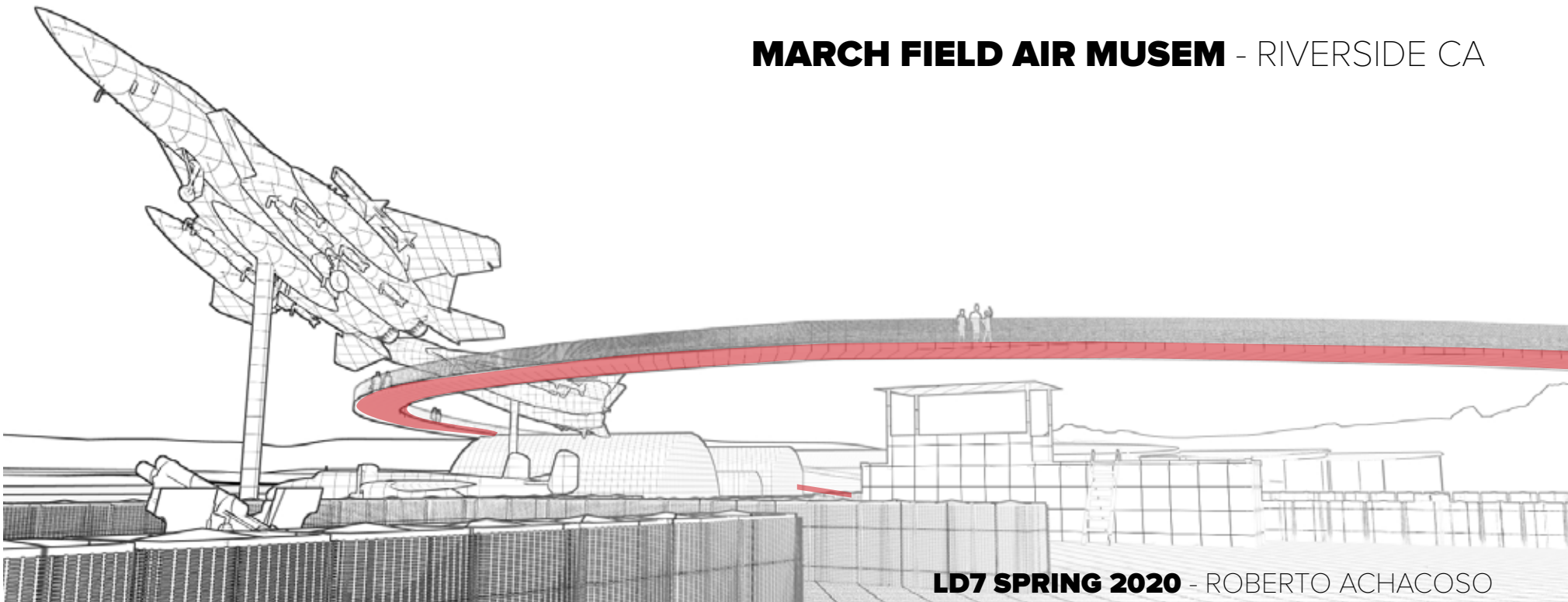


## **MARCH FIELD AIR MUSEM** - RIVERSIDE CA



**LD7 SPRING 2020** - ROBERTO ACHACOSO

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PROJECT STATEMENT & PROGRAM

THIS CONCEPTUAL MASTER PLAN FOR THE MARCH FIELD AIR MUSEUM AIMS TO CREATE AN **EXCEPTIONAL VISITOR EXPERIENCE** THROUGH IMPROVED **DISCOVERY, STORYTELLING, & COMFORT** AS WELL AS IMPROVING THE MUSEUM’S **PUBLIC PROFILE, IDENTITY & ENGAGEMENT**

- EXPANDED & RE-IMAGINED HERITAGE GARDEN
- EXPANDED AND RELOCATED VIETNAM FIREBASE
- EXPANDED AND RELOCATED AFGHANISTAN FIREBASE
- INDOOR/OUTDOOR GLASS ENCLOSED MUSEUM EXPANSION
- ELEVATED WALKWAYS AND OVERLOOKS
- SHADE STRUCTURES AND RESPITES
- EXPANDED ON-FIELD RESTROOM FACILITES
- FLEXIBLE EVENT AND EXHIBIT SPACES
- OPPORTUNITIES FOR STORYTELLING

## JOURNEYS

One of the most striking and unique elements of the current March Field Air Museum are its military firebase re-creations. In the real-world, these forward-operating-bases, sited deep within enemy territory, are challenging places: challenging to get to, challenging to live in, challenging to leave. Getting to them, living in them and returning from them involves **physically and emotionally arduous and transformative journeys**.

This project takes the idea of this ‘journey’ as its central theme, with the goal of taking museum-goers on a series of ‘journeys’ to hopefully **provide visitors even just a slight semblance of the journeys that these soldiers had to undertake**.



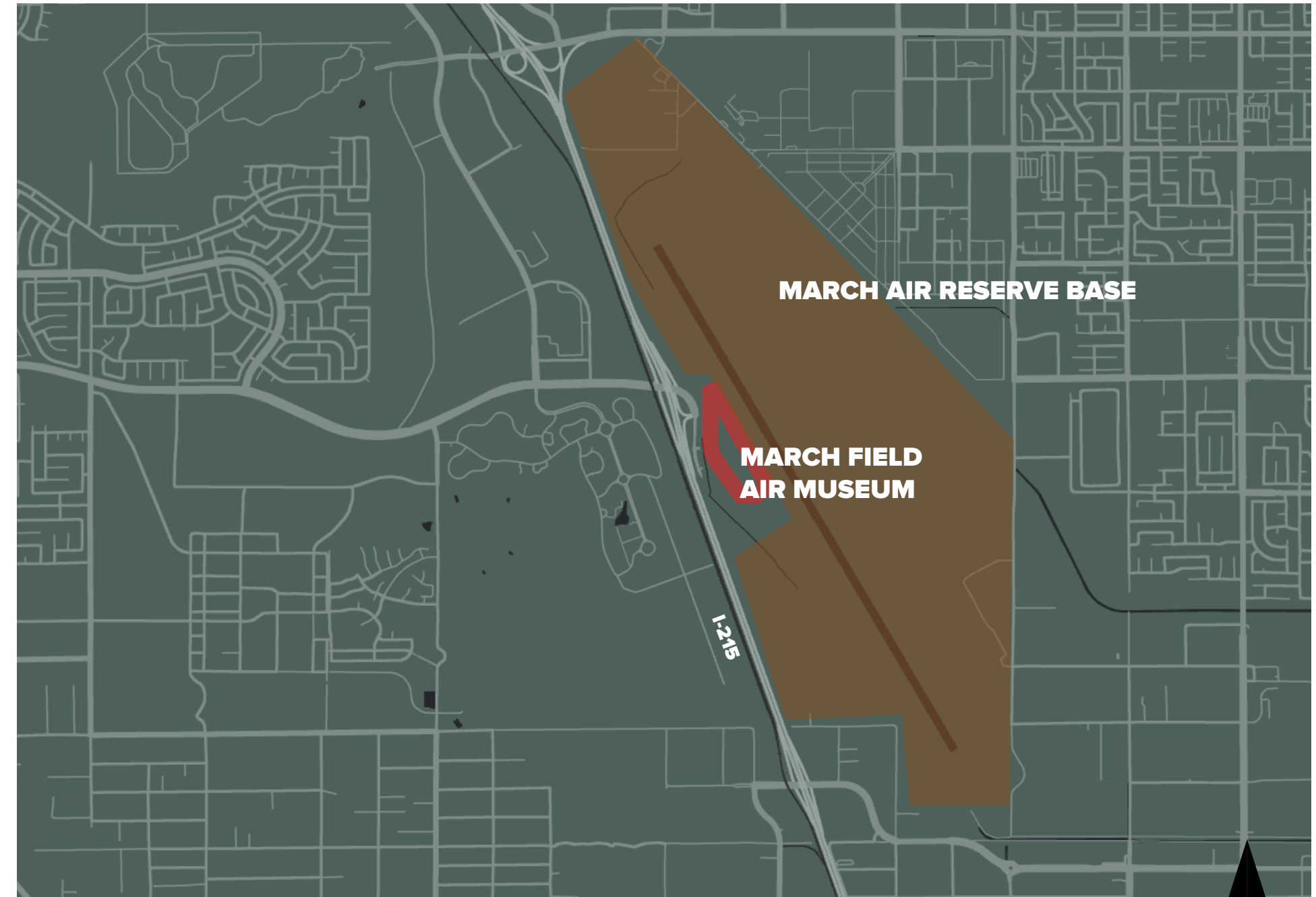
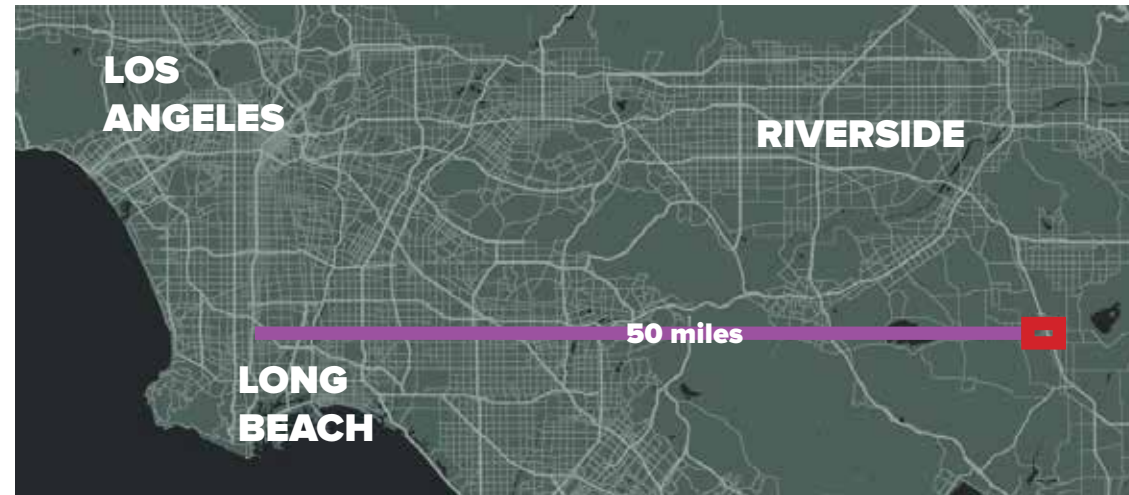
<https://www.youtube.com/watch?v=jfnWb4p1tI>

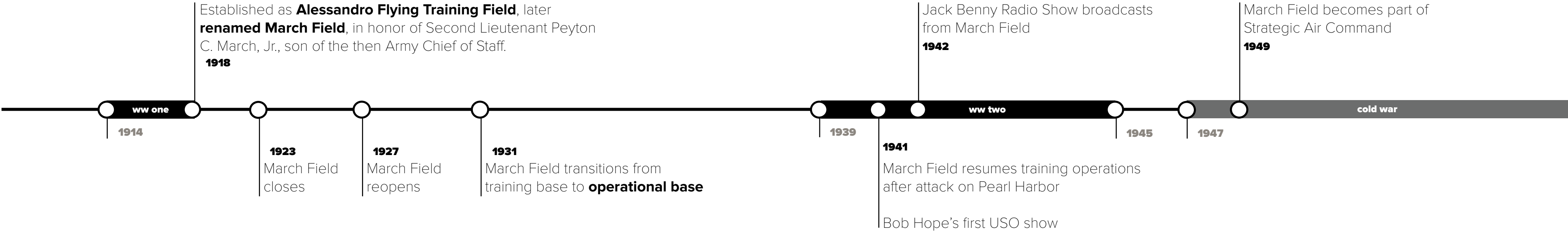


[https://en.wikipedia.org/wiki/Fire\\_support\\_base#/media/File:Fire\\_Support\\_Base\\_Crook\\_1969-06.jpg](https://en.wikipedia.org/wiki/Fire_support_base#/media/File:Fire_Support_Base_Crook_1969-06.jpg)



## SITE LOCATION



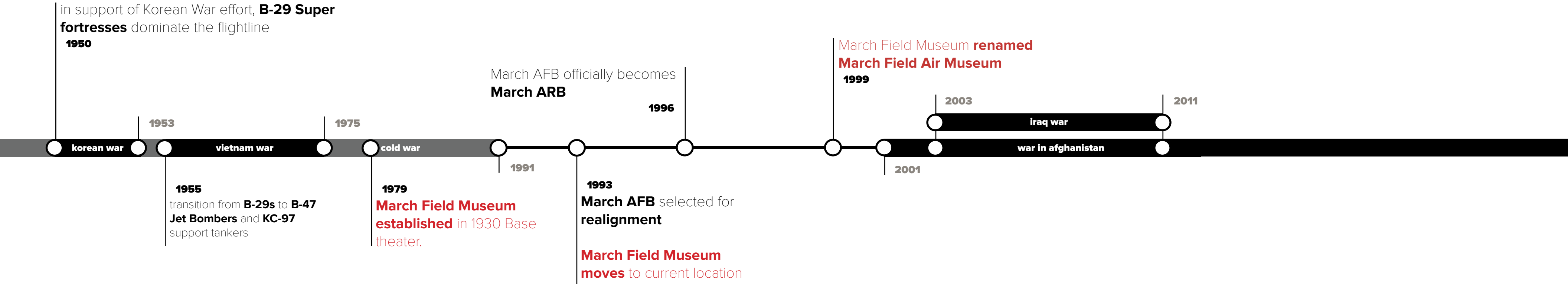


HISTORICAL CONTEXT

HISTORY OF MARCH FIELD 1918-1949

<https://www.march.afrc.af.mil/About-Us/Fact-Sheets/Display/Article/167413/the-march-field-story/>  
[https://en.wikipedia.org/wiki/March\\_Air\\_Reserve\\_Base](https://en.wikipedia.org/wiki/March_Air_Reserve_Base)  
<https://www.marchfield.org/visit/about-us/museum-history/>  
<http://www.militarymuseum.org/MarchAFB.html>





HISTORY OF MARCH FIELD 1950 - PRESENT



<https://www.march.afrc.af.mil/About-Us/Fact-Sheets/Display/Article/167413/the-march-field-story/>  
[https://en.wikipedia.org/wiki/March\\_Air\\_Reserve\\_Base](https://en.wikipedia.org/wiki/March_Air_Reserve_Base)  
<https://www.marchfield.org/visit/about-us/museum-history/>  
<http://www.militarymuseum.org/MarchAFB.html>





DESIGN PRECEDENTS & INSPIRATION

**NATIONAL MUSEUM OF THE UNITED STATES AIR FORCE™** - DAYTON OH  
creating compelling narratives, visuals and journeys

**MUSEUM OF FLIGHT** - SEATTLE, WA  
using a simple structure to craft an identity

**KOREAN WAR VETERANS MEMORIAL** - WASHINGTON, DC  
creating a sense of place with emotional depth

**WALKER ART CENTER / MINNEAPOLIS SCULPTURE GARDEN** - MINNEAPOLIS MN  
defining flexible spaces outdoors

**LACMA - ‘Levitated Mass’** - LOS ANGELES CA  
encouraging changes of perspective

**ACADEMY MUSEUM OF MOTION PICTURES** - LOS ANGELES CA  
innovative glass canopy



Partitions allow the museum to visually separate **different narrative areas**, while overhead views provide visitors glimpses of what's to come. Discrete paths **aid the visitor's journey through the narrative**.



<https://www.nationalmuseum.af.mil/>

**NATIONAL MUSEUM OF THE UNITED STATES AIR FORCE**<sup>TM</sup> - DAYTON OH

creating compelling narratives, visuals and journeys



<https://www.nationalmuseum.af.mil/>

The limited interior space within the exhibit hangars elicits a need for interesting and **dynamic placement of planes** in 3 dimensions. The availability overhead support structures allows for placement of aircraft 'in-flight'



<https://maps.google.com>

**MUSEUM OF FLIGHT** - SEATTLE, WA

using a simple structure to craft an identity



<https://maps.google.com>

The Museum of Flight created an indoor/outdoor hangar without walls. It acts as a **sheltered outdoor exhibit space**, as well as **street facing signage & branding**.





<https://www.koreanwarvetsemorial.org/the-memorial/>

KOREAN WAR VETERANS MEMORIAL -WASHINGTON, DC

creating a sense of place with emotional depth



<https://www.koreanwarvetsemorial.org/the-memorial/>

The Korean War Veterans memorial uses forms and plantings to create a **sense of place** -the rice paddies of Korea - while the collection of realistic soldier statues elicits surprising **emotional depth** because of their **frank and unvarnished portrayal of war life**.



<https://maps.google.com>

WALKER ART CENTER / MINNEAPOLIS SCULPTURE GARDEN - MINNEAPOLIS MN

defining flexible spaces outdoors



<https://maps.google.com>

The Walker Art Center / Minneapolis Sculpture Garden uses different combinations of plantings, pathways and short planters/walls, to **create outdoor rooms**, while leaving enough flexibility for changing exhibits.





<https://www.latimes.com/entertainment/arts/culture/la-et-knight-heizer-rock-20120623-story.html>

The central experience of ‘Levitated Mass’ by Michael Heizer - at the Los Angeles County Museum of Art - is how it uses **changes of perspective** to give the visitor multiple experiences of the same object

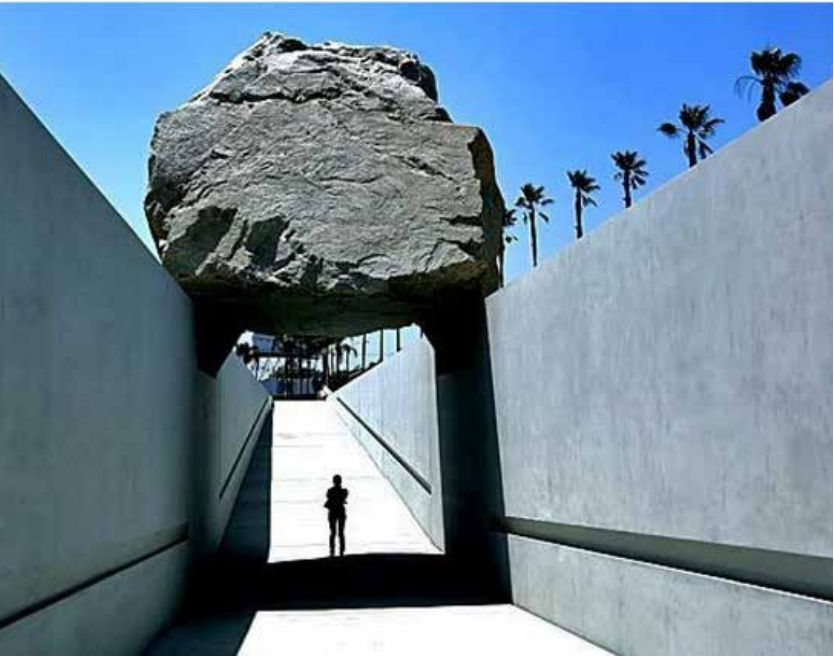


<https://www.dezeen.com/2017/09/29/renzo-piano-academy-museum-motion-pictures-new-images-los-angeles/>

The under-construction Academy Museum of Motion Pictures - designed by Renzo Piano - includes a panoramic **glass covered terrace** that appears to both **shelter the visitor** while **framing the surrounding panorama**

LACMA - ‘Levitated Mass’ - LOS ANGELES CA

encouraging changes of perspective



<https://www.latimes.com/entertainment/arts/culture/la-et-knight-heizer-rock-20120623-story.html>



<https://www.latimes.com/entertainment/arts/culture/la-et-knight-heizer-rock-20120623-story.html>

ACADEMY MUSEUM OF MOTION PICTURES - LOS ANGELES CA

inside / outside - innovative glass canopy



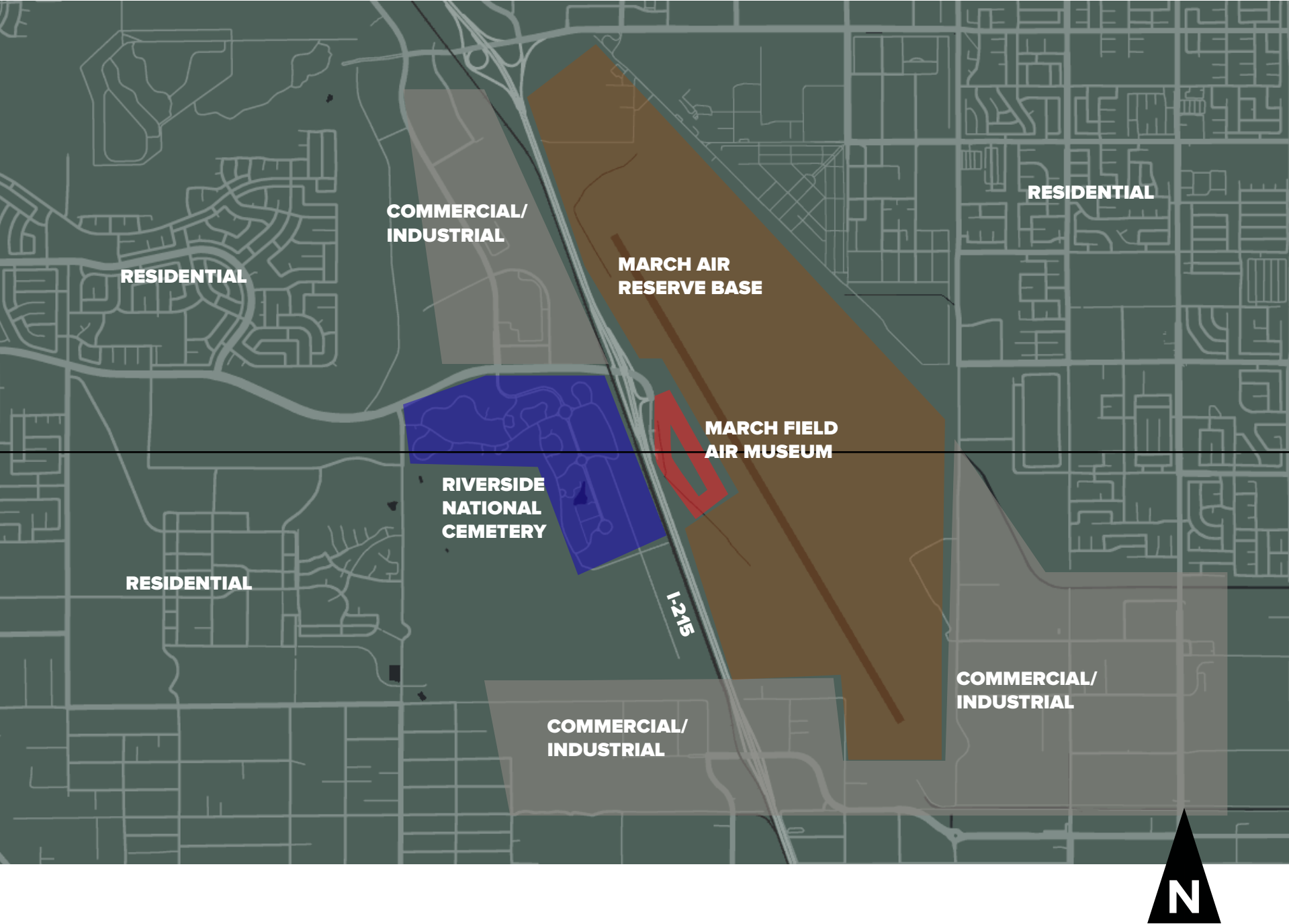
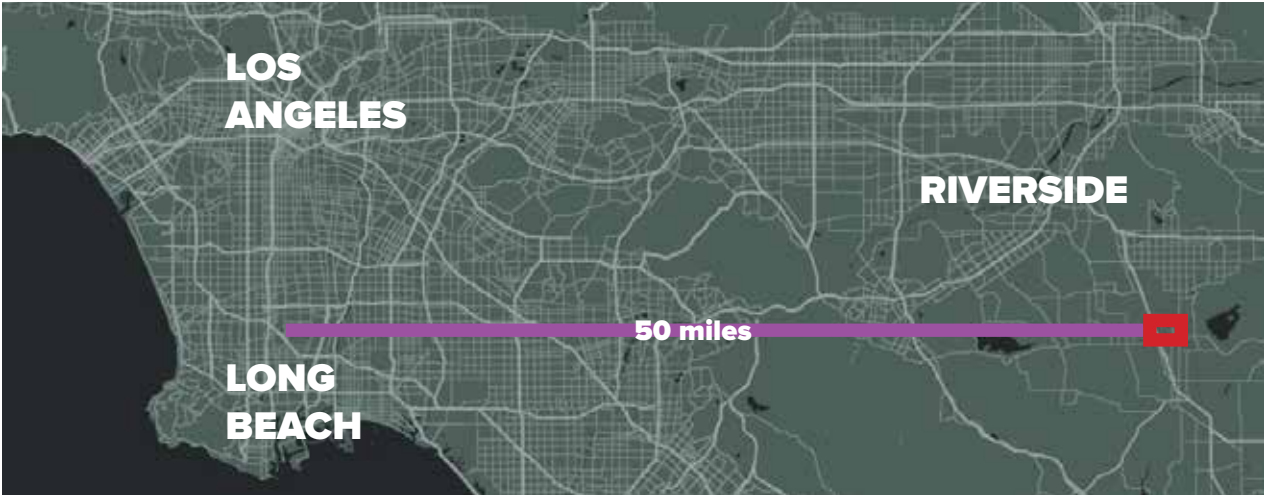
<https://www.dezeen.com/2017/09/29/renzo-piano-academy-museum-motion-pictures-new-images-los-angeles/>



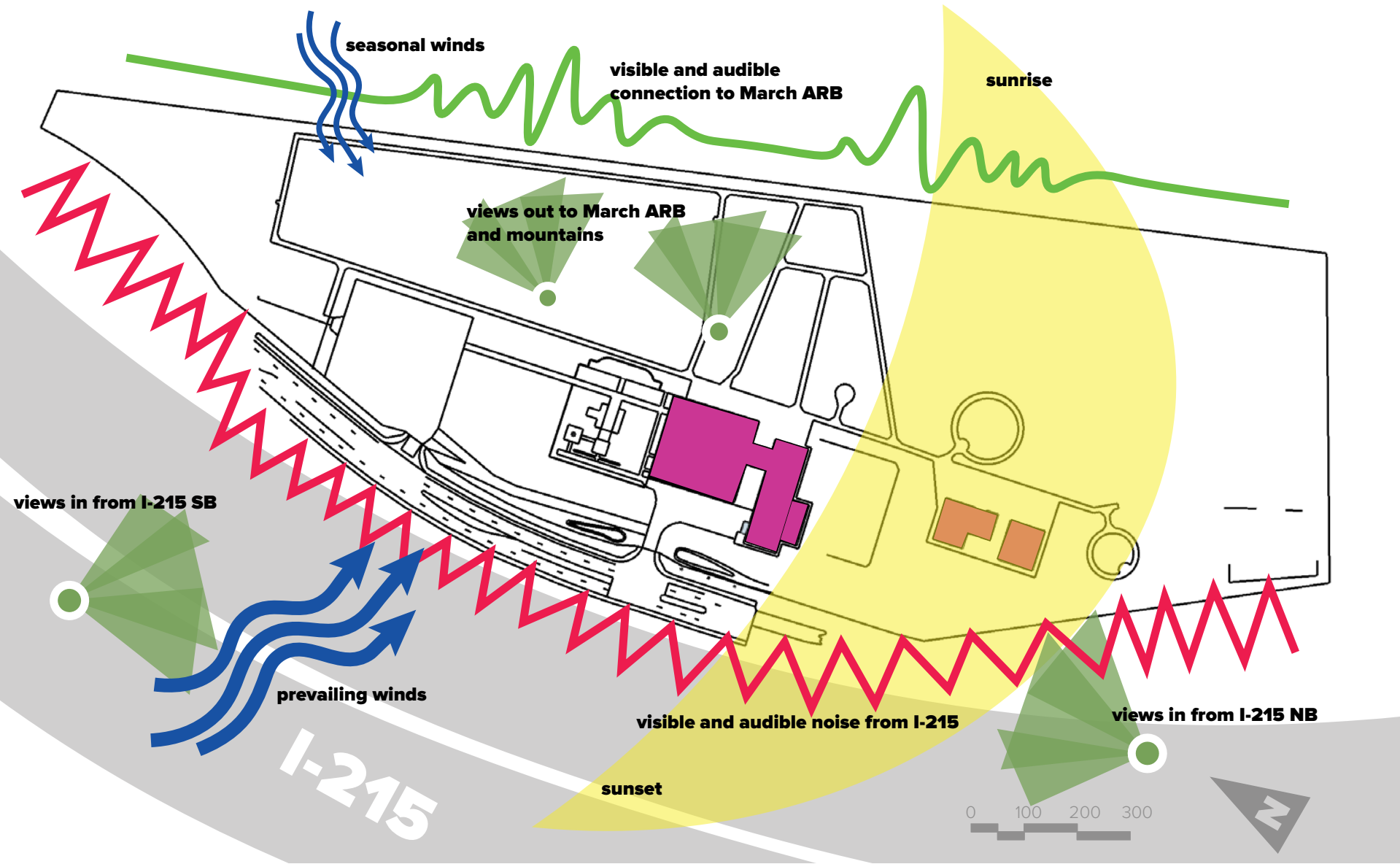
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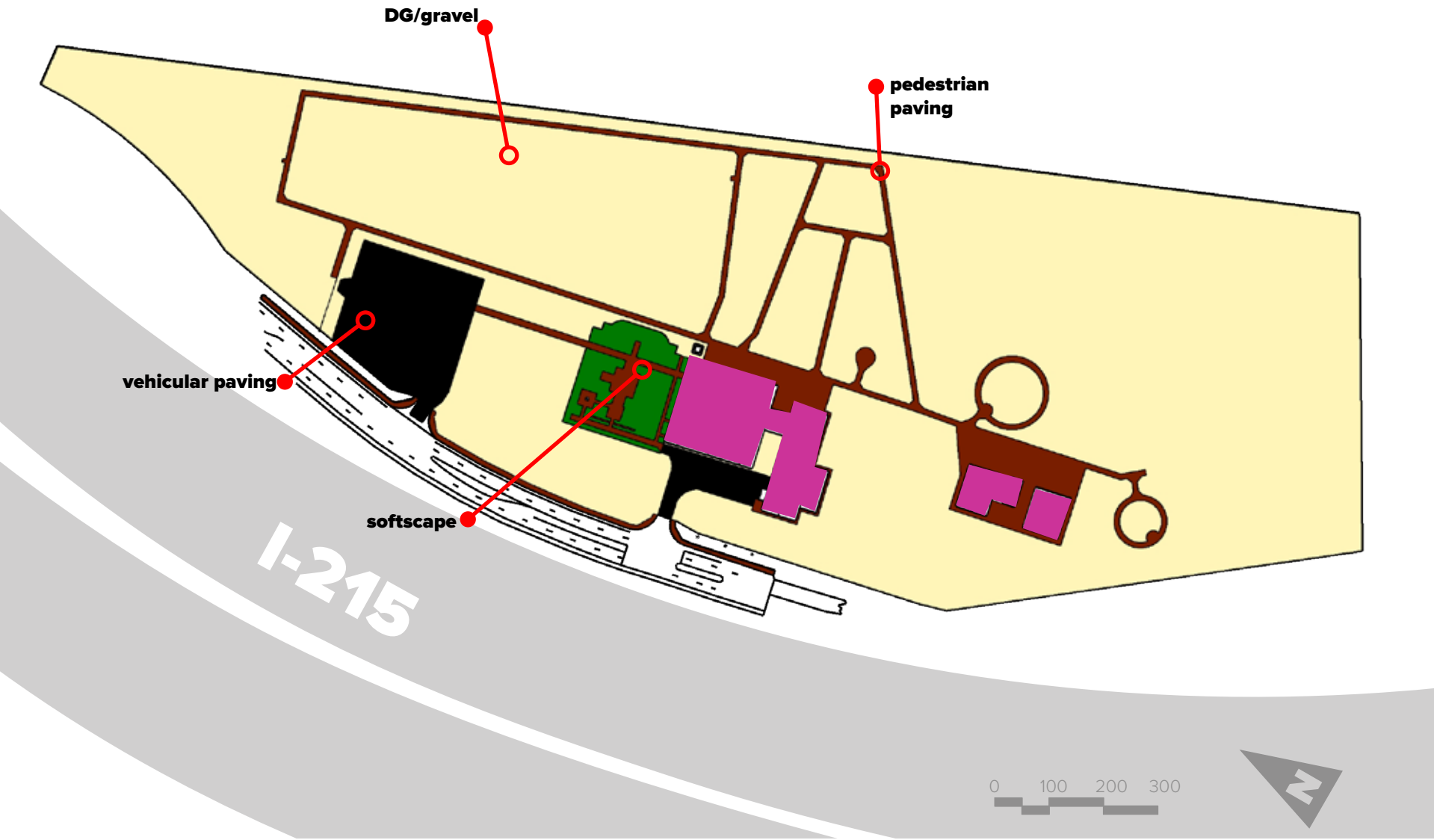
SITE ANALYSIS



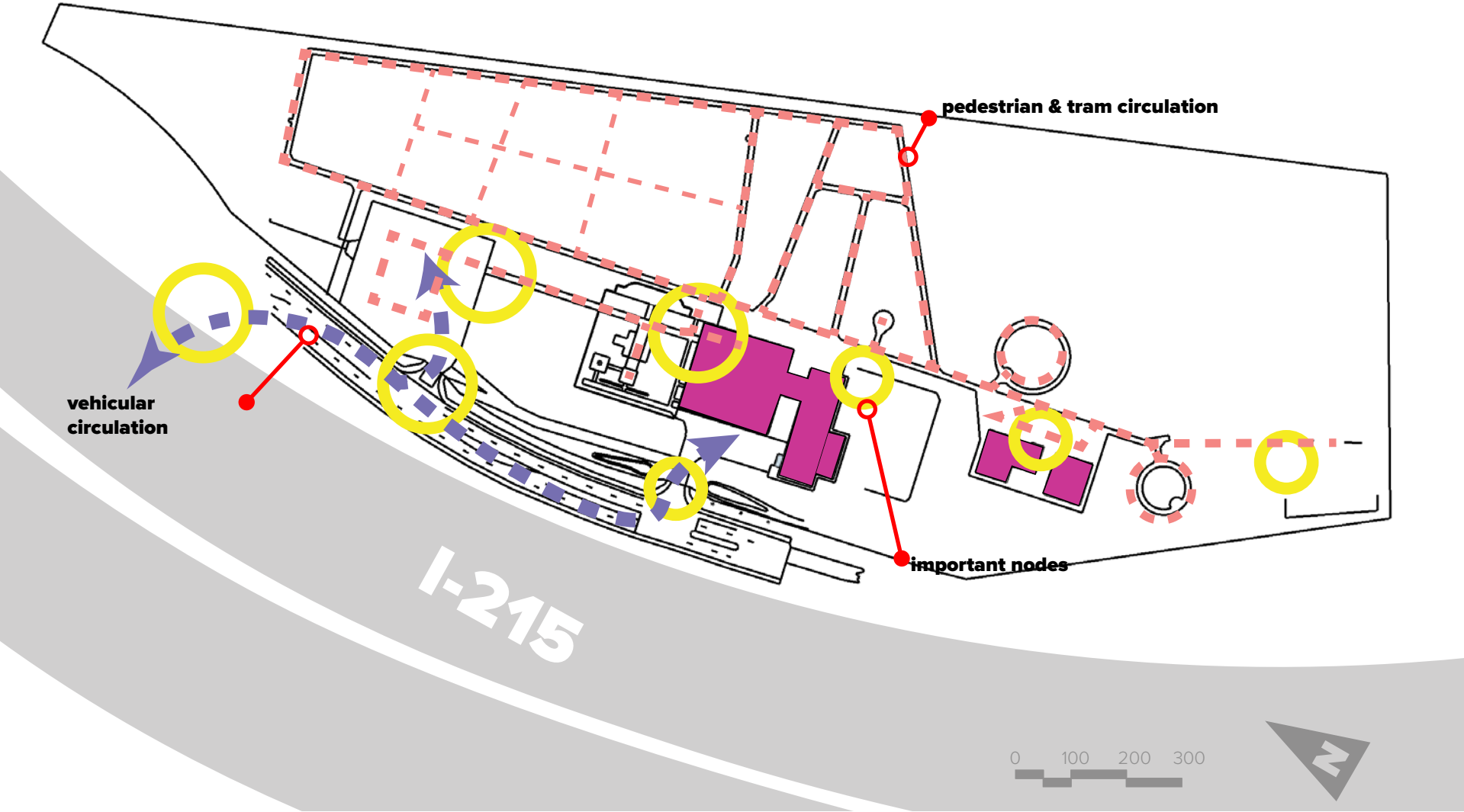




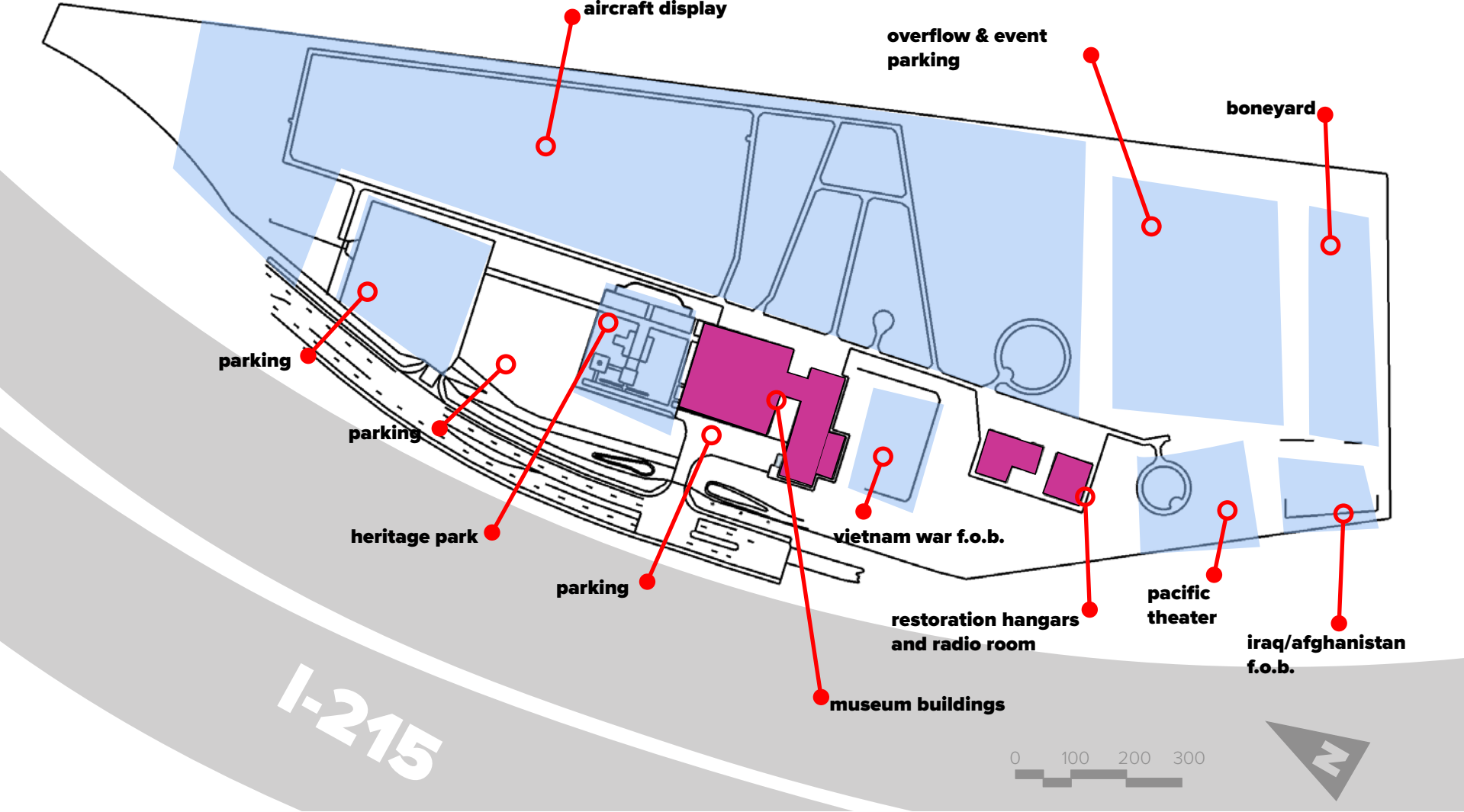
ENVIRONMENTAL FACTORS & CONDITIONS



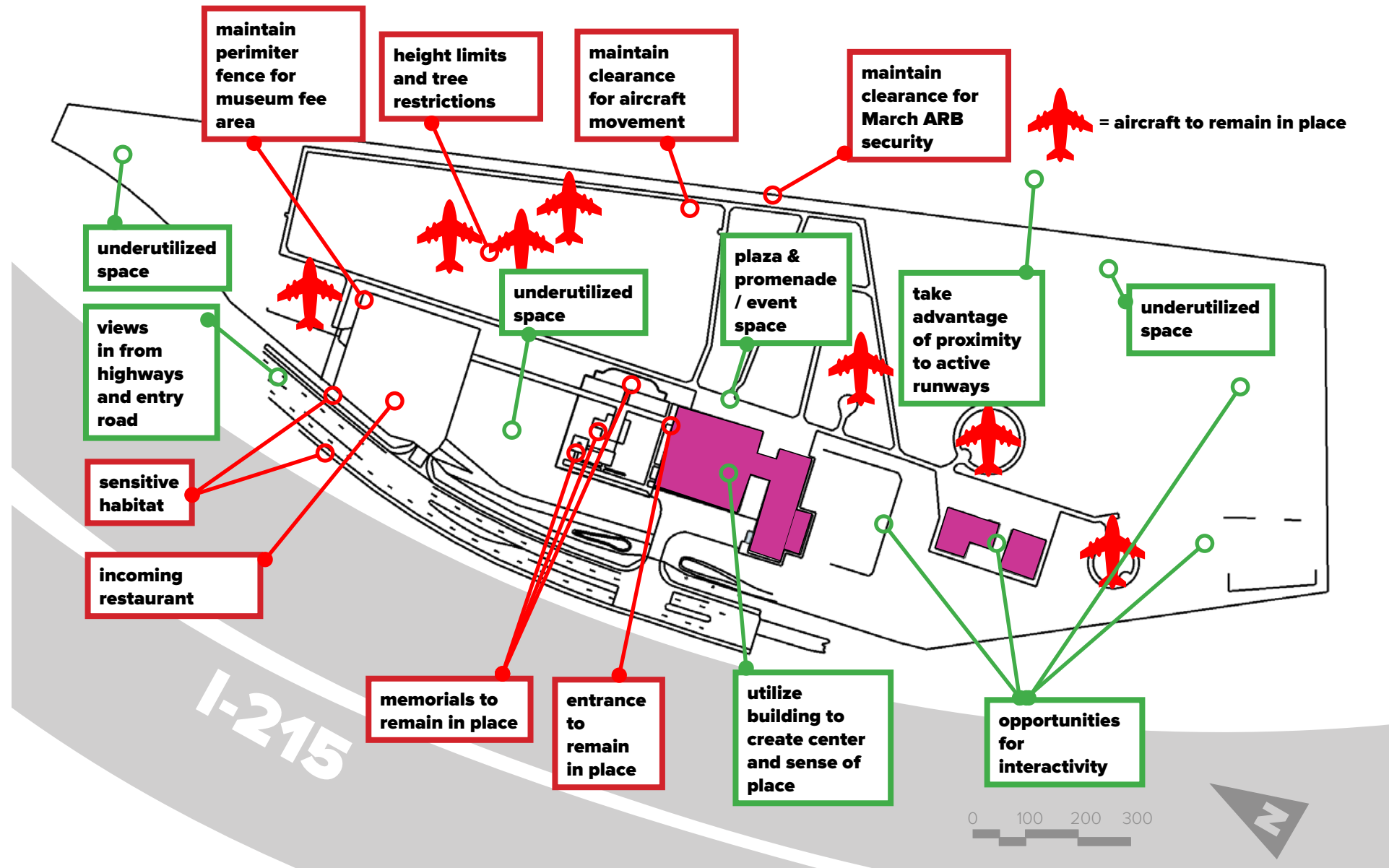
EXISTING SURFACE CONDITIONS



CIRCULATION



CURRENT USE



**constraints:**

- building & planting restrictions
- reserve placement & space for existing elements
- need for shade
- mitigate proximity to highway (noise)

**opportunities:**

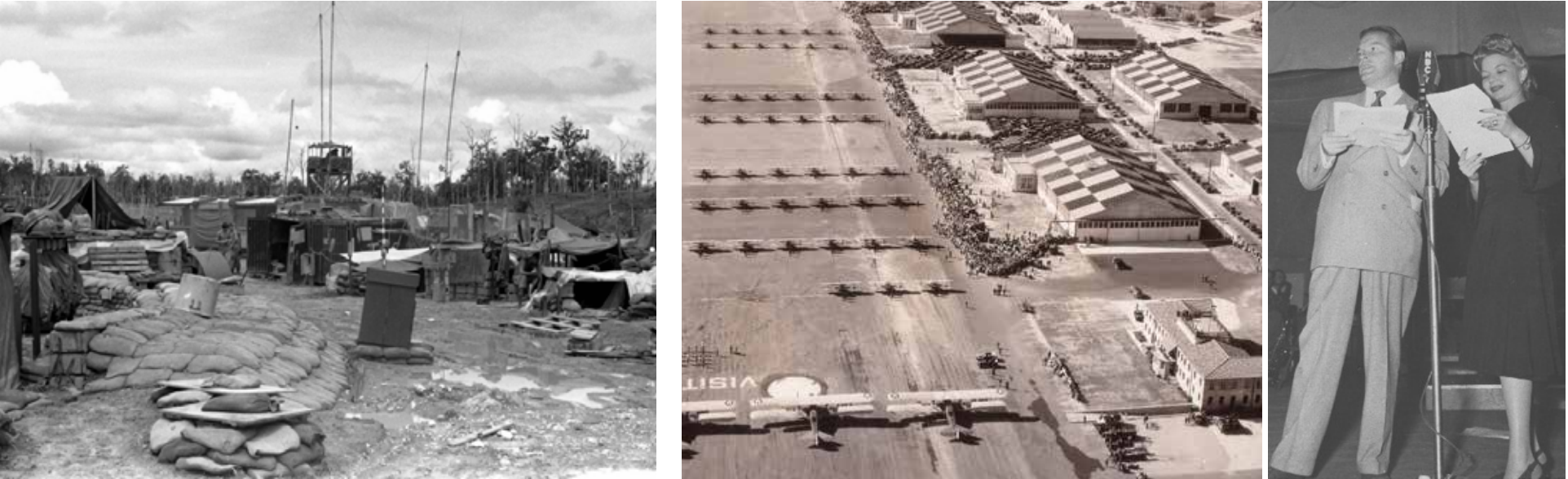
- much underutilized space for expanded exhibits and events
- leverage views out to March ARB Runways
- leverage proximity to highway (visual markers/monuments)





CONCEPT DEVELOPMENT CONNECTION · PHYSICAL - VIRTUAL - THEORETICAL

As a working air base, the central purpose of March Field has been to connect to various far-flung theaters of war. Concept development sprung from this idea of connection, specifically: **physical connection**, **virtual connection**, and **theoretical connection**.






CONCEPT 1 - AIRFIELD    PHYSICAL CONNECTION

Concept 1, physical connection, was based on the idea of the airfield and air travel. The layout structure was based on airfield runway design, with an abstracted layout derived from the Department of Defense’s Joint Military Symbolology standards symbol for ‘Airfield’.

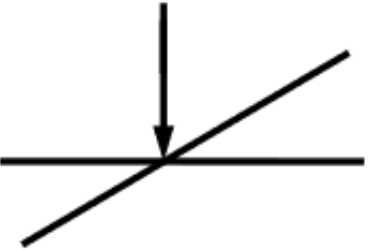
DEPARTMENT OF DEFENSE  
INTERFACE STANDARD  
JOINT MILITARY SYMBOLLOGY



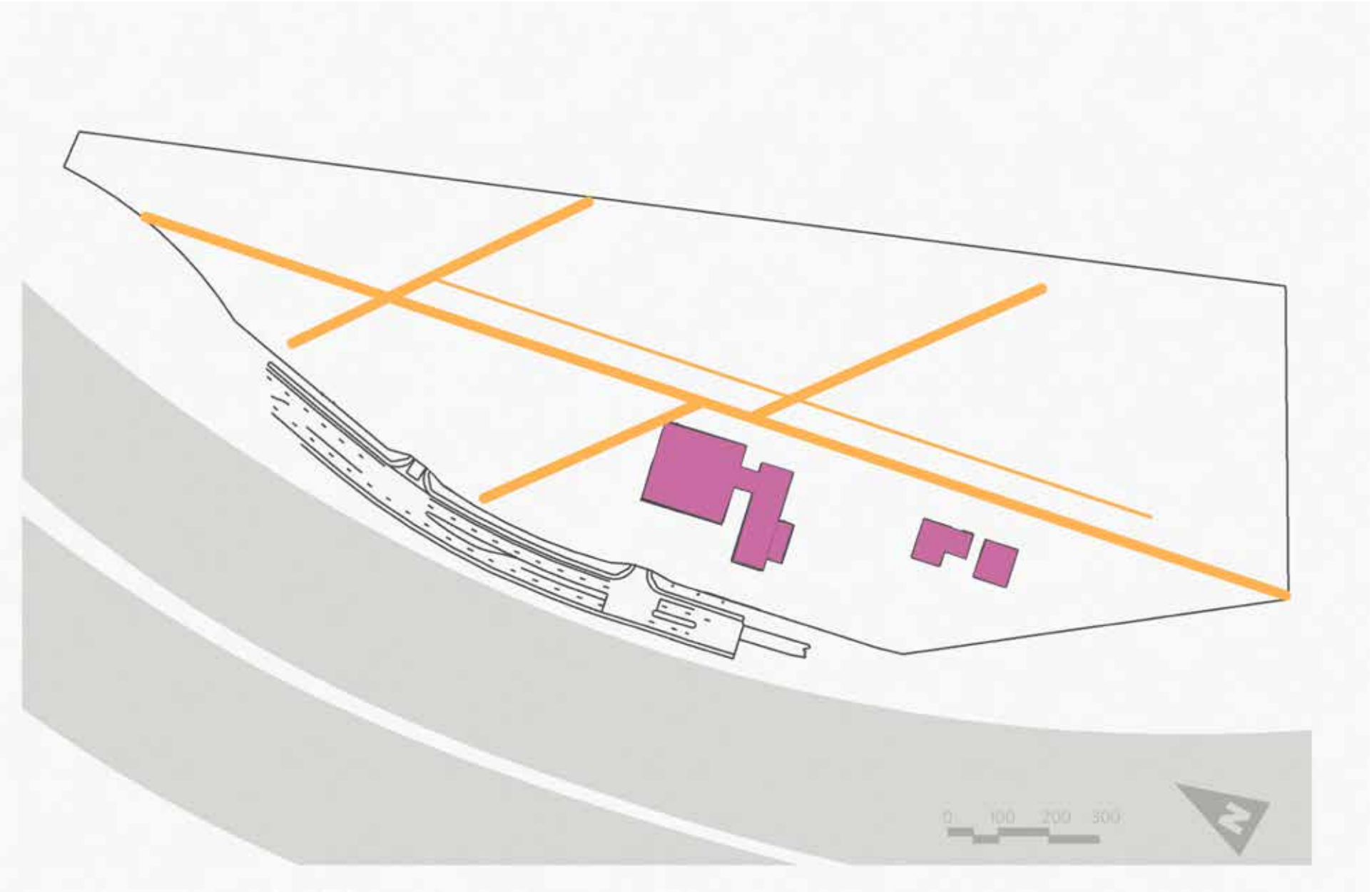
Airfield  
(AEGIS Only)

Symbol Set  
Code: 25  
Code: 131900

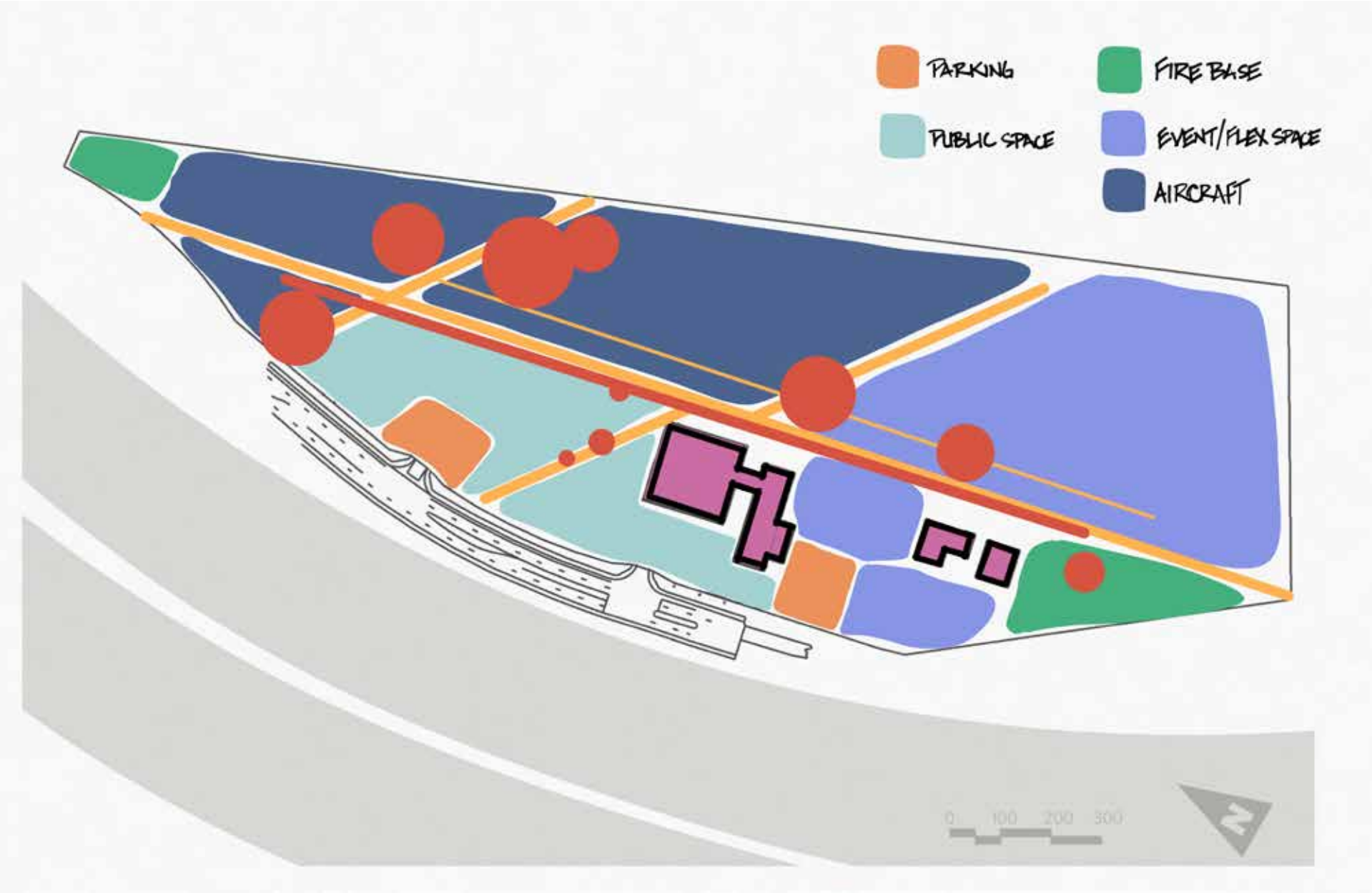
CENTER  
POINT



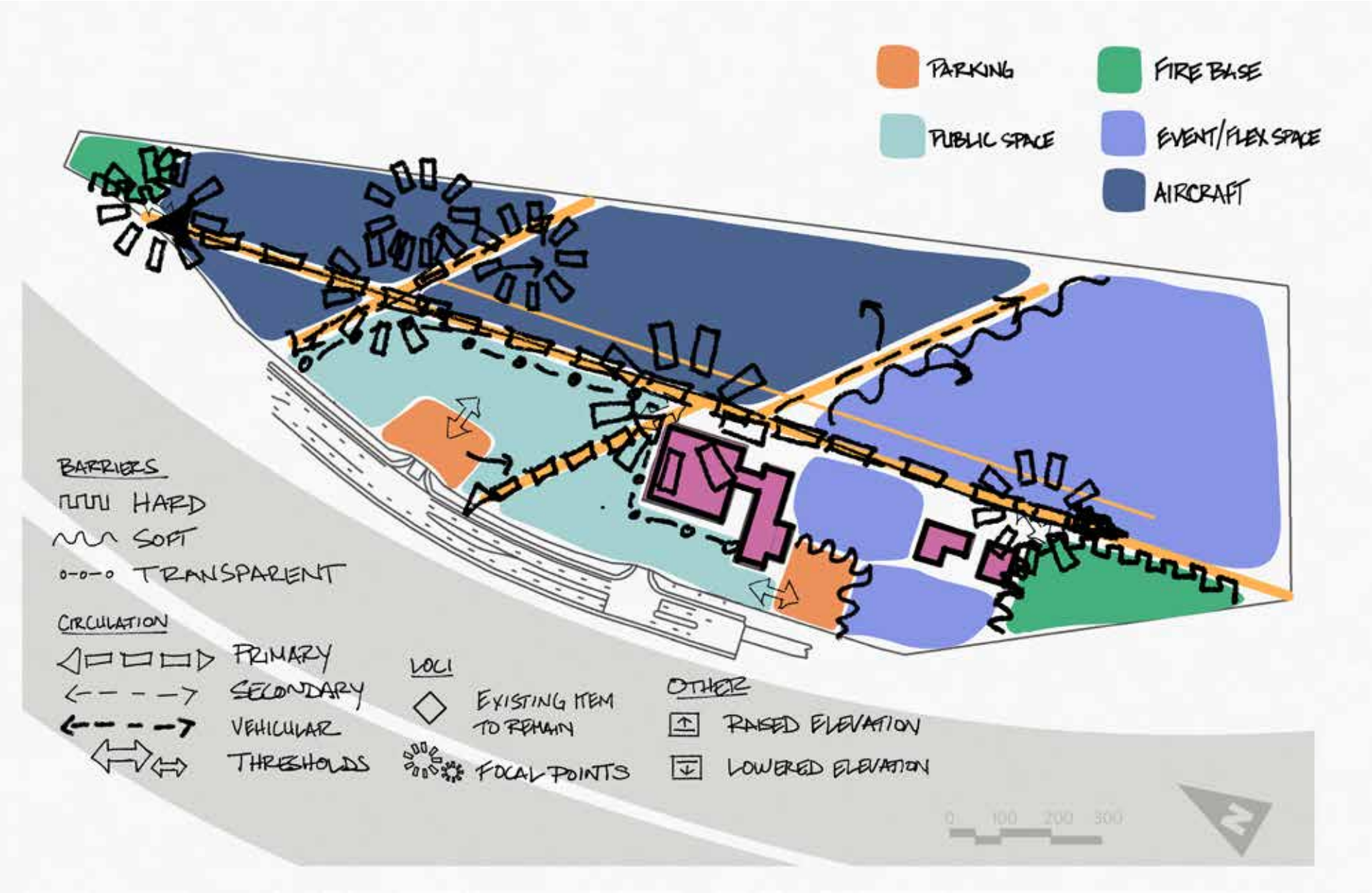
T



CONCEPT 1 - AIRFIELD



CONCEPT 1 - AIRFIELD - CONSTRAINTS

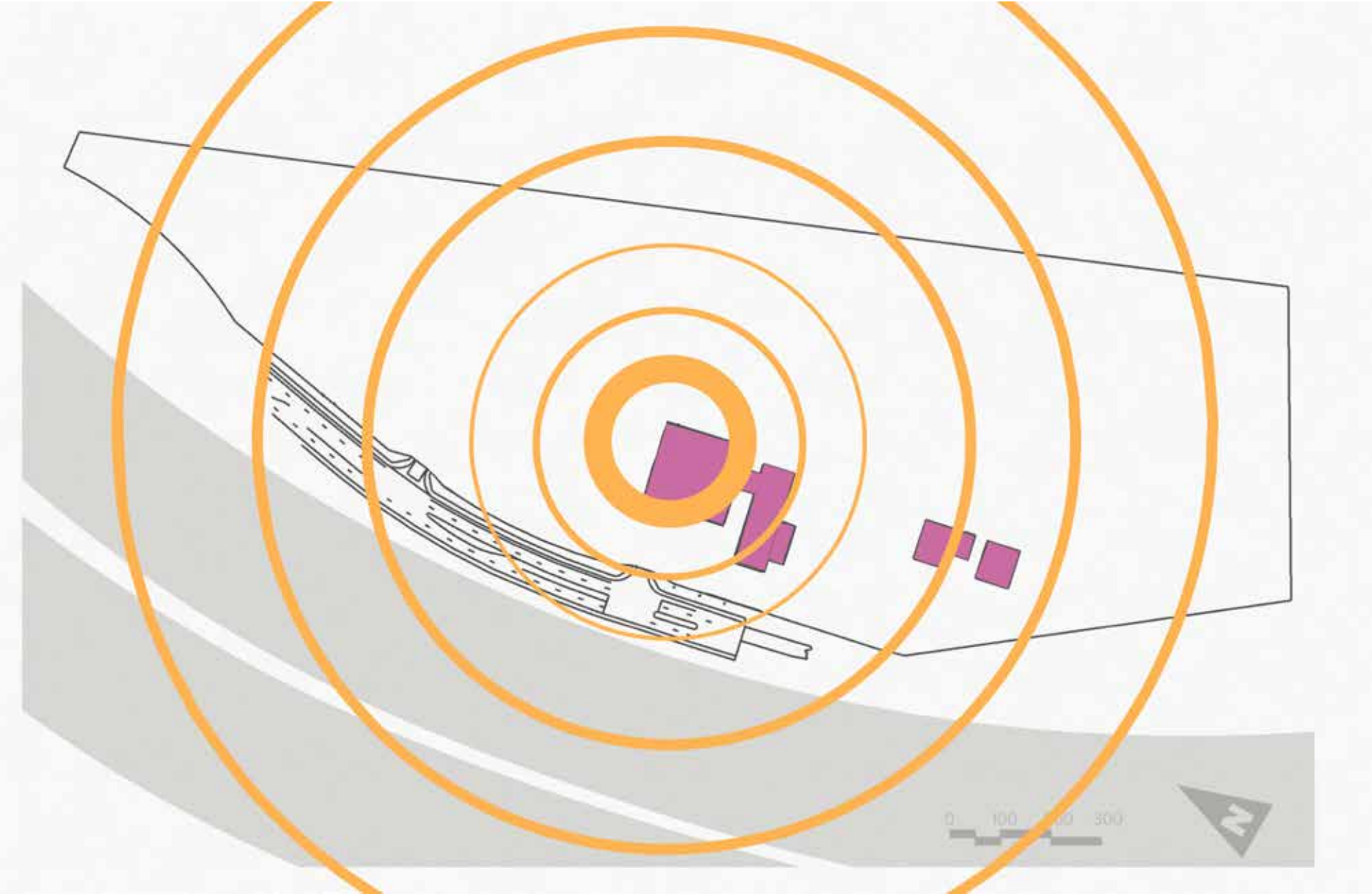


CONCEPT 1 - AIRFIELD - DIAGRAM

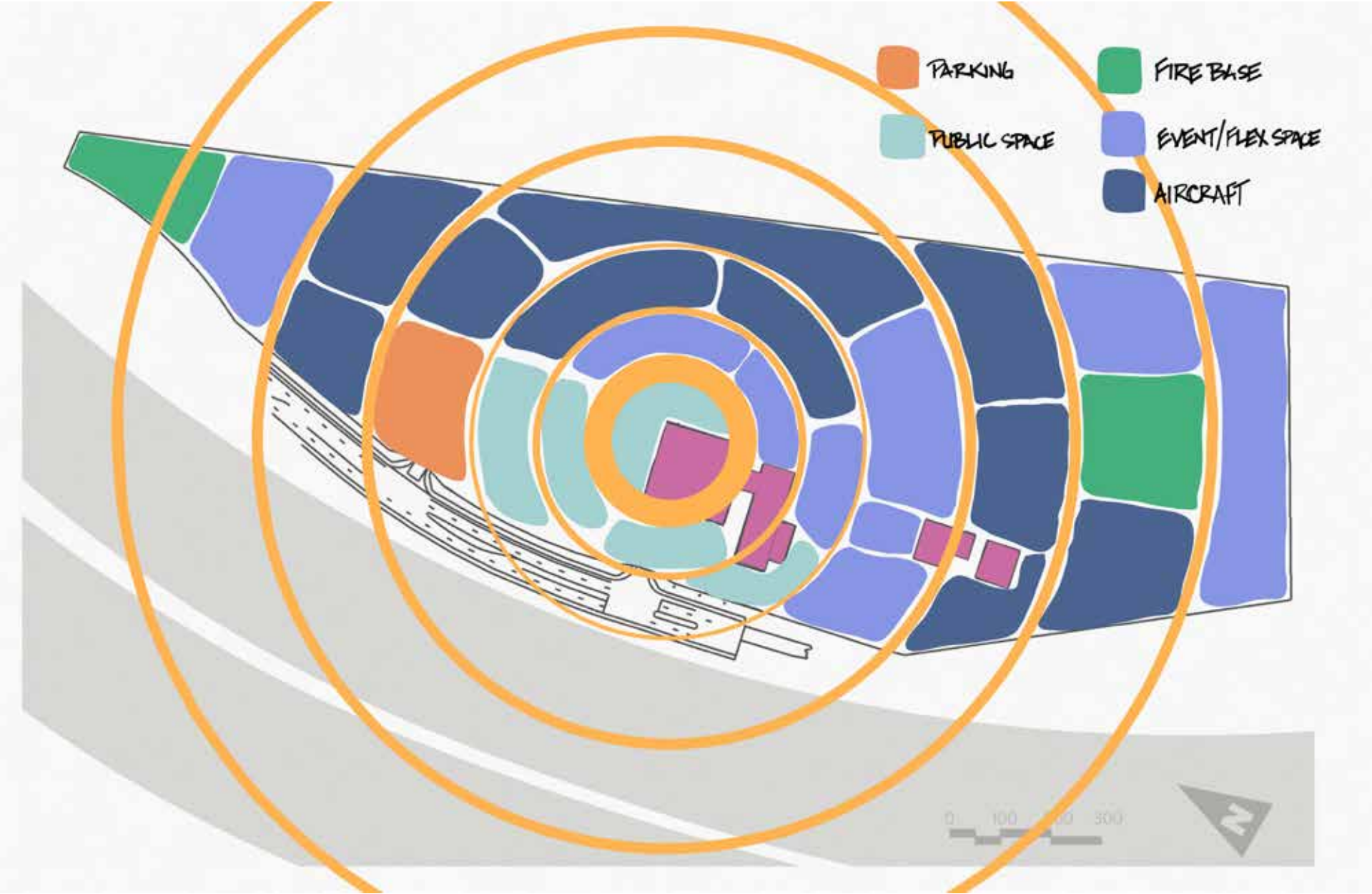


CONCEPT 2 - RADIOWAVES    VIRTUAL CONNECTION

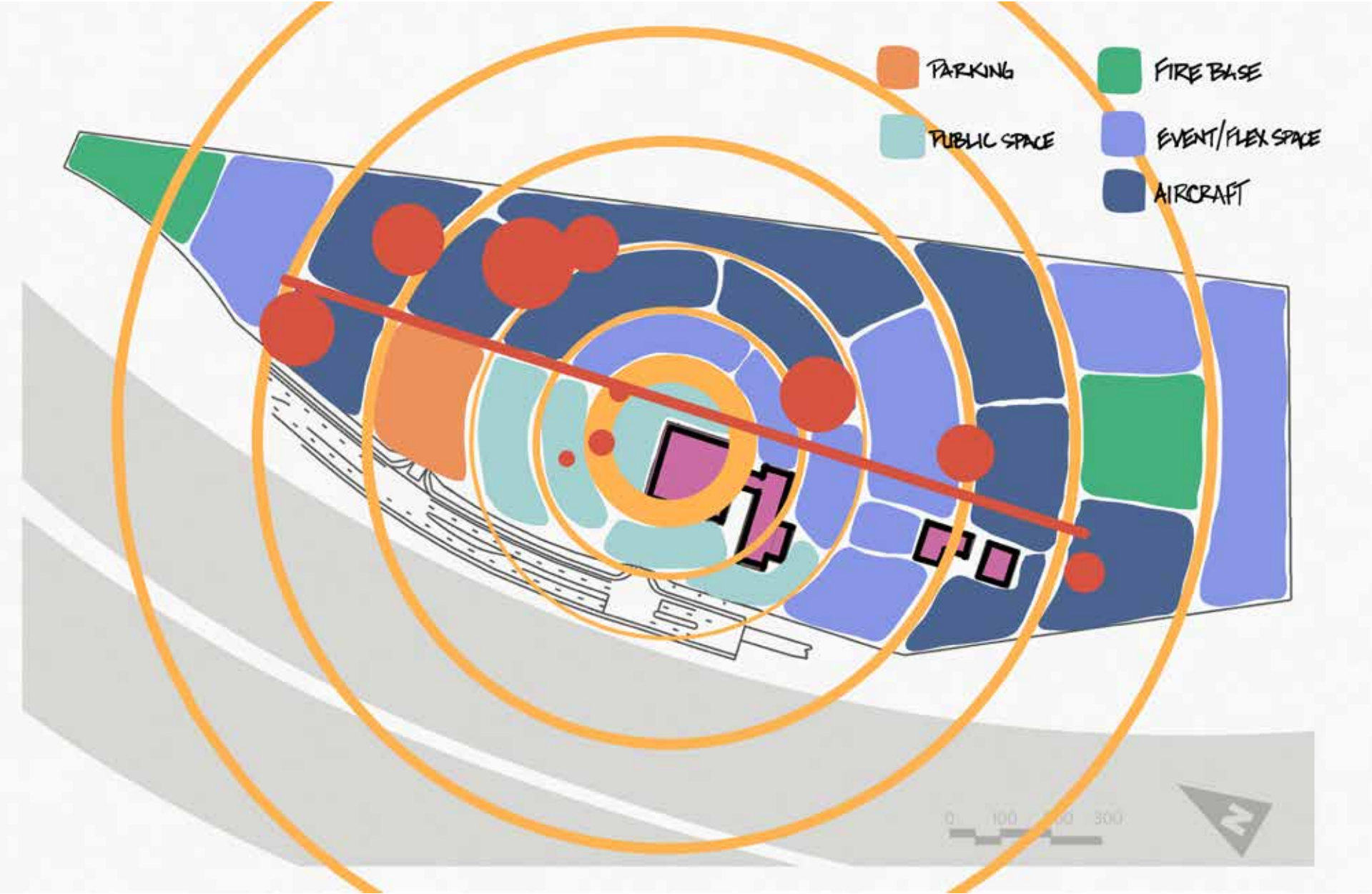
Concept 2, virtual connection, was based on the idea of radiowaves, with a site plan organizing structure based on concentric circles as an abstraction of radiowaves.



CONCEPT 2 - RADIOWAVES



CONCEPT 2 - RADIOWAVES

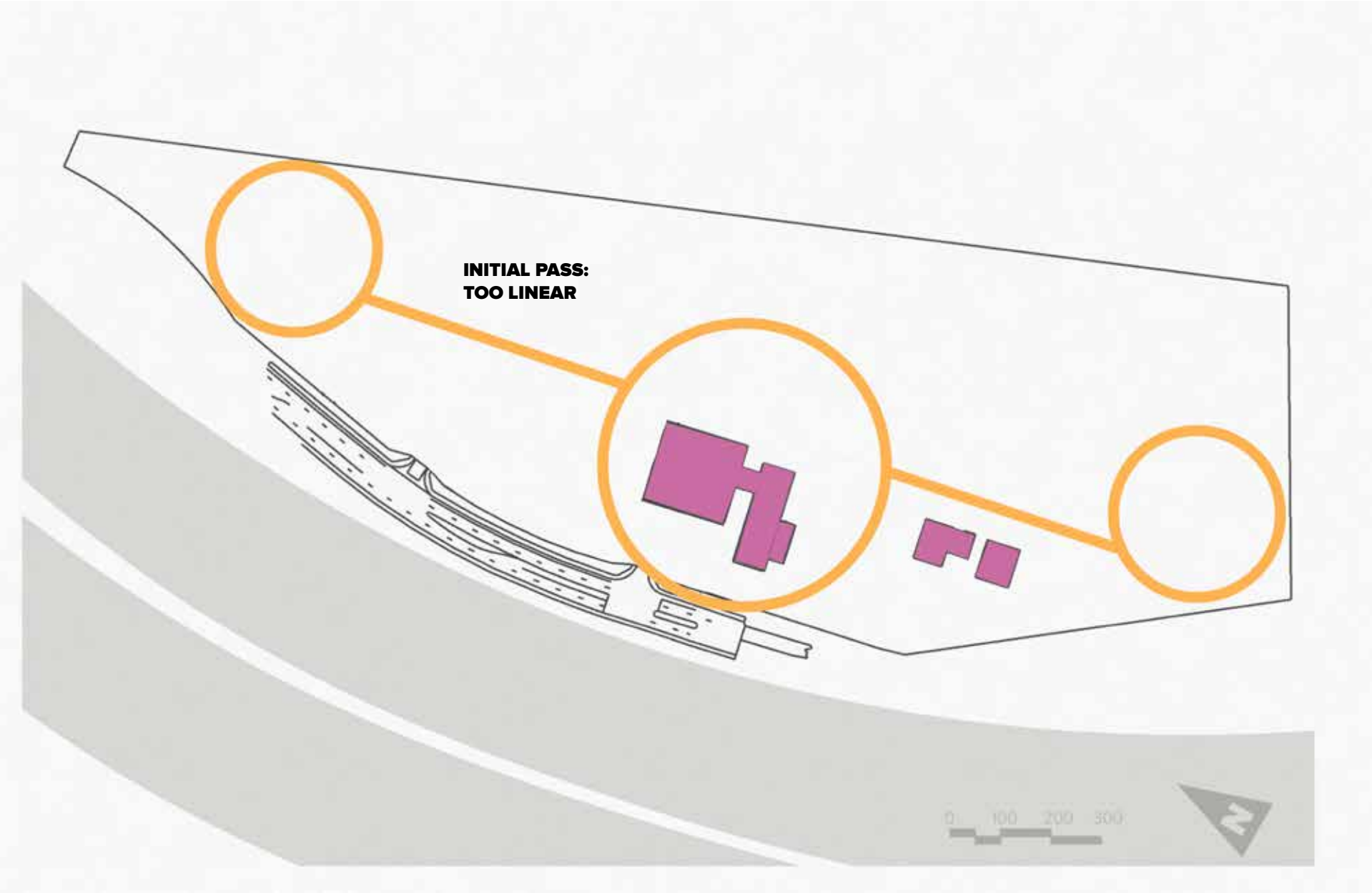
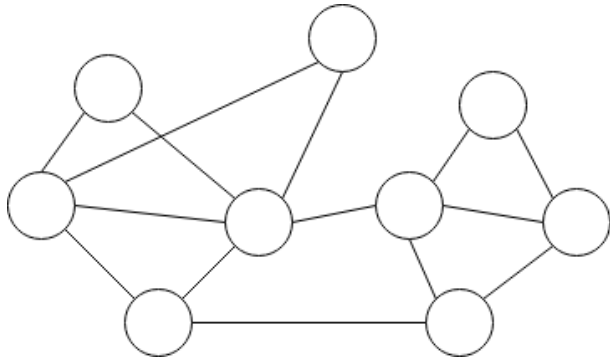


CONCEPT 2 - RADIOWAVES - CONSTRAINTS



CONCEPT 3 - NODES & EDGES THEORETICAL CONNECTION

Concept 3, theoretical connection, was based on the idea of nodes and edges, from graph theory, with the central node (museum) connected to the two outer nodes (firebases).



CONCEPT 3 - NODES & EDGES

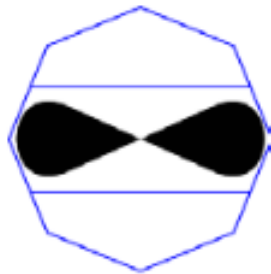
The original configuration was too linear and the out-and-back structure didn't lend itself to the symbolic ideal of a transformative journey, as opposed to a looped pathway, with the return journey separate from the original outbound journey. The Joint Military Symbology standards were again used as inspiration, with the symbol for "Aviation Fixed Wing" providing the inspiration for linked loops.

DEPARTMENT OF DEFENSE  
INTERFACE STANDARD  
JOINT MILITARY SYMBOLGY

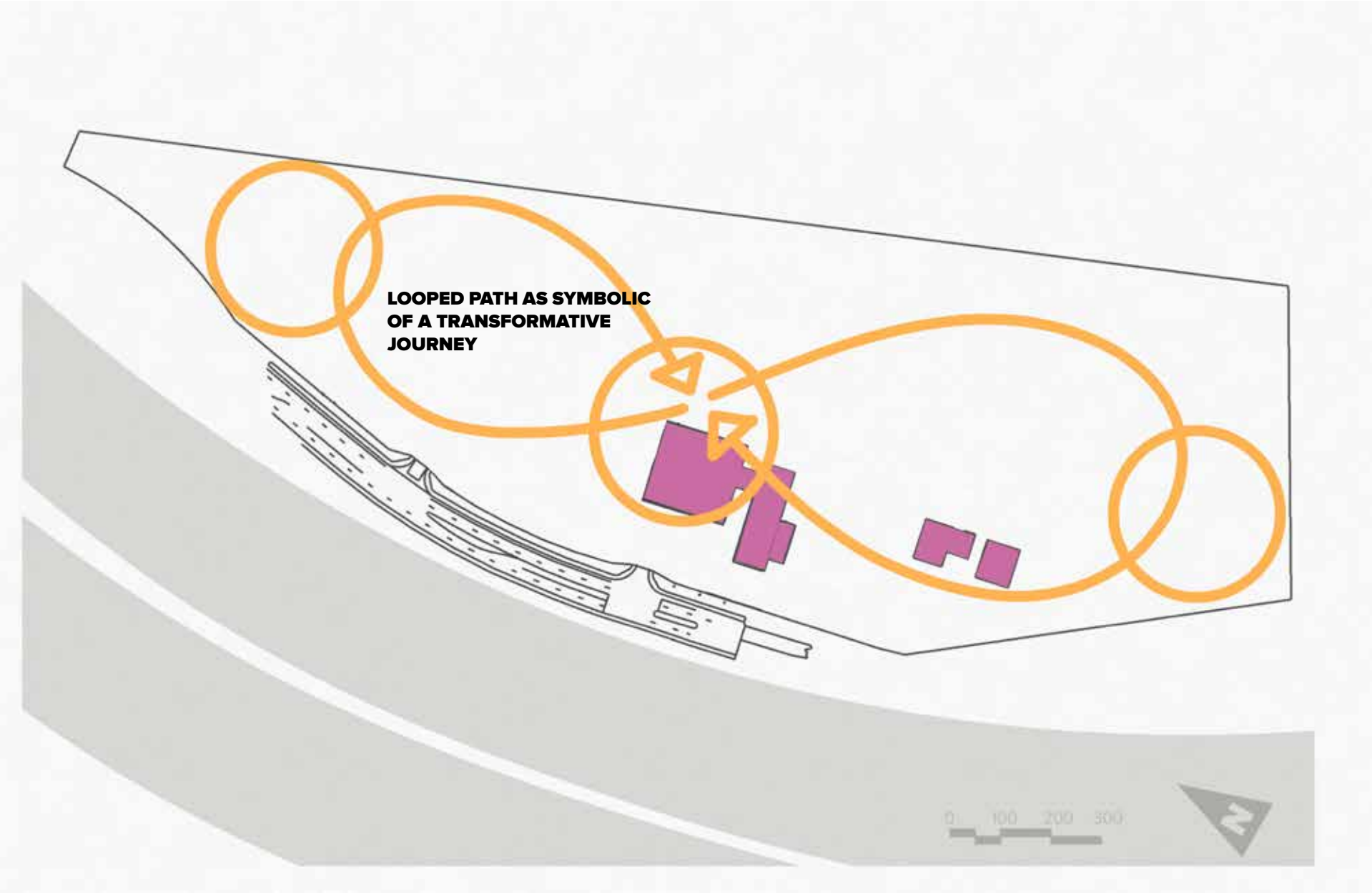
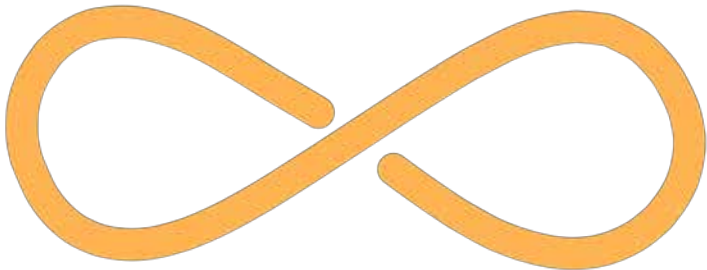


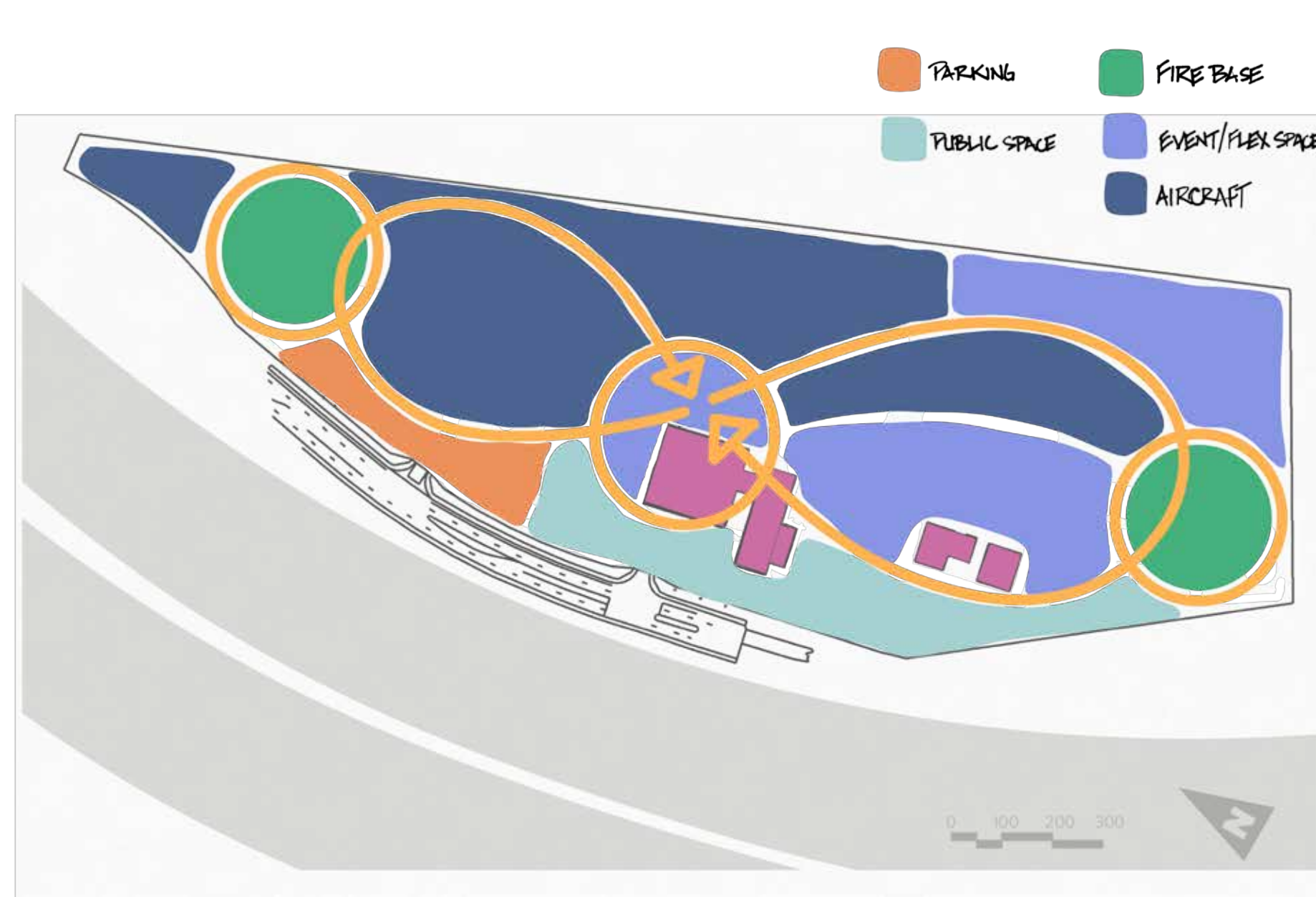
AVIATION FIXED WING

Type: Entity Type  
Entity: MOVEMENT AND  
MANEUVER  
Symbol Set Code: 10  
Code: 120800  
Icon Type: Main

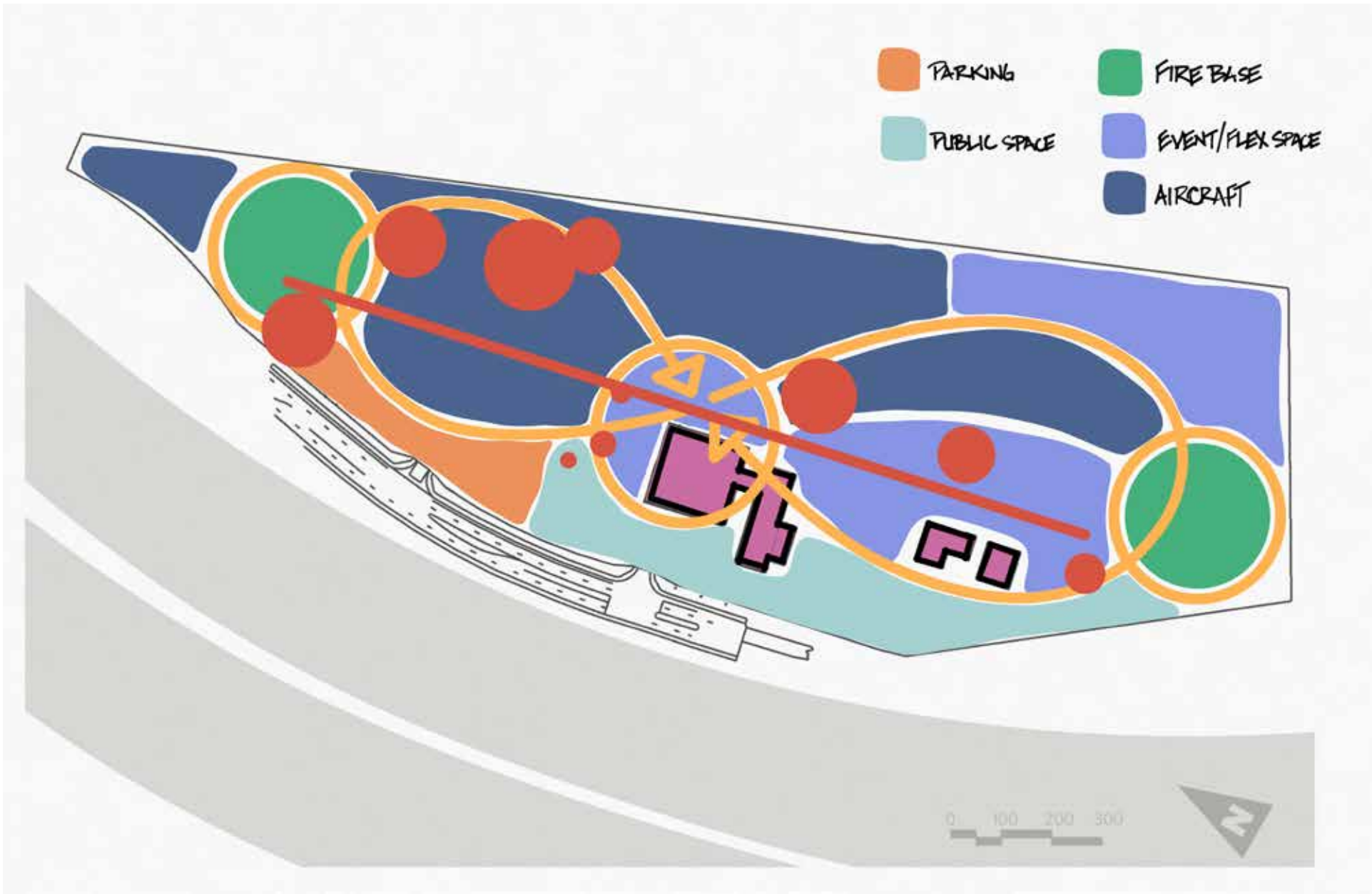


INSPIRATION FROM  
JOINT MILITARY  
SYMBOLGY





CONCEPT 3 - Nodes & Edges

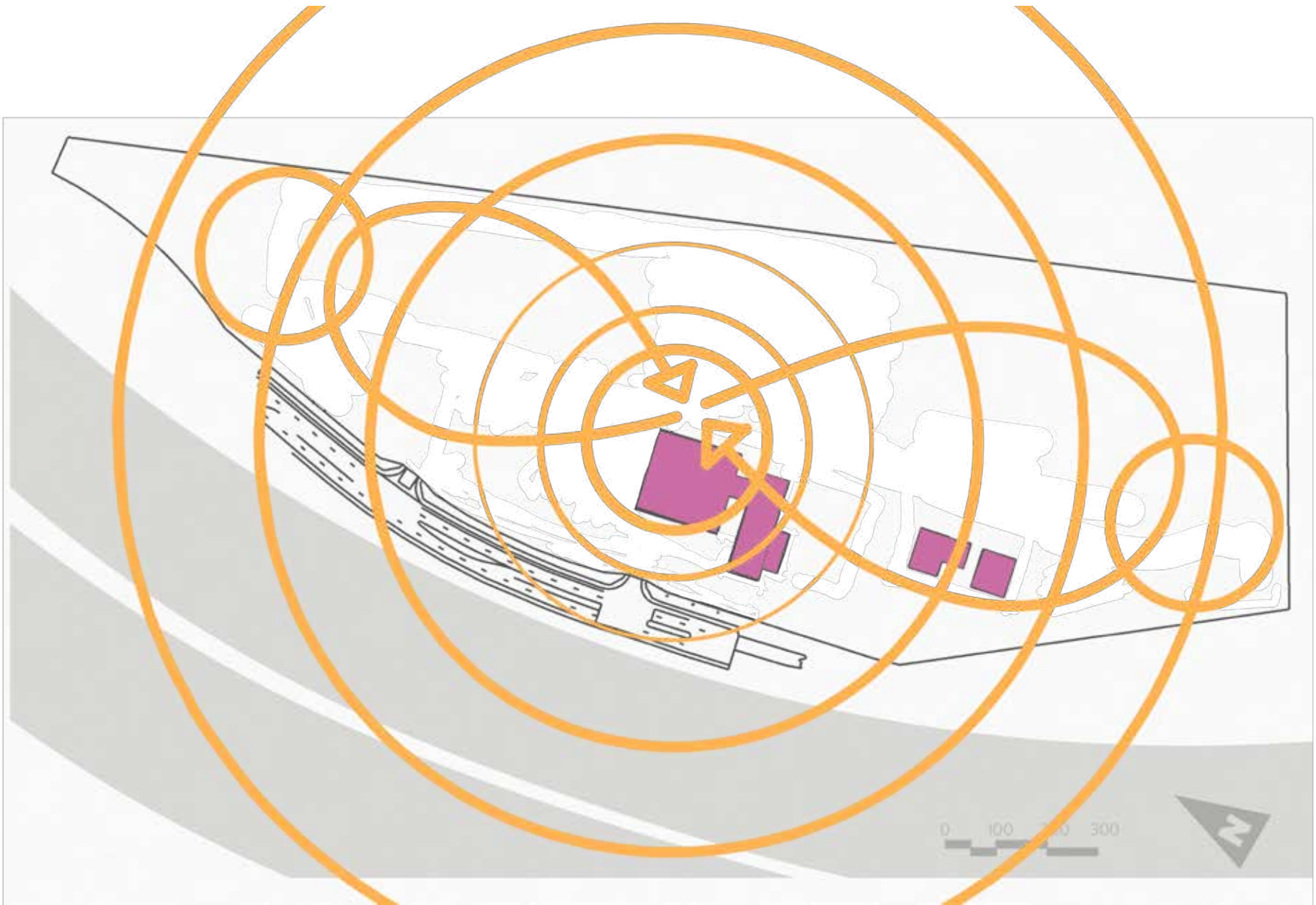


CONCEPT 3 - Nodes & Edges - CONSTRAINTS



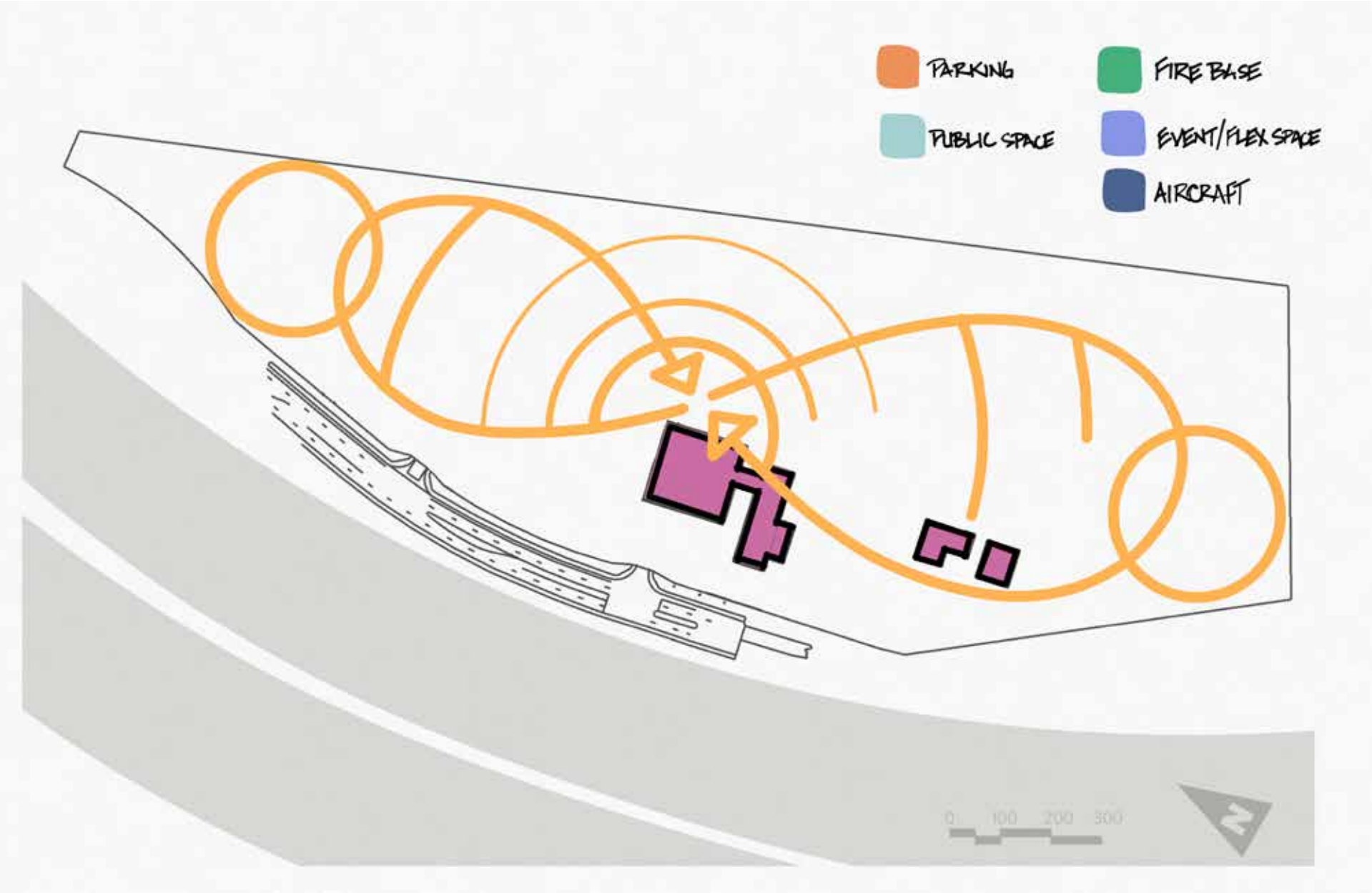
FINAL CONCEPT

The final concept combined elements from concepts 2 (radiowaves) and 3 (nodes & edges), with the major journeys created by the linked loops of concept 3, with the secondary connections provided by the radiowaves of concept 2.

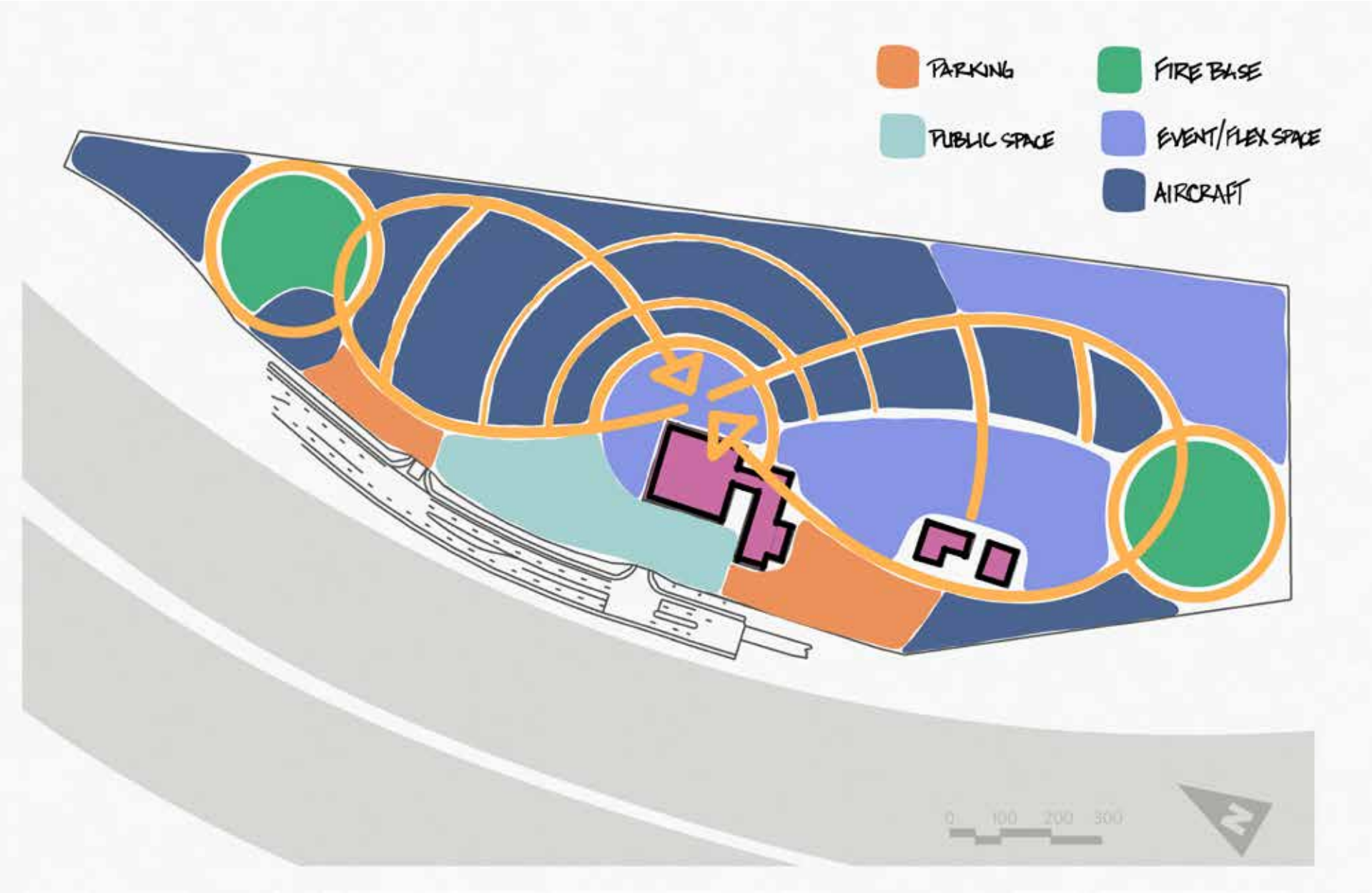


FINAL CONCEPT



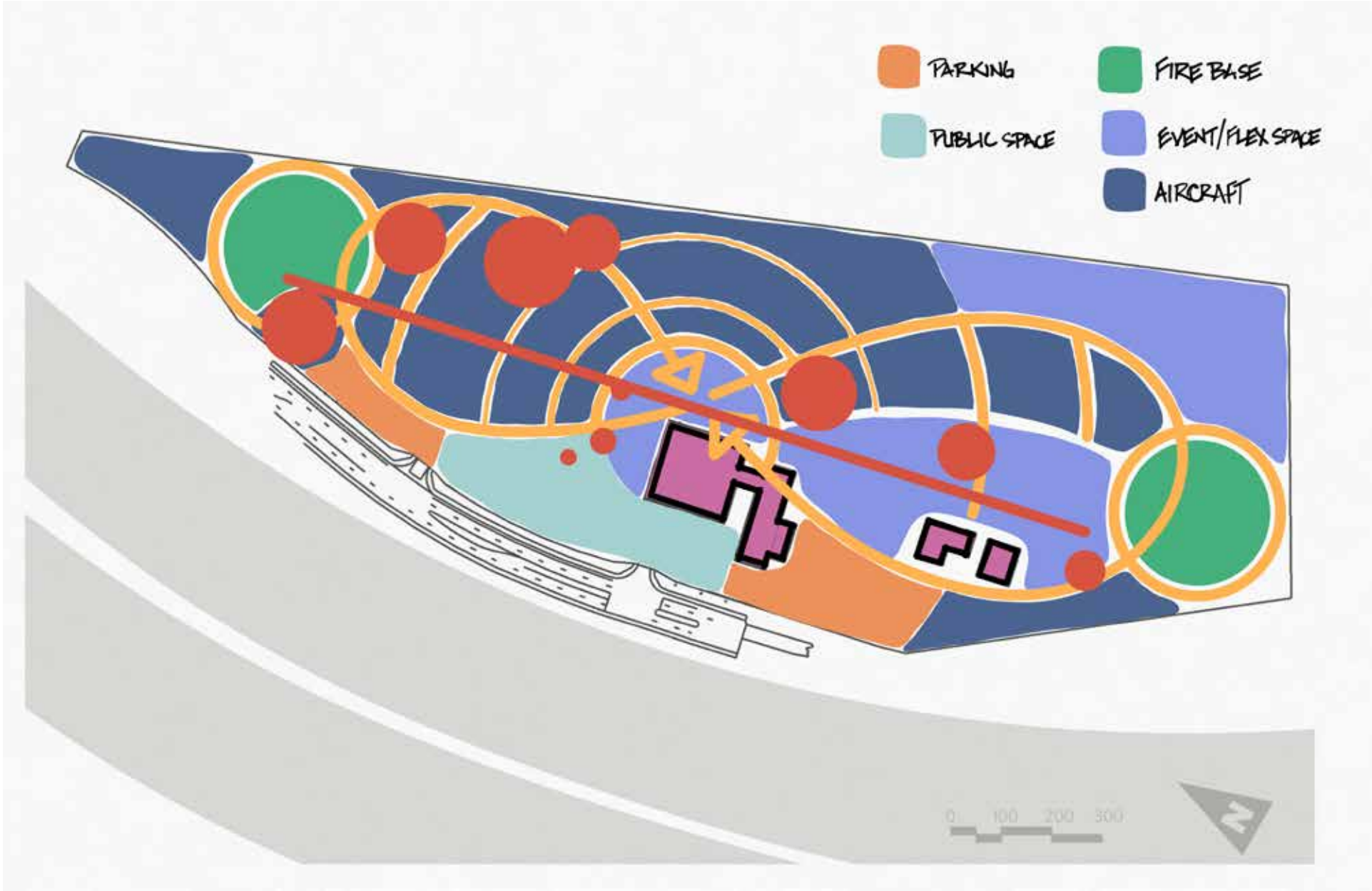


FINAL CONCEPT

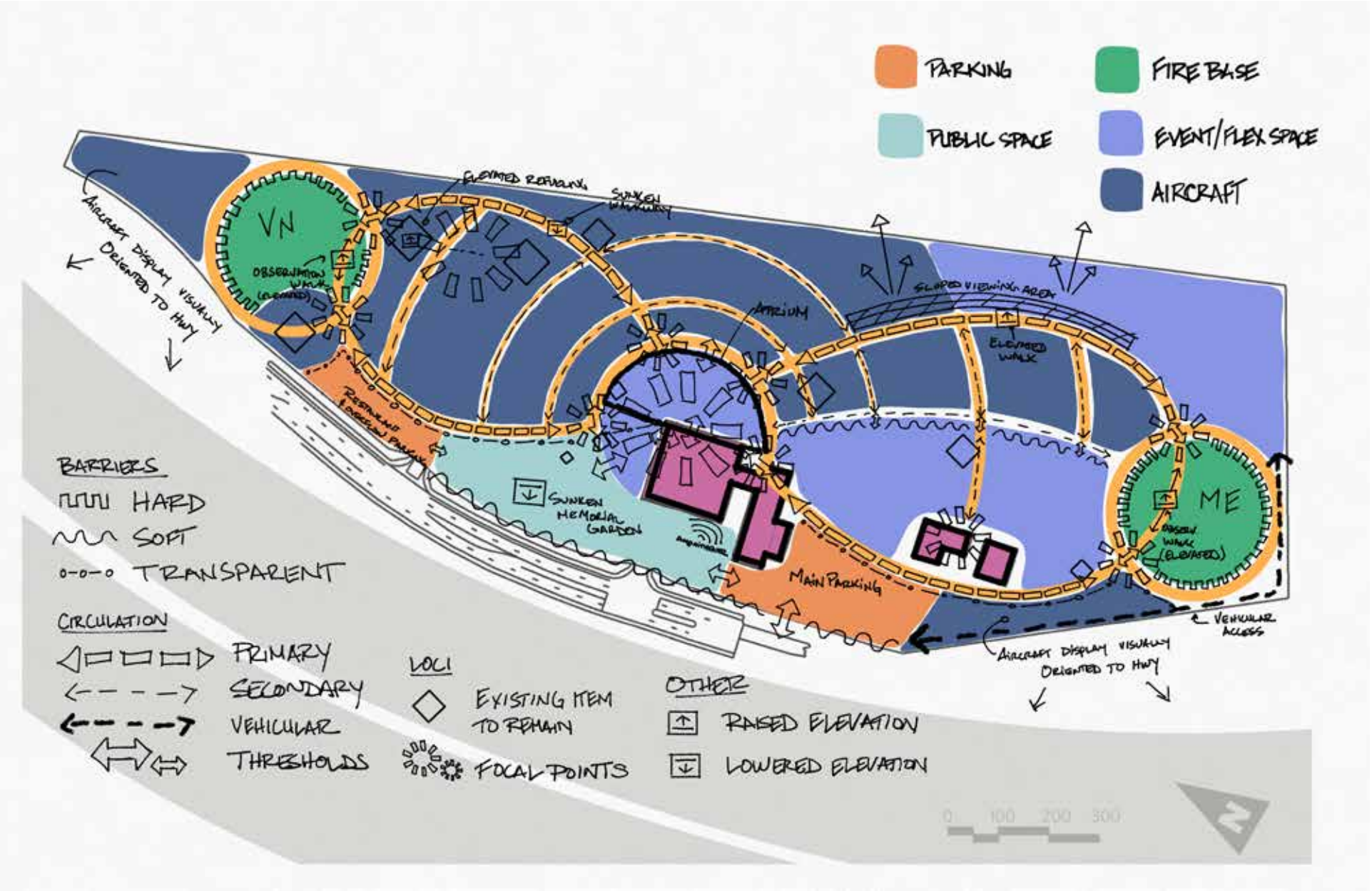


FINAL CONCEPT



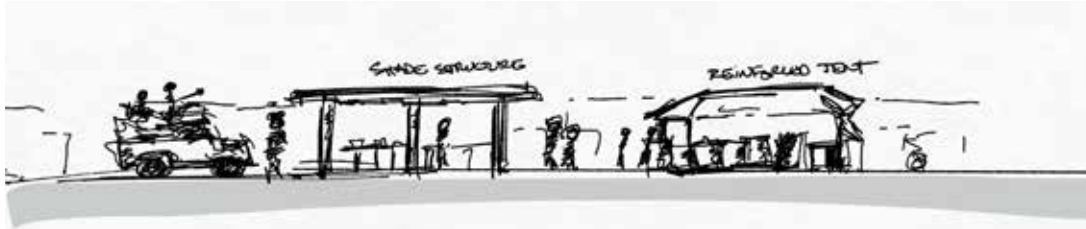
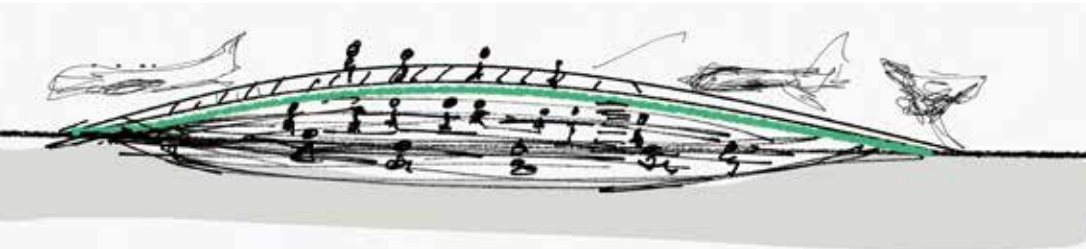
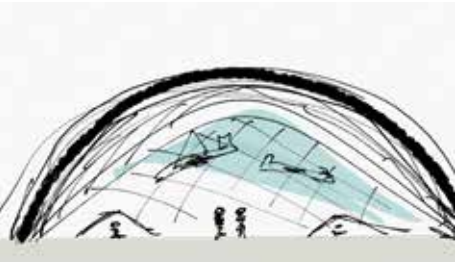
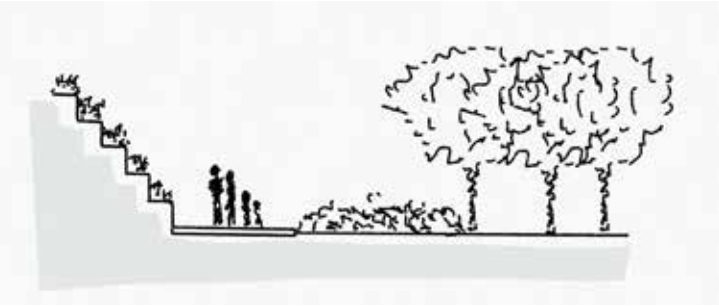
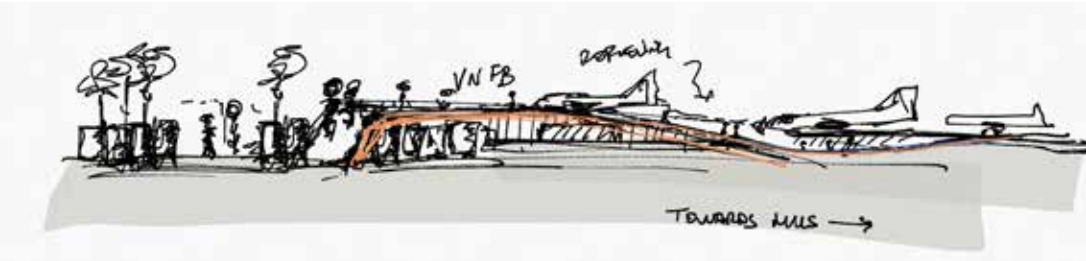
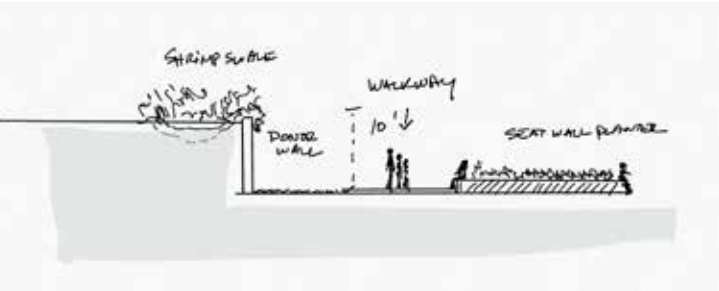


FINAL CONCEPT - CONSTRAINTS



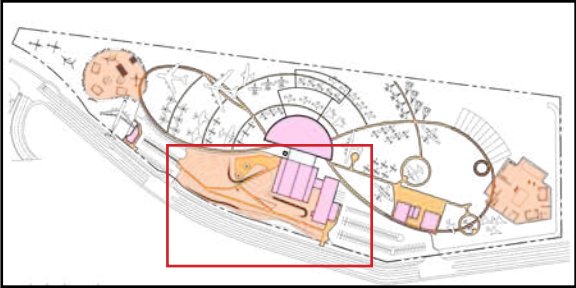
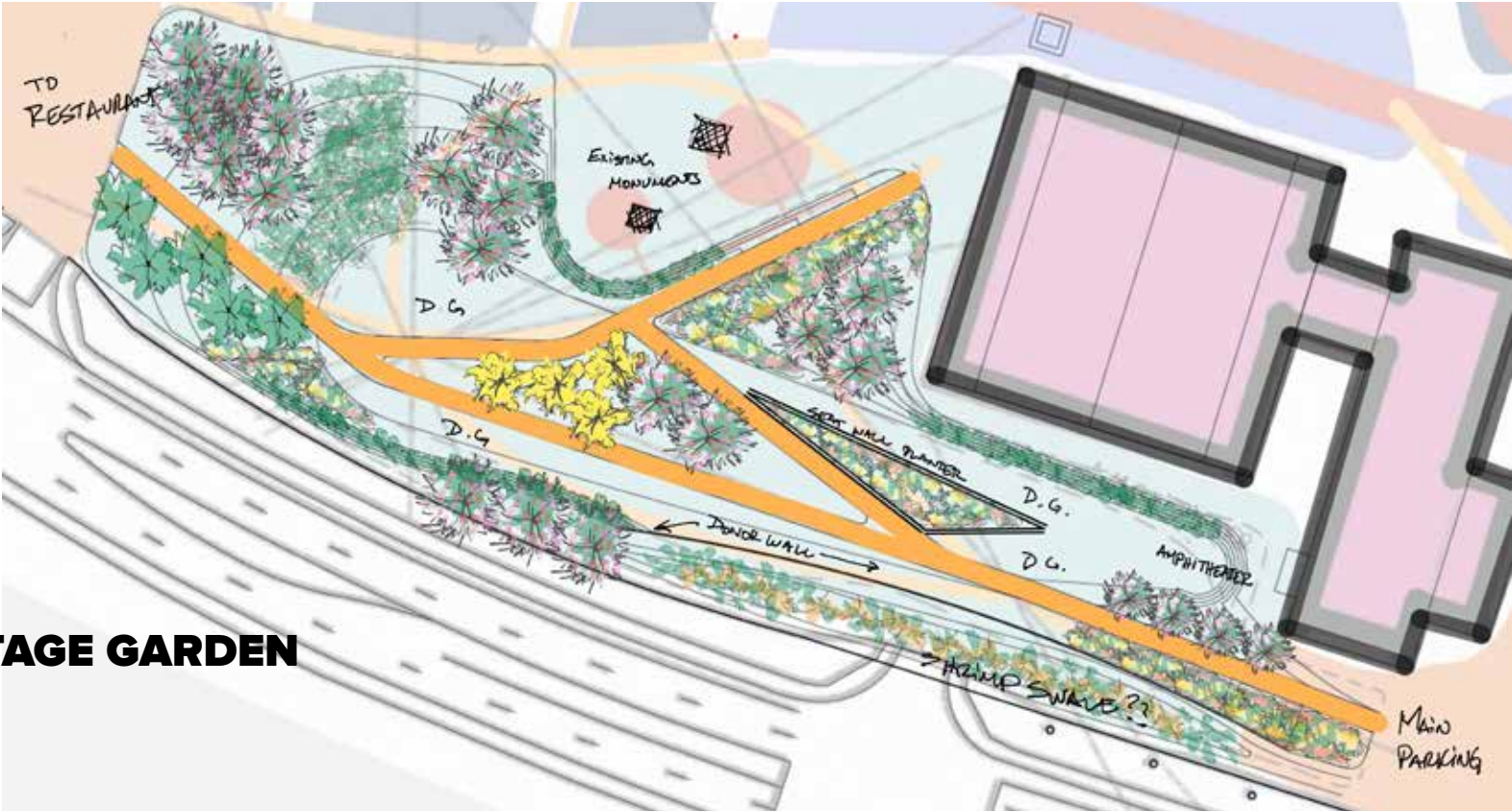
FINAL CONCEPT - DIAGRAM

DESIGN DEVELOPMENT

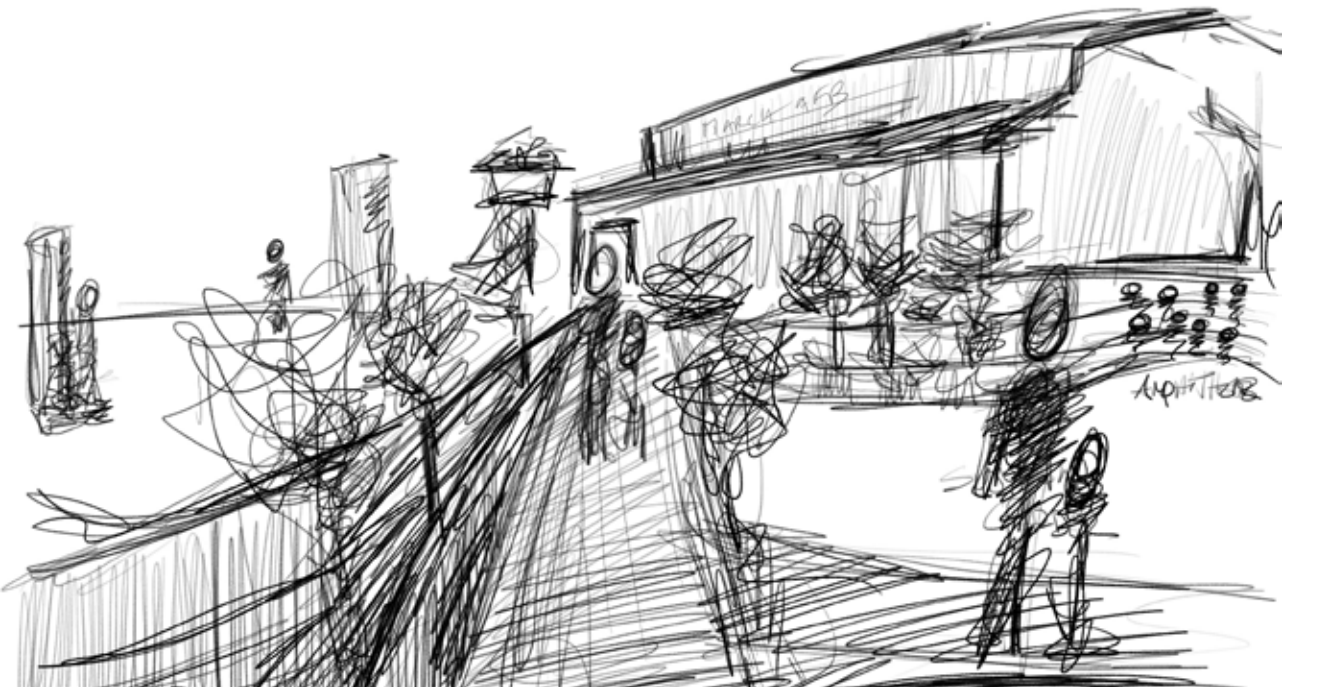
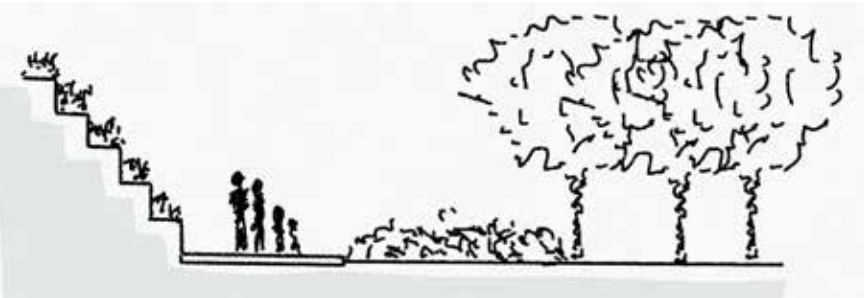
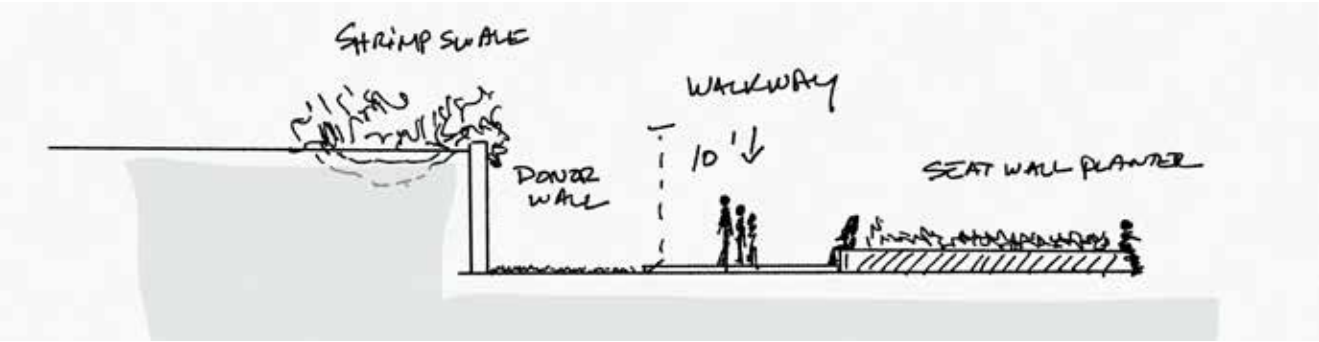




SUNKEN HERITAGE GARDEN

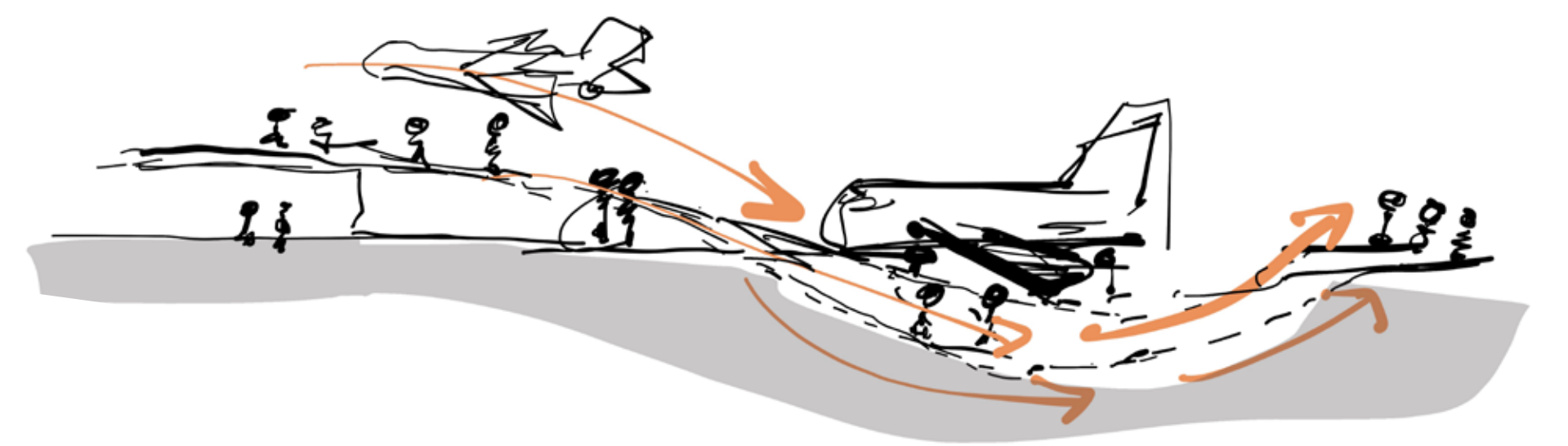
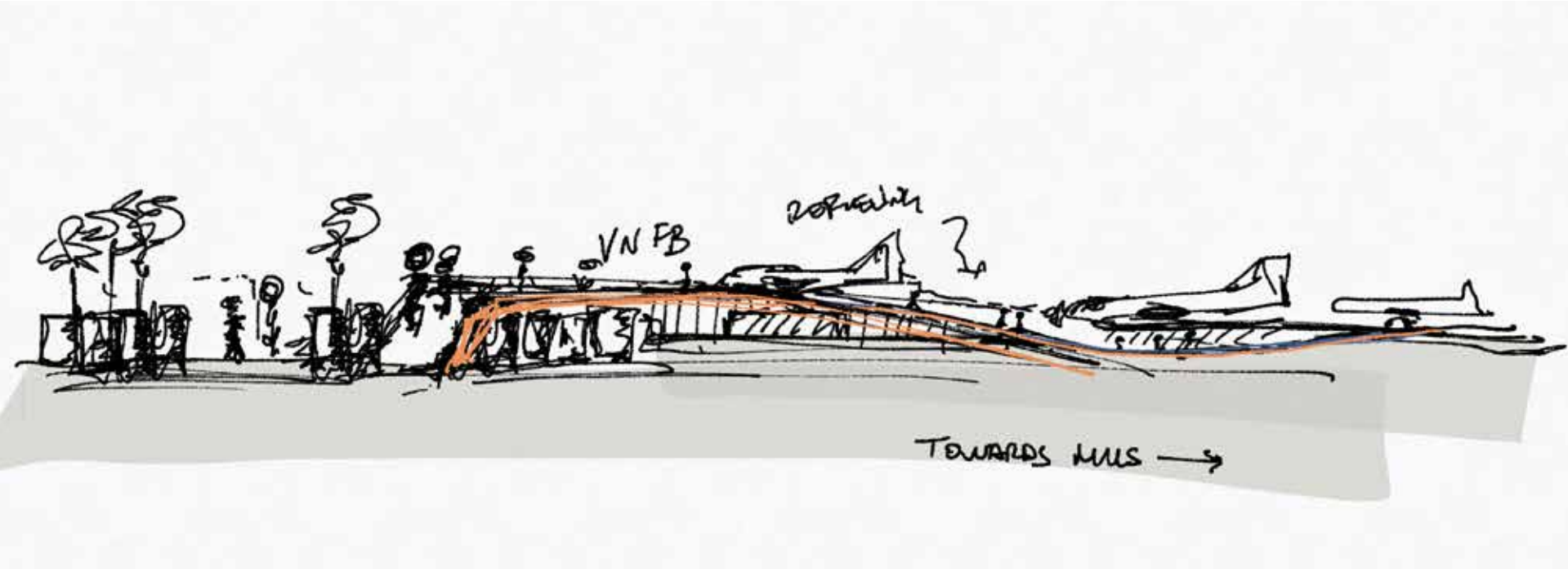
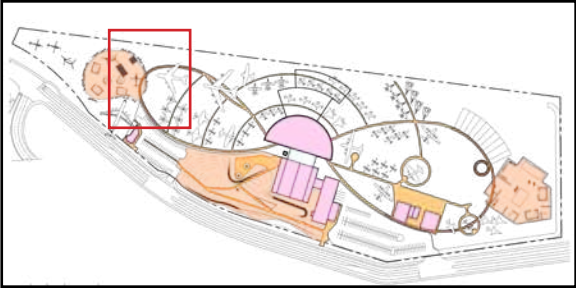


The heritage garden is sunken 10 feet below grade in order to: **create a microclimate, mitigate highway noise, increase shade, and create a contemplative space.**



ELEVATED / SUBTERRANEAN WALKWAYS

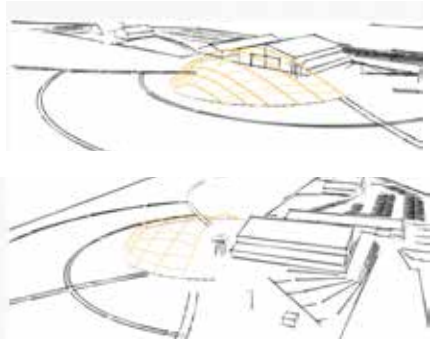
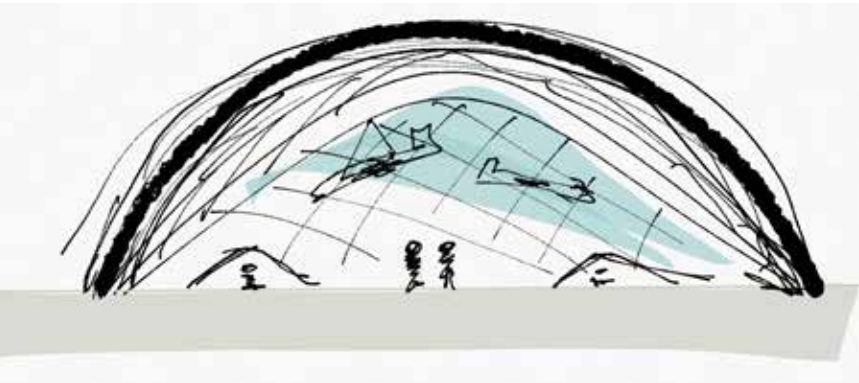
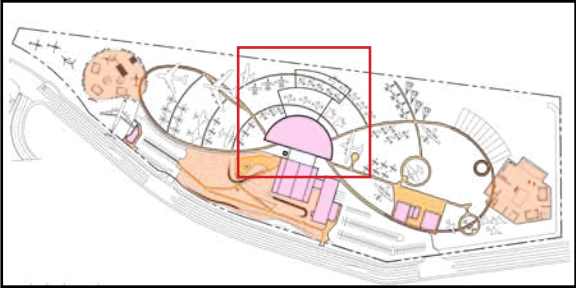
Elevated and sunken walkways **change a visitors’s perspectives**, giving them more **opportunities for discovery**



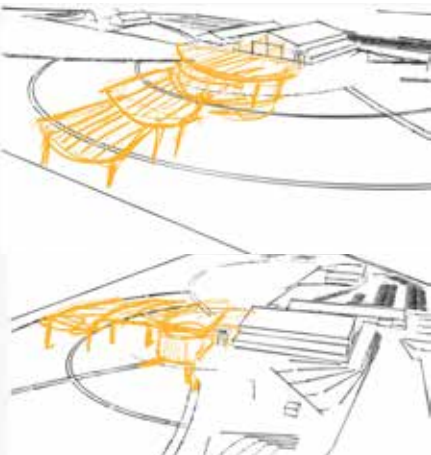
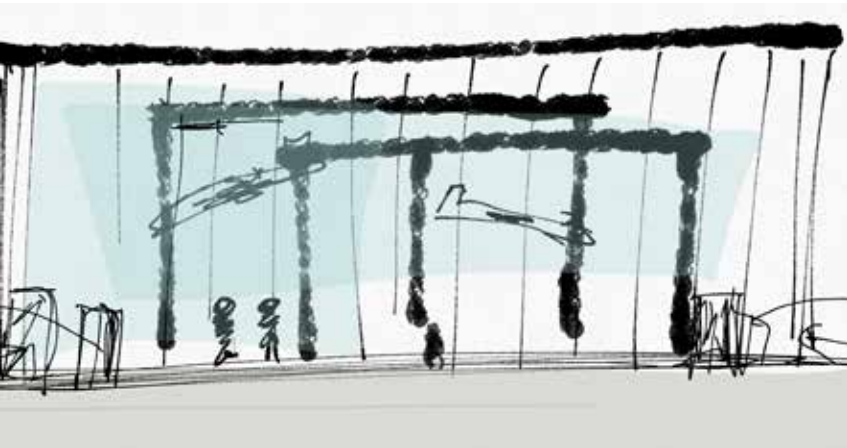


MUSEUM ATRIUM EXTENSION

As the central hub of the museum’s ‘journeys’ the atrium extension needs to establish itself with a strong visual presence. The museum atrium extension also needs to provide an indoor/outdoor sheltered experience that is climate & comfort controlled, yet still connected to the greater museum as well as preserving view to the air base and mountains.

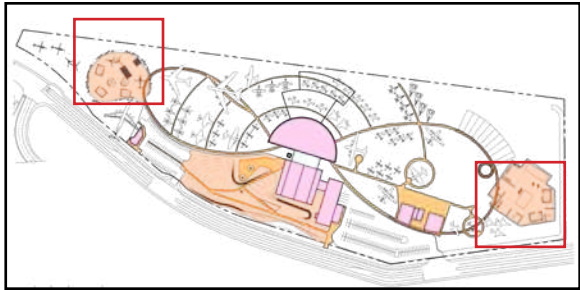


<https://www.dezeen.com/2019/12/12/david-adjaye-sydney-plaza-aboriginal-paintings/>





FIREBASES



<https://www.youtube.com/watch?v=jfznWb4pTl>

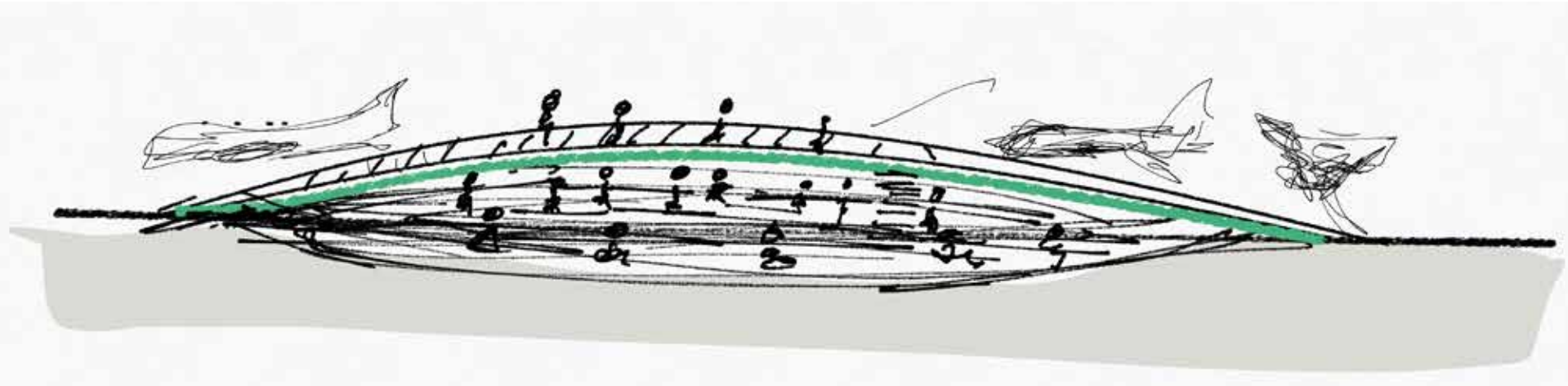
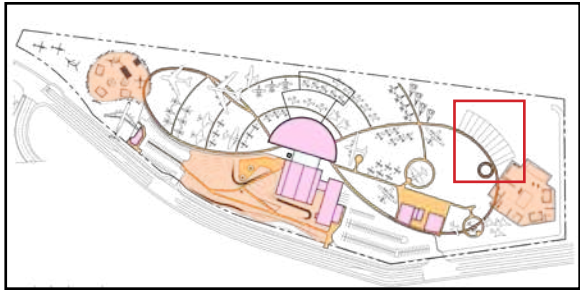


The design of both firebases is based on real-world documentary footage, with the Afghanistan firebase based on footage of Firebase Cobra (since renamed Tinsley) from the 2007 National Geographic documentary “Inside the Green Berets”. Realism through re-creation of simple details aims to give the place an emotional connection and allow visiting veterans the **space to remember, process, and share their stories.**



ELEVATED WALKWAYS / VIEWING GRANDSTAND

Extending terraces from elevated walkways can create grandstands to provide museum-goers with **viewing opportunities** for both air shows and daily March Air Reserve Base aircraft movements.



[https://en.wikipedia.org/wiki/File:Lewis\\_%26\\_Clark\\_Law\\_School\\_Amphitheater.jpeg](https://en.wikipedia.org/wiki/File:Lewis_%26_Clark_Law_School_Amphitheater.jpeg)





<https://www.facebook.com/edoardotresoldiart/>



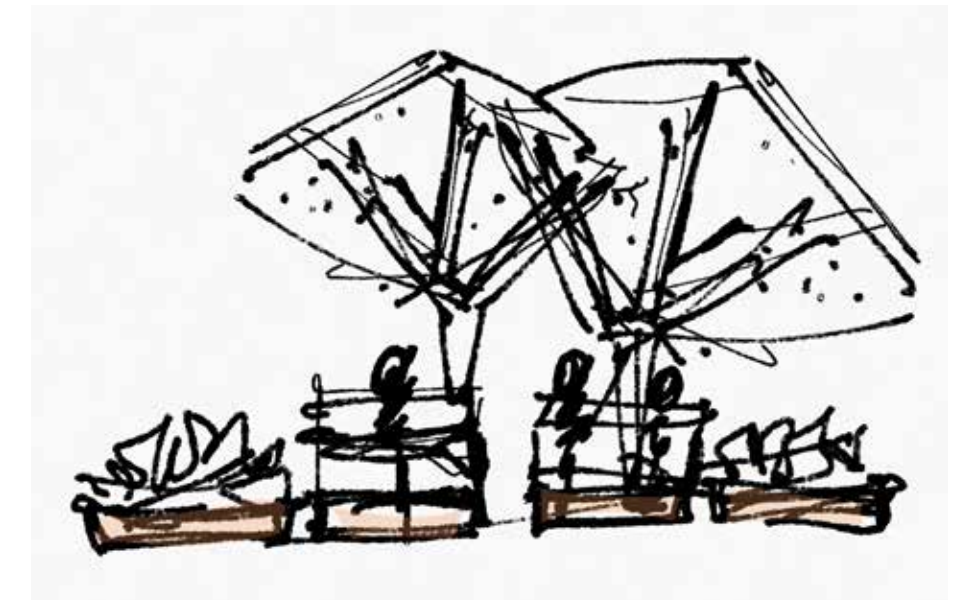
<https://www.pinterest.com/pin/88735055137968081/>



<https://samuelwilkinson.com/larbre-de-flonville/>

## MOBILE & MODULAR SHADED SEATING

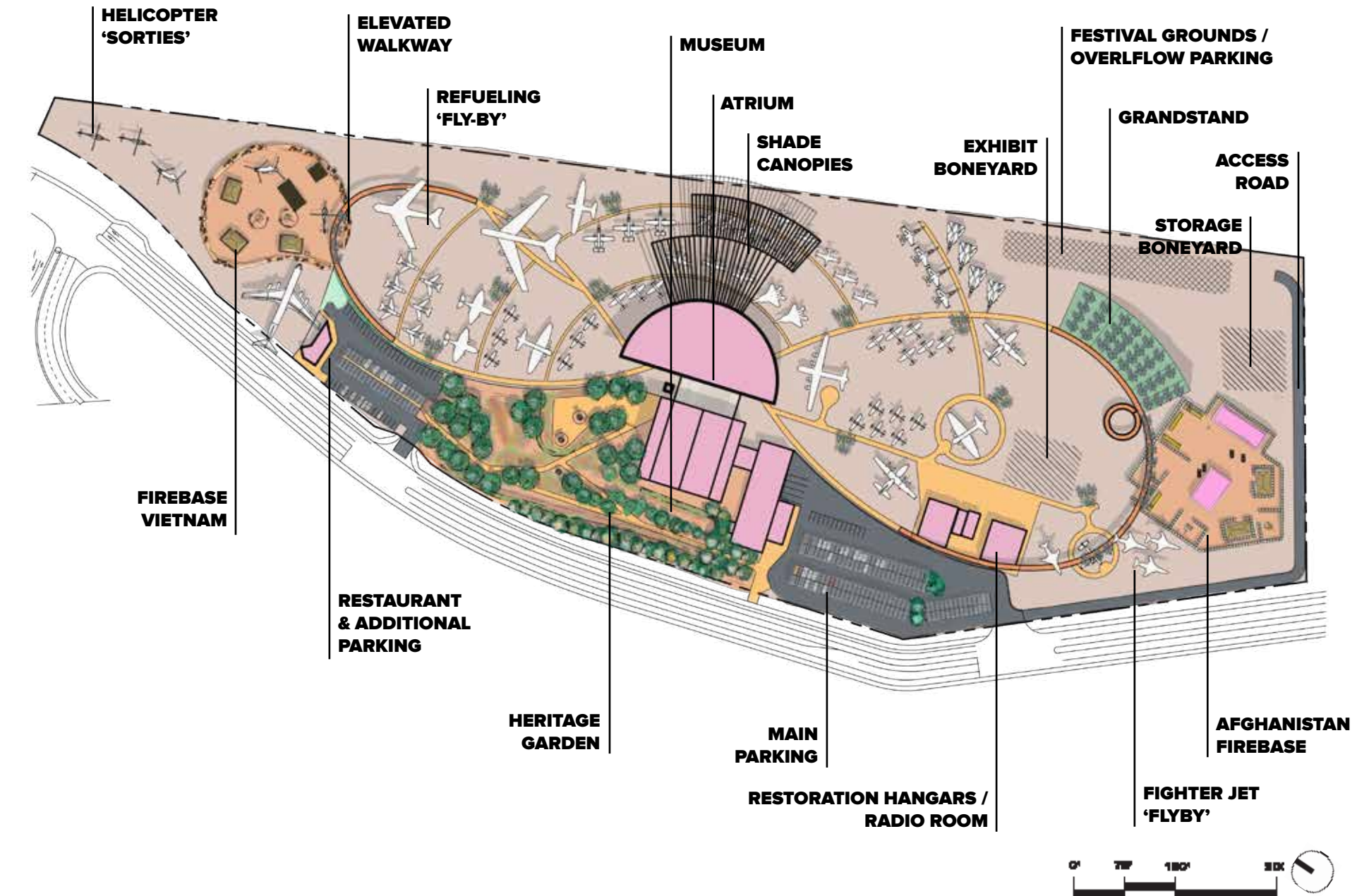
Mobile and modular shade structures can be reconfigured and placed anywhere on the museum campus, giving the institution **flexibility for special events and as exhibits change.**





FINAL DESIGN

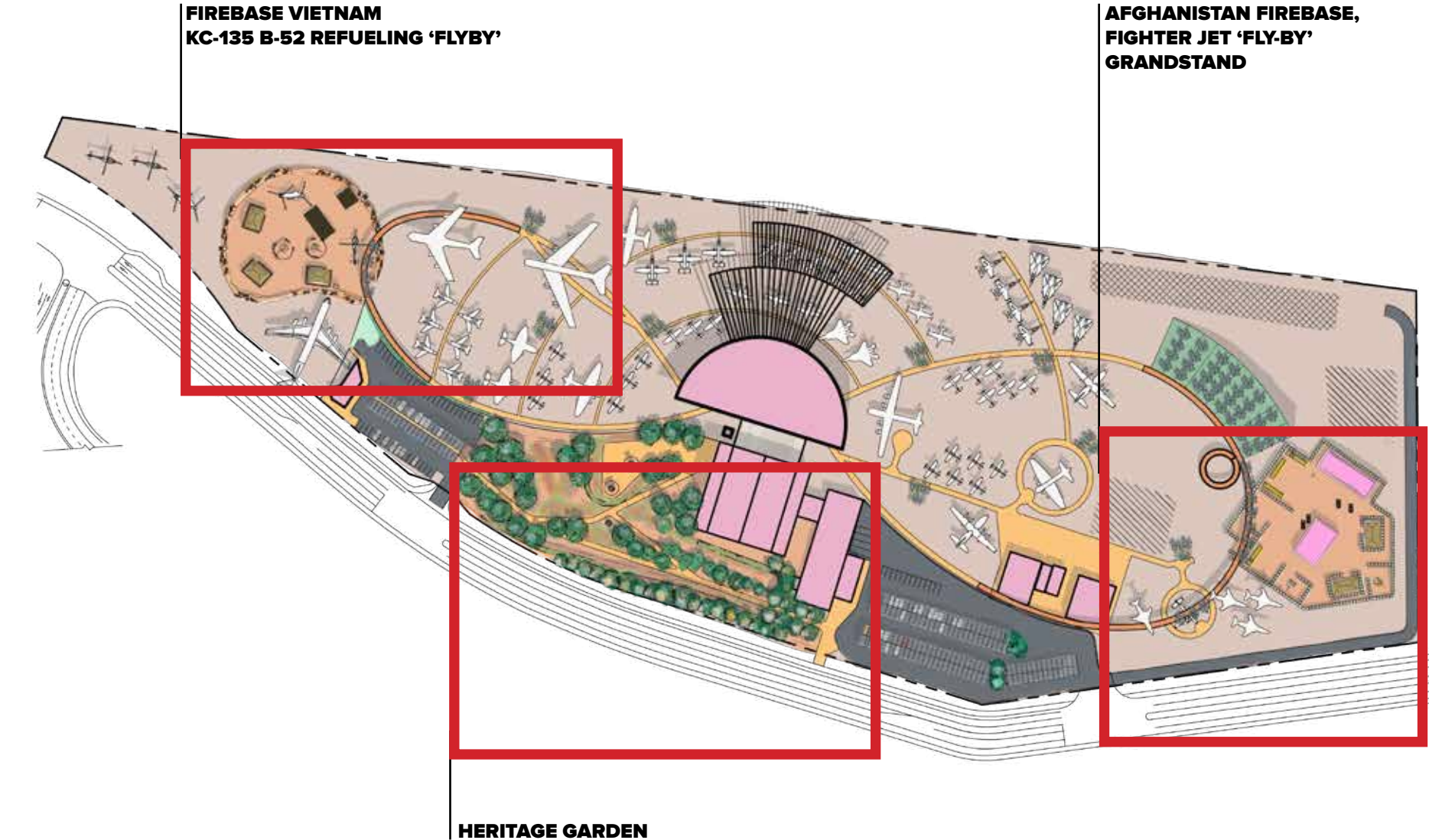
The final design is structured around the idea of ‘**journeys**,’ all linked via the central hub of the museum and atrium. **Changes in elevation and perspective** provided by the elevated walkways and ramps and sunken garden are integral to the experience of the visitor, giving each of them more **opportunity to contemplate & discover**.



MASTER PLAN - OVERVIEW

FINAL DESIGN - DETAIL AREAS

There are three main ‘journeys’ for the visitor to experience: the Heritage Garden walk, the Vietnam Firebase journey and the Afghanistan Firebase journey

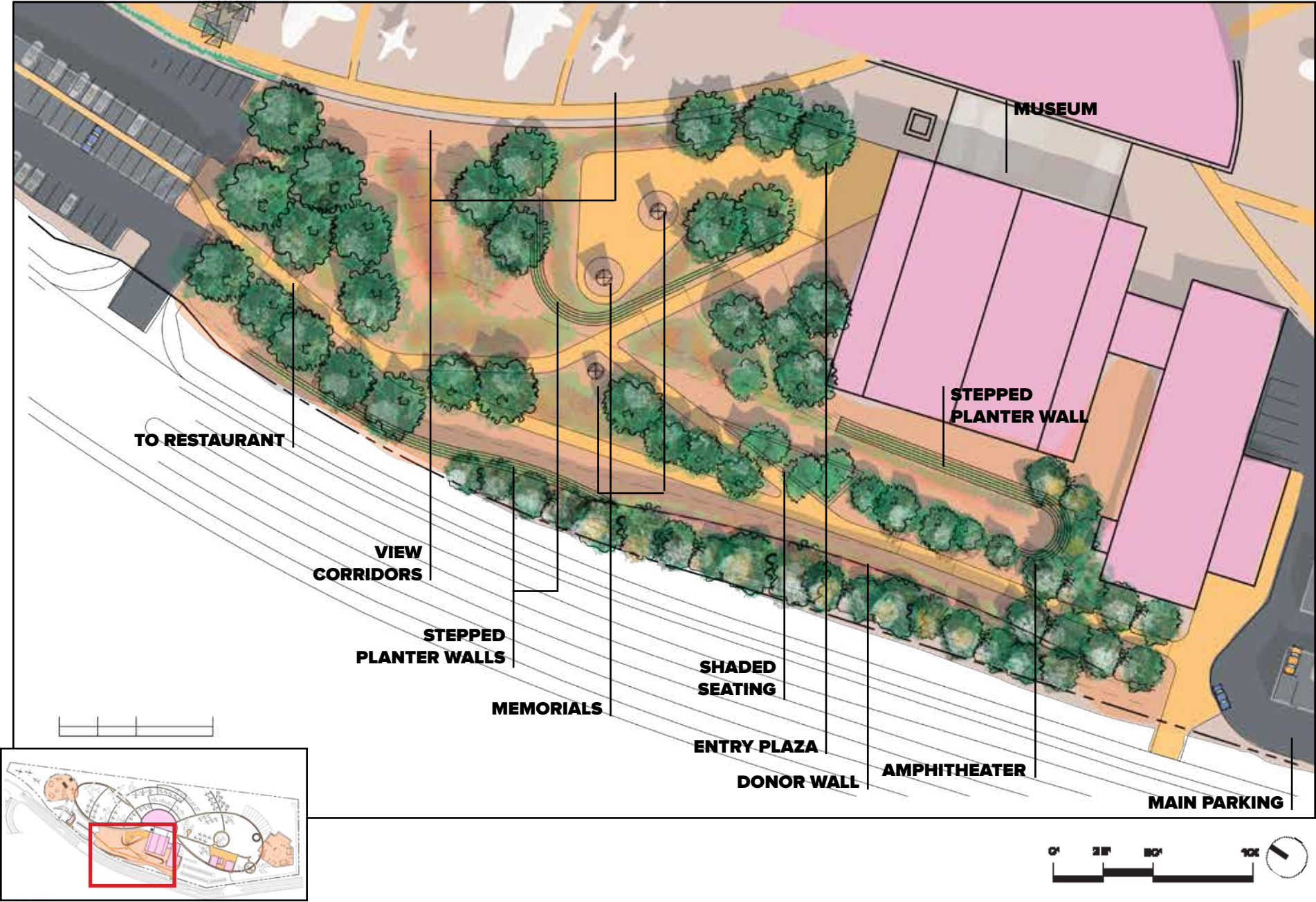


MASTER PLAN - DETAIL AREAS



FINAL DESIGN - DETAIL - HERITAGE GARDEN

The Heritage Garden is the first journey the museum visitor encounters. As the space is sunken 10’ below grade, visitors must descend down into this **shaded & contemplative space** which will be populated with various memorials and exhibits highlighting the shared sacrifice of the military. While traversing the garden, **view corridors** will be preserved to allow the visitor to see glimpses of aircraft on the campus beyond. On approach to the main museum entrance, the visitor will ascend from the sunken space, gradually glimpsing more of the museum’s buildings and aircraft.



HERITAGE GARDEN - ILLUSTRATIVE PLAN DETAIL





HERITAGE GARDEN - HERITAGE GARDEN BIRD’S-EYE VIEW



HERITAGE GARDEN - AMPHITHEATER





HERITAGE GARDEN - MEMORIAL APPROACH & VIEW CORRIDOR



HERITAGE GARDEN - MUSEUM APPROACH

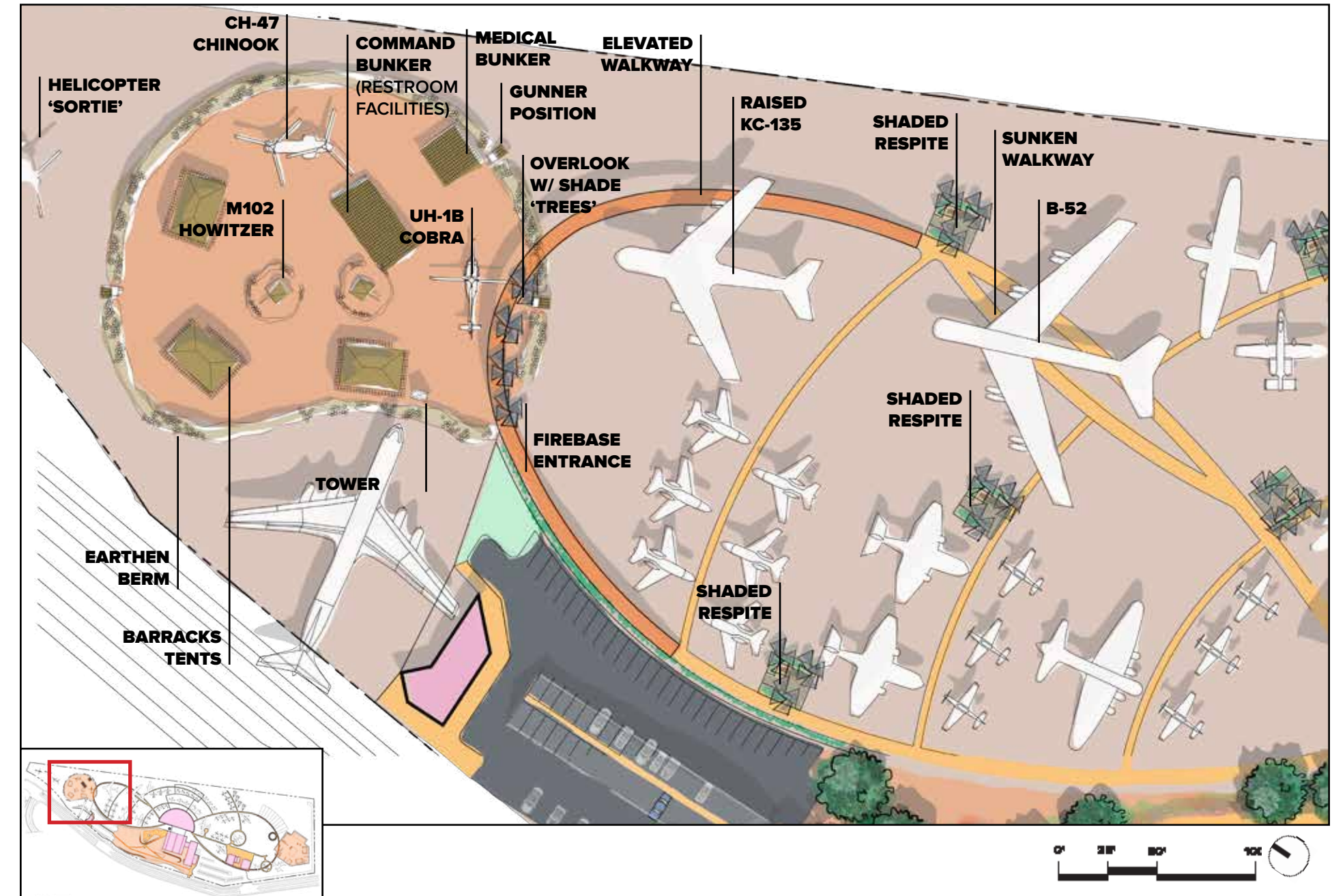


### FINAL DESIGN - DETAIL - VIETNAM FIREBASE & RE-FUELING 'FLY-BY'

The Vietnam firebase journey gives the visitor the opportunity to view the firebase from both ground level, as well as from an **elevated overlook**. Within the site, there are multiple **realistically detailed areas** created to **give veterans space to share their stories** - with perhaps an opportunity for the museum to create an **oral-history library**.

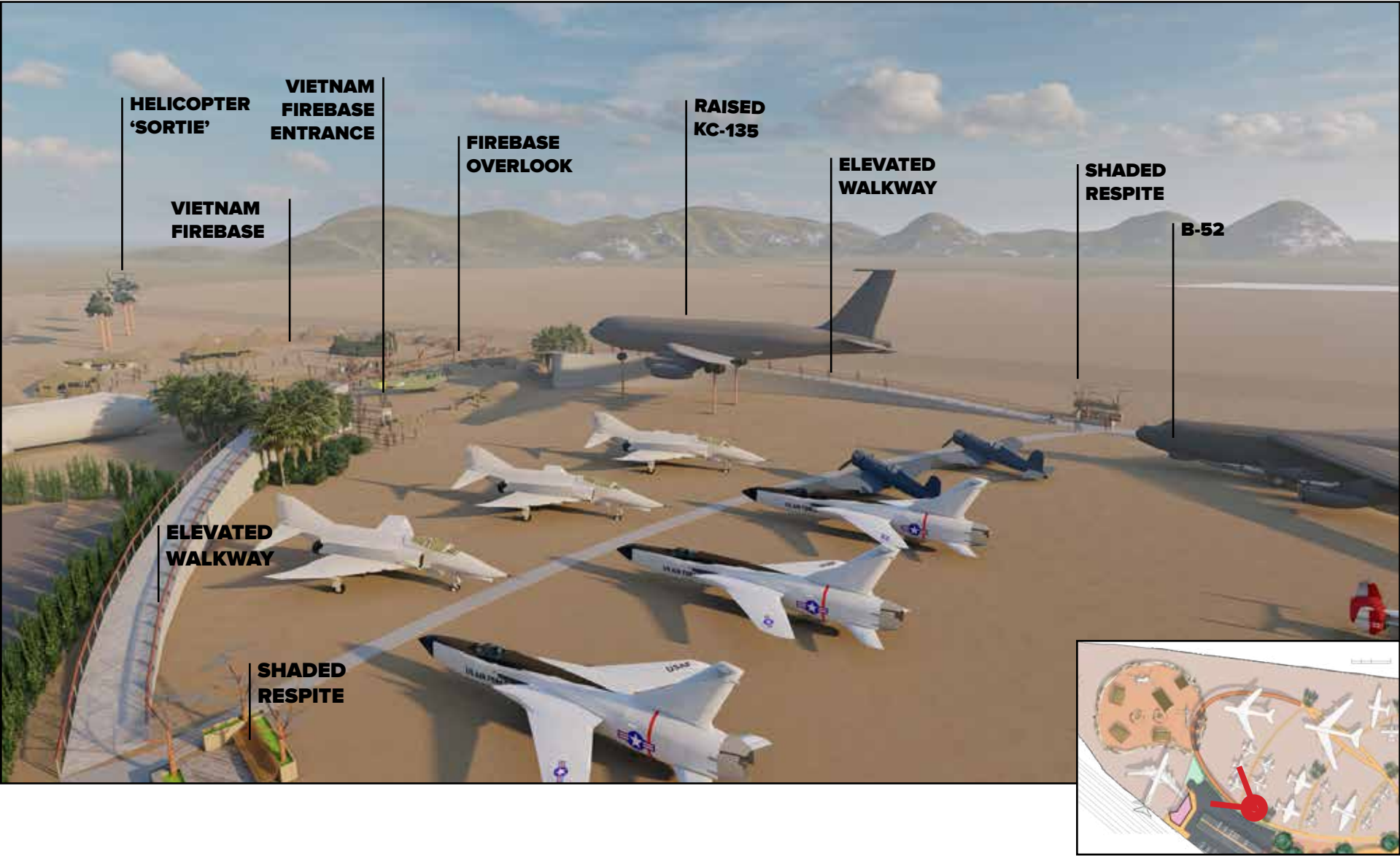
The KC-135/B-52 'fly-by' gives visitors a **unique view of an in-air flight re-fueling mission**.

The helicopter 'sortie' (an exhibit of helicopters raised 'in flight' on structural posts) acts as both an atmospheric element for those inside the Vietnam firebase as well as a **visual monument for those passing by on the adjacent highway**.



VIETNAM FIREBASE & RE-FUELING 'FLY-BY' - ILLUSTRATIVE PLAN DETAIL





VIETNAM FIREBASE & RE-RUELING 'FLY-BY' - BIRD'S-EYE VIEW



VIETNAM FIREBASE - FIREBASE ENTRANCE BIRD'S-EYE





VIETNAM FIREBASE - FIREBASE OVERLOOK



VIETNAM FIREBASE - VIEW FROM INSIDE





VIETNAM FIREBASE - VIEW FROM INSIDE



KC-135 / B-52 REFUELING BIRD'S-EYE VIEW



KC-135 / B-52 REFUELING - KC-135 FLYBY



KC-135 / B-52 REFUELING - B-52 BOMBER BAY





KC-135 / B-52 REFUELING - SHADED RESPITE

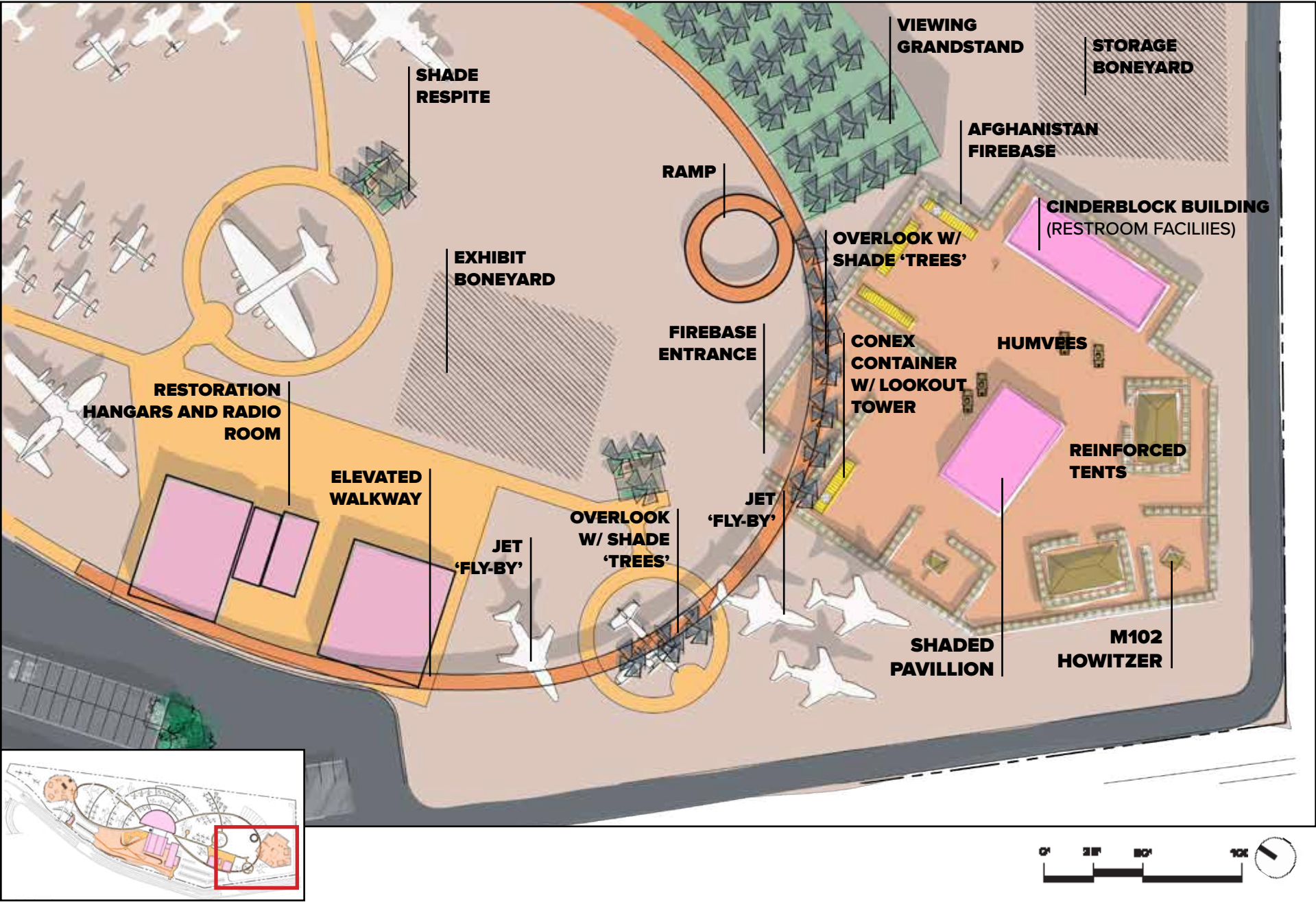


FINAL DESIGN - DETAIL - AFGHANISTAN FIREBASE & GRANDSTAND

The Afghanistan firebase journey gives the visitor the opportunity to view the firebase from both ground level, as well as from an elevated overlook. Within the site, there are multiple **realistically detailed areas created to give veterans space to share their stories** - with perhaps an opportunity for the museum to **create an oral-history library**.

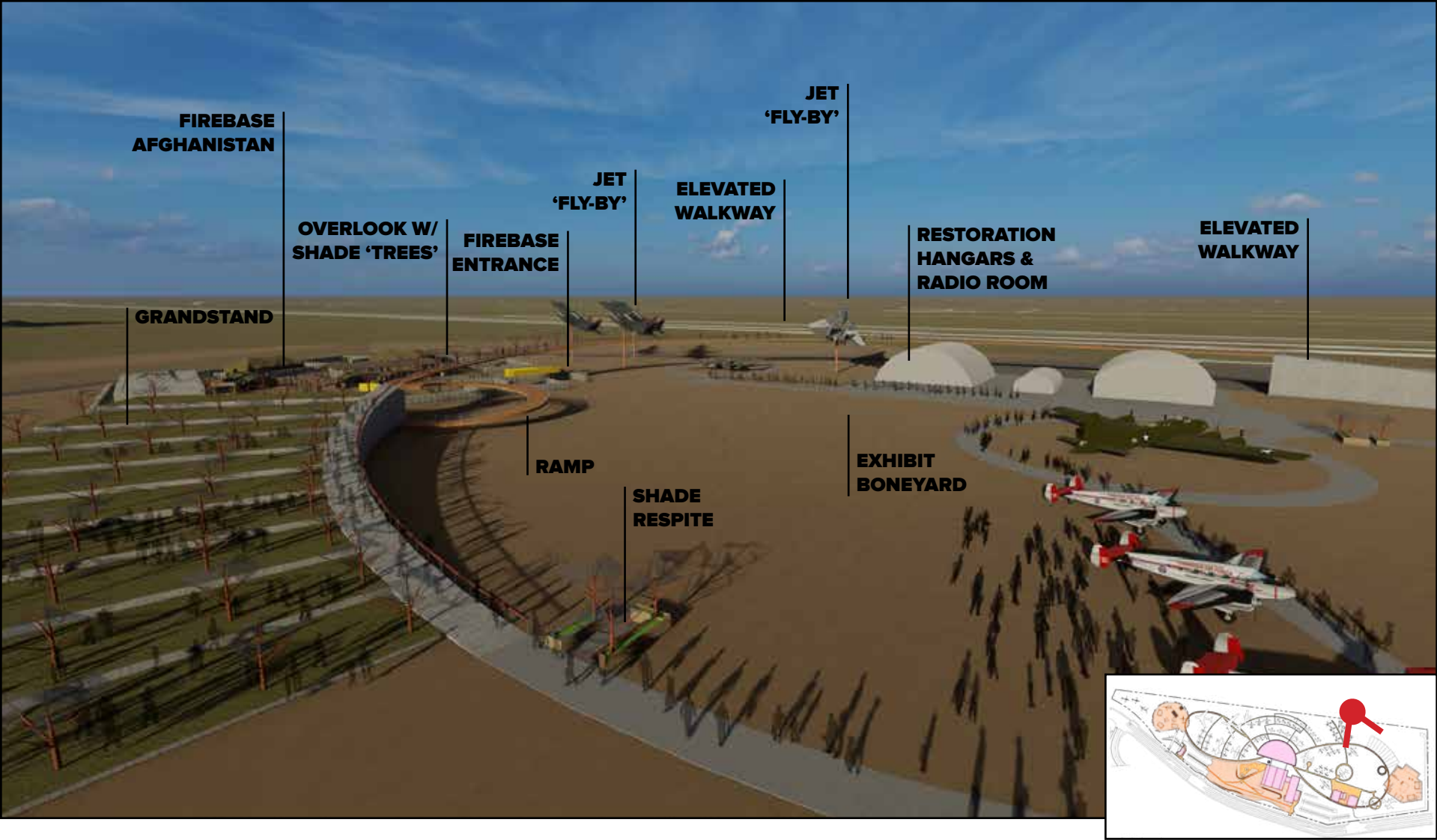
The Grandstand provides space for visitors to **watch aircraft movement** on the adjacent Air Reserve Base during both **air shows and regular operations**.

The jet ‘fly-by’ (an exhibit of fighter jets raised ‘in flight’ on structural posts) acts as both an atmospheric element for those walking by on the elevated walkway as well as a **visual monument for those passing by on the adjacent highway**.



AFGHANISTAN FIREBASE - ILLUSTRATIVE PLAN DETAIL





AFGHANISTAN FIREBASE & GRANDSTAND - BIRD’S-EYE VIEW



AFGHANISTAN FIREBASE - FIGHTER JET FLYBY





AFGHANISTAN FIREBASE - FIREBASE OVERLOOK



AFGHANISTAN FIREBASE - ENTRANCE BIRD'S-EYE





AFGHANISTAN FIREBASE - SHADE PAVILLION



AFGHANISTAN FIREBASE - A VIEW FROM INSIDE



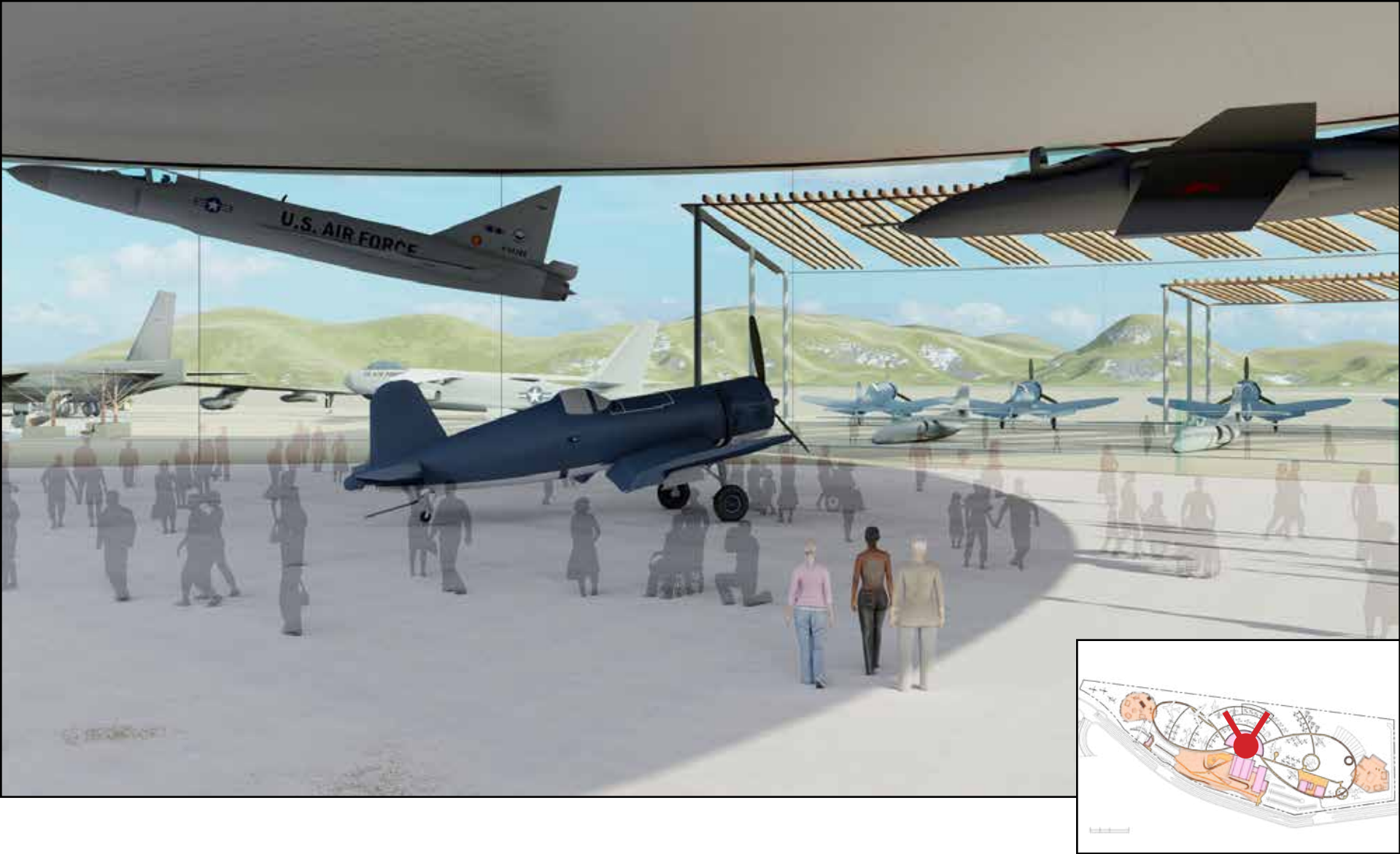


GRANDSTAND



MUSEUM ATRIUM





Many thanks to Patrick Reynolds, Allan Spulecki, and my fellow students.

MUSEUM ATRIUM