

## CHAPTER D

# Landside Alternatives Analysis

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### Introduction.

The forecast operations outlined in **Chapter C – Capacity Analysis and Facility Requirements**, and previously stated goals and objectives relative to aviation development and economic enhancement were considered in the formulation of the generalized landside alternatives that are presented in this section. The ultimate selection of the preferred planning options, to be conducted through this planning process, will result in the identification of RNT’s preferred long-term Conceptual Development Plan.

### Landside Development Areas.

Sited on the south shore of Lake Washington, RNT is centrally located within the greater Puget Sound Region, approximately 11 miles away from downtown Seattle. The City of Renton provides abundant transportation access options for businesses and employees and RNT serves an important role in the regional transportation system (i.e., ground, rail, and waterway). A water taxi service is also being planned between downtown Seattle and Renton along the west channel of Lake Washington. These key locational factors combine to make RNT a prime location for Aviation Industrial Facilities, General Aviation (GA) Based Aircraft and Seaplane Facilities. However, the existing airport footprint, consisting of 168 acres, is extremely site-constrained, with limited property available for new or expanded landside development. There are limited land parcels along the perimeter of the Airport, and some existing airport parcels that can be evaluated for potential landside development expansion and/or redevelopment/repurposing.

An outline of the specific planning options for each landside development category on the Airport is presented in the following section with a compilation of illustrations depicting the planning alternatives for each specified development area. Landside development concepts presented in this section are divided into four specified development areas: Area 1 on the northwest side of the runway; Area 2 on the southwest side of the runway; Area 3 on the southeast side of the runway; and Area 4 on the east side of the runway. Each of the landside alternative illustrations in this chapter include a key map showing the four development areas and their locations relative to the runway. Existing landside development at RNT includes areas for GA facilities, aviation industrial (including aircraft manufacturing apron areas), aircraft parking aprons, Fixed Based Operator (FBO) facilities, fuel storage facilities, the seaplane base, viewing area, and access roadways.

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## Future Landside Development Categories.

The landside development alternatives presented in this chapter categorize development areas by four uses: GA, aviation industrial, airport support and seaplane related facilities. Each of these categories is described below:

### General Aviation Areas

GA is generally categorized as all activity that is not related to commercial passenger operations, large transport air cargo operations, or military operations. It includes private aviation related to pleasure flying, training, business transportation and storage; commercial aviation related to Fixed Base Operators (FBOs), aircraft maintenance, flight training, aircraft charter/rental, and aircraft storage; corporate aviation related to employee transportation and aircraft storage; and, industrial activity related to aircraft manufacturing and refurbishment. Thus, GA is a very broad and very diverse category considering various aircraft sizes, aircraft technology/sophistication, the mission of the organization operating the aircraft, and both airside and landside access requirements.

All of the diverse considerations mentioned above will impact the appropriateness of a given location for a specific GA use. However, as in many cases, a variety of GA facilities can be accommodated on any given site. The recommendations presented in the landside development alternatives aim to identify the best types of GA facilities for a specific developable site. Ultimately, the City of Renton must evaluate specific development proposals and make land use determinations based on the proposed site use efficiencies (striving to maximize the utilization of the available property in the most efficient and effective manner), and best business practices.

### Aviation Industrial Areas

Aviation industrial facilities typically require large acreage sites for initial development, which should also consider future expansion capability. Most often, these sites must provide runway/taxiway access, as well as include convenient landside access and adequate automobile parking areas. The existing aviation industrial facilities at RNT are currently occupied by the Boeing Company. Boeing's existing airport leasehold consists of multiple parcels on both the east side and the west side of the Airport that is accessed via a "through-the-fence" agreement with the Airport.

### Airport Support Facilities

Support facilities provide those services and functions that are necessary for an airport to operate properly but are not part of the runway/taxiway system and are not related to aircraft storage or aircraft maintenance. The support facilities at RNT include the Air Traffic Control Tower (ATCT), fuel storage areas, the, and the airport maintenance facilities. The existing landside facilities are adequate to serve the Airport's needs and changes to the location of the majority of these facilities are not considered in this chapter.

### Seaplane Related Facilities

Seaplane facilities include the docks and seaplane pull out ramp in the northwest corner of the Airport. The important facilities should be maintained and expanded as this is a unique aviation related land use at the Airport.

# Master Plan

## Landside Area 1 Development Alternatives

### Landside Area 1 – Existing/Minimal Improvements

Under the Landside Area 1 – Existing/Minimal Improvements, the focus is on correcting non-standard conditions and it does not propose major changes in use within the area. As shown in **Figure D9**, this area currently serves seaplane, aviation industrial, and GA uses. There is also a viewing area south of the seaplane ramp and base. These uses would remain the same.

Landside Area 1 also include an apron service road. Due to site constraints, the apron service road must be located within both the Runway Object Free Area (ROFA) and the Taxiway Object Free Area (TOFA). However, vehicles are only allowed to use this apron service road with permission from the ATCT when it is safe and conflicting aircraft traffic is not using the runway or taxiway. The apron service road's location would be addressed with an application for an operational Modification of Standards (MOD) from FAA to achieve an acceptable level of safety. The existing seaplane ramp and base would remain in its current location and may also require a MOD. Other changes associated with this alternative involve relocating the Customs and Border Patrol (CBP) facility outside of the ROFA and demolishing portions of the T-hangars that extend into ROFA. These actions would occur in conjunction with future renovation projects for these facilities and therefore are not depicted in **Figure D9**.

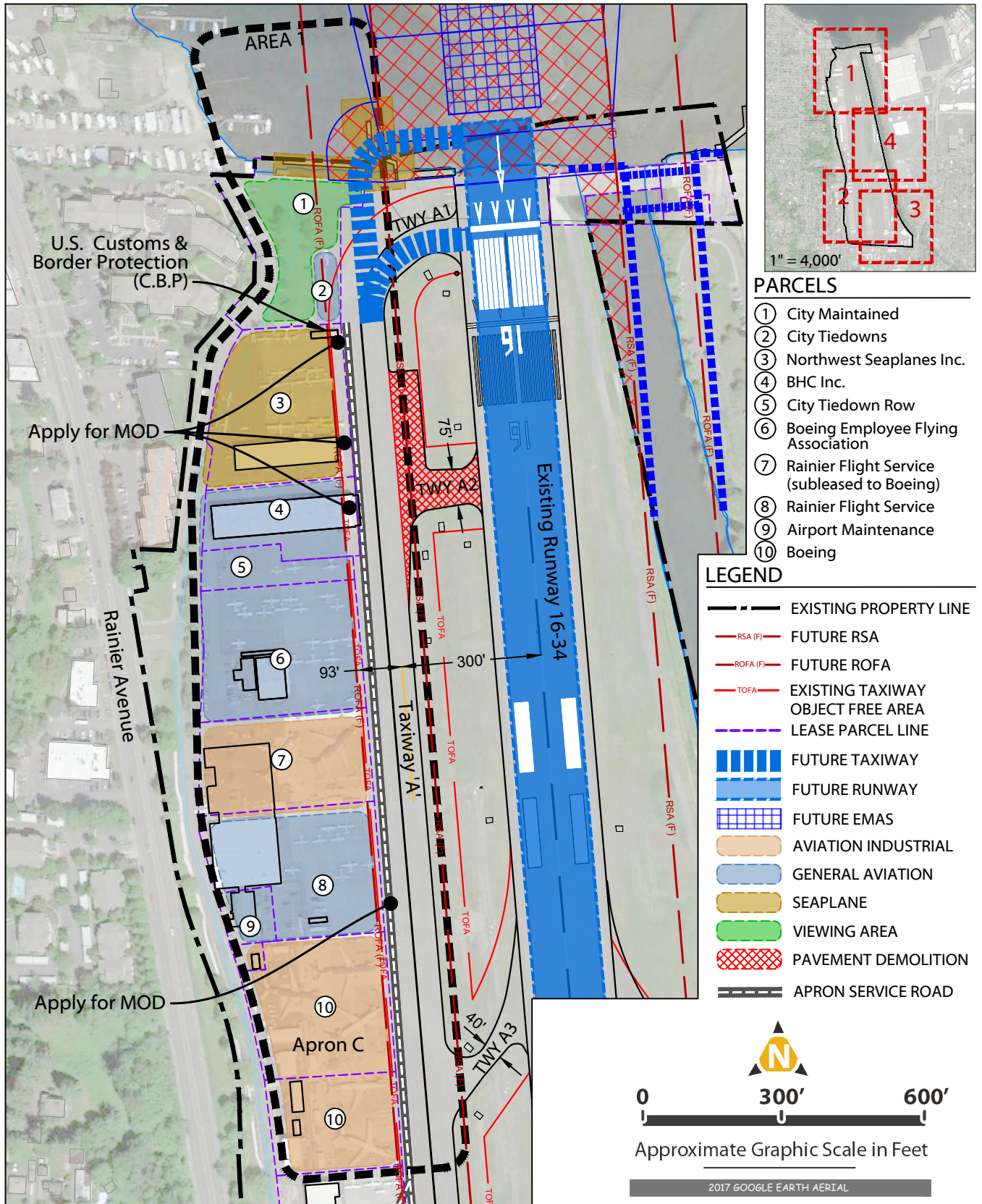


FIGURE D9 Landside: Area 1 - Minimal Action



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## Landside Area 1 – Alternative 1

This alternative is illustrated in **Figure D10** and proposes relocating the seaplane base (docks and pull out ramp) outside of the ROFA and constructing a new seaplane ramp within the ROFA that may require an operational MOD. The viewing area (Parcel 1), which is maintained by the City of Renton, would be converted to GA use and a new perimeter fence would be installed along the west side of parcels 1 and 2, but residential access to this area from outside the perimeter fence would be maintained. Other existing GA uses in Area 1 would remain. Parcels 7 and 10 currently have aviation industrial interim use, but under this alternative, these areas would be reserved for GA uses in the future.

Under this alternative, the (CBP) facility would be relocated outside of the ROFA and the T-hangars that extend into ROFA would be partially demolished. These actions would occur in conjunction with future renovation projects for these facilities, and therefore are not depicted in **Figure D10**.

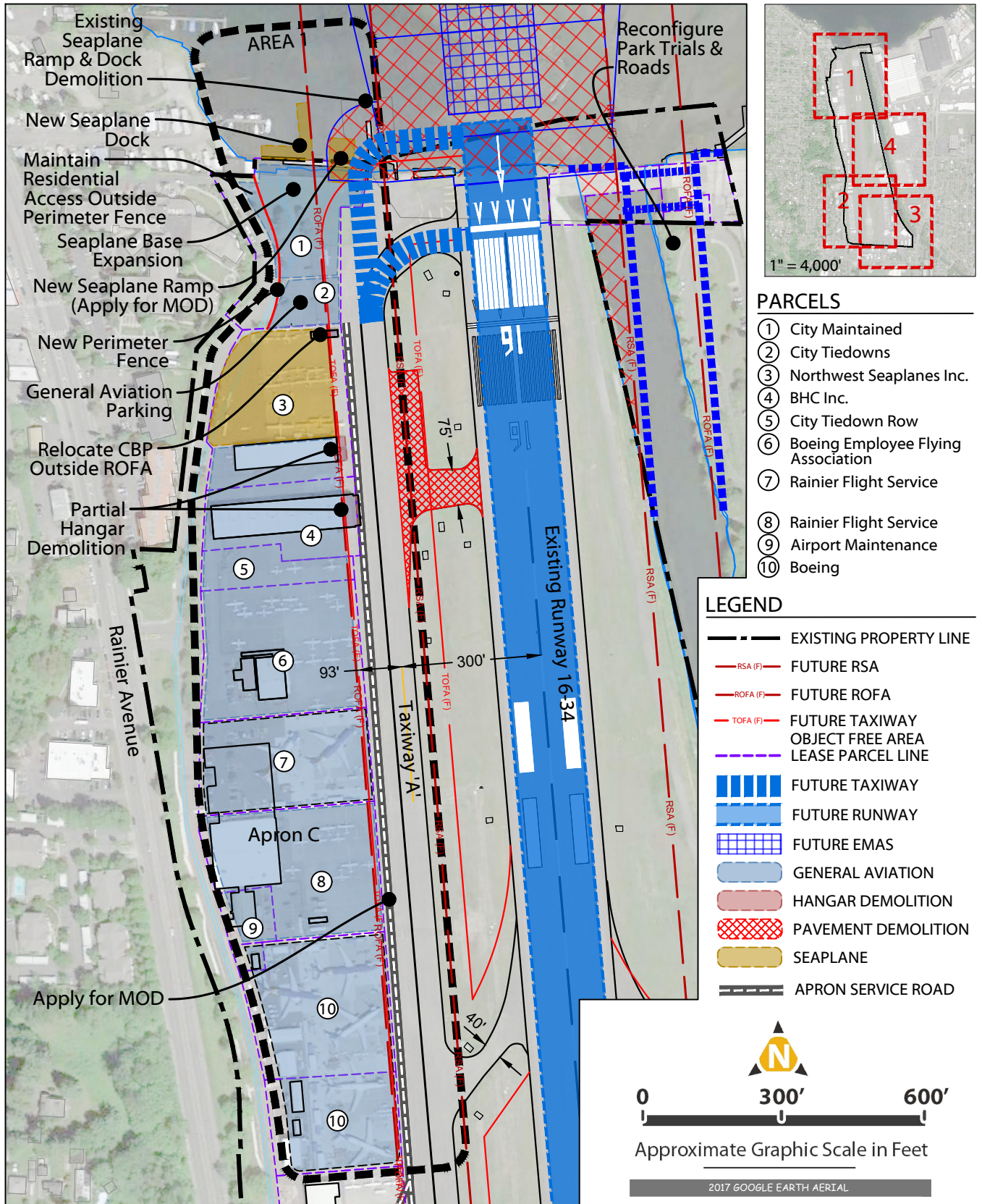


FIGURE D10 Landside: Area 1 - Alternative 1

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## Landside Area 2 Development Alternatives

### Landside Area 2 – Existing Minimal Improvements

This alternative is illustrated in **Figure D11** and is focused on correcting non-standard conditions. This alternative does not propose any major changes in use within the area. Like the previous alternative, the apron service road located within the ROFA would be addressed with an application for an operational MOD for the apron service road, as there is insufficient space to relocate the service road and accommodate forecasted parking needs. T-hangars that extend into ROFA would be partially demolished in conjunction with future renovation projects, and therefore are not depicted in **Figure D11**. Aircraft parking within the ROFA would be restricted.



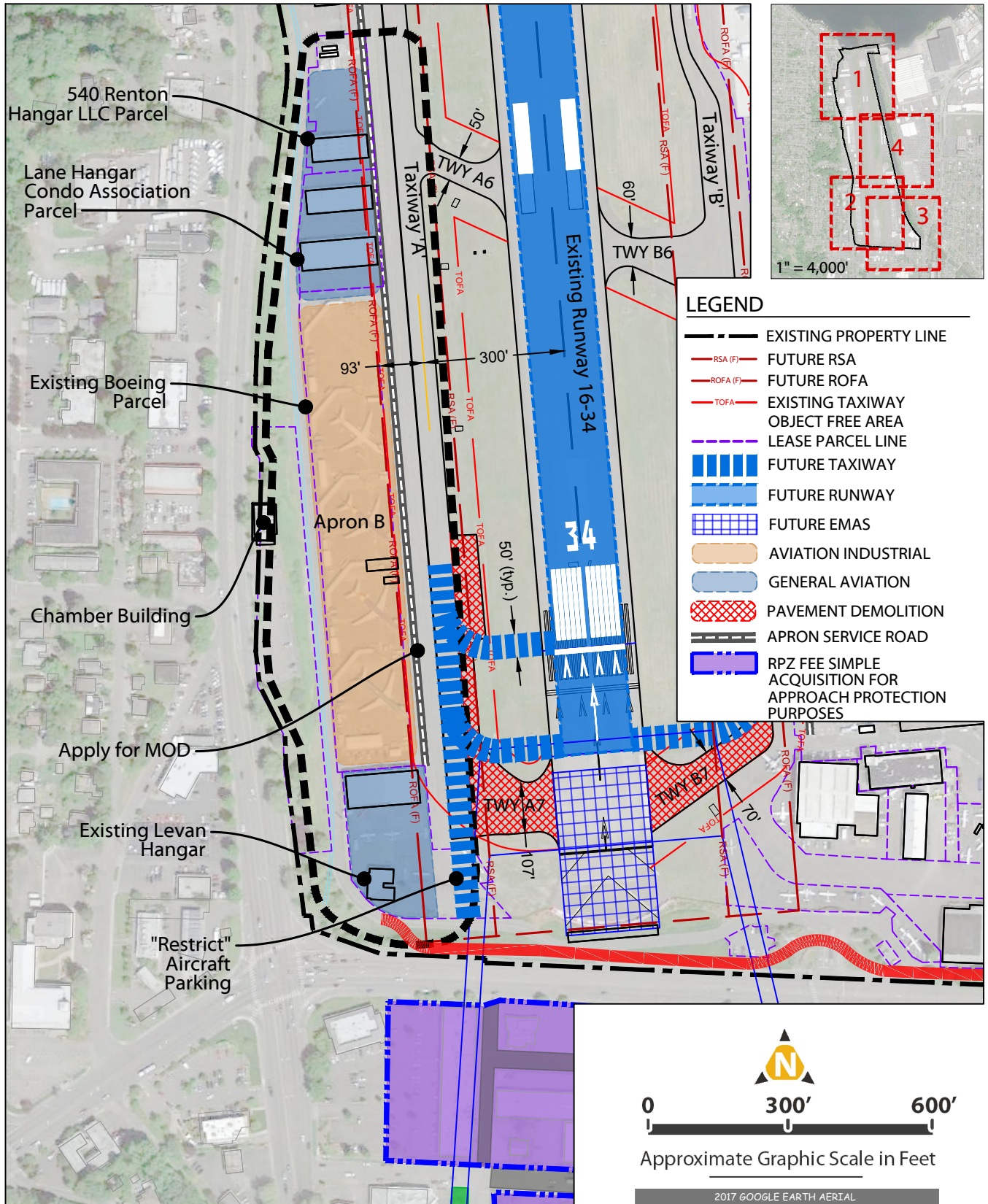


FIGURE D11 Landside: Area 2 - Minimal Action



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## Landside Area 2 – Alternative 1

In this alternative illustrated in **Figure D12**, the service road located within the ROFA would also be addressed with an application for a MOD and T-hangars that extend into ROFA would be partially demolished in conjunction with future renovation projects. The parcel that is farthest south in this area, which is currently occupied by Levan hangars would be converted into aviation industrial use. The aviation industrial use area identified in **Figure D12** would be able to accommodate the Boeing Max 10 aircraft. Space is also reserved in this area to add two additional GA aircraft parking hangars to accommodate demand.

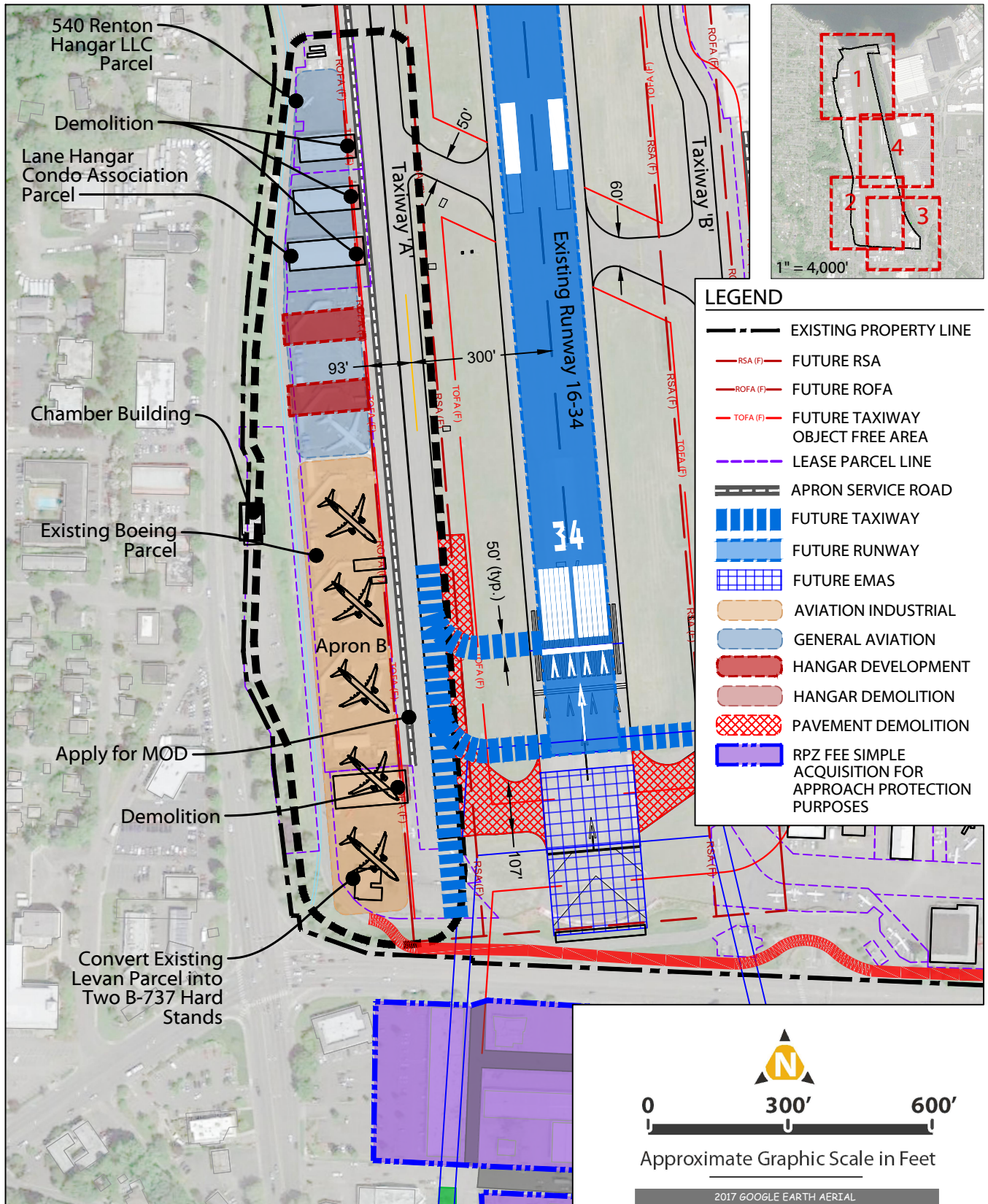


FIGURE D12 Landside: Area 2 - Alternative 1

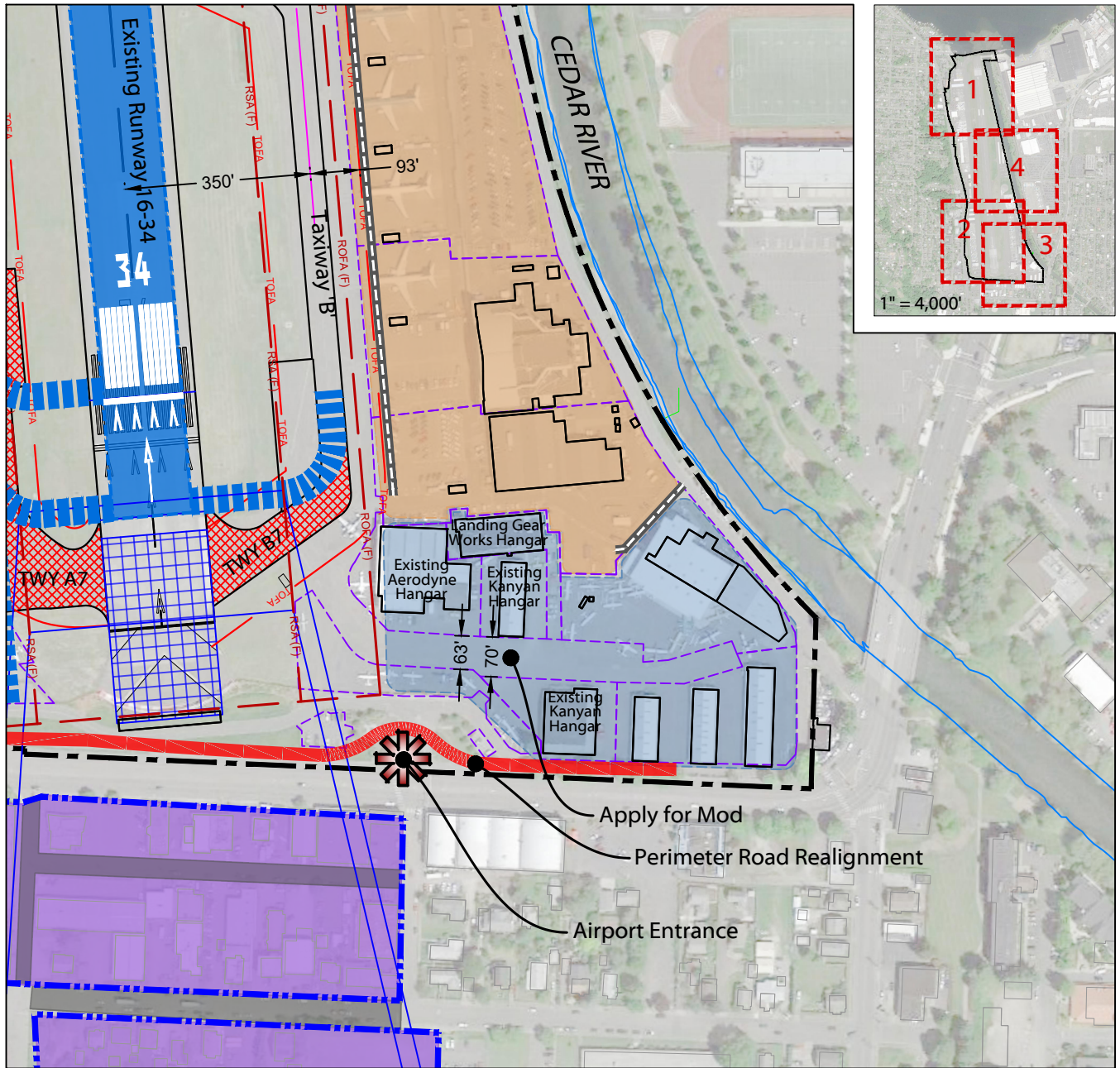
# Master Plan

## Landside Area 3 Development Alternatives

### Landside Area 3 – Existing/Minimal Improvements

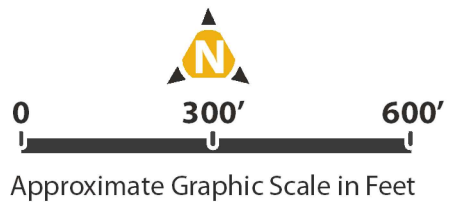
As illustrated in **Figure D13**, this alternative shows the existing mix of land use within the southeast quadrant of the Airport. This area is divided between GA related development and aviation industrial development. The existing land uses would remain and the only change in this alternative is a slight realignment of the perimeter road outside of the Runway Object Free Area (ROFA). Under this alternative, as existing facilities reach the end of their useful life or the end of their lease, the facilities would be reconstructed in place.





LEGEND

- |  |                                   |  |   |
|--|-----------------------------------|--|---|
|  | EXISTING PROPERTY LINE            |  | FUTURE RUNWAY   |
|  | FUTURE RSA                        |  | FUTURE EMAS   |
|  | FUTURE ROFA                       |  | AVIATION INDUSTRIAL   |
|  | EXISTING TAXIWAY OBJECT FREE AREA |  | GENERAL AVIATION  |
|  | LEASE PARCEL LINE                 |  | PAVEMENT DEMOLITION   |
|  | FUTURE TAXIWAY                    |  | RPZ FEE SIMPLE ACQUISITION FOR APPROACH PROTECTION PURPOSES |
|  | APRON SERVICE ROAD                |  |   |



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FIGURE D13 **Landside: Area 3 - Minimal Action**

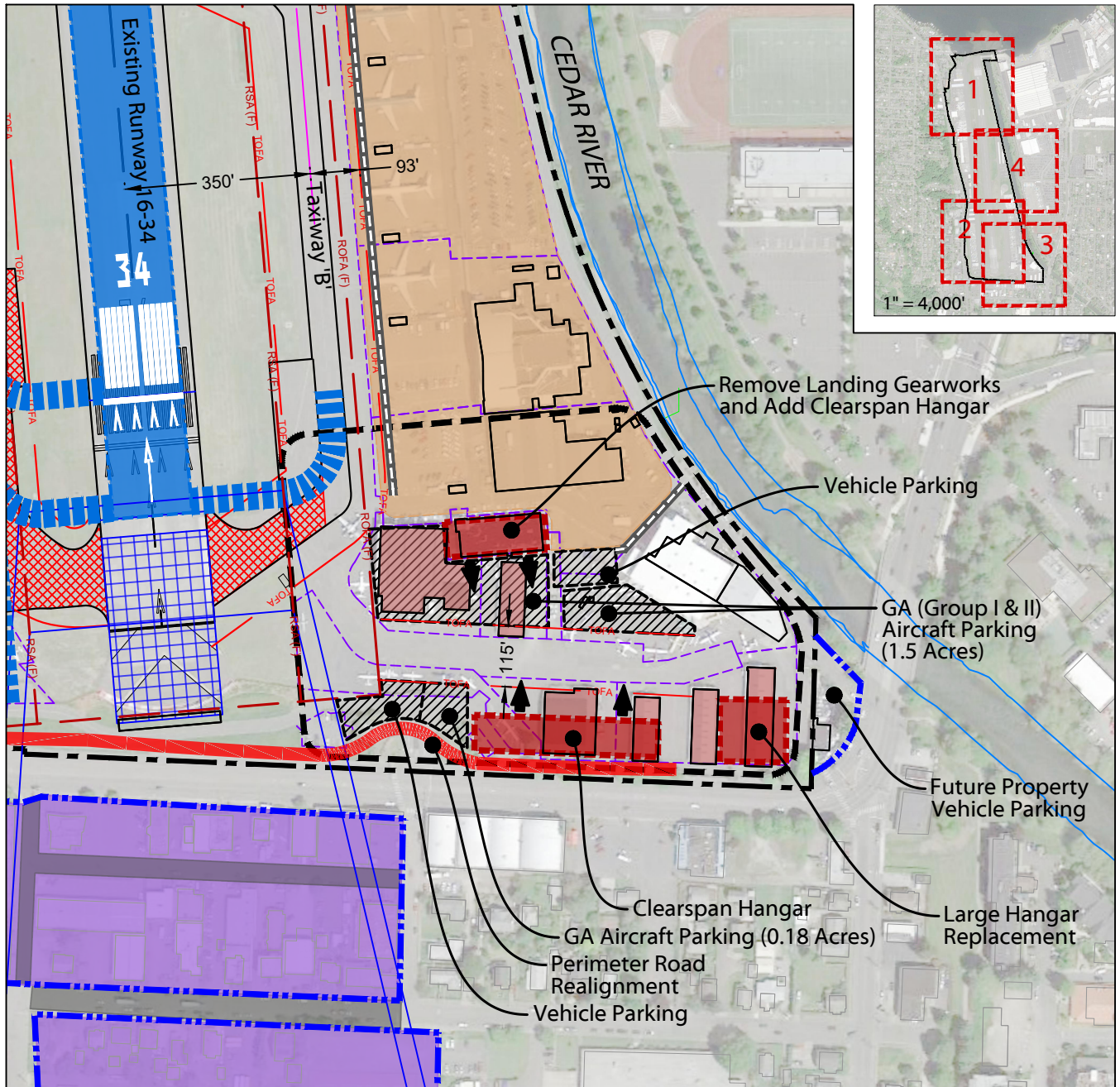


# Master Plan

## Landside Area 3 – Alternative 1

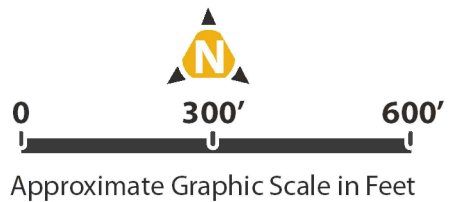
This alternative is illustrated in **Figure D14**. The layout of GA aircraft storage hangars and aircraft and vehicle parking is reconfigured, but the land uses area remain dedicated to GA on the south side of the area and aviation industrial uses on the far northside. Several existing box hangars (Aerodyne, Landing Gear Works, and Kaynan hangars) and all T-hangars in this area would be demolished and replaced with Clearspan hangars that open in only one direction. Adjacent areas would be reserved for additional GA aircraft parking with a standard taxiway down the middle of the development to accommodate Group I and Group II aircraft.

The Perimeter Road is also realigned outside the ROFA. The property boundary is extended to include the 0.22-acre parcel at the southeast corner of the Airport (at the bend in Logan Ave. S), which would be utilized for future vehicle parking. All aircraft parking within the ROFA would be restricted.



LEGEND

|  |                                   |  |   |
|--|-----------------------------------|--|---|
|  | EXISTING PROPERTY LINE            |  | FUTURE EMAS   |
|  | FUTURE RSA                        |  | FUTURE TAXIWAY  |
|  | FUTURE ROFA                       |  | HANGAR DEMOLITION   |
|  | EXISTING TAXIWAY OBJECT FREE AREA |  | HANGAR DEVELOPMENT  |
|  | LEASE PARCEL LINE                 |  | PAVEMENT DEMOLITION   |
|  | FUTURE PAVEMENT                   |  | AVIATION INDUSTRIAL   |
|  | FUTURE RUNWAY                     |  | APRON SERVICE ROAD  |
|  |                                   |  | RPZ FEE SIMPLE ACQUISITION FOR APPROACH PROTECTION PURPOSES |



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FIGURE D14 Landside: Area 3 - Alternative 1

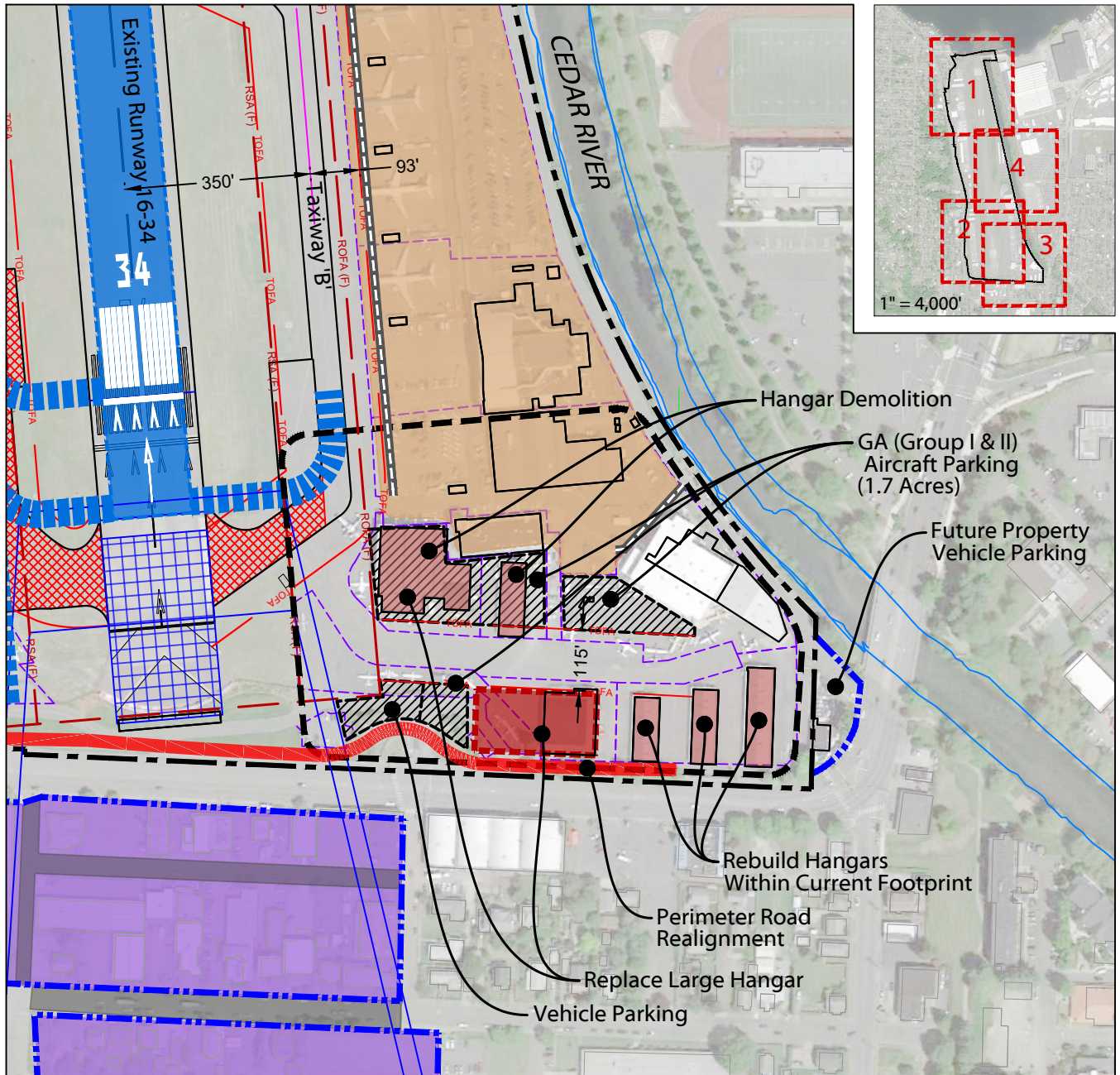
# Master Plan

## Landside Area 3 – Alternative 2

This alternative is illustrated in **Figure D15** and indicates that the hangars north of the taxilane (Aerodyne, Landing Gear Works and Kanyan hangars) are demolished and replaced with GA aircraft parking. The Kanyan hangar south of the taxilane is replaced with a larger hangar and the T-hangars are rebuilt in their existing location. A standard taxilane separating the aircraft parking area and newly constructed hangars would accommodate Group I and Group II aircraft. The area north of the GA aircraft parking area would be reserved for aviation industrial uses.

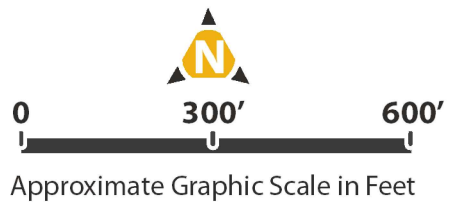
Perimeter Road is also realigned to allow for additional aircraft parking. Also, the property boundary is extended to include the 0.22-acre parcel at the southeast corner of the Airport (at the bend in Logan Ave. S), which would be utilized for vehicle parking. All aircraft parking within the ROFA would be restricted.





**LEGEND**

- |                                   |   |
|-----------------------------------|---|
| EXISTING PROPERTY LINE            | FUTURE EMAS   |
| FUTURE RSA                        | FUTURE RUNWAY   |
| FUTURE ROFA                       | FUTURE TAXIWAY  |
| EXISTING TAXIWAY OBJECT FREE AREA | HANGAR DEMOLITION   |
| LEASE PARCEL LINE                 | HANGAR DEVELOPMENT  |
| FUTURE PAVEMENT                   | PAVEMENT DEMOLITION   |
| APRON SERVICE ROAD                | AVIATION INDUSTRIAL   |
|                                   | RPZ FEE SIMPLE ACQUISITION FOR APPROACH PROTECTION PURPOSES |



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FIGURE D15 Landside: Area 3 - Alternative 2

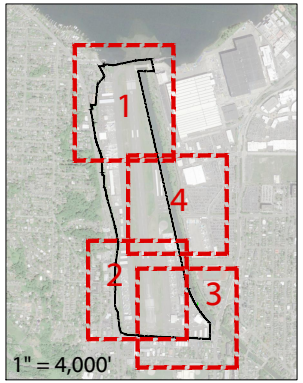
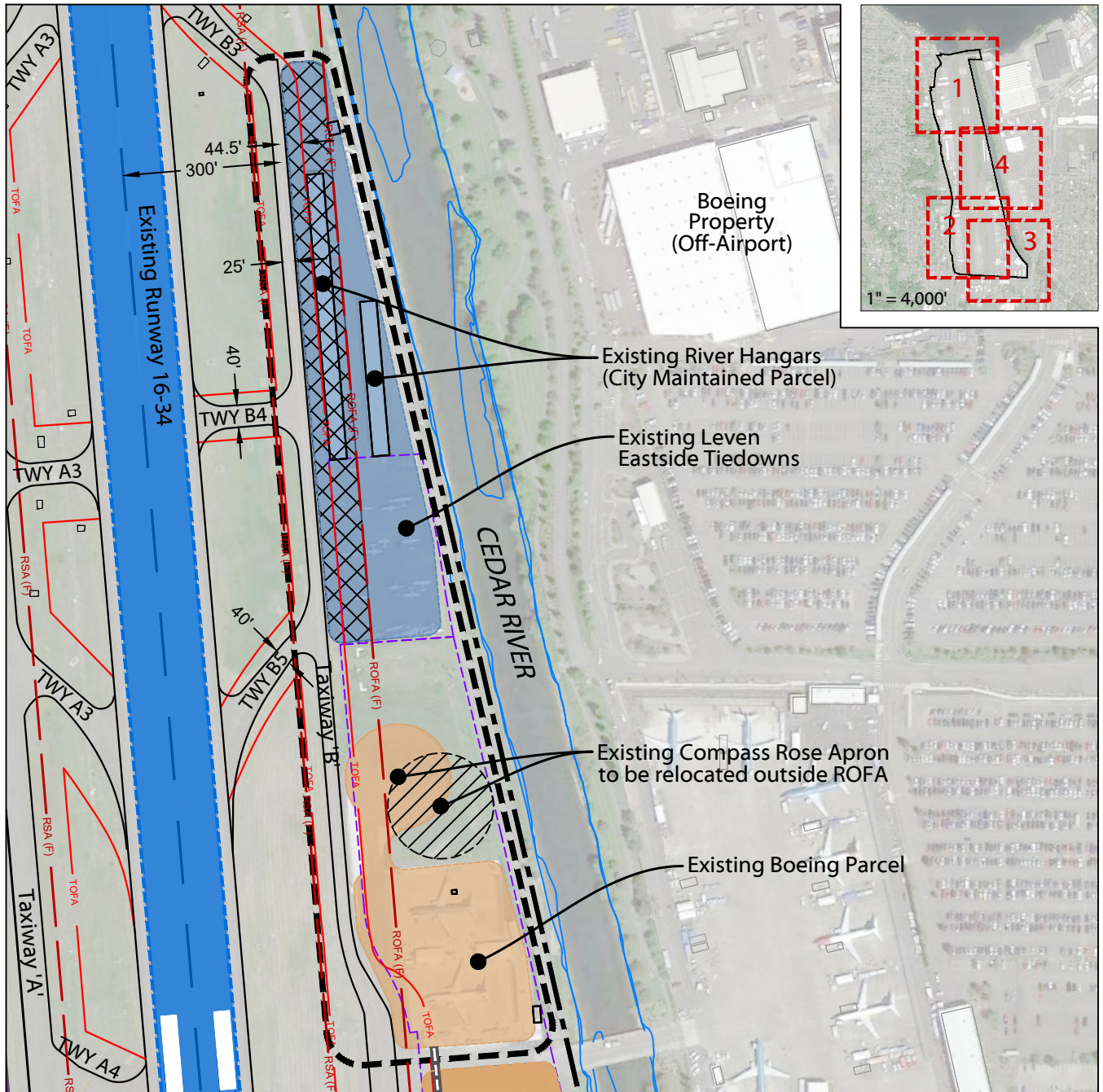


# Master Plan

## Landside Area 4 Development Alternatives

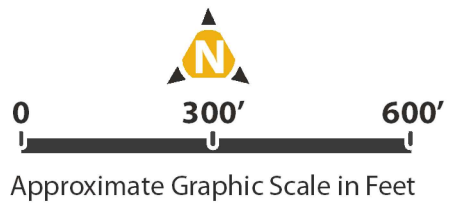
### Landside Area 4 – Existing/Minimal Improvements

This alternative is illustrated in **Figure D16** and indicates that the existing GA and aviation industrial uses would remain. The row of River T-hangars within the ROFA would be demolished and the compass rose apron would be relocated outside of the ROFA.



LEGEND

- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| EXISTING PROPERTY LINE            | FUTURE PAVEMENT                   |
| FUTURE RSA                        | FUTURE RUNWAY                     |
| FUTURE ROFA                       | AVIATION INDUSTRIAL               |
| EXISTING TAXIWAY OBJECT FREE AREA | GENERAL AVIATION                  |
| LEASE PARCEL LINE                 | HANGAR & AIRCRAFT PARKING REMOVED |



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FIGURE D16 Landside: Area 4 - Minimal Action

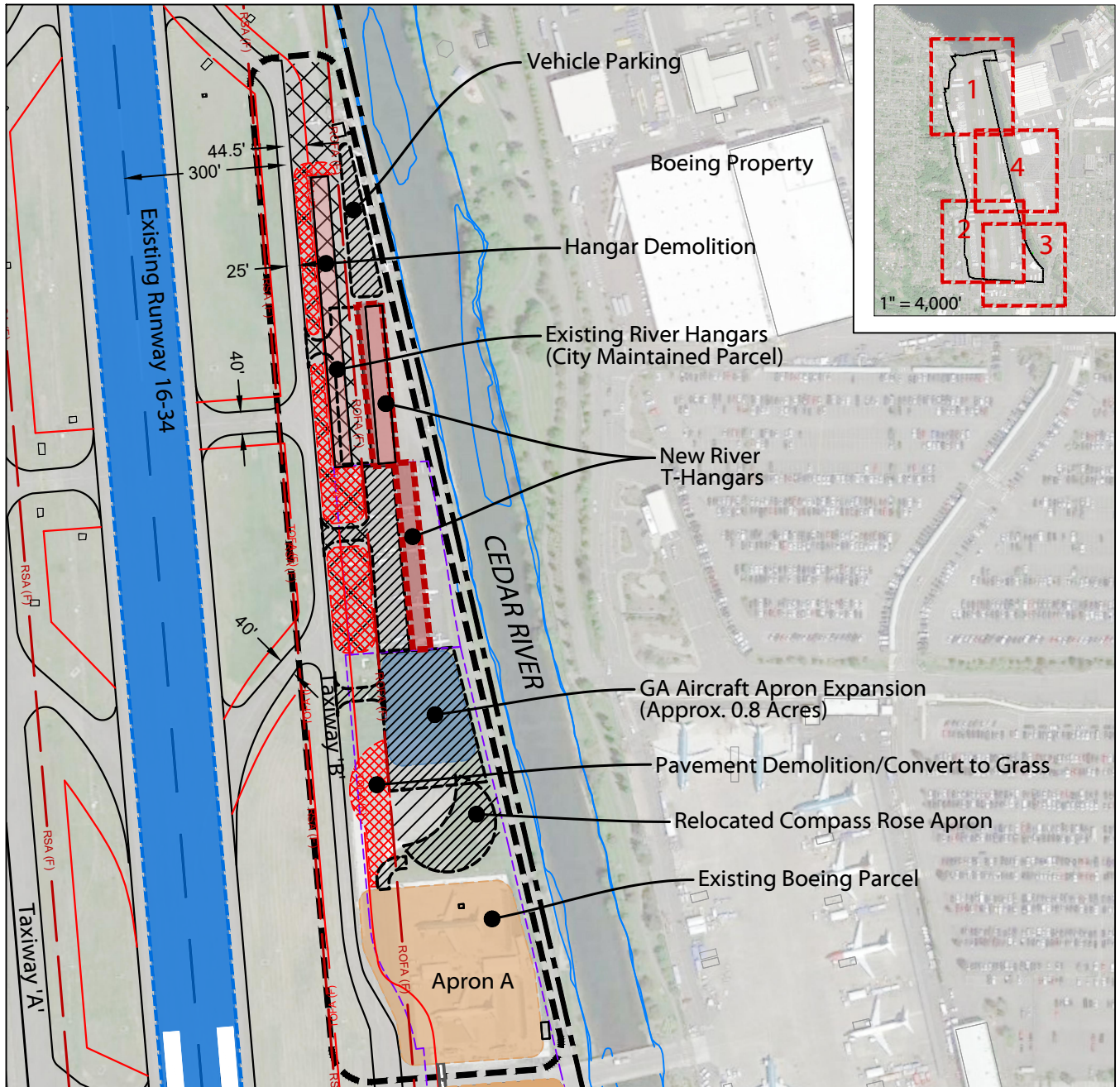
# Master Plan

## Landside Area 4 – Alternative 1

This alternative is illustrated in **Figure D17**. The alternative maximizes GA use in the area and proposes expanding the GA area to the south, which would add approximately 0.8 acres of additional area for GA aircraft parking. The row of River T-hangars within the ROFA and surrounding pavement would be demolished to remove them from the ROFA and to eliminate direct access to Taxiway B from Apron A in this area. Two new taxiway connectors would be constructed to provide access to Taxiway B from the GA portion of Apron A. New apron pavement would be added for the T-hangars would be constructed on the far east side of Apron A, outside of the ROFA.

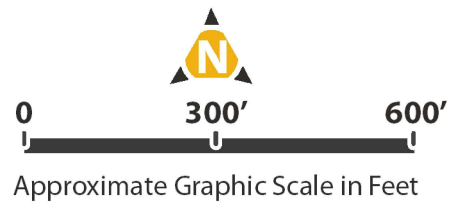
The existing Boeing parcel at the south end of Area 4 would remain the same and the compass rose would be relocated outside of the ROFA. Pavement in front of the compass rose apron would also be demolished, eliminating direct access to Taxiway B from Apron A.





LEGEND

- |                                 |                     |
|---------------------------------|---------------------|
| EXISTING PROPERTY LINE          | FUTURE RUNWAY       |
| FUTURE RSA                      | AVIATION INDUSTRIAL |
| FUTURE ROFA                     | GENERAL AVIATION    |
| FUTURE TAXIWAY OBJECT FREE AREA | HANGAR DEMOLITION   |
| LEASE PARCEL LINE               | HANGAR DEVELOPMENT  |
| FUTURE PAVEMENT                 | PAVEMENT DEMOLITION |



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FIGURE D17 Landside: Area 4 - Alternative 1

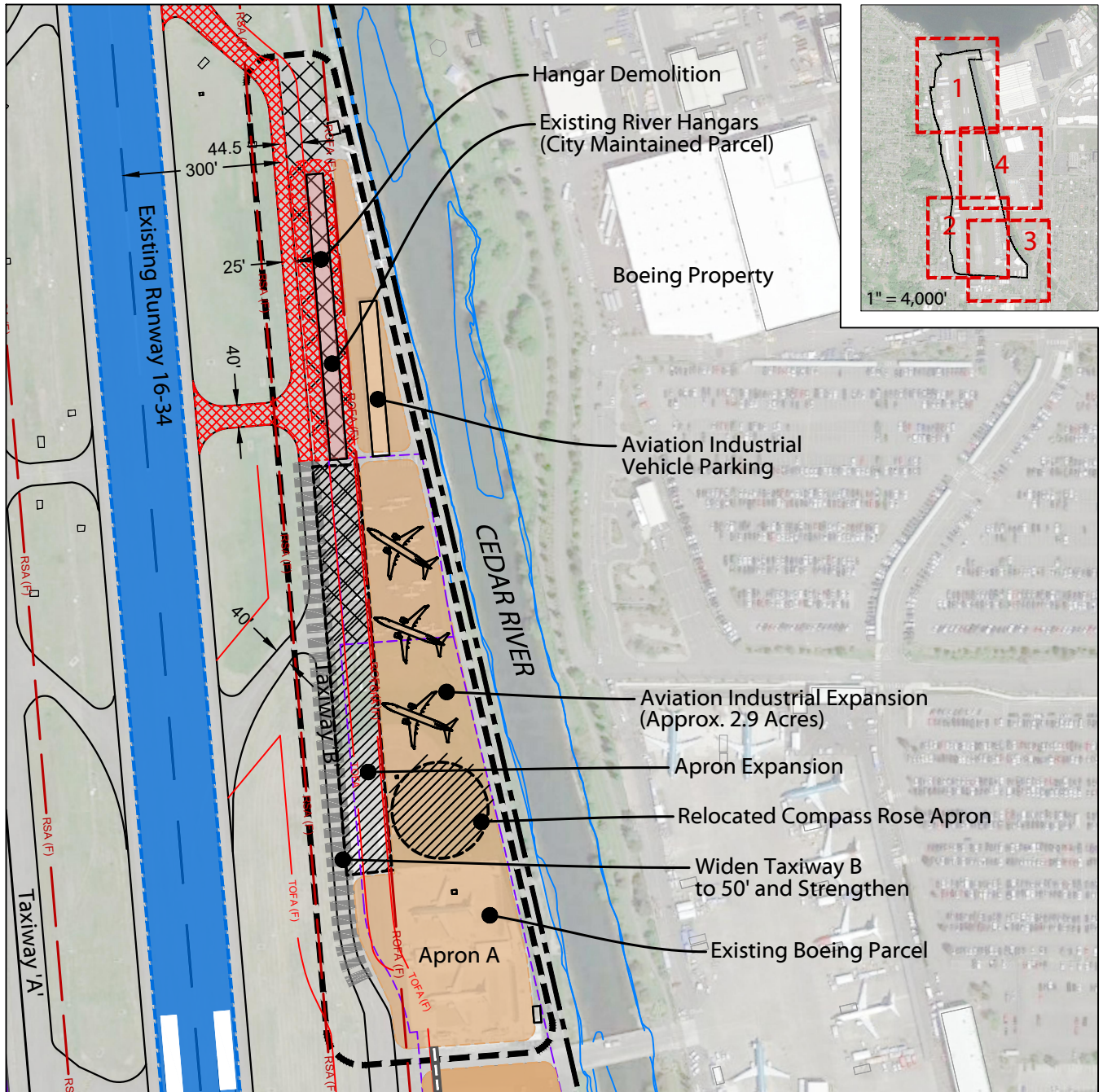


# Master Plan

## Landside Area 4 – Alternative 2

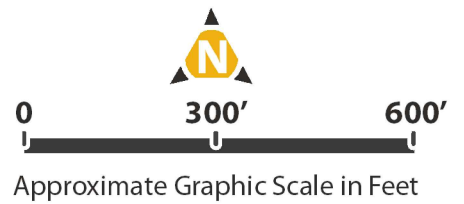
This alternative is illustrated in **Figure D18**. The alternative maximizes aviation industrial use in the area and proposes eliminating GA uses within area 4 and converting all uses to aviation industrial. Both rows of T-hangars would be demolished as well as the surrounding pavement within the ROFA, and the associated GA portion of Taxiway B and taxiway connectors at the north end of this area. The far eastern edge of this area would be converted to aviation industrial vehicle parking. The remaining portion of Taxiway B that currently accommodates GA use would be widened to fifty feet and strengthened to accommodate aviation industrial use. Additional apron pavement would also be constructed between the widened Taxiway B and Apron A. Eliminating the existing GA use on Apron A would provide approximately 2.9 additional acres for aviation industrial use.

Like Area 4 – Alternative 1, the compass rose apron would be relocated outside of the ROFA. Pavement in front of the compass rose apron would also be demolished.



LEGEND

|                                 |                     |
|---------------------------------|---------------------|
| EXISTING PROPERTY LINE          | FUTURE RUNWAY       |
| FUTURE RSA                      | FUTURE PAVEMENT     |
| FUTURE ROFA                     | AVIATION INDUSTRIAL |
| FUTURE TAXIWAY OBJECT FREE AREA | GENERAL AVIATION    |
| LEASE PARCEL LINE               | HANGAR DEMOLITION   |
|                                 | PAVEMENT DEMOLITION |



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FIGURE D18 Landside: Area 4 - Alternative 2

# Master Plan

## Landside Seaplane Area Development Alternatives

### Seaplane Area – Alternative 1

Recognizing that the change in RDC and the Preferred Airfield alternative require a reduction in the amount of space available for aircraft storage and parking, the City of Renton would like to maximize the amount of space reserved for future GA related development, which includes seaplane facilities and parking. The purpose of this alternative, illustrated in **Figure D19**, is to reconfigure and consolidate the existing seaplane facilities at the Airport. Similar to what is illustrated on Landside 1, Alternative 1, this alternative includes relocation of the existing seaplane ramp and dock outside of the ROFA. It relocates the perimeter fence on the west side to expand the parking area while maintaining residential access from outside the perimeter fence and converts the existing viewing area into additional seaplane parking.



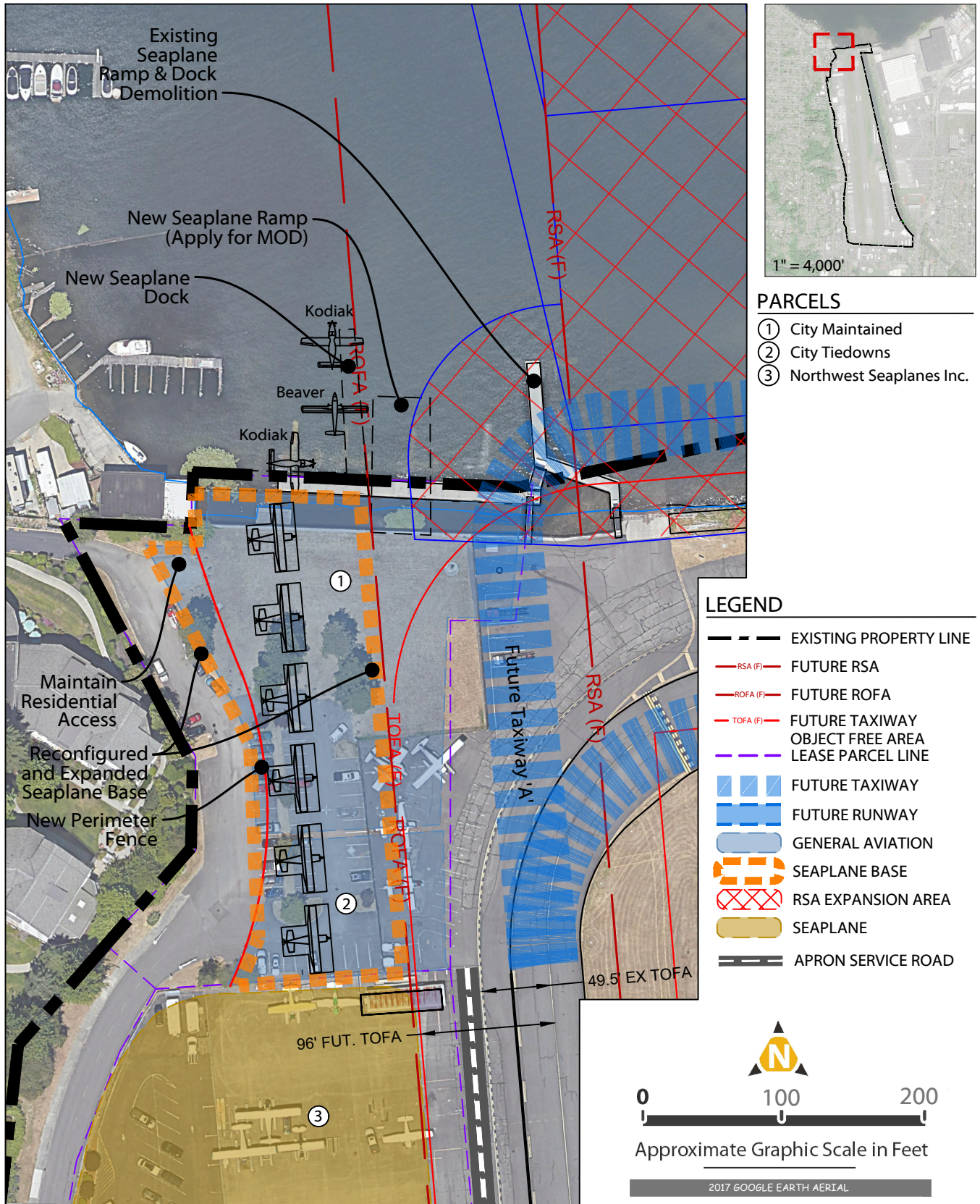


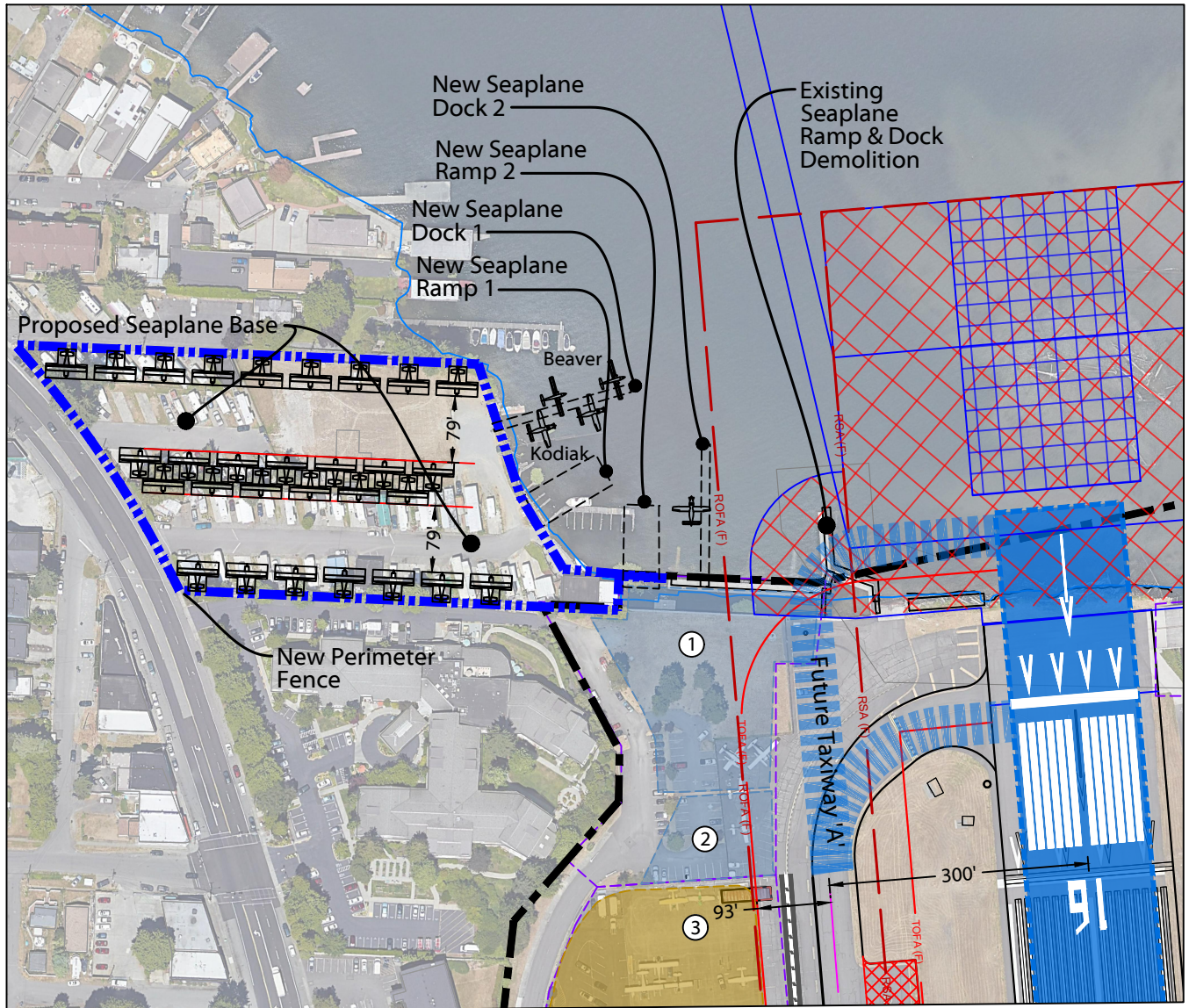
FIGURE D19 Seaplane Area - Alternative 1

# Master Plan

## Seaplane Area – Alternative 2

This alternative, illustrated in **Figure D20**, proposes reconfiguring and expanding the existing seaplane facilities in the northwest quadrant of the Airport. As in Seaplane Area - Alternative 1, the existing seaplane dock and ramp is relocated outside of the ROFA. Two reconfigured seaplane docks and ramps would be constructed to the west of the existing dock and ramp. This alternative involves the acquisition of 4 parcels on the west side of the existing seaplane ramp at the Bryn Mawr Beach Mobile Court and Lake Washington Beach Mobile Park, which compromise approximately 5.72 total acres and have an estimated acquisition cost of approximately \$12 to \$13 Million. The area would also require approximate grading and drainage to allow for apron construction for seaplane parking. The perimeter fence would be reconfigured around this land acquisition area, which would provide 29 additional seaplane parking spaces.



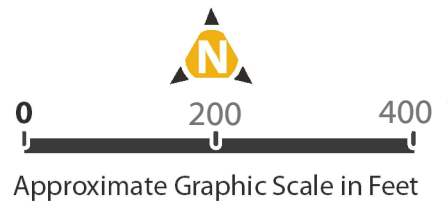


LEGEND

- EXISTING PROPERTY LINE
- RSA (F) FUTURE RSA
- ROFA (F) FUTURE ROFA
- TOFA (F) FUTURE TAXIWAY OBJECT FREE AREA
- LEASE PARCEL LINE
- FUTURE TAXIWAY
- FUTURE RUNWAY
- FUTURE EMAS
- GENERAL AVIATION
- PROPERTY ACQUISITION
- PAVEMENT DEMOLITION
- RSA EXPANSION AREA
- SEAPLANE
- APRON SERVICE ROAD

PARCELS

- ① City Maintained (Convert to GA Parking)
- ② City Tiedowns
- ③ Northwest Seaplanes Inc.



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FIGURE D20 Seaplane Area - Alternative 2



# Master Plan

## Landside Alternatives Screening and Evaluation.

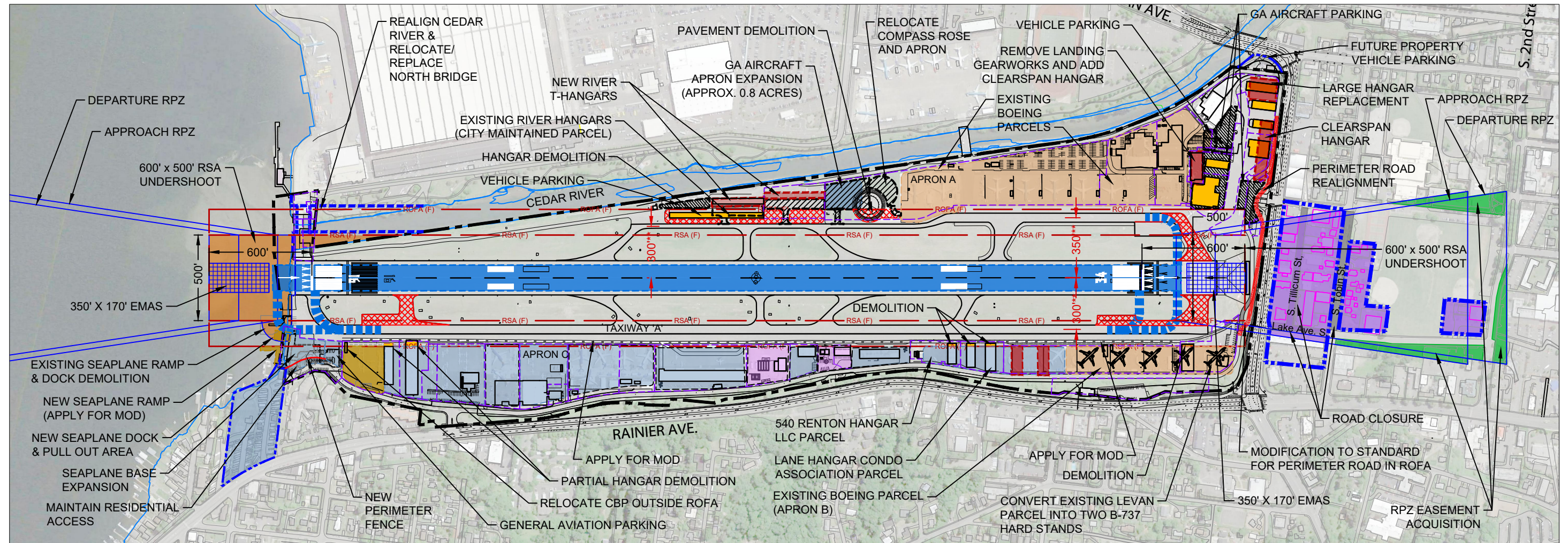
The information provided in the previous sections provides a description of landside development alternatives for the purpose of meeting FAA design standards, as well as meeting the facility requirements and capacity previously defined in **Chapter C**. As stated previously, with the change in RDC the amount of space available for aircraft parking is reduced and a goal of this landside alternatives analysis is to maximize the amount of space available for GA and seaplane parking and storage. Consequently, preference has been given to the alternatives that maximize space available for GA.

The following landside area development alternatives were selected as the preferred alternatives primarily because they maximize GA development, as illustrated in the Conceptual Development Plan (CDP), **Figure D-21**, along with the preferred airside alternative (Alternative 5):

- Landside Area 1 – Alternative 1
- Landside Area 2 – Alternative 1
- Landside Area 3 – Alternative 1
- Landside Area 4 – Alternative 1
- Seaplane Area – Alternative 2

The CDP serves as the base for updating Airport Layout Plan (ALP).



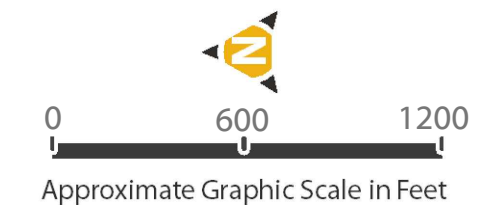


**Notes:**  
 \*\* RW/TW separation to be addressed with operational mitigation.  
 \*\*\*The Renton High School ballfield property will not be acquired by the Airport. However; it is recommended that the Airport, the City of Renton and the Renton School District continue work together to address this non-compatible land use within the RPZ.

**Disclaimer:**  
 This illustration is for study purposes only, based on national FAA standards, and is not necessarily intended for implementation. For further information please see Chapter D of the Airport Master Plan and the FAQ document on the Airport's website.

**LEGEND**

|  |   |  |
|--|---|--|
| --- EXISTING PROPERTY LINE                     | FUTURE TAXIWAY  | ■ AIRPORT SUPPORT                                    |
| - - - FUTURE PROPERTY LINE                     | ■ FUTURE RUNWAY   | ■ AVIATION INDUSTRIAL                                |
| --- ROAD CLOSURE                               | ▨ FUTURE PAVEMENT   | ■ GENERAL AVIATION                                   |
| --- FUTURE ROADWAY ALIGNMENT                   | ■ FUTURE RUNWAY SAFETY AREA EXPANSION                         | ■ FUTURE SEAPLANE DOCK                               |
| --- RSA (F) FUTURE RW SAFETY AREA (RSA)        | ■ RPZ CONTROLLED ACTIVITY AREA (EASEMENT)*                    | ■ HANGAR DEVELOPMENT                                 |
| --- ROFA (F) FUTURE RW OBJECT FREE AREA (ROFA) | ■ PROPOSED BUILDING/FACILITY DEMOLITION                       | ▨ PAVEMENT DEMOLITION                                |
| --- TOFA (F) FUTURE TW OBJECT FREE AREA (TOFA) | ■ RPZ FEE SIMPLE ACQUISITION FOR APPROACH PROTECTION PURPOSES | ■ FUTURE ACQUISITION FOR SEAPLANE BASE               |
| --- APRON SERVICE ROAD                         | ■ BUILDINGS WITHIN RPZ ACQUISITION TO BE REMOVED              | ■ FUTURE ENGINEERED MATERIAL ARRESTING SYSTEM (EMAS) |
| --- LEASE PARCEL LINE                          |   |  |



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FIGURE D21 Conceptual Development Plan