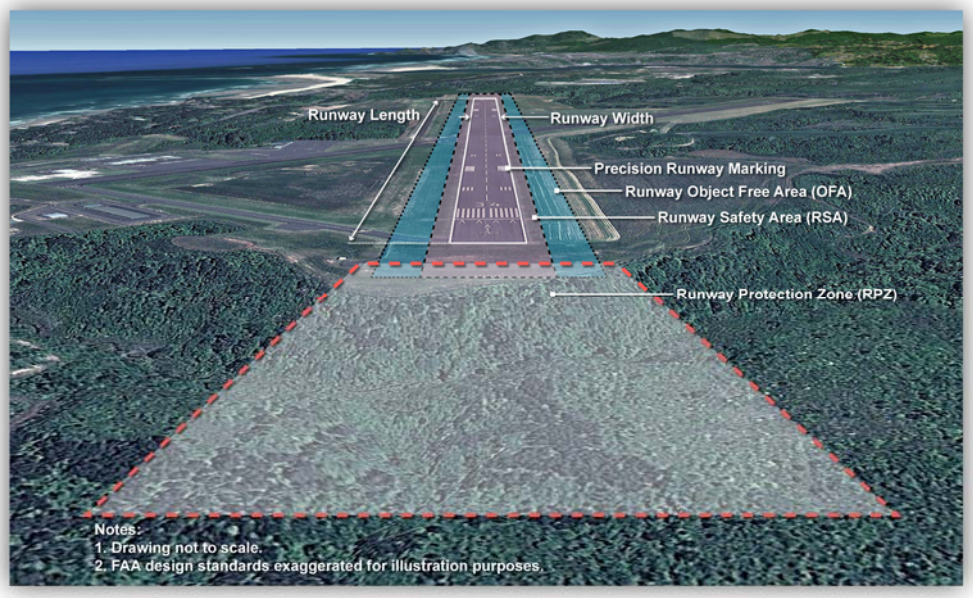
Obstacle Free Zone (OFZ)

The OFZ is a volume of airspace below 150 feet of the established airport elevation that is required to be clear of objects, except for frangible items required for the navigation of aircraft. It is centered along the runway and extended runway centerline and protects the transition of aircraft to and from the runway.

Runway Protection Zone (RPZ)

The RPZ is an area off each runway end whose purpose is to enhance the protection of people and property on the ground. The RPZ is trapezoidal in shape and centered about the extended runway centerline. The dimensions of an RPZ are a function of the Runway Design Code. The FAA recommends that RPZs be clear of all residences, places of public assembly (churches, schools, hospitals, etc.), roads, and that airports own the land within the RPZs. **Exhibit 4A** shows the RPZ at the Airport.

Exhibit 4A. Selected Airfield Design Standards



Source: WHPacific, Inc.

Surface Gradient

The maximum allowable longitudinal grade on existing runways varies, depending on the AAC. For Aircraft Approach Category "B" runways, the maximum grade is 2.0%, for AAC "C" runways, the maximum grade is 1.5% with the first and last quarter of the runway length being no more than 0.8%.

Building Restriction Lines (BRL)

A BRL is a line marking the area on the airport where buildings of a certain height are restricted from being built to ensure that aircraft using runways and taxiways can operate safely and without restriction. The BRL should be set beyond the RPZs, OFZs, OFAs, runway visibility zone, and NAVAID critical areas because buildings are not allowed in these areas. The location of the BRL is dependent upon the allowable structure height. A building height of 35 feet will be used in this master plan update.

Runway Visibility Zone

The runway visibility zone is a trapezoid shaped area which is centered on the crossing point of intersecting runways and extends down each of the runways a specified distance. The purpose of the runway visibility zone is to remove any terrain, vegetation, or structures to ensure clear visibility between crossing runways in order to avoid a collision. Pilots can see aircraft that might be landing or taking off on the adjacent runway.

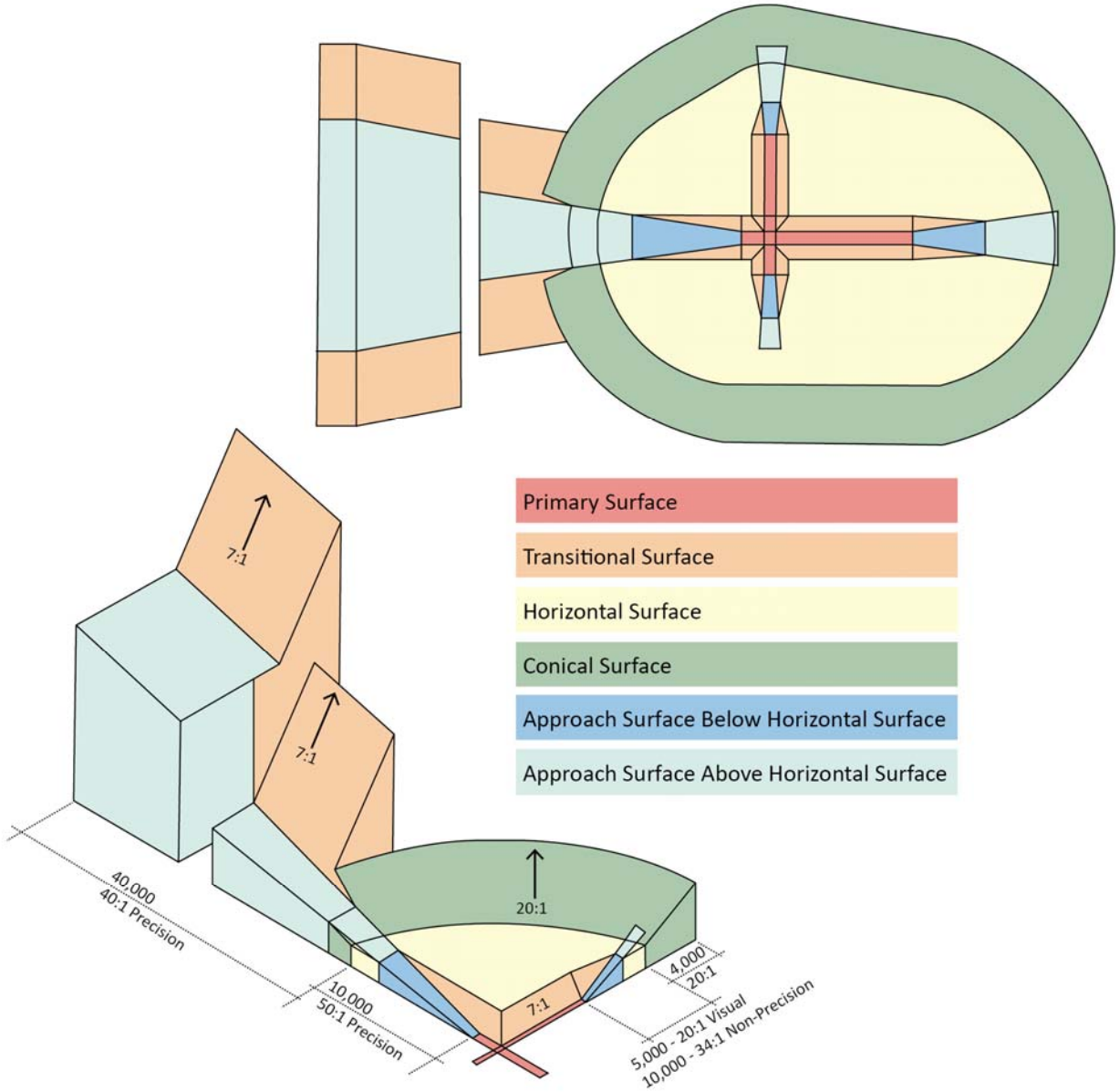
Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Airspace

While not an FAA design standard, Title 14, Code of Federal Regulation (CFR) Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace (Part 77), defines and established the standard for determining obstructions that affect airspace in the vicinity of an airport. Part 77 is published separately and is primarily concerned with the identification of objects on and near airports that could be hazards to air navigation. Airports and/or their sponsors are responsible for identifying Part 77 imaginary surfaces and protecting them through land ownership or other means of land use controls (such as zoning, easements, etc.).

Prior to any construction on the airport and in the area immediately around an airport, the responsible party must file a Form 7460 with the FAA, which describes the project and its proximity to the airport. The FAA will then conduct an airspace evaluation to determine the possible impact on airspace for the airport. The FAA will evaluate the impact of the construction on a set of imaginary surfaces called the Part 77 Surfaces. However, there is no specific authorization in any statute that permits the FAA to limit structure heights or determine which structures should be lighted or marked that control with the local building department. The FAA, through grant assurances, requires the local government to exercise this authority.

The imaginary surfaces are geometric shapes that surround the runways of an airport and vary in size and slope depending on the category of the runway. The five imaginary surfaces are the Primary, Approach, Horizontal, Conical, and Transitional. Any object that penetrates these surfaces is considered an obstruction and may affect navigable airspace. Unless these obstructions undergo additional aeronautical study to conclude they are not a hazard, obstructions are presumed to be a hazard. Hazards to air navigation may include terrain, trees, permanent or temporary construction equipment, or permanent or temporary manmade structures. **Exhibit 4B** highlights these fives surfaces, with text following for a more detailed definition.

Exhibit 4B. FAR Part 77 Imaginary Surfaces



Source: WHPacific, Inc.

Primary Surface

The primary surface is longitudinally centered on a runway that extends 200 feet beyond each end of the runway. The width of a primary surface ranges depending on the existing or planned approach and runway type.

Horizontal Surface

The horizontal surface is a horizontal plane located 150 feet above the established airport elevation, covering an area from the transitional surface to the conical surface. The perimeter is constructed by swinging arcs from the center end of the primary surface and connecting the adjacent arcs by lines tangent

to those areas. For all approaches to runways supporting large aircraft (those with maximum takeoff weights of 12,500 pounds or more), the radius of each arc used to construct the horizontal surface is 10,000 feet.

Conical Surface

The conical surface extends upward and outward from the periphery of the horizontal surface at a slope of one foot for every 20 feet (20:1) for a horizontal distance of 4,000 feet.

Transitional Surface

Transitional surfaces extend outward and upward at right angles to the runway centerline, with the runway centerline extended at a slope of seven feet horizontally for each foot vertically (7:1) from the sides of the primary and approach surfaces. The transitional surfaces extend to where they intercept the horizontal surface at a height of 150 feet above the runway elevation.

Approach Surface

Longitudinally centered on the extended runway centerline, the approach surface extends outward and upward from the end of the primary surface. An approach surface is applied to each end of each runway based on the type of approach. FAA surfaces are 20:1 for visual approaches, 34:1 for non-precision approaches, and 50:11 for precision approaches.

The FAR Part 77 surfaces will be illustrated as part of the Airport Layout Plan drawing set. Existing Part 77 surfaces will be evaluated during the development of the ALP and any penetrations will be noted and recommended for removal or marking, as appropriate.

Runway and Taxiway Design Standards

The FAA provides recommended dimensions for runway width, taxiway width, taxiway safety areas, and others based upon the design aircraft. The following tables compare the Airport's existing dimensions to the recommended design standards for each runway. The criteria shown in Tables 4B and 4C are graphically depicted on the Airport Layout Plan (ALP) and associated drawings. An updated ALP is an element of this study and included in the final narrative. The official ALP is kept on file with the City of Newport and is subject to minor revision more frequently than master plans.

Table 4B shows design standards for Runway 16-34. In addition to showing existing dimensions, both RDC B-II and C-I are included, per recommendation from Chapter 3, *Forecasts*. Runway 16-34 currently meets all criteria for B-II. Runway 16-34 would not meet criteria for RDC C-I or C-II in the following standards: runway centerline to parallel taxiway centerline, runway safety area width and length, runway object free area length, blast pad width, and runway hold line. The Runway 34 RPZ does not meet either standards, as the existing dimensions meet visual and not lower than 1 statute mile visibility minimums.

[1]Precision instrument approach slope in 50:1 for the inner 10,000 feet and 40:1 for an additional 40,000 feet.

Table 4B. Runway 16-34 FAA Airfield Design Standards (RDCs B-II and C-I or C-II)

Design Standard	Existing Dimension	Approach Visibility Minimums Not Lower than ¾ mile	
		B-II	C-I or C-II
Runway Width	100'	75'	100'
Runway Centerline to Parallel Taxiway Centerline	290'	240'	300' *
RSA Width	300'	150'	500' *
Length beyond runway end	300'	300'	1,000' *
ROFA Width	800'	500'	800'
Length beyond runway end	300'	300'	1,000' *
Precision OFZ Width	N/A	N/A	N/A
Length	N/A	N/A	N/A
RPZ Inner Width x Outer Width x Length	Rwy 16 - 1,000' x 1,510' x 1,700' Rwy 34 - 500' x 700' x 1,000' *	1,000' x 1,510' x 1,700'	1,000' x 1,510' x 1,700'
Runway Blast Pads Width	Rwy 16 - N/A Rwy 34 - 100'	95'	120' *
Length	Rwy 16 - N/A * Rwy 34 - 300'	150'	100'
Runway Shoulder Width	10'	10'	10'
Runway Centerline to Aircraft Parking	600'	250'	400'
Runway Holdline	240'	200'	250' *
Taxiway Safety Area Width	79'	79'	79'
Taxiway Object Free Area Width	131'	131'	131'

**Does not meet design standard.*

Source: FAA AC 150/5300-13A (Change 1), Table 3-5, Runway Design Standards Matrix

Table 4C lists the existing dimensions for Runway 2-20 in relation to design standards. The runway currently meets all standards for "visual and not lower than 1 statute mile visibility minimums". If an instrument approach with visibility minimums "not lower than ¾ statute mile" were ever implemented, the RPZs would need upgraded to a larger area.

Table 4C. Runway 2-20 FAA Airfield Design Standards (RDC B-II)

Design Standard	Existing Dimension	Approach Visibility Minimums	
		Visual and Not Lower than 1 mile	**Not Lower than ¾ mile**
Runway Width	75'	75'	75'
Runway Centerline to Parallel Taxiway Centerline	N/A	240'	240'
RSA Width	150'	150'	150'
Length beyond runway end	300'	300'	300'
ROFA Width	500'	500'	500'
Length beyond runway end	300'	300'	300'
Precision OFZ Width	N/A	N/A	N/A
Length	N/A	N/A	N/A
RPZ Inner Width x Outer Width x Length	500' x 700' x 1,000'	500' x 700' x 1,000'	1,000' x 1,510' x 1,700' *
Runway Blast Pads Width	95'	95'	95'
Length	150'	150'	150'
Runway Shoulder Width	10'	10'	10'
Runway Centerline to Aircraft Parking	N/A	250'	250'
Runway Holdline	200'	200'	200'
Taxiway Safety Area Width	79'	79'	79'
Taxiway Object Free Area Width	131'	131'	131'

**Does not meet design standard.*

Source: FAA AC 150/5300-13A (Change 1), Table 3-5, Runway Design Standards Matrix

Number and Orientation of Runways

The number of runways needed for an airport depends upon the level of aviation demand (number of aircraft taking off and landing) and wind coverage (how well the runways line up with the prevailing winds). The airfield capacity analysis concluded in an earlier section of this chapter concludes that the primary runway, Runway 16-34, provides adequate capacity given the forecast number of take offs and landings throughout the planning period. However, the investment in Runway 2-20 is fully justified in order to provide adequate crosswind coverage for the aircraft operating at Newport Municipal Airport.

For the operational safety and efficiency of an airport, the primary runway should be oriented as closely as possible to the direction of the prevailing wind. This improves safety by reducing the amount of crosswind (wind blowing against the side of an aircraft) a pilot experiences during take-off and landing. Wind coverage is calculated as the percent of the time crosswind components are below an acceptable velocity. The desirable minimum wind coverage for an airport is 95%, based on maximum crosswind speeds that are defined for different sizes of aircraft (lower for smaller aircraft). This would mean that

95% of the time the wind aligns favorably with one or more of the runways and pilots would experience unfavorable crosswinds only 5% of the time. Ten years of wind data at the Airport were examined. The results of this analysis are shown in **Table 4D**.

For Runway Design Code B-II, the acceptable crosswind component is 13 knots. Neither Runway 16-34 nor Runway 2-20 by itself is able to reach 95% coverage. Combined, both runways exceed the desired wind coverage for all crosswind speeds, which supports the need for two runways to achieve the desired wind coverage. Once the RDC for Runway 16-34 is changed to C-II, the acceptable crosswind increases to 16 knots. In that situation, Runway 2-20, the crosswind runway, remains fully justified for FAA funding based on current classification and should be maintained as a vital component of the airfield for all users.

Table 4D. All Weather Wind Analysis

Crosswind Component	Runway 16-34	Runway 2-20	Both Runways
10.5 knots	90.27%	87.49%	95.86%
13 knots	93.87%	93.56%	97.99%
16 knots	97.23%	98.10%	99.20%
20 knots	89.92%	99.57%	99.79%

Source: NOAA, January 1, 2004 through December 31, 2013

Runway Length

The runway length required for an aircraft is different for landing than it is for takeoff. The requisite distances depend on several factors such as airport elevation, temperature, runway gradient, airplane operating weights, runway surface condition (*i.e.*, wet or dry), and others. FAA Advisory Circular (AC) 150/5325-4B, *Runway Length Requirements for Airport Design* provides guidance on recommended runway length at an Airport. AC 150/5325-4B, uses site-specific data which reflects runway length recommendation by grouping general aviation aircraft into several categories, reflecting percentage of fleet within each category.

Although airport elevation, air temperature, runway gradient and surface conditions all factor into runway length, the most significant factor is aircraft load because as weight increases the requisite runway length must also be increased. Advisory Circular 150/5325-4B classifies aircraft based on weight. For "small" airplanes (those with maximum takeoff weights of 12,500 pounds or less), the classifications are further divided into two additional categories: 1) small airplanes with fewer than 10 passenger seats, and 2) small airplanes with 10 or more passenger seats. Recommended runway lengths for airplanes between 12,500 and 60,000 pounds maximum takeoff weight are also listed. **Table 4E** summarizes the FAA's generalized runway length recommendations for the Airport.

The FAA methodology for determining runway length requirements yields multiple values depending on the operational requirements of an airport. In this instance, the Airport's role as a potential recovery station must be weighed in shaping the final recommendation. Because the airfield is situated well outside of the tsunami inundation zone, the Airport is considered likely to provide a critical role in the recovery effort following a Cascadia earthquake event. Additional investment in the survivability of the facility is likely to occur due to recommendations provided by the Regional Airport Review Task Force. Location is another significant factor in this calculation. Being fairly isolated from other airports capable of

accommodating occasional use by large aircraft, the longest length that can be feasibly provided is vital. Both constraints will be included in the resulting determination.

Table 4E provides values for a number of scenarios applying to the recommended length for Runway 16-34, the primary runway. In this case the critical aircraft, both existing and future, weigh over 12,500 but less than 60,000 pounds. Those values are shown in the bottom four rows. Of those scenarios, the percentage of large airplanes refers to specific makes and models that as a group will require a certain runway length. The useful load refers to the amount of fuel and payload that the group of airplanes would be typically able to carry on its mission.

Table 4E. Runway Length Requirements

Airport and Runway Data	
Airport elevation	160 feet
Mean daily maximum temperature of the hottest month	62° F
Maximum difference in runway centerline elevation	Runway 16-34 7.8’
Wet and slippery runways	
Runway Length Recommended for Airport Design	
	Runway 16-34
Small airplanes with less than 10 passenger seats	
To accommodate 75% of these small airplanes	-
To accommodate 95% of these small airplanes	3,795
To accommodate 100% of these small airplanes	3,220
Small airplanes with 10 or more passenger seats	4,255
Large airplanes of 60,000 pounds or less	
75% of these large airplanes at 60% useful load	5,232
75% of these large airplanes at 90% useful load	6,382
100% of these large airplanes at 60% useful load	5,290
100% of these large airplanes at 90% useful load	7,590

Source: FAA Advisory Circular AC 150/5325-4B, Runway Length Requirements for Airport Design.

While fairly isolated from other coastal airports with similar capabilities, aircraft operating from Newport do not need to fly long distances, especially in a disaster recovery scenario. However, larger and heavier aircraft will likely be needed to provide critical supplies and equipment during the recovery effort. With that in mind, the recommended runway length is the longer of either the existing length or 100 percent of the large airplanes at 60 percent useful load. Runway 16-34 is currently 5,398 feet long, which is approximately 108 feet longer than the FAA recommendation. **Therefore, as alternatives methods are identified for meeting the standards of a “Category C” runway, it is vital to require that the available runway lengths in the alternatives be between 5,290 and the existing 5,398 feet.**

Runway Width

The current width for Runway 16-34 is 100 feet, which exceeds the current B-II standard of 75 feet but meets the forecasted C-II standard. The primary runway was rebuilt in 2014. Results of the runway study conducted as part of this plan recommend the width remain at 100 feet for the duration of this planning

period. This will take advantage of the useful life of the rebuild and anticipate the possible change in critical aircraft to a "C" category, which would require a 100 foot wide runway. Runway 2-20 is currently 75 feet wide and the standard is 75 feet. **No changes to runway width are required during the planning period for either runway.**

Runway and Taxiway Pavement Strength

The current pavement strength for Runway 16-34 is rated at 75,000 pounds for Single Wheel Gear (SWG) aircraft and 120,000 pounds for Dual Wheel Gear (DWG). The pavement rating for Runway 2-20 is 33,000 pounds SWG and 50,000 pounds DWG. **The pavement strength for both runways is adequate to accommodate the forecasted aircraft fleet mix.**

Five taxiways, A, B, C, D and E provide access to and from the runway system. Strength ratings for the taxiways are not known; however, Taxiway B was rebuilt during the 16-34 rehabilitation project and designed for heavy aircraft as it is the only taxiway used for heavy aircraft departures on Runway 16 (aircraft back-taxi on the runway rather than use Taxiway A and use Taxiway B as a turnaround).

It is recommended maintenance of these pavements should be considered in the capital improvement plan and continued maintenance to sustain pavement strength should be provided throughout the planning period.

Taxiways

Taxiways are constructed to facilitate the safe aircraft movements to and from the runway system. While some taxiways are necessary to provide access between the aprons and the runways, others are necessary to provide safe and efficient use of the airfield as activity increases at an airport. Taxiway design is based on a newly established Taxiway Design Group (TDG), which is based on the overall Main Gear Width (MGW) and the Cockpit to Main Gear (CMG) distance. There are five taxiways at the Airport as detailed in Chapter 2.

Taxiway A, which serves Runway 16, has a taxiway centerline to runway centerline separation of 290 feet. This centerline separation falls 10 feet short of the required 300 foot RDC B-II standard or the future RDC C-II standard.

It is recommended that Taxiway A be relocated 10 feet away from Runway 16-34 to meet the RDC B-II and C-II standard.

Currently, the convergence of Taxiway D, Taxiway A, Taxiway E, and Runway 2 creates nonstandard geometry that can be confusing to pilots when taxiing on the airfield. Additionally, the inline portion of Taxiway E leading in to the Runway 2 is non-standard.

It is recommended the non-standard portions of Taxiway A, D, E, and Runway 2 threshold where the intersecting taxiways create an inefficient operating environment for aircraft and a unique geometry not supported by FAA design requirements be corrected.

Airport Visual Aids

Airports commonly include a variety of visual aids, such as pavement marking and signage, to assist pilots using the airport.

Pavement Markings

Runway markings are designed according to the type of instrument approach available on the runway. FAA Advisory Circular 150/5340-1J, *Standards for Airport Markings*, provides the guidance for airport markings. Precision markings are currently in place on Runway 16-34 and are in good condition. Non-precision markings are currently in place on runway 2-20 and are in good condition.

There are hold marking on all taxiways adjoining the runways. The purpose of hold markings is to ensure that aircraft waiting for arriving or departing aircraft do not encroach into the runway safety area (RSA). In addition to hold markings, all taxiways are clearly marked with centerlines. Existing hold and taxiway marking at the Airport are satisfactory. **It is recommended that the existing taxiway markings be maintained throughout the planning period.**

Airfield Signage

The airfield is well marked with guidance and location signs that meet FAA standards. Airfield signage is adequate for the planning period. **It is recommended that the existing system of airfield guidance signage be maintained throughout the planning period.**

Airport Lighting

Beacon

A rotating beacon is on the west side of Runway 16. It is in good operating condition and is adequate for the planning period. **It is recommended that the rotating beacon be maintained throughout the planning period.**

Visual Approach Aids

Both ends of Runway 16-34 have a four-light Precision Approach Path Indicator (PAPI). The PAPI for Runway 34 is out of service until a flight check is conducted to recommission the PAPI. The PAPI width has been adjusted with baffles to avoid extraneous trees on the west and a communications tower on the east. The FAA will continue to make further adjusts to the PAPI until crews are satisfied with the results. **It is recommended the PAPI be returned to operation as soon as practicable.**

Precision Instrument Approach Lights

Runway 16 has a Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR). These lights are associated with the instrument landing system for that runway. The lighting system is a required part of the instrument landing system and is adequate for the planning period. Portions of the lighting system supports are on private property and the appropriate easements should be secured. **It is recommended the precision instrument approach lighting system be maintained throughout the planning period.**

Runway Lighting

Runway 16-34 is equipped with High Intensity Runway Edge Lighting (HIRL) and Runway 2-20 is equipped with medium intensity runway edge lighting (MIRL). Both can be pilot controlled via radio. Runway 34 has Runway End Identifier Lights (REIL). REILs are flashing white lights that identify the end of the runway. **It is recommended that the runway lighting systems be maintained throughout the planning period and that REILs be added to Runways 2 and 20.**

Radio Navigational Aids and Instrument Approach Procedures

Electronic and visual approach aids provide guidance to arriving aircraft and enhance the safety and capacity of the airfield. Such equipment is vital to the success of the airport and provide additional safety to users of the air transportation system. Instrument approaches are categorized as either precision or non-precision. Precision instrument approach aids provide an exact alignment and descent path for an aircraft on final approach to a runway while non-precision instrument approach aids provide only runway alignment information. Most existing precision instrument approaches in the United States are instrument landing systems (ILS) utilizing glide slope and localizer electric equipment installed adjacent to the runway.

With the advent of GPS, stand-alone instrument-assisted approaches will eventually be established that provide vertical guidance down to visibility minimums currently associated with Category I precision instrument landing systems. As a result, airport design standards that formerly were associated with a type of instrument procedure (precision/non-precision) are now revised to relate instead to the designated or planned approach visibility minimums. The FAA is continuing to expand development and use of GPS for use in aircraft navigation and instrument approach procedures via Area Navigation (RNAV) and the Wide Area Augmentation System (WAAS). WAAS utilizes a network of ground-based antennas to send correcting signals to the GPS satellite constellation, allowing for ILS-like accuracy. **Alternatives should address the potential for additional and/or improved instrument approaches to keep up with quickly advancing technologies.**

Other Airfield Recommendations

Traffic Pattern

Runways 2 and 34 follow a standard left-handed pattern. Runway 20 and 16 operate on nonstandard right-handed patterns to avoid overflight of the area southeast of the Airport. The existing traffic pattern is adequate. **It is recommended the current traffic pattern remain in place due to houses southeast of runways 20 and 16.**

Wind Indicators / Segmented Circle

A segmented circle and lighted windsock are located mid-field. There is a supplemental windsock at Runway 34. The location of this windsock is to be verified due to conformance questions. **It is recommended this system should be maintained, with supplemental wind indicators placed near the runway ends.**

Weather Reporting

Real-time weather reporting at the Airport is supplied via Automated Weather Observing System (AWOS). The AWOS has been updated with a new ceilometer. However, parts for the older model of AWOS are becoming increasingly difficult to obtain. **Therefore, it is recommended that the Airport replace the AWOS with a modern equivalent, such as an AWOS III-P/T**.

LANDSIDE REQUIREMENTS

Landside facilities support airside operations, such as the facilities necessary for handling aircraft and passengers while on the ground. The landside facilities consist of hangars, apron, aircraft tiedown space, access roads, GA terminal facility, and other support facilities. The capabilities and capacities of the various landside components are examined in relation to the projected demand to help identify future landside facility needs.

Hangars

The utilization of hangars varies as a function of local climate, security, and owner preferences. The trend in GA aircraft is toward higher performance, higher value aircraft. This type of aircraft is typically stored inside a hangar as opposed to outside on a tiedown. In planning for hangar development, the number and type of aircraft to be based at the Airport is analyzed. Hangar development is typically based on actual demand and not solely on forecasts.

At the Airport, all of the 28 based aircraft are currently stored in hangars. It is assumed that this trend will continue and all future aircraft will also be stored in hangars. Hangar facilities at an airport typically consist of some combination of T-hangars and box hangars. T-hangars typically store one aircraft in one unit, while box hangars can store more than one aircraft in one large enclosed structure. In order to determine the number of T-hangars versus box hangars, the following assumptions were made:

- All multi-engine aircraft, turbojets, and helicopters will be stored in box hangars.
- Half of all future single engine aircraft will be stored in T-hangars and the other half in box hangars.
- For planning purposes, 1,200 square feet per aircraft is used for T-hangar development and 3,000 square feet will be used for box hangar development.

Applying these assumptions, one T-hangar row with a capacity for six airplanes (approximately 7,200 square feet) will be needed and eight additional conventional hangars (24,000 square feet) will be needed by 2035. **Table 4F** summarizes the hangar development needs for each milestone year.

For long-term planning purposes, possible hangar development area needs beyond the 20-year planning window, per Table 4F, should be considered in the development alternatives. **It is recommended that one additional T-hangar with six units and eight additional box hangars be built over the planning period.**

Table 4F. Landside Facility Needs

	2016-2020	2020-2025	2025-2035	Planning Period Total
Additional Aircraft to be stored in hangars				
Single Engine (Piston and Turbine)	2	2	2	6
Multi-engine (Piston)	0	0	0	0
Turboprop and Turbojet	1	1	3	5
Helicopters	1	0	2	3
Total				*14*
Hangar Positions				
T-hangar	2	1	3	6
Conventional	2	2	4	8
Total				*14*
Hangar Area Requirements (square ft)				
T-hangar Area	2,400	1,200	3,600	7,200
Conventional Hangar Area	6,000	6,000	12,000	24,000
Total Additional Area Needed	*8,400*	*7,200*	*15,600*	*31,200*
Tiedown Positions				
Based Aircraft Tiedowns	3	4	4	-
Transient Aircraft Tiedowns	22	25	31	-
Total Square Yards	12,080	13,940	16,940	-
Cargo Apron (square yards)	0	4,160	0	4,160
Cargo Facility (square ft)	0	3,750	0	3,750

Source: WHPacific, 2016
Note: Square footages for hangars are building area only and do not include areas needed for taxilanes between hangars.

Aprons and Aircraft Parking

Currently, there are 13 tiedown positions at the Airport. Due to the desire for aircraft owners to store their aircraft in hangars, it has been assumed that all future based aircraft will be stored in hangars. For planning purposes, it is assumed that at any given time, up to 10% of locally based aircraft may require temporary space on the parking apron due to some aircraft requiring both hangar storage and parking apron space.

The FAA has developed an approach for determining the number of tiedowns needed for itinerant aircraft operating at an airport. The following methodology was taken from *Airport Design*, Appendix 5, Change 10, and is based on peak operations calculations:

- Peak Day Operations (from the Forecast Chapter), multiplied by ratio of itinerant operations
- Divide by 2 (50% of operations are departures)
- Multiply by 50% (assumes 50% of the transient airplanes will be on the apron during the peak day)

Using this methodology, the Airport will need to have transient tiedown space for 31 aircraft by 2035, as shown is Table 4F. Combining based and transient tiedown needs, a total of 35 tiedown positions will be needed throughout the planning period. The FAA recommends using a ratio of 360 square yards per based aircraft tiedown, and 500 square yards per transient aircraft tiedown. By 2035, the total area needed for both based aircraft and transient aircraft tiedowns is 16,940 square yards. The current apron will not be adequate over the planning period. Some of the apron is also within the Runway Protection Zone and Part 77 Approach surface for Runway 20. **It is recommended to expand or redesign the current apron to meet the demand for tiedown spaces outside of the Runway 20 RPZ and Approach area by 2035 or relocate the Runway 20 threshold and RPZ.**

The Oregon Airport Plan (OAP) recommends Category III airports have designated cargo aprons. The Airport meets the recommended cargo apron area, approximately 8,320 square yards. **However, based on the air cargo forecast, it is recommended the Airport expand the current cargo apron over the planning period to accommodate a third cargo aircraft and construct a modestly-sized cargo facility.**

Airport Access and Parking

Airport access is adequate at this time. However, any development alternatives should consider impacts to surface transportation. **It is recommended that the Airport maintain current access throughout the planning period.**

Vehicle parking is located near the fixed base operator (FBO). Airport use has outgrown this area. Any future expansion should consider the need for more vehicle parking. **It is recommended that the Airport build additional vehicle parking during the planning period.**

Aviation Businesses and Services (Fixed Base Operator)

Airport services are currently offered by the City. User surveys and PAC members have indicated the need for additional services, such as flight training, aircraft charter service, and a full service FBO. There was also a desire for recreational activities such as skydiving, private airplane rides, and the occasional air show. Should an additional FBO be developed there would be need of a site that could provide for approximately 20 more vehicular parking spaces, hangar development, and aircraft ramp area. Total land requirements for a second FBO facility would be approximately one acre. Chapter 5, *Alternatives* will explore possible locations for these additions. **It is recommended that a location for a potential second FBO facility be located for possible future development during the planning period.**

General Aviation Terminal Facility

The City-owned and operated FBO is located within the GA Terminal. The terminal offers pilot amenities, meeting areas, and weather monitoring. The terminal is in good condition and will meet the Airport's needs over the planning period. Historically, the terminal facility has met the needs of Part 139 service with small charter flights and the historical nine-seat air service. **It is recommended the terminal be maintained throughout the duration of the planning period.**

US Coast Guard Air Station Expansion

The US Coast Guard Air Station currently occupies approximately 4 acres on the Airport. At the present time, the US Coast Guard has no plans to expand the Air Station in Newport. However, the US Coast Guard is a critical asset to the City of Newport and keeping land available for their future growth at the Airport should be considered. **It is recommended that an additional 1 acre be set aside adjacent to their existing facilities for potential future expansion.**

National Guard

The National Guard currently has facilities in the City of Newport. The City of Newport has discussed internally the potential to relocate National Guard facilities to Airport property. **It is recommended that the ideal property at the Airport be identified for this possibility.**

SUPPORT FACILITY REQUIREMENTS

Facilities that are not classified as airfield or landside are known as Support Facilities, and include emergency services, airport maintenance, airport fencing, utilities, storm drainage, and aviation fueling facilities.

Emergency Services and Security

There is currently a ARFF designed fire station located at the Airport. The station houses the airport's crash truck and a municipal pumper truck. Firefighting services are the responsibility of the City of Newport Fire and Rescue District. Based on FAA regulations and the airports Part 139 certification, the Airport is required to provide ARFF services. The current emergency services are adequate for the planning period. **It is recommended the Airport keep and maintain the current ARFF facilities and vehicles throughout the duration of the planning period.**

Airport Security

With the exception of three general aviation airports located within the Flight Restriction Zone around Washington DC, the Transportation Security Administration (TSA) does not regulate GA airports.

The Airport Characteristics Measurement Tool (ACMT), published in the TSA Information Publication (IP) A-001, is considered the standard security assessment tool available for GA airports. TSA states that the document aims to provide effective and reasonable security enhancements at GA facilities across the Nation to the extent the procedures and recommendations are consistent with the Airport's circumstances. The ACMT uses points to assess security risks for different airport characteristics. **Table 4G** summarizes the results of the assessment.

The ACMT separates GA airports into four categories: 0 to 14 points, 15 to 24 points, 25 to 44 points, and

greater than 45 points. Based on the assessment presented in Table 4G, the Airport currently falls into the 0 to 14 points category and will remain in this category based on future conditions.

Table 4G. GA Airport Security Assessment – City of Newport Municipal Airport

Security Characteristics	Existing Conditions	Future Conditions[2]
26 – 100 based aircraft	2	2
Based aircraft over 12,500 pounds	-	3
Runway 5,000 feet or greater	5	5
Asphalt runway	1	1
Part 135 operations	3	3
Flight training	3	3
Total	14	17

Source: Security Guidelines for General Aviation Airports ((IP) A-001), May 2004

For existing conditions, the Airport currently meets most TSA recommendations, such as perimeter fencing, signage, and documented security procedures. While there is no specific policy in place for monitoring airport activity, airport residents actively watch for unknown people on the airport and any suspicious activity. When an aircraft over 12,500 maximum takeoff weight (MTOW) relocates to the Airport, another set of TSA recommendations will be introduced that includes LEO (Law Enforcement Officer) support, implementation of a security committee, and transient pilot sign-in / out procedures. **It is recommended the airport community continue their watch and suspicious activity identification.**

Airport Maintenance

Airport maintenance equipment is currently stored in various locations around the airport. The current Quonset hut on the northwest side of the airfield has exceeded its useful life. Consideration should be given to replacing it with a new more functional facility with a restroom and proper tool and equipment storage. **It is recommended that the Airport maintenance Quonset hut be replaced at some time during the planning period.**

Airport Fencing

The Airport does have full perimeter fencing. Airport fencing is adequate for the planning period. However, there are locations along the fence line where erosion is becoming an issue. **It is recommended that the Airport maintain perimeter fencing throughout the planning period.**

Drones

There is not currently any drone use at the Airport. However, as targeted cities in Oregon continue working with the Federal Aviation Administration's test program for drones, the Newport Municipal Airport will look for opportunities to meet the needs of this developing industry.

[2] Based on user/tenant statements.

Utilities

Several City owned utilities do not fully extend to the developed areas of the airport. Although it has been a long held belief that extension of those utilities will be essential to future expansion, an analysis of the existing utilities showed the challenges involved in expanding City services on the Airport. As development alternatives are prepared in the next chapter, existing and future utility infrastructure siting will be assessed as necessary. Below is an examination of airport infrastructure.

Water

Existing water usage on the Airport is approximately 934 GPD total or 39 GPD per 1,000 SF of building space (excluding hangars and the ARFF station) on the Airport. The projected growth of aviation related buildings over the 20-year planning period depicted on Table 4F - Landside Facility Needs would likely include a water service connection to a future Cargo Facility estimated at around 3,750 SF. For purposes of long-range planning this would equate to an additional 146 GPD over the planning period for a combined total of approximately 1,080 GPD of water usage at the end of the planning period in 2036.

The potential increased water usage described above does not account for any aeronautical and non-aeronautical related industrial type development that may occur on or near airport property. If a future corporate hangar development including a water service connection were initiated, such a development is not part of the FAA aviation forecasts, and consequently has not been considered in this analysis. FAA approved aviation forecasts, and related facility requirements used to project future development requirements on the Airport, account for growth only in hangar space and other airport related facilities. The majority of development projected to occur in this Master Plan will likely be similar to existing facilities which have a relatively low water use historically for the Airport overall.

The Master Plan Alternatives will identify land on the Airport for both aeronautical and non-aeronautical industrial type land-uses, which would undoubtedly increase the actual demand for water at the Airport when they occur. While buildable sites and land-uses for any future industrial type development will be identified in Chapter 5 – Development Alternatives, actual estimates for the size, quantity, and timing of future industrial buildings, or the infrastructure required to support this development, is not within the scope of this Master Plan, and therefore cannot be accounted for with respect to future utility requirements. However, once a potential developer has been identified, the City will evaluate the cost-benefit-analysis of extending City water service to the Airport and any other potential development areas. Without a specific development in the forecast, the City of Newport is fiscally constrained by the existing cost-benefit analysis currently guiding waterline expansion described below.

Extending City water to the FBO building and the rest of the Airport currently served by Seal Rock Water District would require a significant extension of the existing City of Newport water lines from the ARFF station through Airport property. Due to the low water pressure at the end of the existing City main line at SE 72nd ST, extending water service south across the airfield would require a new pump station near the ARFF building. The cost of a new pump station, based on local estimates provided by Airport staff, would exceed $500,000 and be cost prohibitive considering existing Airport water usage, as well as the forecasted minimal growth on the Airport discussed above. Therefore, it may not be cost effective to expand City Water infrastructure to the undeveloped areas of the Airport unless a currently unidentified party expresses interest in developing industrial business at a site on or adjacent to the Airport.

In preparation for industrial growth, and as part of the planning process, a specific route for City of Newport water lines to serve future Airport facilities as well as any future aeronautical or non-aeronautical type industrial development on or near the Airport will be identified in the Alternatives chapter. At this time, present needs and future forecasted facility requirements do not warrant spending the funding required to expand City of Newport water to the rest of the Airport. **It is recommended that as future development occurs the individual needs of the development projects will require additional analysis to determine whether or not City water lines need to be installed, upgraded, and/or expanded to serve the airport.**

Sewer

Bringing City sewer to the FBO building and other Airport tenants would require a significant extension of the existing City of Newport sewer infrastructure. As noted in the water section above, the current and forecast impact on the sanitary sewer system (respectively 934 GPD and 1,080 GPD) is very low and expected to remain relatively low over the planning period. Therefore, it is not expected that the Airport alone would warrant an extension of, and a connection to, the local sanitary sewer system during the 20-year planning period. However, similar to the water system discussion above, if a currently unidentified party expresses interest in developing an industrial type development on or near the Airport, the City will need to evaluate the cost-benefit of extending local sanitary sewer in to Airport property. Further, such an extension may not be required due to Chapter 5.15.020 of the Newport Municipal Code, which states that only structures within 250 feet of a collection sewer or intercepting sewer line must be connected to the sewer system. Currently, the only structure that may require a connection to a potential City sewer extension along Highway 101 would be the ARFF Station. All other Airport facilities are beyond a distance of 250 feet. At this time, present needs and future forecasted facility requirements do not warrant an immediate extension of the City sewer main lines. **It is recommended that, as business grows and expands at the Airport, and areas around the airport are annexed into the City boundaries, the need for an extension of the City of Newport sanitary sewer lines be re-evaluated based on Municipal Code requirements and financial availability.**

Power

It is recommended that any potential developers extend and/or upgrade underground power lines to serve future development as it occurs.

Communication

It is recommended that any potential developers extend and/or upgrade communication lines such as telephone and/or fiber optic in order to serve future development as it occurs.

Storm Drainage

The need for additional hangar facilities has been identified, which will increase the Airport's existing impervious surfaces. These additional surfaces must be evaluated with future construction projects to

ensure that the requirements of the 1200-Z[3] stormwater discharge permit are met. Because a specific layout for future development has not yet been defined, the exact amount of increased impervious surface is still to be determined. The alternatives analysis will consider the stormwater impacts of each alternative within the criteria analysis.

Aviation Fueling Facilities

AvGas and Jet A fuel is available for sale at the Airport. The current location and condition of the tanks is not suitable for the duration of the planning period. The location does not allow for easy truck access or self-serve fueling. The current tanks will end their useful life within the planning period. **It is recommended that when their useful life ends, tanks be replaced and moved to an area of easier access, such as near the FBO building or a new maintenance building if the Quonset hut facility is relocated.**

Land Use Planning and Zoning Recommendations

Responsible land use planning around airports is essential to establish and maintain adjacent compatible uses in the vicinity of the airport. FAA explicitly requires airport sponsors to protect the airport from encroachment by incompatible uses such as dwellings, schools, hospitals, churches, and tall structures that could be hazards to air navigation. Typical methods that are employed by airport sponsors to control land uses beyond its boundaries include implementing compatible use zoning/overlay zones and comprehensive planning. Once the preferred development plan is established by this master plan, more detailed recommendations for land use will be included. These recommendations will address adjustments to existing land use controls in order to be consistent with the airport master plan and any associated adjustments to the airport's boundaries for development and airspace protection.

Zoning Code

Current zoning of the Airport is not in compliance with Oregon Revised Statutes (ORS) 836.600 through 836.630, *Local Government Airport Regulation*. The Airport is currently zoned Public. It is recommended the Airport boundary be zoned as a Public-Use Airport, which would authorize customary and usual aviation-related activities outright. It does appear, however, that aeronautical uses are currently permitted outright (subject to a building permit) and the airport airspace is protected through height restriction overlay zone for the area around the airport as defined by FAA Part 77 Airspace, so achieving full compliance should be straightforward. The City of Newport Planning Department will be further consulted to determine current land use and zoning practices at and surrounding the Airport. At such time a more detailed recommendation will be given to the language of land use and zoning practices, along with mechanisms for enforcement.

[3] The federal Clean Water Act mandates jurisdictional control of the quality of stormwater runoff. This mandated program is found in the Code of Federal Regulation part 122.26. The Airport may fall under the scope of these regulations and may need to apply for a National Pollution Discharge Elimination Permit (NPDES).

Comprehensive Plan

Comprehensive plans establish the policies for land use and are reflective of the community's goals for orderly development of land. The plans for Newport Municipal Airport have a bearing on the City's comprehensive plan and they need to be brought into harmony. Upon completion of the updated airport master plan, it must be adopted by reference into the City's Comprehensive Plan. **A Supplemental Update to the Comprehensive Plan is shown in Appendix J**. In addition, any land use boundaries that may be affected through adoption of the airport master plan would be adjusted accordingly. The City of Newport will be consulted to determine what that process will entail, to ensure this Plan's inclusion in the Comprehensive Plan. That process will be identified in this plan at that time.

Report from the City of Newport Regional Airport Review Task Force, February 17, 2016

On July 24, 2014, the Newport City Council approved the establishment of a Regional Airport Review Task Force. The purpose of the Task Force was to review the role that Newport Municipal Airport plays on the central coast. **Appendix I** includes a copy of the Task Force report. The report addressed numerous issues related to the airport:

A. Commercial airline service
B. Governance
C. Finance
D. Marketing
E. Land Use Issues
F. Emergency Services

Each section of the report included one or more recommendations to the City. Some of those recommendations were to be addressed in the airport master plan to the extent the project's scope could allow. For this section, the relevant recommendations from the land use section are identified here so that they can be considered during the development and analysis of alternative concepts and associated land use recommendations.

E.1 The Task Force recommends providing sanitary sewer to the airport and completing the water distribution system. Priority: High

E.2 The Task Force recommends that the airport master planning process identify specifically what land, facilities, and amenities could be made available to prospective tenants on and adjacent to the airport. Priority: High

E.3 The Task Force recommends the master plan process evaluate the current boundaries of the airport to determine whether there are any lands included in the airport boundaries that could be excluded from the airport property in order to make them available for future compatible economic development. Priority: High

E.4 The Task Force recommends identifying the existing permitted land uses around the airport as part of the airport master plan. Priority: High

E.5 The Task Force recommends identifying areas within the airport that would be available for long-term leases to allow the construction of commercial or industrial facilities for airport bases to support business at the airport as part of the master pan process. Priority: High

FAR Part 139 Airport Certification Analysis

In Chapter Three the planning team reviewed the Part 139 Certificate in terms of size of aircraft, current passenger potential, and future needs. In Chapter Four the analysis is continued with a focus on the costs and benefits associated with maintaining the 139 certification. This is not a normal part of the Master Planning process. The City has added these sections in response to both local and federal requests to review the FAR Part 139 certificate in light of current airport needs and anticipated 20-year forecasts and requirements. The intent of this assessment is to provide information for local decision-makers so they may assess a prudent course of action in maintaining, deactivating, or relinquishing the stringent safety and maintenance requirements of FAR Part 139.

Under FAR Part 139, the FAA requires an Airport Operating Certificate (AOC) for any airport supporting commercial air service with aircraft carrying more than nine passenger seats. There are four categories, or classes, to the certification program.

Class I airport means an airport certificated to serve scheduled operations of large air carrier aircraft that can also serve unscheduled passenger operations of large air carrier aircraft and/or scheduled operations of small air carrier aircraft.

Class II airport means an airport certificated to serve scheduled operations of small air carrier aircraft and the unscheduled passenger operations of large air carrier aircraft. A Class II airport cannot serve scheduled large air carrier aircraft.

Class III airport means an airport certificated to serve scheduled operations of small air carrier aircraft. A Class III airport cannot serve scheduled or unscheduled large air carrier aircraft.

Class IV airport means an airport certificated to serve unscheduled passenger operations of large air carrier aircraft. A Class IV airport cannot serve scheduled large or small air carrier aircraft.

Scheduled operation means any common carriage passenger-carrying operation for compensation or hire conducted by an air carrier for which the air carrier or its representatives offers in advance the departure location, departure time, and arrival location. It does not include any operation that is conducted as a supplemental operation under 14 CFR part 121 or public charter operations under 14 CFR part 380.

Unscheduled operation means any common carriage passenger-carrying operation for compensation or hire, using aircraft designed for at least 31 passenger seats, conducted by an air carrier for which the departure time, departure location, and arrival location are specifically negotiated with the customer or the customer's representative. It includes any passenger-carrying supplemental operation conducted under 14 CFR part 121 and any passenger-carrying public charter operation conducted under 14 CFR part 380.

Note: Special Statutory Requirement to Operate to or From a Part 139 Airport. Each air carrier that provides—in an aircraft designed for more than 9 passenger seats—regularly scheduled charter air transportation for which the public is provided in advance a schedule containing the departure location, departure time, and arrival location of the flight must operate to and from an airport certificated under part 139 of this chapter in accordance with 49 U.S.C. 41104(b)… Certain operations by air carriers that conduct public charter operations under 14 CFR part 380 are covered by the statutory requirements to operate to and from part 139 airports. See 49 U.S.C. 41104(b).

*Excerpts taken from Part 139 Handbook *§139.5 Definitions*

At the time this analysis was prepared, ONP did not have commercial air service requiring the airport hold an AOC. When there is a FAR Part 139 airport not served by an airline carrying 30 or more passengers, the

Classification of the certificate changes from Class I to Class IV. This allows some, but not all, of the AOC requirements to be relaxed. Although the Airport holds a Class IV certificate, the Airport maintains a Class I field. None of the 139 Certification Class I requirements have been relaxed.

Although the Airport does not currently serve large 30+ passenger planes, large planes have landed at the Airport. In 1984, Ports-of-Call, a Denver-based vacation club, landed two Boeing 727 aircraft, carrying approximately 212 passengers, at the airport. These operations were possible due to recent upgrades in the strength and length of Runway 16-34. The Airport has maintained those upgrades in years since. In the early 1980s, the arrival of the 727 jets heralded the hope that large passenger planes would encourage convention and vacation business in Lincoln County. That growth in large jet traffic did not continue; the Airport upholds the 139 Certification in the hope that it will.

With changes in aircraft, the air carrier industry, and travel, the City and the FAA are studying the costs, benefits, and opportunities of maintaining or relinquishing the AOC. The City is not required to relinquish its Part 139 certificate as long as the airport continues to meet all of the requirements for the Class IV AOC.

In order to highlight the relevant factors in such a decision, Planners have considered several aspects of how the AOC impacts the Airport. The following sections provide a brief discussion of the benefits and costs associated with maintaining a FAR Part 139 Certificate.

Benefits of Maintaining the Part 139 Certificate

Airports accrue a number of benefits by maintaining a Part 139 Certificate in good standing. The primary benefit is the ability to allow air carriers to operate at ONP with aircraft that have more than nine seats. With that in mind, the City may have an advantage in the recruitment of airlines that consider adding ONP over competing airports that do not have an active AOC. Even though there are additional requirements for airports, depending on the type of scheduled passenger service proposed, just holding the certificate keeps ONP on a list of 531 airports that maintain their fields to a higher standard and that remain qualified to accommodate airline activity. Just two other competing airports in Oregon hold Class IV Certificates—McNary Field in Salem and Eastern Oregon Regional in Pendleton. In the region, Klamath Falls Airport and Southwest Oregon Regional Airport each hold a Class I certificate as they currently serve commercial aircraft with more than nine seats.

Further benefits to holding the AOC is the enhanced safety for all normal aircraft operations and the emergency response capability for any on-field incident. Airfield safety features required of all AOC holders include enhanced marking and lighting standards along with more stringent airfield design, maintenance, and condition reporting requirements. These requirements allow pilots entering an airfield to expect the same standardized operating environment at all certificated airports with confidence that maintenance at these airports is to the same high standards along with the availability of emergency services on the Airport.

Emergency response capability focuses on the Aircraft Rescue and Firefighting (ARFF) equipment and personnel training requirements. The Airport Emergency Plan spells out specific requirements for each Class IV airport. Tailored to the airport's particular circumstances, this plan is unique to each airport and

indicates who will be on site, how quickly an off-site crew will reach the airport, and other relevant information.

Because there is no currently scheduled air carrier operations at ONP, trained personnel do not need to be on station for any particular aircraft operations. However, the truck remains ready and able to roll for airport emergencies. In addition, for extreme off-airport situations that can only be extinguished using ARFF chemical agents, the truck can complement City fire crews in battling fires. *However*, the AOC and other supporting assurances associated with the purchase of the ARFF vehicle require the truck to be ready and available for airport-only incidents.

The final benefit of 139 Certification is the perception of Newport's commitment to safety, security, and standardization in the pilot community, especially among professional pilots and charter companies. This insight requires an awareness of the obligations placed on AOC holders, including how each airport meets those obligations. Because Planners were not able to identify any particular general aviation operators with specifications that pertained to FAR Part 139, it is difficult to quantify this benefit. Still, for those who do understand the differences among airports, they would likely view Newport as a preferred location to operate. Including the certification status in promotional material could increase awareness of these important safety enhancements as well as the value of this benefit to Newport over time.

Costs of Maintaining the Airport Operating Certificate

Aircraft Rescue and Fire Fighting

Costs for maintaining the AOC vary according to size of the airport, size of the aircraft accommodated, and size of the staff. At airports holding a Class I AOC, the costs can be significant. Nonetheless, revenues derived from airline activity offset some of these costs. Newport does not receive commercial service revenues, but the Airport does not have the additional costs required to support commuter service either.

What costs the Newport Municipal Airport shares in common with other obligated 139 airports are still lower due to the lack of commercial air service. The lower overall costs required to maintain the AOC compared to airports of similar size that have airline service, are due, in part, because trained ARFF personnel do not need to be on-station for any particular aircraft operations. This minimizes the majority of personnel costs directly associated with holding the AOC. Further, City of Newport staff estimate that the Fire Department annually requires approximately $20,455 to meet their obligations for the Class IV AOC. This covers training and recordkeeping, maintenance of the vehicle, firefighting agents, and an allocated share of salaries/benefits for firefighters.

ARFF Truck Operating Costs	$
Personnel Regular Rate & OT Rate	$9,517
Annual Training Costs – Big Bend CC	$9,067
Lodging at Training Course	$1,371
Annual Truck Maintenance	$500
Total	**$20,455**

Management and Inspections

Although Newport has participated in a larger number of Part 139 inspections over the last four year than is typical, usually a 139 Certification Inspector assess Class IV airports on a 24- month interval. These inspections can be useful. Even though an airport is diligent in keeping up with the AOC requirements, staff and inspectors often discover discrepancies in preparation of or during Certification inspections.

An estimate of the total cost for the management of the AOC includes daily airport self-inspections, recordkeeping, and maintenance of the required documents. An estimate, based on those specific activities, is that on average of one to two hours per day over and above the normal airport management responsibilities is dedicated to maintenance of the AOC at a cost of $50,418 for salary and fringe benefits.

Cost of Airport Management and Inspections	$
Fire Department Inspections	$342
Staff Airport Maintenance & Training	$26,331
Part 139 Certificate Administration	$23,745
Total	**$50,418**

This table, like many tables, simplifies data for quick comparison. For example, the Part 139 Certificate Administration number accounts for the Airport Director's time and the Staff Airport Maintenance & Training tracks airport employees. For ease of comparison, this approach works for this part of the discussion as most 139 documentation is maintained by the Director while activities like inspections and maintenance tasks are shared with employees. When the later analysis separates costs by option towards the end of this section, categories become more fluid. Less of the Director's time is spent maintaining 139 records and moves to maintenance and training. Employees continue to work on maintenance and inspections but at a lower frequency. Director and Staff time merge under Staff Airport Maintenance & Training. Further, with the way the airport currently operates, Staff often complete night inspections during overtime hours. More about that later. For now, the cost of maintaining the Part 139 Certificate Administrations is $50,418.00.

Capital Projects

Part of a Certification inspection is an assessment of existing facilities measured against current design, safety, and maintenance standards. If the airfield does not meet current design guidelines, upgrades are required in order to meet the design and maintenance standards identified. Inspectors use the Airport Certification Manual (ACM) to outline needed improvements for inspection on their next visit. Then, through stand-alone City funding or partnerships with state and federal agencies through the Airport Improvement Program (AIP), these upgrades are budgeted and completed.

The ARFF truck is a good example of how this process works. During an ARFF inspection, the inspector noted the age of the equipment. They listed a need for a newer truck. The City and FAA added a new ARFF truck to the five-year Capital Improvement Project (CIP) list. As soon are AIP funding became available, the FAA issued a grant for the purchase of a new truck. Because of the 139 Certificate inspections, ONP

could purchase a new ARFF truck in 2013. With proper care, the vehicle should last 20 or more years. The building housing the truck should also last at least 20 years. Due to this inspection process, the capital costs associated with maintaining AOC ARFF readiness are now negligible. The only caveat: grant assurances tied to the funding the ARFF vehicle, require the truck to remain at the airport *and not be made available to respond to general city fire calls and used only in the event of certain rare chemical fires better suited for the ARFF truck*. This may be an important factor in deciding what to do with the AOC.

Airfield projects require significant capital expense for certificated airports. Typically, the FAA does not grant waivers for non-compliant airfield geometries, safety areas, runway protection zones, and other design criteria. Therefore these safety related improvement projects are high priority projects and programmed to be funded as quickly as practicable. As regulations and design criteria evolve, the airport faces challenges to adapt the airport to comply. The master plan has incorporated many such changes, which is changing the dimensions and locations of facilities like the crosswind runway. While compliance with these evolving criteria will make the airfield safer, such changes can also make the field less capable and/or efficient. Although 139 inspectors are vigilant in watching for safety concerns and/or violations, the AOC only directly influences grants intended for ARFF trucks and snow equipment (Stewart, 2017).

Other capital expenditures include projects associated with compliance of airfield lighting, marking, and signage requirements. Additionally, certificated airports are also required to maintain a security plan, which is a document that spells out how the airport will secure against outside threats. These facility requirements vary according to the airport and its activity, however, certified airports are typically required to address airport security fencing and similar perimeter issues.

Future unknowns, such as changes to Part 139 Certification requirements, could result in some unanticipated future capital costs for the Airport such as terminal buildings, security requirements, and other facility upgrade requirements to meet standards. These requirements would be costly implementations with current airport facilities and revenues. Additionally, the FAA is now considering the best way to introduce Safety Management Systems (SMS) requirements at Part 139 certificated airports in an effort to continue to improve aviation safety. The safety policies and objectives identified in the SMS could result in additional unanticipated administrative and capital expenses. There is also the possibility that as aviation safety evolves, commercial flights of smaller planes could one day required certificates to operate.

In a clarifying discussion with the City's FAA project manager (Stewart, 2017), he stated that Newport, with or without the 139 certificate, would remain in a position to receive federal funding as long as the need exists and the program continues. As a good-sized general aviation airport, with a comfortable NPIAS number, funds to accomplish ONP mandated projects carries a high priority for FAA, and discretionary grants are typically available to meet those needs. In all capital projects, ONP competes from the same position with or without the AOC. As a general aviation airport, even a good-sized one, the Airport is up against larger, commercial hubs airports for discretionary funding.

Review of Future Options for Part 139

Planners presented three alternatives to the PAC.

Option 1 – Keep the Part 139 Certification

The City could choose to keep their Class I Part 139 Certificate. There would be no reduction in cost to the City and the FAA would continue its annual inspection. The estimate of cost presented to the PAC during the forecast process was $16,000 (since upgraded to $20,495 when additional information was provided by the City after the PAC meeting) for special fire department training required by the FAA. In addition, there is the time spent by the airport manager and City staff to maintain pertinent documents such as aircraft fueling records along with staff training requirements such as airfield driver training. Other costs associated with keeping an active Certificate is staff participation in annual inspections conducted by the FAA plus time spent correcting any discrepancies identified by FAA inspectors.

At present, the type of air service most likely to occur in Newport - a nine passenger aircraft – is independent of Part 139 Certificate requirements. However, while currently unfounded, this standard, like many federal standards, could change and a Certificate might be required for nine passenger aircraft at some point in the future. It is reasonable to expect and plan for increased regulatory requirements associated with the implementation of SMS, future Part 139 certificate policies, or other unexpected requirements the FAA may implement. It may also be that for a potential airline, the fact that the City has maintained the airport to a higher standard, the AOC demonstrates a perceived commitment by the City as a positive indication of their strong commitment to the airport. Further, just having the Certificate in-hand, as opposed to reapplying for one in the future, could also be a perceived advantage.

Option 2 – Ask the FAA to Become "Inactive"

The City could choose to make the AOC inactive. The City would still be required to maintain the Airport to Part 139 standards, however, the FAA would not be required to do an annual inspection; although they could elect to do so anyway at their discretion. If the FAA were to do an inspection, the City would be required to make any necessary corrective action to address any discrepancies identified during the inspection.

Option 3 – Relinquish It

The City could relinquish the Part 139 Certificate. Relinquishing the Part 139 Certificate would reduce the City's costs, particularly for ARFF training and administration. If the City needed to reinstate the Part 139 Certificate in the future as a result of new commercial air service requiring so, there is a process in place with the FAA to do so. Further, the most likely type of aircraft utilized for commercial service would be a nine-passenger aircraft, which as noted above currently does not require the Certificate. After a period of successful commercial air service with a nine passenger aircraft, the City could then reapply to the FAA for the 139 Certificate with an eye toward growing the commercial air service and moving to a larger size aircraft for which the Certificate was a requirement.

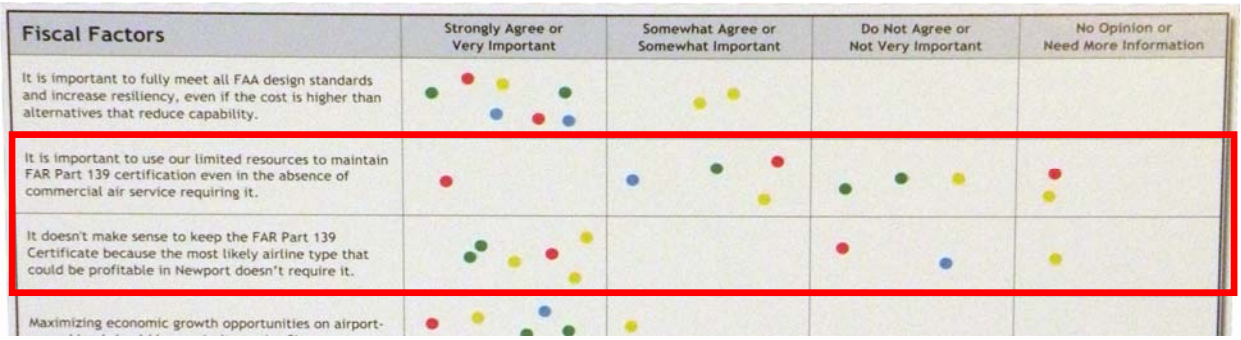
There have been questions as to whether or not the FAA will participate in funding any field upgrades required for regaining the AOC. Sometimes the answer is yes; sometimes the answer is no. More applicably, the answer depends on so many factors the question of receiving AIP funding can only be determined at the time of application. However, if the field is maintained at current standards, airport

operations can quickly bring required training certificates, records and manuals up to FAR 139 specifications, and no building or field designs occur that detract from AOC safety requirements, then the answer is most likely, yes, AIP will help finance any required field upgrades.

PAC Meeting Discussion of Part 139 Certificate

At the second PAC meeting in March 2016, the PAC reviewed the three options listed above. Due to the complexity of whether or not Newport should maintain Part 139 Certificate the outcome remained undetermined and tabled for future discussions at the local level.

At the third PAC meeting held in May 2016, the PAC participated in a group exercise. The exercise posed two questions:



Source of Image: PAC Meeting #3 – May 2016

In answer to whether or not it is important to use our limited resources to maintain the Airport's AOC, the results were 5:3 or "Somewhat Agree". The response to rephrasing the same question from the opposite direction that it does not make sense to keep the FAR Part 139, the votes cancelled out. Three strongly agreed; three did not agree or were not sure.

The outcome showed that participants appeared largely split on the importance of using limited local resources to maintain Part 139 Certification even in the absence of commercial air service that requires it. At least one person felt they did not have enough information to make a decision. This uncertainty of whether or not to keep the AOC reflects the complexity of the decision.

Summary Comparison of Part 139 Certification Options

To determine the best path forward for the community with respect to maintaining, relinquishing, or becoming inactive with the Part 139 Certification, Planners conducted a comparison analysis to help guide future decisions by the City. Much of the discussion between the planning team and the City revolved around the costs associated with maintaining the Part 139 Certification requirements and the requirements due to Grant Assurance obligations.

One argument for retaining the 139 certificate could be the value of periodic FAA inspections and the quality of field maintenance associated with being ready for these inspections. However, there is another, often forgotten, aspect to maintaining the airport: Sponsor obligations associated with grant assurances and their impact on field maintenance.

Grant Assurances are a set of requirements the City agrees to maintain with each Airport Improvement Program (AIP) grant the City accepts. There are 39 grant assurances, incumbent for twenty years after accepting a grant, each covering a separate area of airport operation. These "assurances", aka obligations, cover areas of airport management, record keeping, field maintenance, and public outreach, among others. Grant assurances are independent of the Part 139 standards. Whether or not the City has an active AOC, or an inactive AOC, the City is required to maintain grant assurance at the same level of quality required.

Airport Administration Requirements	Required Per Part 139 Cert.	Required Per FAA Grant Obligations	Notes
Training	X	X	Not as much training needed under grant assurances.
Training Records	X	X	Not as many training records needed under grant assurances.
Administration	X	X	Less record keeping required by grant assurances.
Field Maintenance	X	X	Different time-frame to make repairs.
ARFF Support	X		Not required by grant assurances
Security	X	X	
Airport Design	X	X	Not as stringent under grant assurances.
# of Personnel	X	X	The same.
Airport Certification Manual	X		
FAA Cert. Inspection	X		
NPEs	X	X	Same qualifications under both guiding documents.
NPIAS Status	X	X	Same qualifications under both guiding documents.
AIP Funding	X	X	Same qualifications under both guiding documents.
1-9 Seat Commuter Air Service		X	Most likely for smaller communities with current air service business models.
10-30 Seat Commuter Air Service	X		Less likely for smaller communities with current air service business models.
Future TSA Costs	X		Potentially needed with commuter service.
Operating FBO	X	X	Independent of airfield requirements.

This presents two questions: what are the obligations of the 139 certificate compared to obligations associated with grant assurances, and, what is the cost difference between those obligations as applied to the options provided to the PAC? To begin this comparison, the above table provides a comparison of the requirements associated with the AOC and grant obligations to create a baseline for evaluation.

The table shows that the Grant Assurances require much of the same record keeping and training involved with maintaining the Part 139 Certificate but to a much lesser extent. With fewer training requirements, no Airport Certification Manual to update, fewer forms to maintain, and no ARFF inspections, grant assurance requirements have a reduced management time compared to AOC obligations.

The challenge here is the difficulty in separating required upgrades determined by the AOC and other capital projects promoted by changes in FAA thinking. Certainly, compliance to 139 safety requirements are more imperative, and warrant greater scrutiny for some projects, but some of the required changes stem from the FAA attempting to increase safety throughout the national transportation system. What design criteria might work well in a larger, metropolitan airport, does not always make sense for smaller general aviation airports. With nearly 3,400 existing and proposed airports in the national transportation system, as a management tool, the FAA focuses on conformity more than exception. Whether or not ONP retains its AOC, some design changes will be required regardless.

Priority projects identified in the first 10 years of the master plan CIP list will likely get FAA approval regardless of the status of the AOC so those costs should not weigh in on this decision. Future regulatory requirements may mandate additional costly capital projects. If the City relinquished the AOC, the City could potentially avoid these expenses. Dedicating matching funds for these capital projects may cause the City to defer other projects preferred by local airport users.

For example, should the City decide to relinquish the AOC, the City would still need to consider one of three options: 1) keep the ARFF truck for airport only use, 2) keep the truck for off-airport use or 3) relinquish the truck. Grant assurances are an important factor in this decision.

- No action is required to keep the ARFF truck for airport use. Planners verified with the AIP manager that the City would not be required to return the truck if the AOC is returned. Grant assurances are in effect for a limited time (20 years or less). After 10 or so years, the City could approach the FAA for release from grant obligations.
- To keep the truck, use it for off-airport fires, and gain release from associative grant assurances, the City would need to reimburse the FAA for the cost of the ARFF truck. The City could do so by buying the truck outright, thus returning the grant funds used to purchase the truck to the FAA, or reinvest the purchase cost into an AIP approved project. Owning the truck, and released from all grant assurances, the City would be free to assign the vehicle to off-airport duty. The cost to seek immediate release from the grant assurances and legally send the ARFF truck on calls off the airport could exceed $250,000.
- Relinquish the truck to another Part 139 airport in need of ARFF protection, freeing the City from grant assurance requirements attached to the truck and maintenance costs. The hope is that airline service will return, and the City will secure a future grant to replace the vehicle.

This example holds the benefits of an AOC against the requirements of the grant assurances to show that both are binding in their own areas. There are other examples of how the Part 139 and the Grant Assurances work together and separately.

Once establishing the distinction between the Part 139 requirements and Grant Assurance obligations, Planners considered measurable costs for staff, airport maintenance, and other facility requirements. Separating these costs relative to the different options available to the Airport for maintaining, becoming inactive, and relinquishing the Part 139 Certification clarifies the budget needed for each option. The table below presents the summary of costs.

Part 139 Certificate Costs	Option 1 *"Maintain"*	Option 2 *"Inactive"*	Option 3 *"Relinquish"*
ARFF Truck Operating Costs			
Personnel Regular Rate & OT Rate	$9,517	$4,359	$ -
Annual Training Costs	$9,067	$4,236	$ -
Lodging	$1,371	$1,218	$ -
Annual Truck Maintenance	$500	$500	$500
ARFF Truck Total	**$20,455**	**$10,313**	**$ 500**
Cost of Management and Inspections			
Fire Department Inspections	$342	$342	$ -
Staff Airport Maintenance & Training	$20,777	$20,777	$24,942
Part 139 Certificate Administration	$23,745	$23,745	$ -
Staff Nightly Airport Inspections	$5,554	$5,554	$ 1389
Management and Inspections Total	**$50,076**	**$50,076****	**$26,331**
Total Part 139 Certification Costs	**$70,531***	**$60,389**	**$26,831**

* Costs to maintain Part 139 (Option 1) could increase in the future due to changing standards, increased requirements, or a change in fleet and commercial operation requirements.

** In the "Inactive" status (Option 2) the Management and Inspections total could be less depending on how often FAA inspections occur.

As mentioned earlier in this section, as costs separate by option, the Director's time merges with Staff hours. Staff overtime decreases as inspection frequency decreases at a 4:1 ratio. Daily, 8 AM to 5 PM, Staff hours do not decrease. Less of their timer is set aside for training, but some training is still required. The remainder of Staff duties, which include running the FBO, remain the same. The biggest change occurs in daily, 8 AM to 5 PM, Director's hours. The Director, freed from the administrative 139 requirements of the AOC, works on other tasks required to maintain the airport, including those administrative tasks obligated by Grant Assurances.

If the City elects to *"maintain"* the Part 139 Certificate, the measurable costs to the City would be, at a minimum, approximately $70,000 per year due to administration and maintenance of the airport and operation/maintenance of the ARFF truck. It is important to remember that future unanticipated requirements could potentially increase the cost to maintain the Part 139 certification.

If the City elects a Class IV *"inactive"* status, the most noticeable cost savings will come from the costs

associated with operating the ARFF truck. The maintenance of the truck will remain the same but the smaller crew required to operate the truck and relaxed training and recordkeeping could reduce ARFF operating costs by approximately half. The cost of airport management and inspections will remain relatively unchanged because, as previously mention, in the *"inactive"* status the City would still be required to maintain the Airport to Part 139 standards and respond to the potential FAA inspections.

If the City elects to *"relinquish"* the Part 139 Certification, grant assurances will require the Airport to maintain airfield geometry to FAA design standards; maintaining lighting, marking, and signage; keep current with airport administration and training requirements. Therefore, these overlapping areas between the grant assurances and Part 139 Certification show why release of the certification drops the cost of management and inspections by approximately half, but not entirely. If the City were to "relinquish" the Part 139 certification and the ARFF equipment, the costs of ARFF staff training are no longer required.

FAR Part 139 Conclusion

Planners have been careful to provide information without drawing conclusions. Whether or not to maintain the 139 Certificate or make a change going into the future is a decision only the local community can determine. They are the ones who have a global view of their community and where they hope to grow during the 20-year planning period.