

HARTFORD - BRAINARD AIRPORT PROPERTY (BAP) STUDY: 2022/2023

PREPARED FOR CONNECTICUT FINANCE REVENUE AND BONDING COMMITTEE
AND THE DEPARTMENT OF COMMUNITY AND ECONOMIC DEVELOPMENT

March 27, 2024



BEJ Planning

AGENDA

BRAINARD AIRPORT PROPERTY STUDY INFORMATIONAL FORUM



- Introduction and Project Overview
- Methodology
- Hartford Brainard Airport Overview
- Development Scenarios
- Economic, Environmental, and Airport Operation
- Recommendations and Implementation Strategy
- Conclusion
- Questions and Answers

INTRODUCTION

Purpose:

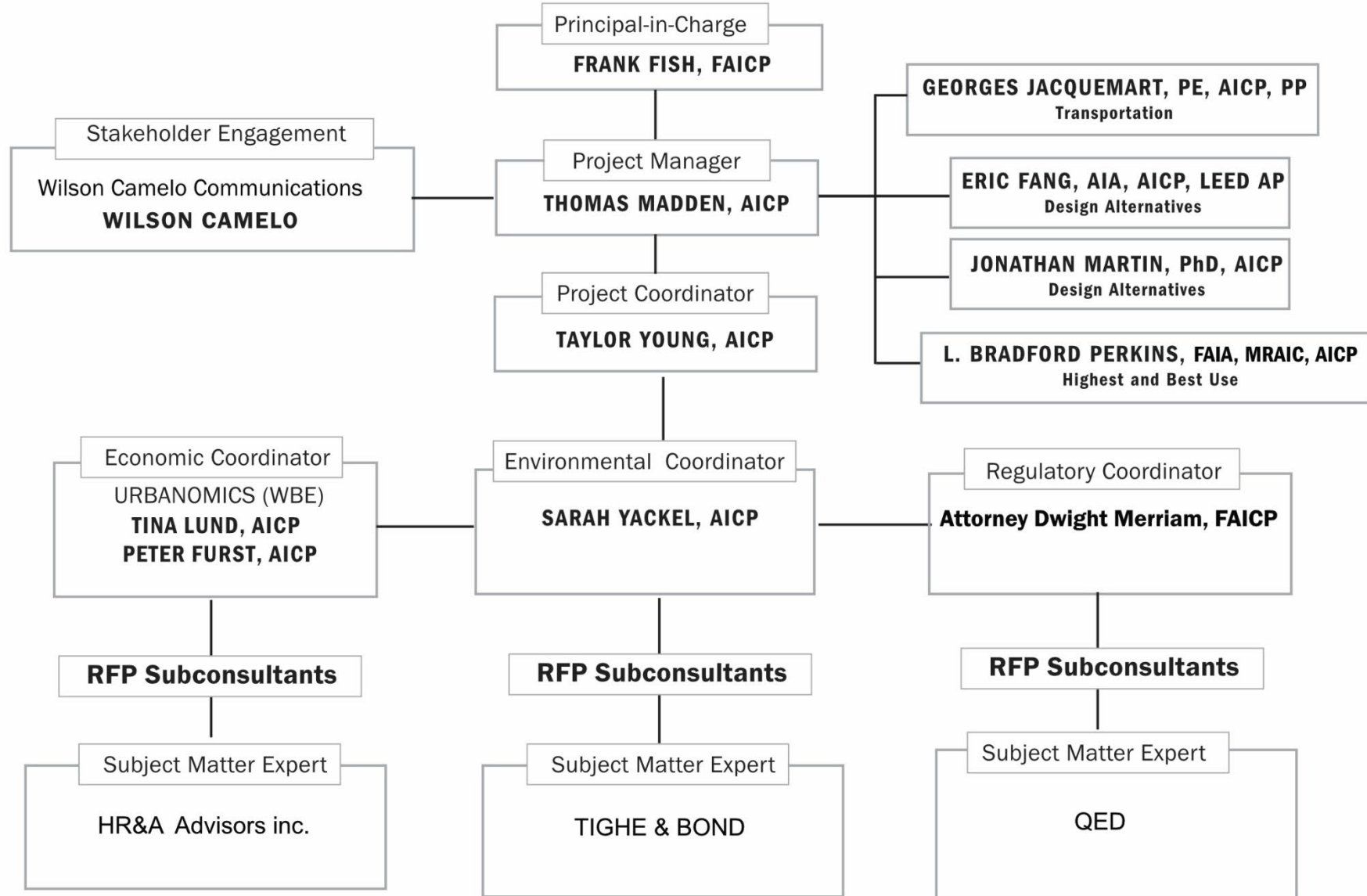
- To assess the benefits and opportunity costs of the current and alternative uses of the Hartford Brainard Airport property.
- Enhance the quality of life, boost tourism, stimulate the economy, and increase recreational opportunities along the Connecticut River.

Objectives:

- Economic Impact Assessment: Evaluate the property's current and potential economic impacts (direct, indirect, quantitative, and qualitative).
- Environmental and Regulatory Analysis: Identify environmental or flood control challenges and governmental obstacles to redevelopment, including potential costs and strategies for overcoming these barriers.
- Optimal Use Determination: Determine the highest and best use of the property, considering economic, environmental, and regulatory findings and aligning with the goals of enhancing health, welfare, safety, and quality of life.

ORGANIZATION CHART

STATE OF CONNECTICUT STEERING COMMITTEE



PROJECT SCHEDULE

2023

NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
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Airport Operations and Environmental Due Diligence

Highest and Best Use Scenarios

Developing Current and Alternative Development Scenarios

Draft and Final Report and Presentation

Workshops



LEGISLATIVE MANDATE PUBLIC ACT NO. 22-118, SECTION 426

STUDY COMPONENTS

The study shall assess the following:

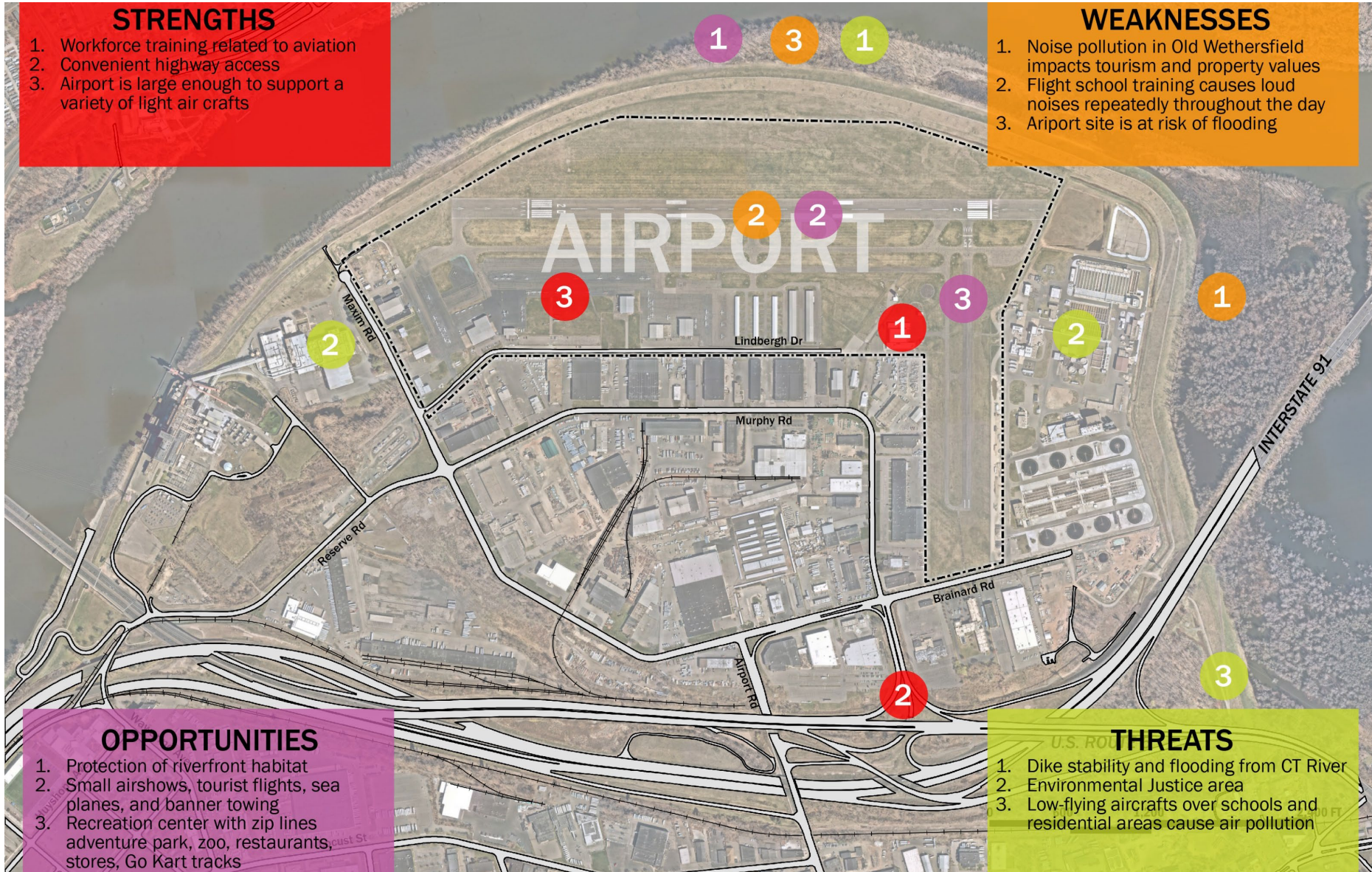
- 1) The economic impact of the current use of the property to the state and to the region surrounding the property;
- 2) The economic impact of alternative uses of the property, including commercial, residential, and recreational opportunities, to the state and to the region surrounding the property;
- 3) Identification of any environmental or flood control obstacles to the development of alternative uses of the property, including the conducting of any required testing of the site and the possible avenues and associated costs to render the property environmentally developable;
- 4) Identification of any federal, state or local governmental obstacles, including existing contractual obligations, to the development of alternative uses of the property, the possible avenues to remove each such obstacle and the associated costs of pursuing each avenue; and
- 5) The highest and best use of the property, if not its current use, taking into consideration the findings of subdivisions (2) to (4), inclusive of this subsection and the goals set forth in subsection (a) of this section.

COMMUNITY OUTREACH

- Five public meetings
 - Meeting #1 – February 16, 2023 – *Introduction*
 - Meeting #2 – April 13, 2023 - *Airport Operations*
 - Meeting #3 – May 18, 2023 - *Environmental Conditions*
 - Meeting #4 – July 13, 2023 – *Economic Conditions*
 - Meeting #5 – August 10, 2023 - *Highest and Best Use*
- Economic Engagement Events
 - Interview with Developers and Commercial RE
- Economic Impact Survey of Airport:
 - Sent through email to pilots and business owners
- Website - <https://hartfordbrainardairportstudy2023.com>



COMMUNITY OUTREACH



Airport Property History



PROPERTY HISTORY

- The site has operated as an airport for over a century (opened in 1921).
- The Connecticut National Guard was historically present from 1923 until post-World War II.
- The Site had been prone to severe flooding due to the proximity of the Connecticut River. Following significant flooding in 1936 and 1938, the US Army Corps of Engineers constructed the Clark Dike that abuts the eastern property boundary.
- The site is currently leased by the State of Connecticut to several tenants, predominately for aircraft use.
- As of July 1, 2013, all airport-related activity formerly administered by the Connecticut Department of Transportation (ConnDOT), is under the purview of the Connecticut Airport Authority (CAA).



HARTFORD-BRAINARD AIRPORT OVERVIEW

GEOGRAPHIC AND HISTORICAL CONTEXT



HARTFORD-BRAINARD AIRPORT OVERVIEW

GEOGRAPHIC AND HISTORICAL CONTEXT



1951 Brainard Airport



1971 Hartford Brainard Airport



2022 Hartford Brainard Airport

CURRENT HFD SITE CONDITIONS

The 200-acre site is surrounded by an industrial park and utility uses

- Water treatment plant
- Decommissioned waste-to-energy facility
- Industrial Park and Uses



Assessment of Airport Operations



AIRPORT OPERATIONS

AIRPORT FACILITY REQUIREMENTS

Runway 2-20 (Length - 4417')

- Provides 95% of weather wind coverage
- Serves most of the GA aircraft well
- Business jets may experience weight restrictions
- Potential for expanding into one lagoon

Runway 11-29 (Length - 2314')

- Offers support during gusty wind conditions
- Training for student pilots
- Extension is not practical
- Not likely to remain eligible for FAA grant funding, life/cycle benefit-cost ratio of 0.52

Turf Runway (Length - 2309')

- Operational support during peak activity
- Active April thru October



AIRPORT OPERATIONS

AIRPORT FACILITY REQUIREMENTS

Instrument Approach Procedures

- Limited to Runway 2
- Potential for upgrades

Landside

- Land area available to meet terminal area facilities demand – long term improvements



AIRPORT FINANCES

FY 2021-2023 (BUDGET)

Operating Revenue

- Operating revenue \$938,000 (avg)
 - Primary operating revenue source: land and facility rents
- Operating expenses \$1,183,000 (avg)
- Net operating loss averages \$558,000
 - Net-Net operating loss after State Employee Retirement System exclusion averages \$282,000
 - Primary operating expense is staffing
- Expectations are for a continued imbalance in operating revenue and expenses

AIRPORT OPERATIONS

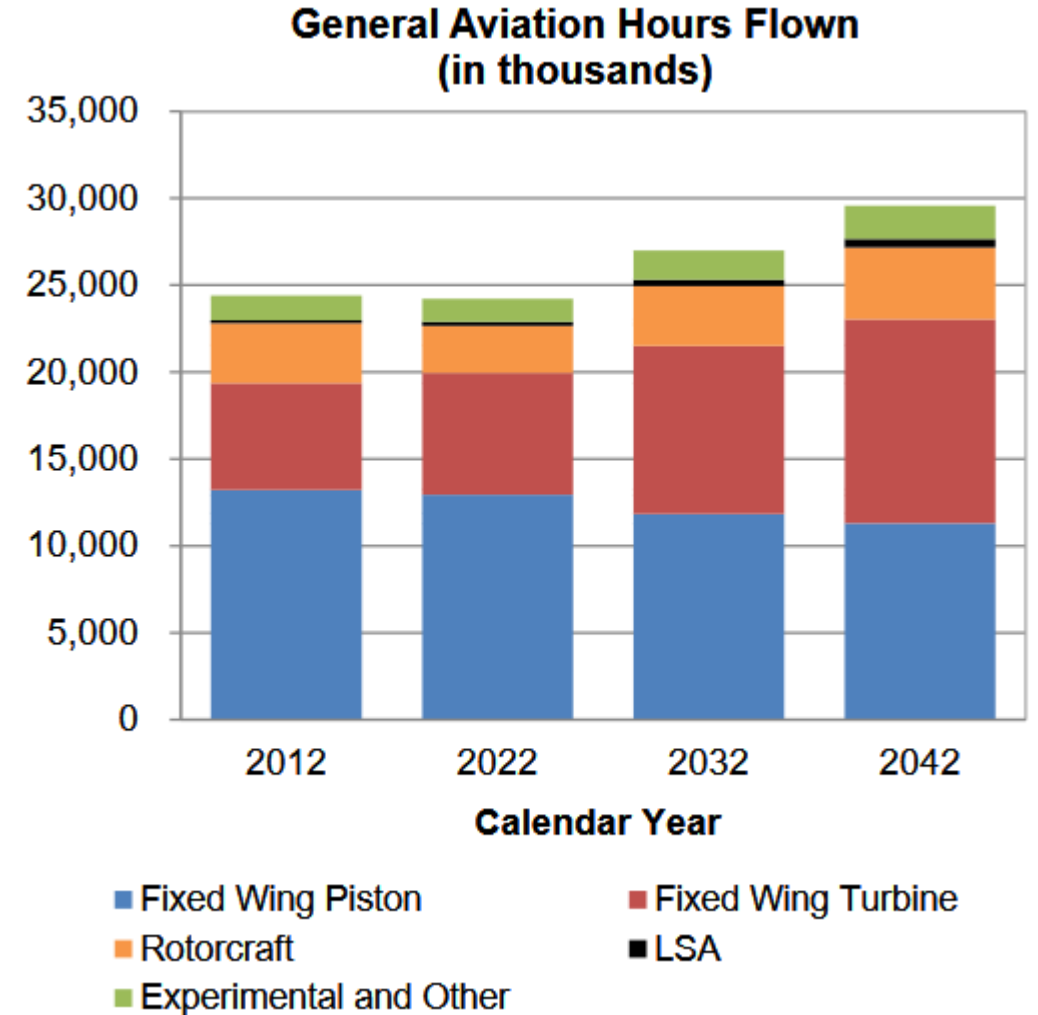
CURRENT AND FUTURE OPERATIONS

- Offers a high level of service to the smaller segment of the general aviation aircraft fleet
- Has limited ability to meet operational requirements of larger business jets
- Has land area for terminal area facility expansion
- Experiences a net and net-net operating loss
- May have the potential to implement a vertiport facility (e-VTOL)

CURRENT OPERATIONS

FISCAL ANALYSIS

- Moderate growth in aircraft activity, consistent with national trends
- Sufficient airfield and terminal area capacities to accommodate increased traffic levels
- Runway 2-20 can be extended to 5000' if the lagoons at the Runway 2 end can be acquired
- Runway 11-29 provides limited utility given its length and slight incremental crosswind coverage



CURRENT OPERATIONS

IMPROVEMENTS

- During the next 20 years, CAA has indicated that the Airport will need some \$22 million total investment
 - CAA - \$2.4 million
 - FAA - \$19.4 million
 - Private sector - \$2.2 million (hangars)
- Runway 11-29 - \$5 million
- Runway 11-29 life-cycle benefit/cost ratio = 0.52
- Airport expected to continue to operate at a deficit of about \$400,000 annually, excluding SERS payments
- Potential to establish an eVTOL vertiport to serve airports/cities in a 100 n.m. range



AIRPORT OPERATIONS

AVIATION DEMAND FORECASTS

- Activity levels returning to pre-COVID levels
- Population growth, employment levels, and household income suggest HFD activity growth on par with state and national projections
- 138 based aircraft to 153 over 20 years (2043)
- Single-engine piston aircraft are the vast majority now and, in the future.
- Design of critical aircraft
 - Runway 2-20: ARC B-II (light general aviation and light jets)
 - Runway 11-29: ARC A/B-I - Small (lightest GA aircraft category)
 - Turf Runway: ARC A/B-1 - Small (lightest GA aircraft category)

AIRPORT OPERATIONS

IF THE AIRPORT STAYS OPEN - NECESSARY SHORT-TERM IMPROVEMENTS (NEXT 5 YEARS):

- Crack and seal Runway 11-29
- Reconstruct Runway 2-20
- Maintain terminal area pavements
- Continue discussions with MCD to extend Runway 2 end
- Construct airfield electrical vault
- Estimated total costs ~ \$11MM (FAA ~90% and CAA ~10%)

AIRPORT OPERATIONS

IF THE AIRPORT STAYS OPEN - NECESSARY LONG-TERM IMPROVEMENTS (NEXT 5 YEARS):

- **Rehabilitate Taxiway A South**
- **Rehabilitate airfield lighting systems**
- **Reconstruct Runway 11-29**
- **Maintain terminal area pavements**
- **Construct new hangar storage**
- Estimated total costs ~ \$11MM (FAA~90% and CAA ~10%) + \$2MM private

AIRPORT OPERATIONS

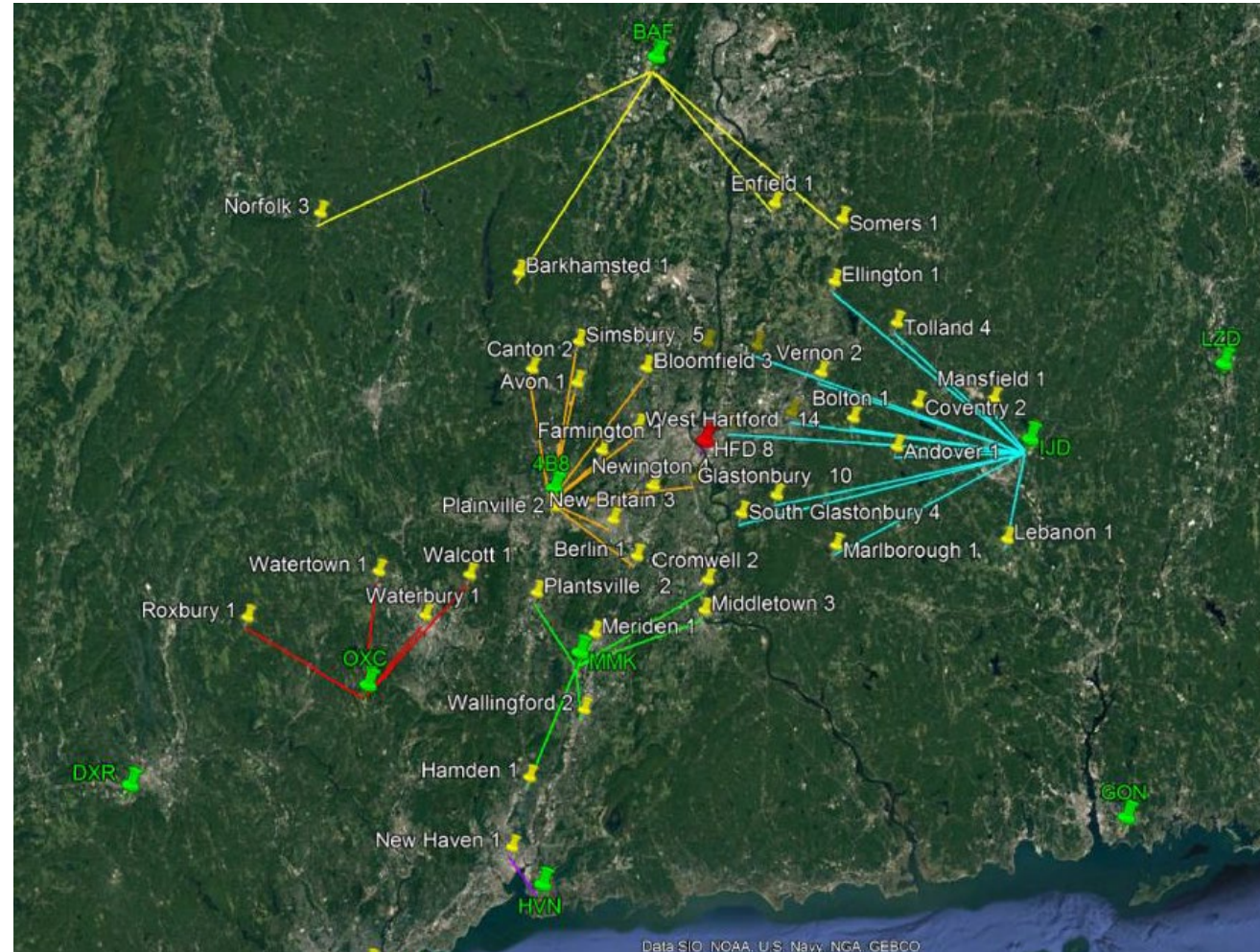
OBSTACLES TO IMPLEMENTATION:

- Availability and timing of FAA AIP grants (up to 90% of project cost) and matching funds from CAA
- Availability and timing of private investment in hangar facilities
- Runway 2-20 may be closed during reconstruction
- Continued noise complaints from Wethersfield general public

IF THE AIRPORT WERE TO CLOSE

REPOSITION AIRCRAFT TO OTHER AIRPORTS

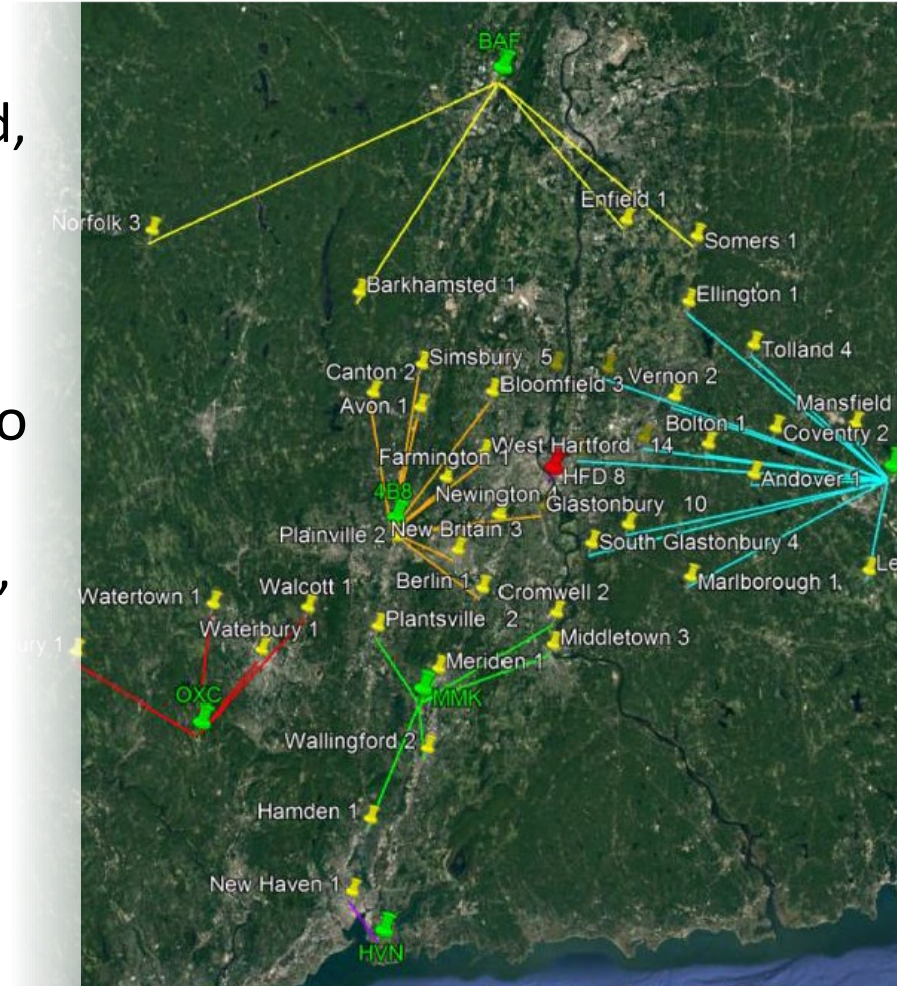
- Considered publicly-owned airports, excluding Bradley International
- Initial concept allocation repositioning to other airports based on:
 - Pilot proximity
 - Planned tiedown and hangar facilities capacities
 - Land resources available for based aircraft terminal area facilities, including potential for sponsor-owned adjacent vacant land
 - Runway length
 - Services available



AIRPORT CLOSURE

FISCAL/REGULATORY ANALYSIS

- Reposition 138 based aircraft
 - Primary receiving airports likely include Robertson Field, Windham Airport and Meriden Markham Municipal Airport
 - Capital costs (hangars) -- \$7 million
- Sale of Airport land and assets must be redistributed to other airports
 - Offers potential for airport improvements more quickly, particularly for in-demand hangar facilities
- Redistribution of aircraft generates de minimis environmental impacts
 - Aircraft noise impacts eliminated in Wethersfield



IF THE AIRPORT WERE TO CLOSE

- Development costs at receiving airports -- \$7.3 million

TERMINAL AREA DEVELOPMENT REQUIREMENTS AND COSTS TO ACCOMMODATE REPOSITIONED AIRCRAFT			
Receiving Airport	Required Additional Spaces		Total Development Cost (\$)
	Tiedown	Hangars	
Robertson Field (4B8)	0	40	3,450,000
Westfield Barnes (BAF)	0	6	520,000
Bridgeport Sikorsky (BDR)	0	1	90,000
Tweed New Haven (HVN)	0	1	90,000
Windham (IJD)	15	12	1,860,000
Meriden Markham (MMK)	0	11	950,000
Waterbury Oxford (OXC)	0	4	350,000
Total	15	75	\$7,310,000

- Incremental aircraft noise at receiving airports is assessed as minimal using FAA screening model
- Incremental air and water quality impacts at receiving airports is de minimis

AIRPORT CLOSURE

FISCAL/REGULATORY ANALYSIS

- Repayment of unamortized grants to FAA -- nearly \$2 million
- Subject to an FAA finding that closure results in a net benefit to civil aviation
 - Closure to allow for a 'higher and better' use is not considered by FAA
- Closure is a federal action subject to an environmental assessment of the proposed reuse of the Airport land and assets
- May be directed by US Congressional legislation



ECONOMIC IMPACTS OF HFD OPERATIONS



THE ECONOMIC AND FISCAL IMPACTS OF HFD

As a part of this study, HR&A assessed:

- The economic impacts of HFD on the City of Hartford, the region, and the State of Connecticut for both continued operations and alternative scenarios.
- The fiscal impacts of HFD on the City of Hartford and the State of Connecticut for both continued operations and alternative development scenarios. This includes:
 - PILOT
 - Tax revenues
 - Other fees and revenues

CURRENT ECONOMIC IMPACT ANALYSIS OF HFD

1. Review of Prior Studies and Reports
2. Airport Activity Survey and Registered Aircraft Owner Survey
 - Quantitative data to inform economic impact model inputs
 - Qualitative data, including richer context to activity at the airport
 - Surveys developed and in the field as of April 10th
3. Hartford Market Assessment Report
 - Site/neighborhood visit
 - Scan of regional demographic, employment, and real estate trends
 - Stakeholder outreach to inform and/or validate market data

SURVEYS

AIRCRAFT OWNERS AND EMPLOYERS

Two surveys were preformed to help assess the economic impact

Audience Research & Analysis

Hartford-Brainard Business Operator Survey 2023

1. Please check each type of **business you operate** at Hartford-Brainard airport. *
Check each that applies.

<input type="checkbox"/> Aircraft parts	<input type="checkbox"/> Fuel sales
<input type="checkbox"/> Aviation education/ Instructors, Management	<input type="checkbox"/> General aviation maintenance including runways
<input type="checkbox"/> Community Services Based at Airport	<input type="checkbox"/> Hangar/Tie-down rentals
<input type="checkbox"/> Emergency Medical Transport	<input type="checkbox"/> Service and repair of avionics
<input type="checkbox"/> FBO management (flight planning, pilot room, baggage, parking, etc.)	<input type="checkbox"/> Other - Write In <input type="text"/>
<input type="checkbox"/> Federal Agency (e.g., DEA, FBI, National Guard, Homeland Security)	

2. In a few sentences, please describe your business.
OPTIONAL

[Back](#) [Next](#)

10%

Hartford-Brainard Aircraft Owners Survey 2023

Please enter the approximate **percentage** of the total amount reported above for each category below. *
Please enter a "0" for any category that is not applicable.

Fuel	<input type="text"/>
Supplies (other than fuel)	<input type="text"/>
Hangar or Tie-down rent at Brainard	<input type="text"/>
Maintenance at Brainard	<input type="text"/>
Insurance	<input type="text"/>

0 out of 100 Total

INITIAL SURVEY FINDINGS

PURPOSE OF THE SURVEY

115 aircraft owners were sent a survey about their airport usage and expenditures and 12 businesses were sent surveys about their business operations at HFD.

The screenshot shows a survey form titled "Audience Research & Analysis Hartford-Brainard Business Operator Survey 2023". The first question asks respondents to check each type of business they operate at the airport. The options include: Aircraft parts, Aviation education/Instructors, Management, Community Services Based at Airport, Emergency Medical Transport, FBO management (flight planning, pilot room, baggage, parking, etc.), Federal Agency (e.g., DEA, FBI, National Guard, Homeland Security), Fuel sales, General aviation maintenance including runways, Hangar/Tie-down rentals, and Service and repair of avionics. There is also a field for "Other - Write In". The second question asks for a description of the business, marked as optional. The form includes "Back" and "Next" buttons and a progress indicator showing 10% completion.

Airport Activity Survey and Registered Aircraft Owner Survey

- Attempts were made to contact all businesses located on HFD
- Quantitative data to inform economic impact model inputs
- Surveys developed and in the field as of April 10th

68

Aircraft Owner Responses

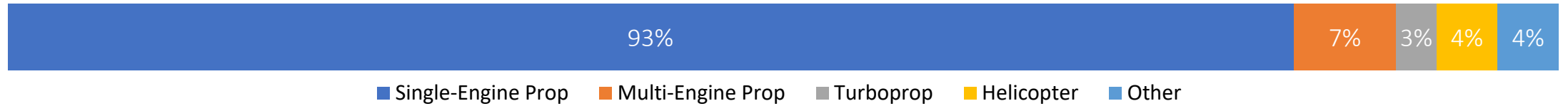
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Business Operator Responses

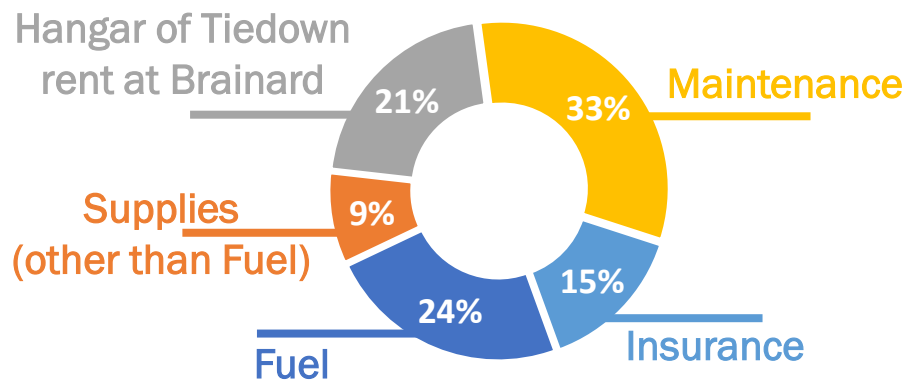
INITIAL SURVEY FINDINGS

AIRCRAFT OWNERS SURVEY

What type(s) of aircraft do you own?



Average Breakdown of Aircraft Owner Spending at Brainard



\$55K

Average spending at HFD

55%

Of owners spend between \$5,000 and \$25,000 at HFD

\$1.25M

Highest spending at HFD

HFD Aircraft owners spend an average of \$55,000 annually on fuel, supplies, hangar or tiedown rent, maintenance on-site, and insurance

INITIAL SURVEY FINDINGS

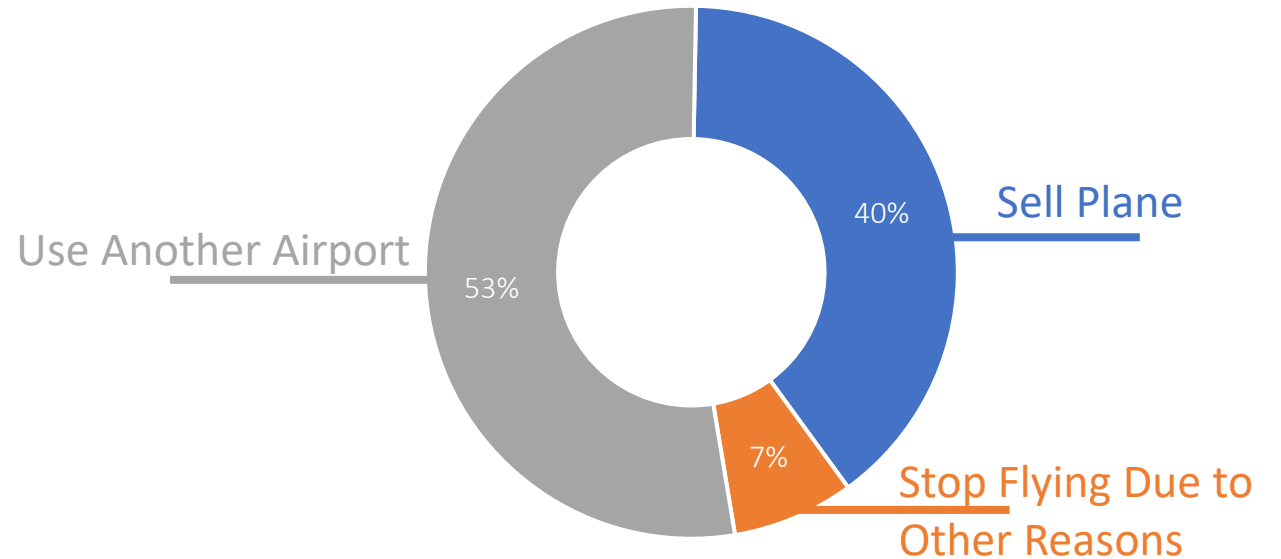
PLANE OWNERS SURVEY

The closure of HFD would prompt 47% of aircraft owners to sell their aircraft or to stop flying.

Top Five Alternative Airports

1. Meriden Markham Municipal Airport
2. Robertson Field
3. Windham Airport
4. Simsbury Airport
5. Waterbury-Oxford Airport

If you were unable to use the Hartford-Brainard Airport, which of the following actions are you most likely to take?



INITIAL SURVEY FINDINGS

BUSINESS OPERATORS SURVEY

The closure of HFD would force five of the eight business operator respondents to close their businesses, a loss of 54 jobs and \$4M of business spending

If HFD closed...

30

Full-time jobs would
be lost

24

Part-time jobs would
be lost

160

Students would not
be trained in Hartford

5%

of business spending
would remain within
the region

CURRENT FISCAL IMPACTS OF HFD

SUBJECT MATTER EXPERT REVIEW

- State-owned property
- Tax exempt
- State makes a consolidated PILOT for all State-owned property in municipalities across Connecticut.
- The airport's assessed value is included in the State's calculation of the consolidated PILOT it makes to the City of Hartford.

Source: Municipal Grants State of Connecticut, 2022 Use of Hartford Brainard Airport's Site, 2016.



CURRENT FISCAL IMPACTS OF HFD

PAYMENT IN LIEU OF TAXES (PILOT)

Airport does not make PILOT to the City of Hartford; instead, State makes a PILOT for all State-owned property in Hartford, *a share of which can be attributed to the airport.*

- PILOT attributed to State-owned airport equals 45% of property tax.
- State has underfunded statutorily required PILOT for decades.
- Beginning in FY 2022, State established new allocation of limited PILOT funding to cities with higher needs. As a result, and as a result, Hartford receives 50% of the total PILOT formula as a Tier 1 city
- This results in an effective PILOT calculation that is 22.5% of the property tax in the case of the PILOT attributed to the airport

CURRENT FISCAL IMPACTS OF HFD

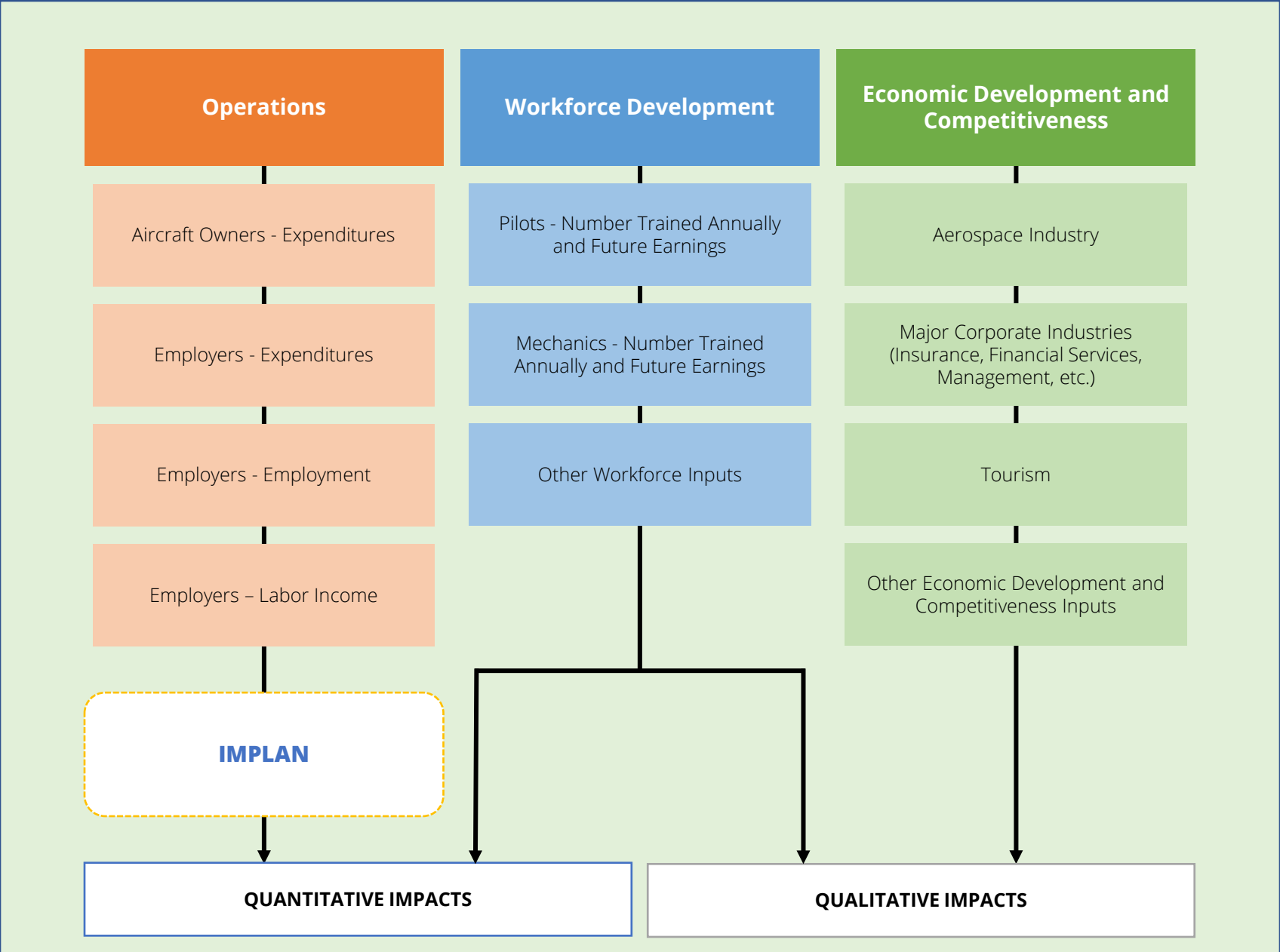
WHAT IS THE VALUE OF THE PILOT AT THE AIRPORT?

FY 2023 Estimated PILOT	All State-Owned Property in the City of Hartford	Hartford-Brainard Airport
Assessed Value	\$1.1B	\$40M (3.6%)
Real Property Tax Rate	7.43%	7.43%
State-mandated PILOT Rate	*53%	45%
Tier 1 PILOT Share	50%	50%
Value of PILOT	\$21M	Est. \$668K

Source: 2022 Building Inventory State of Connecticut; Municipal Grants State of Connecticut, 2022 Use of Hartford Brainard Airport's Site, 2016; State of Connecticut, *State-Owned Property - Payment in Lieu of Taxes (State Owned PILOT), 2022*.

* - Represents blended PILOT rate based on shares of different exemption codes including, general government, corrections, education, hospitals, etc.

CONCEPTUAL HFD OPERATIONS ECONOMIC IMPACTS MODEL



IMPLAN MODELING

- IMPLAN is a widely used economic tool that allows users to analyze the economic effects of changes in various economic sectors.



ECONOMIC INPUT AND OUTPUT MEASURES

ECONOMIC IMPACT ANALYSIS OF HFD OPERATIONS FOCUSES ON CURRENT STATE

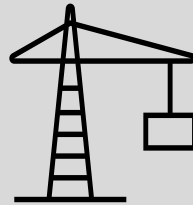
HR&A CONSIDERED THE TOTAL IMPACTS FROM A SET OF DRIVERS INCLUDING ONSITE AND OFFSITE SPENDING BY AIRPORT USERS AND EMPLOYERS, CAPITAL INVESTMENTS IN THE AIRPORT, AND VISITOR SPENDING

- Aircraft owner spending
 - Onsite and offsite
 - Includes: fuel, maintenance, supplies, rent, and insurance, as well as offsite retail spending
- Employer spending
 - Includes: payroll, raw materials, office goods and services
- Visitor spending
- CAA capital maintenance spending

MODELING OF ECONOMIC AND FISCAL IMPACTS FOR REDEVELOPMENT SCENARIOS

- Modeling economic impacts of redevelopment scenarios includes greater emphasis on one-time impacts of construction

Time Period of Benefit



One-time



Ongoing (annual)

- One-time and ongoing economic output and labor income measured over a 20 to 30 year time period and discounted

MODELING OF ECONOMIC AND FISCAL IMPACTS FOR REDEVELOPMENT SCENARIOS



Construction Costs

(site preparation and buildings)



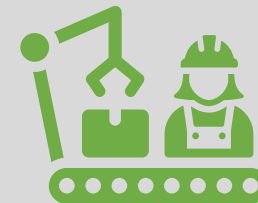
Sales

(retail uses and other selected commercial uses)



Visitor Spending

(selected recreation uses)



Employment

(commercial office and industrial uses)

MODELING OF ECONOMIC AND FISCAL IMPACTS FOR REDEVELOPMENT SCENARIOS

- Economic impact results summarized in terms of:



Jobs

(Job-years for one-time impacts, full-time equivalents for ongoing operations)



Earnings



Economic Output

- Fiscal impact results summarized in terms of:



Tax revenues from one-time and annual impacts

CURRENT FISCAL IMPACTS OF HFD

FISCAL BENEFITS TO CITY OF HARTFORD & STATE FROM HFD

HFD provides fiscal benefits to the City through multiple channels, including;

1. Local Benefits

- Other Fees and Revenues (e.g., Aircraft Registration Fees)
- Payment in Lieu of Taxes (PILOT)

2. State Benefits *(5.2% Share of revenues returned to Hartford through municipalities revenue sharing grant)*

- Sales Taxes
 - Repair or replacement parts exclusively for use in aircraft and aircraft repair services are exempt
- Personal and business income taxes
- Motor fuels taxes
- Other taxes (e.g., Gross Earnings Tax, etc.)

Environmental Conditions



ENVIRONMENTAL CONDITIONS

PHASE I ENVIRONMENTAL SITE ASSESSMENT

- Purpose of a Phase I ESA
 - **Identify Areas of Concern (AOCs)** as defined in the Connecticut Department of Energy and Environmental Protection (CTDEEP) Connecticut Site Characterization Guidance Document (SCGD) and **Recognized Environmental Conditions (RECs)** as defined in ASTM E1527-21 Standard Practice for Environmental Site Assessments (the ASTM Phase I Standard).
 - **Review of past and current subject property activities.**
 - **Determine if surrounding properties have the potential to impact soil, groundwater, or soil vapor on the subject property.**



Brainard Field 1936

Photograph Credit: Connecticut Historical Society Museum & Library

ENVIRONMENTAL CONDITIONS

ENVIRONMENTAL SITE ASSESSMENT PROGRESSION

Phase I ESA Findings

23 AOC/ 5 RECs

- Typical Aircraft Maintenance and Repair Activities
- Historical Airport Activities and Aircraft Accidents
- Underground Storage Tanks (USTs) and Aboveground Storage Tanks (ASTs)
- Other Associated AOCs:
 - Transformers, Diesel Generators, Oil/Water Separators



ENVIRONMENTAL CONDITIONS

RESULTS OF PHASE I ENVIRONMENTAL SITE ASSESSMENT

Phase I ESA Findings

Off-site AOCs

- Clark Dike
- Connecticut River
- MIRA = Northern Trash to Energy Facility,
- MDC - Southern Wastewater Treatment Plant



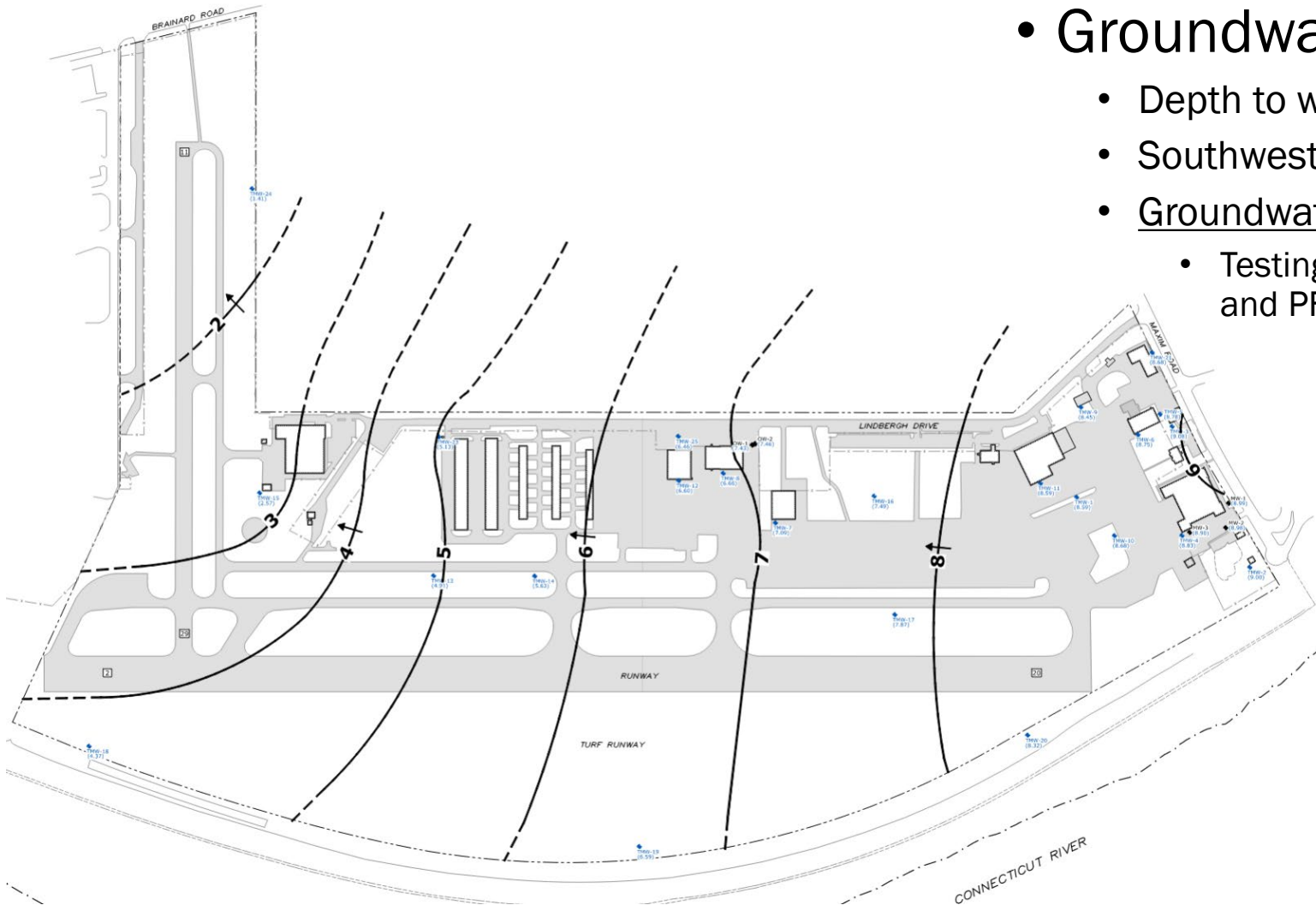
ENVIRONMENTAL CONDITIONS

PHASE II/III ENVIRONMENTAL SITE ASSESSMENT RELEASE AREAS



ENVIRONMENTAL CONDITIONS

PHASE II/III ENVIRONMENTAL SITE ASSESSMENT GROUNDWATER CONDITIONS



- Groundwater Conditions

- Depth to water ranges between 6.09 to 11.39 feet
- Southwesterly flow beneath the Site
- Groundwater impacts are currently being identified.
 - Testing is looking at metals, acenaphthylene, VOCs and PFAS

ENVIRONMENTAL CONDITIONS

ENVIRONMENTAL SITE ASSESSMENT PROGRESSION

Conceptual Remedial Action Plan

- Evaluate remediation strategies for the site to address potentially identified impacted soil and localized zones of impacted groundwater.
 - Excavation, capping, environmental use restrictions (EURs), etc.

Conceptual Opinion of Probable Remediation Cost (OPC)

- Based on the site's proposed remediation strategies, an OPC will be provided, assigning a potential cost range for each strategy.

Flood Plain Survey and Impacts

- Provide a summary of the project flood plain, permitting requirements, and possible solutions.

FLOODPLAIN CONSIDERATIONS



FLOODPLAIN CONSIDERATIONS

STUDY METHODOLOGY

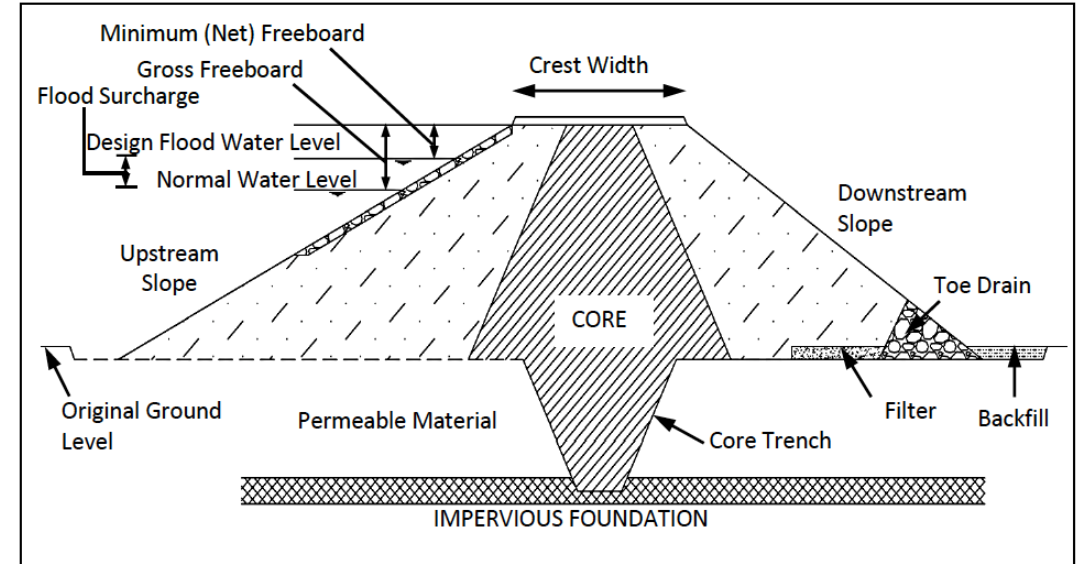
- Data Gathering (Available maps and levee data)
- Site Visit
- Confirm regulatory requirements
- Identify risks
- Develop conclusions and recommendations



FLOODPLAIN CONSIDERATIONS

FLOODPLAIN CONTEXT

- Development Site is Protected by Flood Control Levee
- Base Flood (1% Annual Chance, 100-Year) Elevation = 29.5 NGVD29
- 0.2% Annual Chance (500-Year) Elevation = 34.0 NGVD29
- Top of Levee = Elevation 42.5 NGVD29



ANATOMY OF A LEVEE

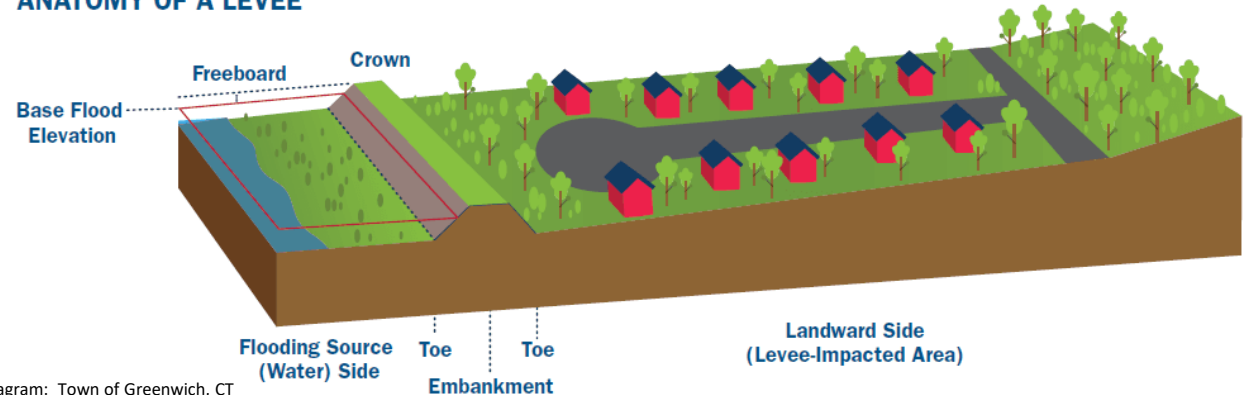
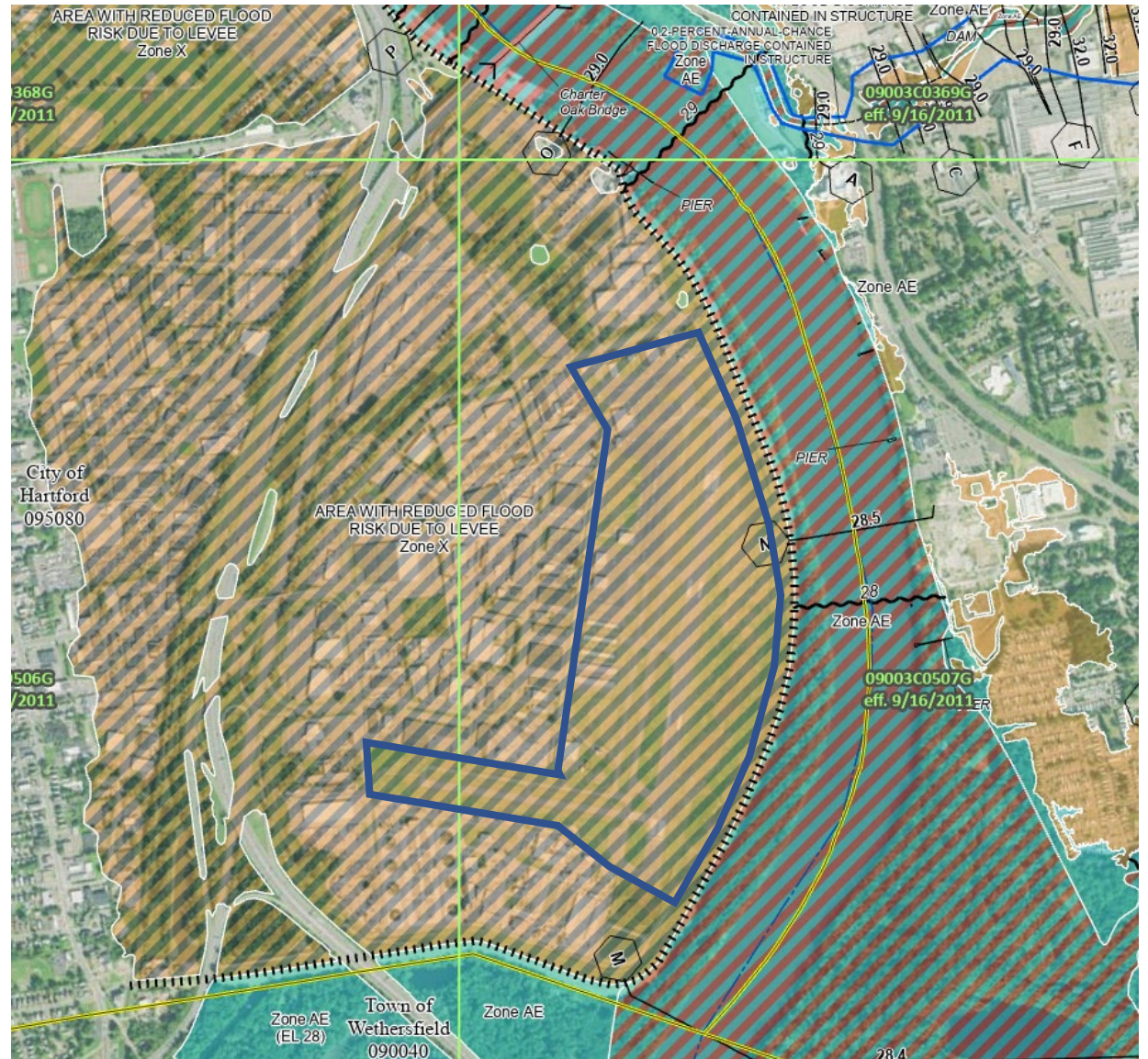


Diagram: Town of Greenwich, CT

FLOODPLAIN CONSIDERATIONS

DATA GATHERING

- Mapped as Zone X
- No mandatory flood insurance purchase requirements
- No minimum floodplain elevation standards
- The levee currently does not meet the ACOE accreditation standards and the Hartford Flood Control Commission is making repairs under a System Wide Improvement Framework Plan



FLOODPLAIN CONSIDERATIONS

CAPITAL IMPROVEMENTS

Project	Priority	Total Est. Cost
EMBANKMENTS/FLOODWALLS		
1. Bulkeley Bridge Underseepage Mitigation	High	\$12,500,000
2. North and South Meadows Dike Toe Drain Installation	High	\$650,000
3. South Meadows Dike Underseepage and Impervious Blanket	Medium	\$5,500,000
4. Floodwall Inspection and Tilting Portion Monitoring	Medium	\$10,000
5. Closure Structure Upgrades	High	\$1,369,000
6. Concrete Flood Wall Upgrades (Joint Repairs)	Low	\$500,000
7. Utility Penetration Abandonment & Modification	Low	\$500,000
PUMPING STATIONS		
8. Pump Station Inspections	High	\$130,000
9. North and South Meadows Pump Station Trash Rack Replacement	High	\$2,000,000
10. Repairs to intake and discharge pipelines at Pope Park, Bushnell Pump, and Armory Pump Stations	High	\$6,000,000
11. South Meadows Pumping Station Valve Improvements	High	\$3,870,000
12. North Meadows Pumping Station Improvements	High	\$4,200,000
13. Bushnell Park Pumping Station Improvements	High	\$2,800,000
14. Keney Lane Pumping Station Improvements	Medium	\$2,800,000
15. Pumping Station Training Program	Medium	\$74,900
16. South Meadows Pumping Station Additional Improvements	Low	\$400,000
17. Armory Pumping Station Improvements	Low	\$2,800,000
18. Pope Park Pumping Station Improvements	Low	\$2,900,000
19. Pumping Station Automation Improvements	Low	\$3,750,000
INTERIOR DRAINAGE & CONDUITS		
20. Weston Street Drainage (Phase 1B)	High	\$300,000
21. North Branch Park River Channel Improvements	Low	\$3,500,000
22. Park River Conduit Upgrades	Low	\$10,000,000
23. Folly Brook Conduit Replacement	Low	\$8,000,000
24. Cemetery Brook Conduit Upgrades	Low	\$1,000,000
TOTAL		\$42,200,000

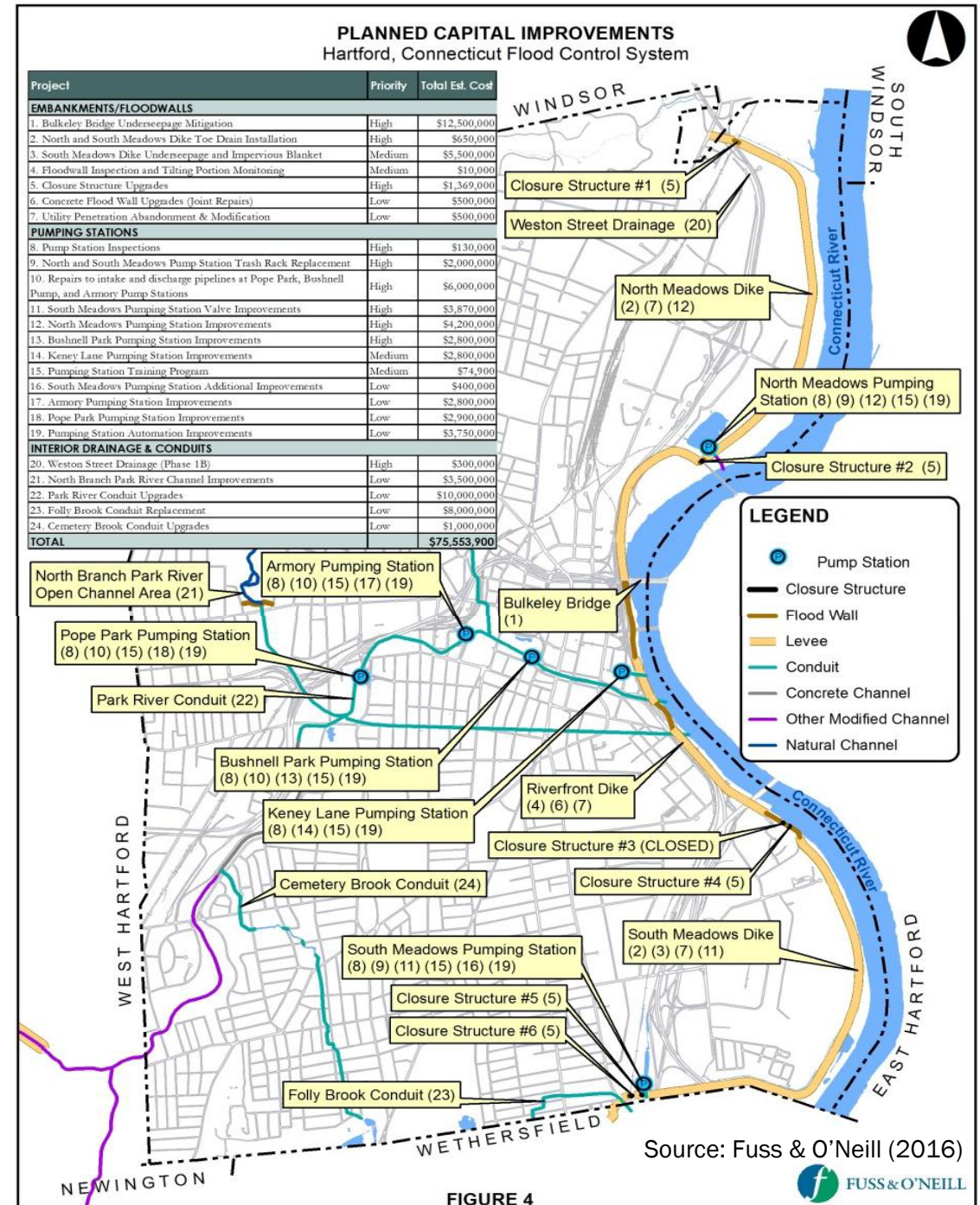


FIGURE 4

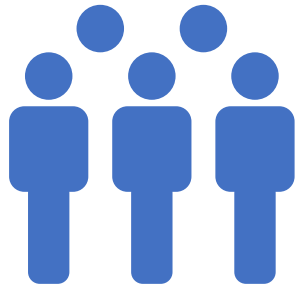
Development Options



MARKET SCAN

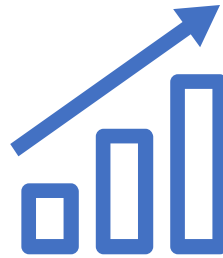
APPROACH

This analysis comprised a review of regional demographic changes, the performance of the local economy, and the current supply of property for the studied uses.



DEMOGRAPHIC TRENDS

- Population and household formation
- Age
- Race
- Income and education



ECONOMIC CONDITIONS

- Employment
- Growth by sector
- Regional competitiveness
- Economic priorities and other emerging trends



REAL ESTATE MARKET

- Inventory and pipeline
- Product types available in the market
- Rent and vacancy rates
- Historical absorption

DEMOGRAPHIC & ECONOMIC CONDITIONS

- **Declining population in Hartford as the region's population grows**
From 2011 to 2021, Hartford's population fell 3% from 124,817 to 121,562, while the Capital Region grew by 1%
- **Softening of the job market in Hartford**
Hartford metro area employment grew 0.4% from 2011 to 2021, adding ~2,500 jobs, as the City of Hartford lost ~2,800 jobs or 3%
- **Strong regional growth in Transportation and Warehousing development**
This sector grew by 71% (+12,200 jobs)
- **Manufacturing is a priority sector for the State of Connecticut**
Region's goal is to increase manufacturing employment to 235,000 by 2033 (4% annual growth)

OFFICE

Corporate relocations, loss in office employment, and remote working trends have left Hartford with high office vacancy

- Downsizing and relocations from Hartford have pushed the downtown submarket's vacancy above 20%
- Limited new office development in the broader region has primarily been medical office
- These figures may underrepresent the market in the next few years

Market Indicators	City of Hartford	CRCOG
Vacancy	24.6%*	11.0%*
Avg. Rent (\$/SF per year)	\$22.56	\$20.70
New Space Constructed (2018-2023 YTD)	0 SF	346,000 SF (1% of total)
Space Under Construction	0 SF	103,000 SF

Source: Costar

RETAIL

The HFD site location makes traditional retail a difficult market use to develop but select big box retail may work

- Rents have grown modestly but retail vacancy rates remain low despite continued deliveries in the region
- Retail would likely need to be big box retail that could lure customers from a broader area with a distinctive offering
- The area's industrial character will limit new retail performance

Market Indicators	City of Hartford	CRCOG
Avg. Rent (\$/SF per year)	\$20.86	\$16.46
New Space Constructed (2018-2023 YTD)	399,400 SF (5% of total)	1,296,000 SF (2% of total)
Space Under Construction	8,000 SF	215,000 SF

INDUSTRIAL

The broader market could support industrial, and distribution uses but the HFD site may have size limitations

- The Interstate Corridor market has healthy fundamentals and seen record-breaking growth in rents, deliveries, and absorption
- Rents have grown at an average annual rate of 5.5% over the past 10 years
- The 2.2M SF Rentschler Field project is a potential competitor

Market Indicators	I-91 Industrial Corridor	CRCOG
Vacancy	3.6%	4.0%
Avg. Rent (\$/SF per year)	\$6.65	\$6.70
New Space Constructed (2018-2023 YTD)	2.7 million SF (6% of total)	4.8 million SF (5% of total)
Space Under Construction	115,645 SF	957,000 SF

Source: Costar

MULTIFAMILY

- The current multifamily rents would not be able to support an amentized development.
- This location is a challenge for residential development because it is adjacent to a large sewage treatment plant to the south and a decommissioning power plant to the north
- The site is isolated from existing neighborhoods and services by the Connecticut River, Railroad and I-91

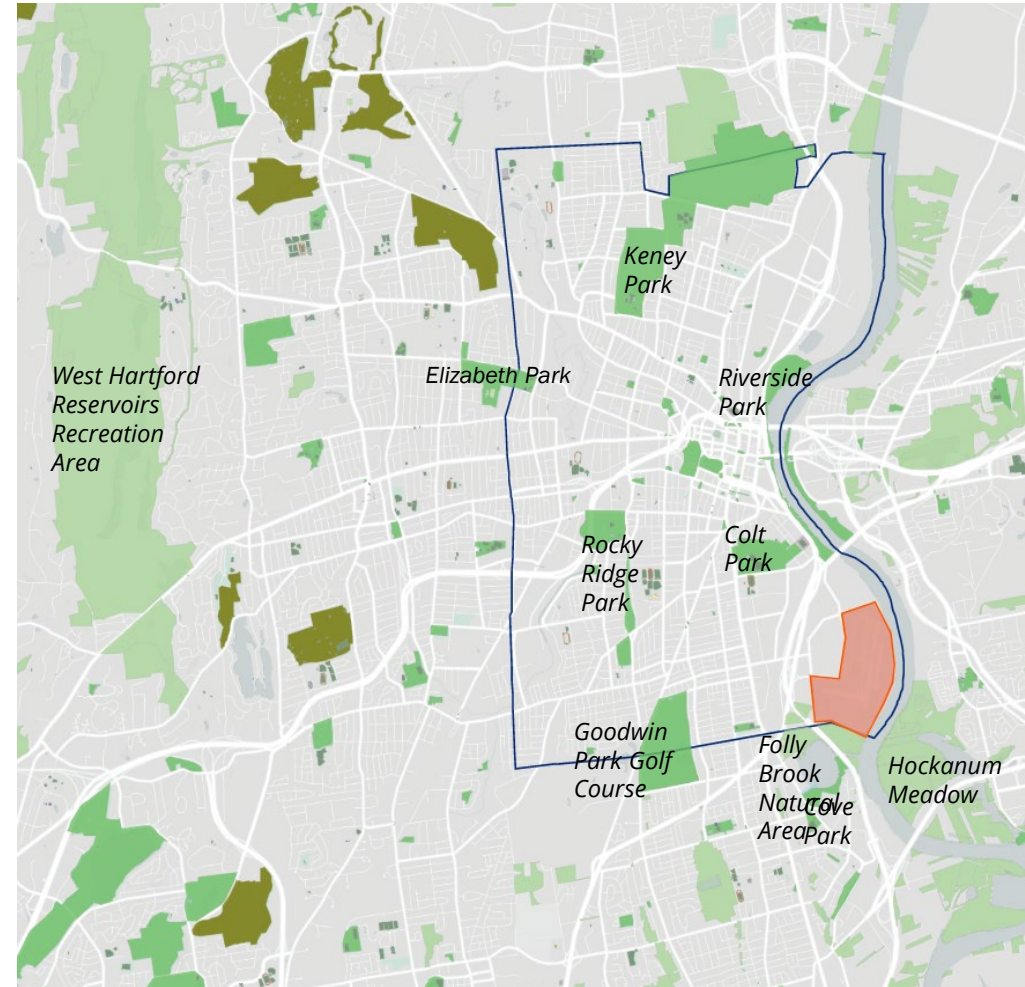
Market Indicators	Hartford	CRCOG
Vacancy	6.3%	5.0%
Avg. Rent (\$/SF per month)	\$1.57	\$1.70
New Units Constructed (2018-2023 YTD)	1,800 units (8% of total)	4,300 units (6% of total)

RECREATIONAL

SUBJECT MATTER EXPERT REVIEW

HFD's environmental conditions and location provide constraints to recreation use.

- There are some moderate environmental constraints that make putting park use here limited
- There is demand for indoor facilities such as fieldhouses for both local and out-of-town users
- The Riverfront Recapture trail could be routed between the Dyke and the Connecticut River
- The Southend area is currently served by Colt Park and Goodwin Park



Source: City of Hartford,
Connecticut Convention & Sports Bureau

OPPORTUNITIES AND CONSTRAINTS

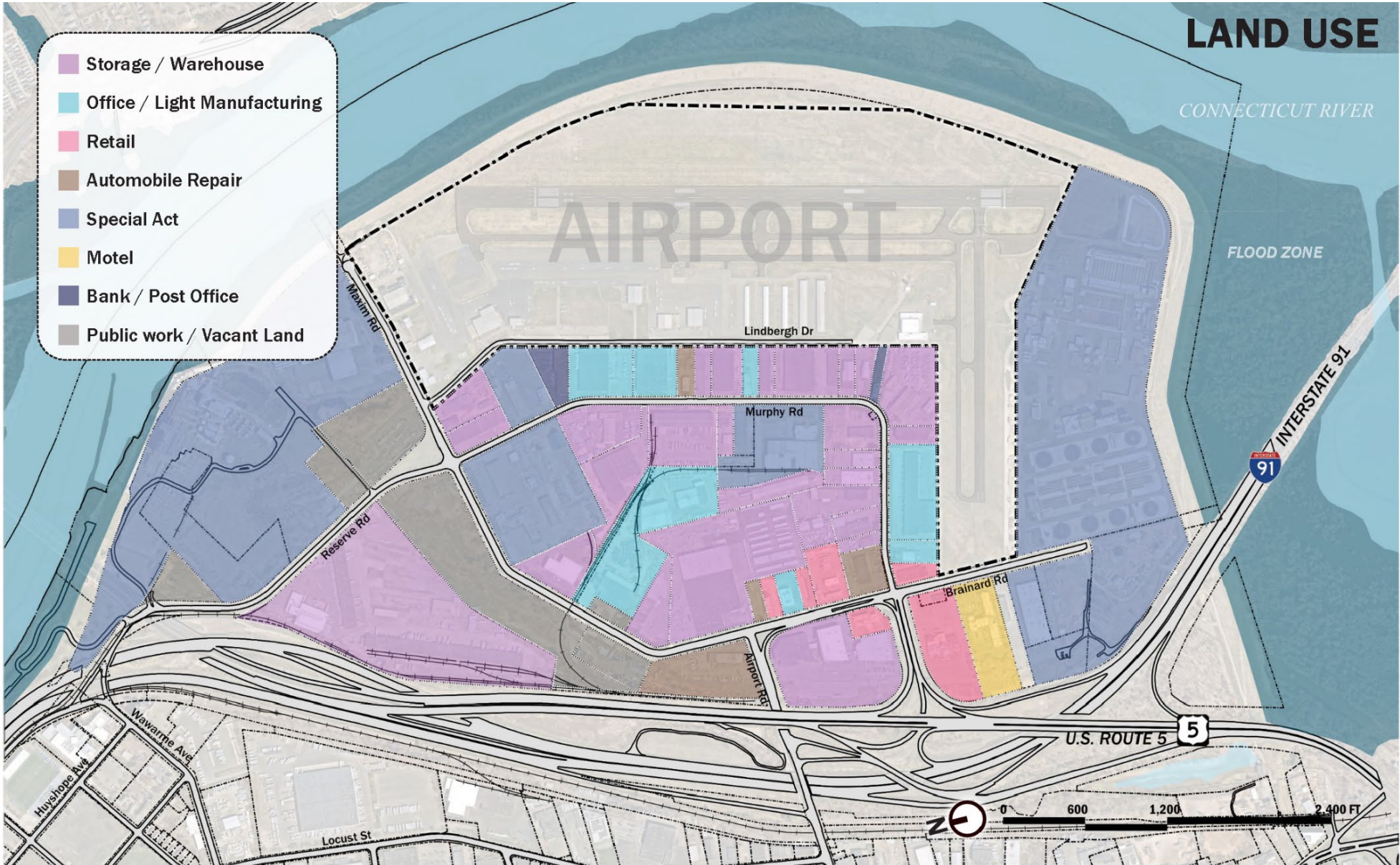
COMPARING USES

Use	Opportunity	Constraint
Residential	<ul style="list-style-type: none"> Increased tax base 	<ul style="list-style-type: none"> Development cost premium Lack of proximate amenities Environmental issue of development between MIRA and the MDC Plant Need to evaluate the capacity of sanitary sewer to accept new/increased flows from any potential redevelopment
Office	<ul style="list-style-type: none"> Increased employment Increased tax base 	<ul style="list-style-type: none"> Weak market Competition with vacant office space downtown
Retail	<ul style="list-style-type: none"> Supports other uses as amenity Increased tax base 	<ul style="list-style-type: none"> Weak market Retail better located in downtown and existing corridors
Industrial	<ul style="list-style-type: none"> Increased employment Increased tax base Compatible with nearby existing uses Relatively strong market 	<ul style="list-style-type: none"> Competition with other regional developments Absorption rate
Recreation	<ul style="list-style-type: none"> Increased recreation opportunities Limited opportunity to drive visitation 	<ul style="list-style-type: none"> Open space incompatible with nearby uses Hartford well-served by parks; additional open spaces limit resources for existing parks Limited market for higher-end indoor facilities

Study Options for Redevelopment



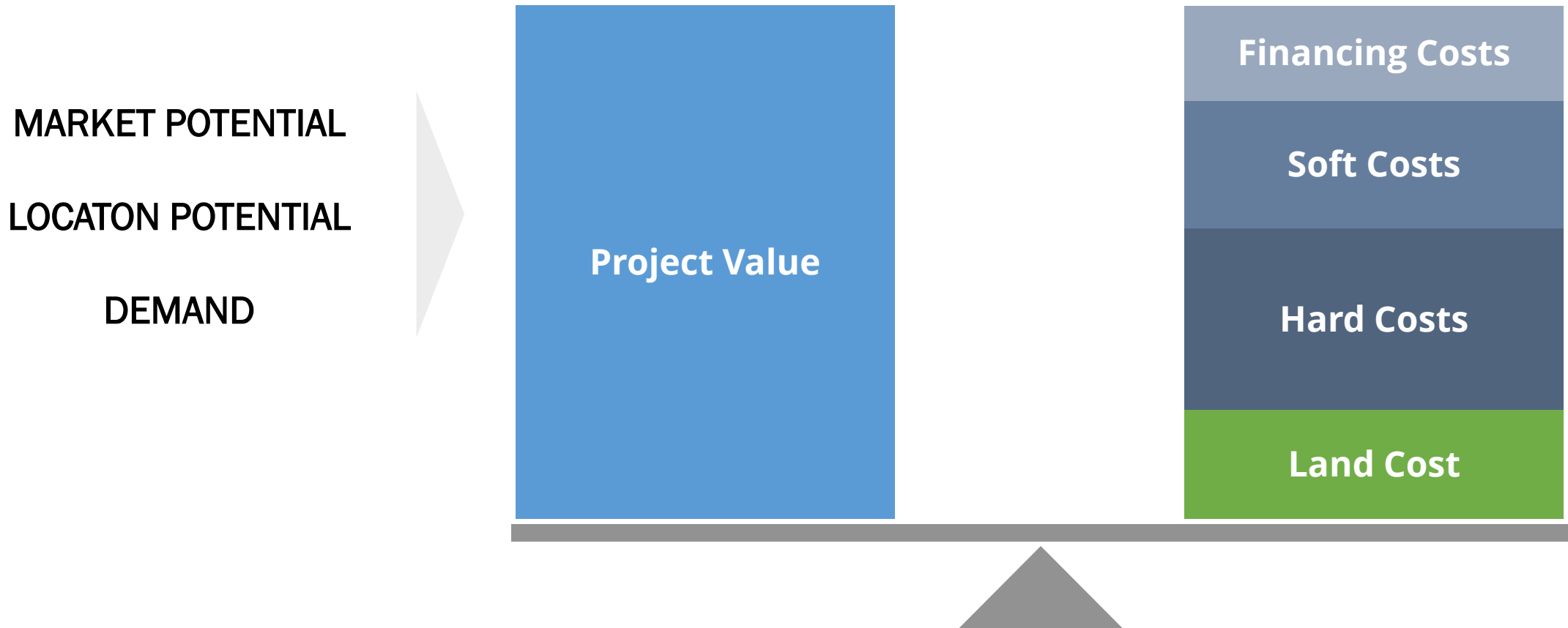
SITE CONTEXT



FINANCIAL FEASIBILITY

PROJECT COSTS AND VALUES

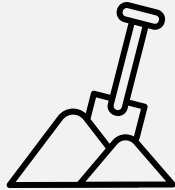
Financial feasibility analysis will translate market potential into development value and compare against associated development costs.



FINANCIAL FEASIBILITY

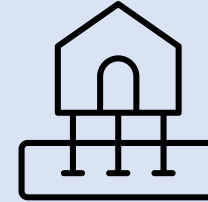
CHALLENGES OF DEVELOPMENT AT HFD

Environmental Remediation



Required to replace contaminated soil from underground storage tanks.

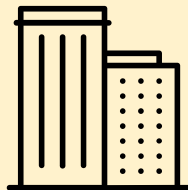
Added Construction Costs – Piles, Water, Sewer



Needed to support vertical development by extending piles to the bedrock.

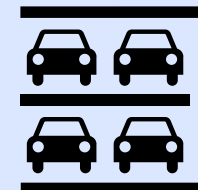
Need to invest in supporting infrastructure

Added Construction Costs – Mid-rise Typology



To enhance value of residential development by providing river views.

Added Construction Costs – Structured Parking



To provide a non-residential podium for flood mitigation purposes.

STUDY DECISIONS PATHWAYS

Option #1
Airport Remains
Open



**Alternative Use
Option #2**
Airport Remains
Open but Closes
Runway 11-29

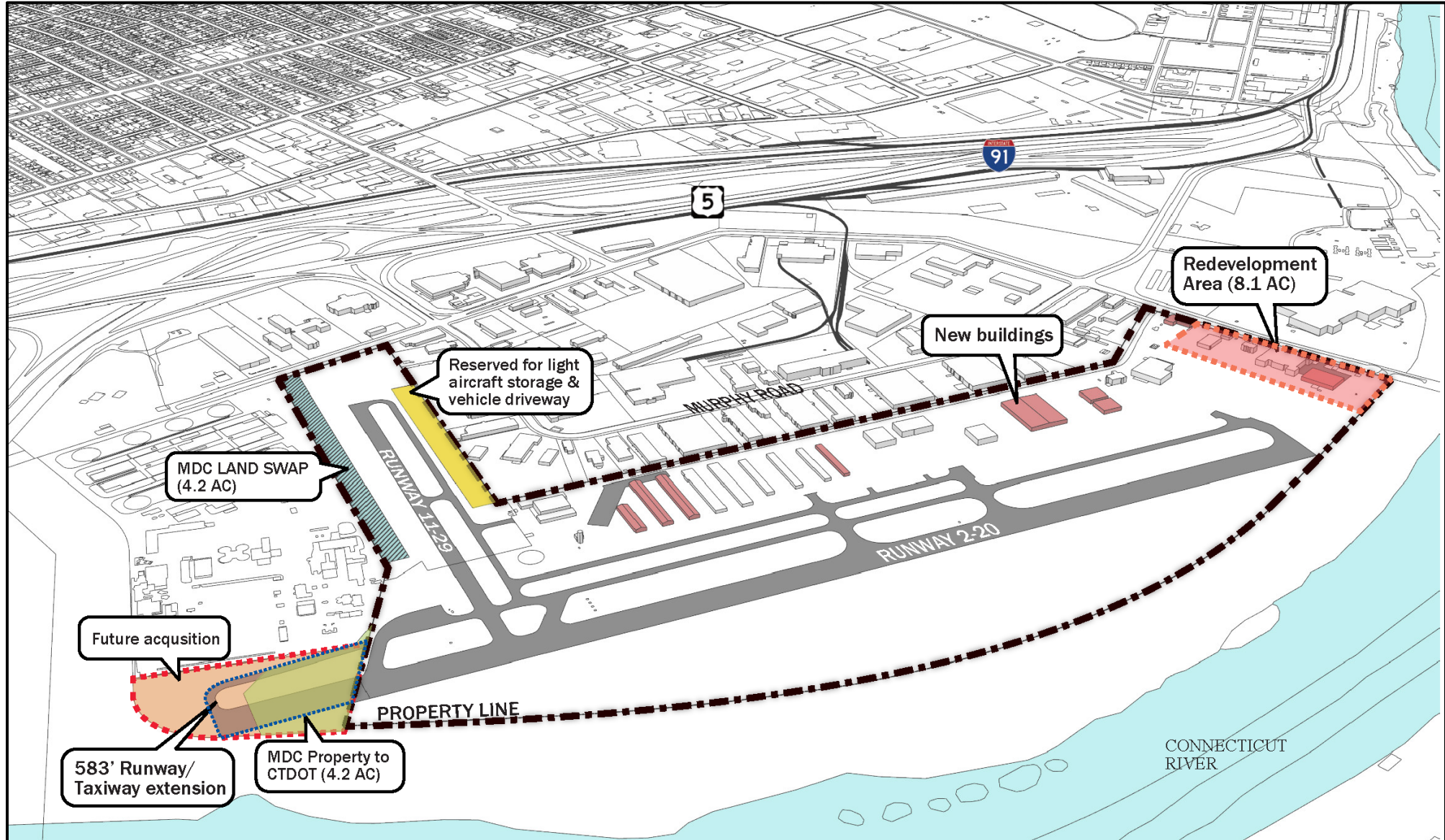


**Alternative Use
Option #3**
Airport Closes



NO ACTION

SCENARIO #1 AIRPORT REMAINS OPEN



OPTION #1 - AIRPORT REMAINS OPEN

Improvements need to
the Site
and Neighborhood
Issues to be addressed



Remediation and
Development Plan for
Improvements



Improvement Costs

- Continue discussions with MCD to extend Runway 2- 20
- Reconstruct Runway 2-20
- Crack and seal Runway 11-29
- Construct airfield electrical vault
- Rehabilitate Taxiway A South
- Maintain terminal area pavements
- Construct new hangar storage
- Estimated total costs ~ \$11MM (FAA~90% and CAA ~10%) + \$2MM private

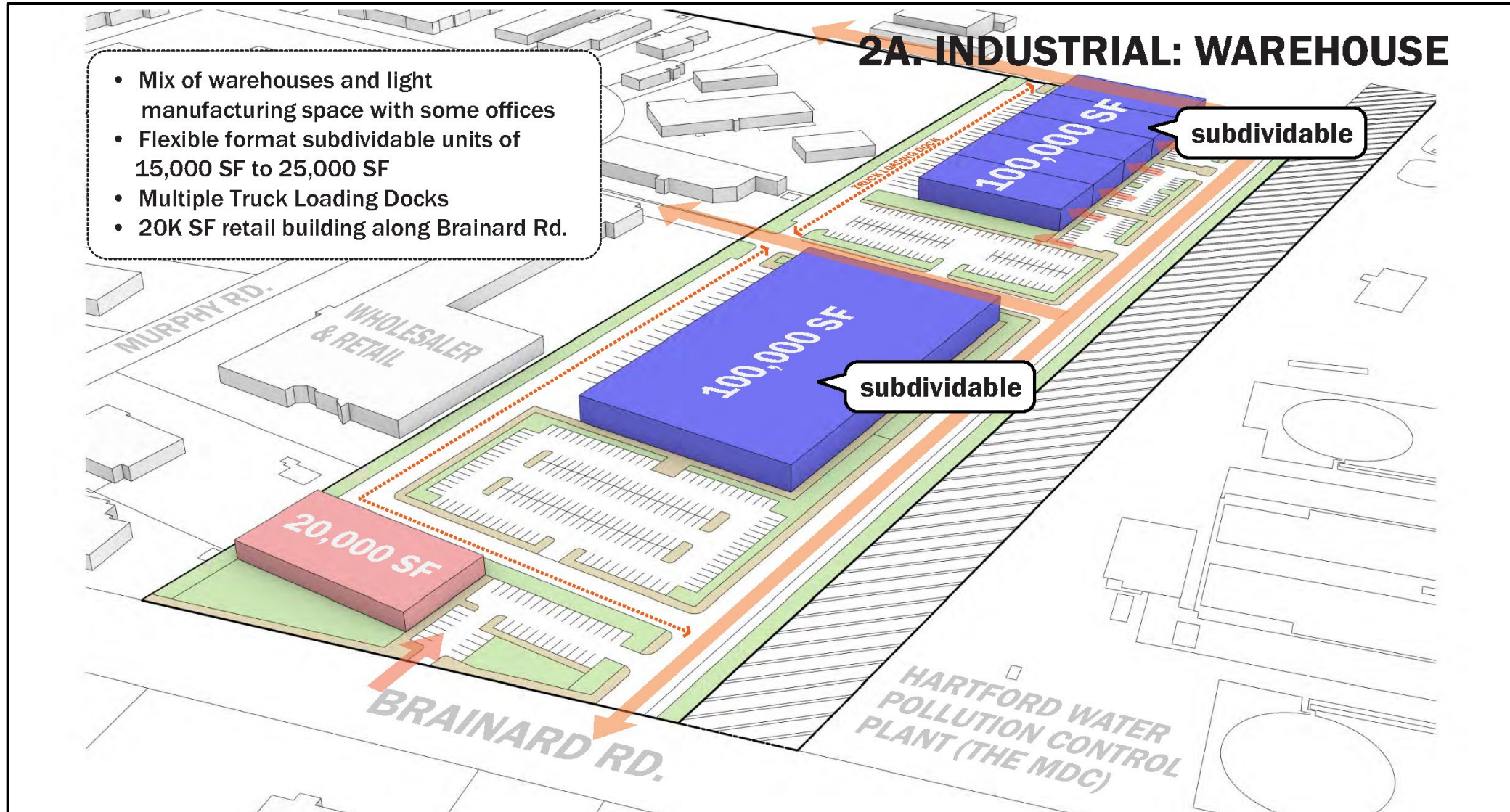
Economic Impacts

Planning Actions

- IMPLAN modeling for Impacts on the Region
- Permitting Actions
- Environmental Remedial Actions
- Capital Plans for Dyke
- Stormwater Plans and permits
- How to tie future operations into State plans for regional Aerospace Industries.

AIRPORT REMAINS OPEN BUT CLOSES RUNWAY 11-29

SCENARIO #2 INDUSTRIAL USE



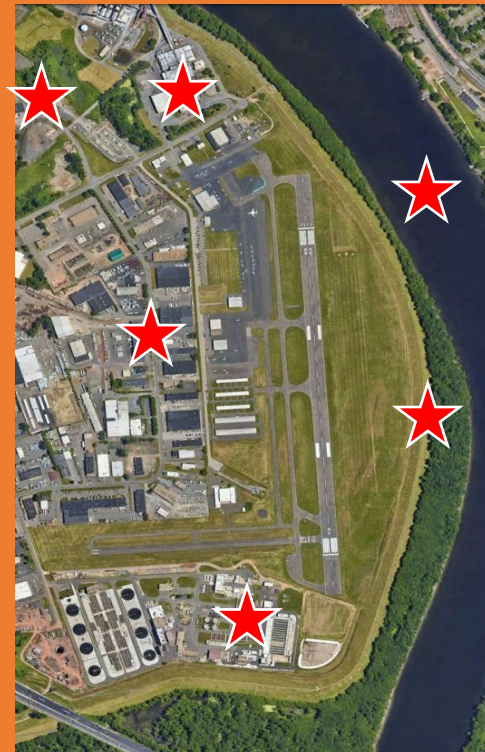
ALTERNATIVE USE OPTION #2 - AIRPORT REMAINS OPEN BUT CLOSES RUNWAY 11-29

Economic Market
Analysis and Scan

Environmental
Assessment



Remediation and
Development Plan for
Highest and Best Uses.
(commercial, residential, and
recreational opportunities)



Federal, State or Local
governmental obstacles

- FAA Actions
- Local Zoning
- Local Boards for Permitting Approval
- Army Corp of Engineer
- DEEP Remediation Plans
- Sale of Airport for Market Value
- Remediation Costs of Property
- Relocation of Assets on the Site
 - Planes
 - Businesses
 - State Police Facilities
 - CT Aero Tech School



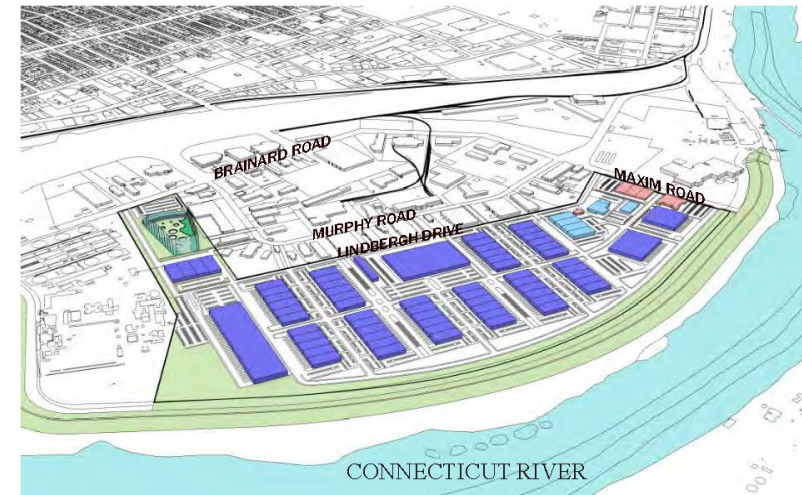
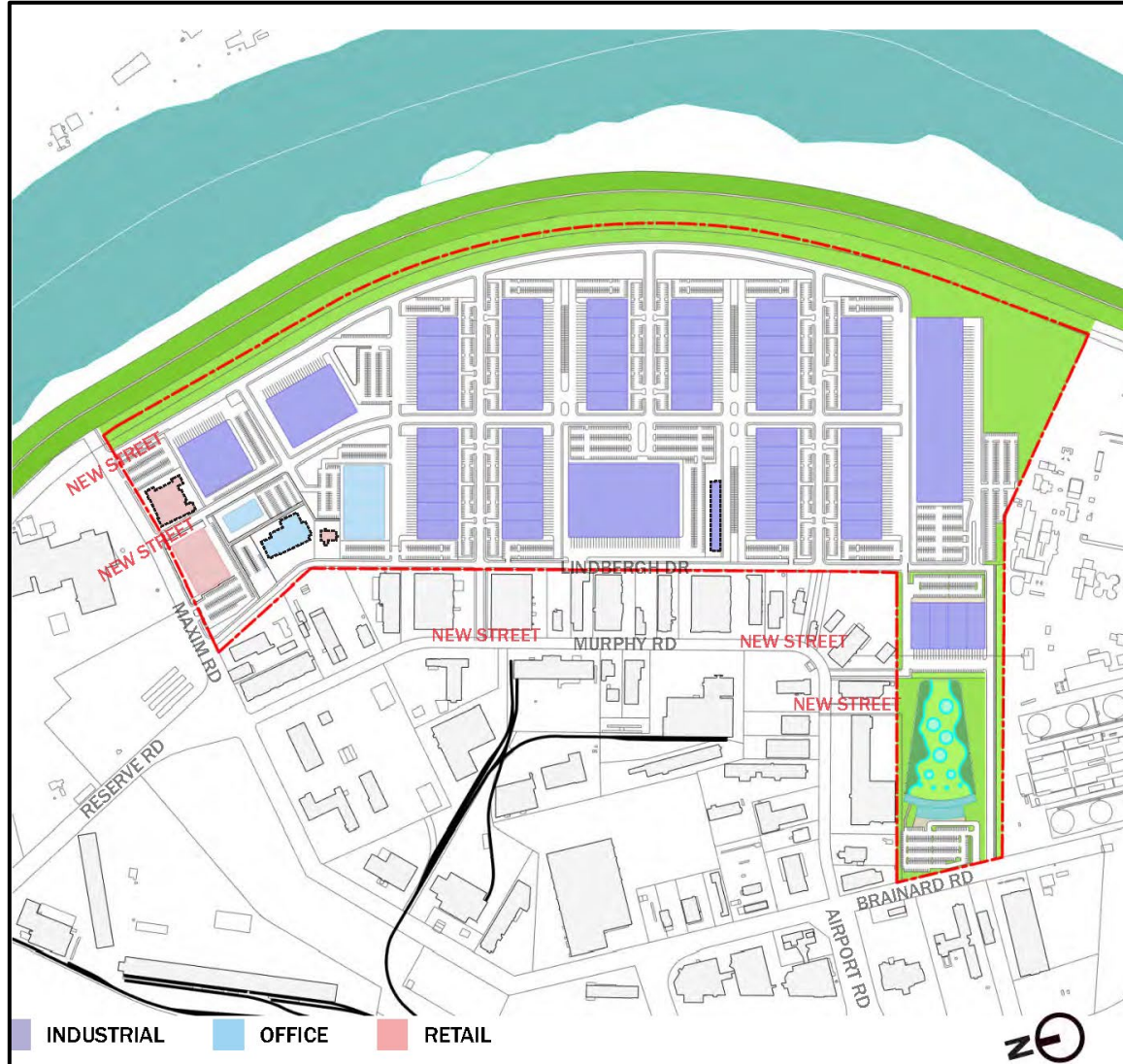
Economic Impacts

Planning Actions

- IMPLAN modeling for the Highest and Best Use
- Potential Tax Impact
- Development Costs of Alternatives
- Permitting Actions
- Environmental Remedial Actions
- Stormwater Plans and Permits

AIRPORT CLOSES

SCENARIO #3 INDUSTRIAL ALTERNATIVE USE



Total Development Program: 2.6 million SF

- Industrial: 2,360,000 SF
- Offices: 140,000 SF
- Retail: 100,000 SF

Assumptions:

- Industrial: Minimum 1.5 Parking Space per 1,000 SF
- Office: 3 Parking Spaces per 1,000 SF
- Retail: 3.5 Parking Spaces per 1,000 SF

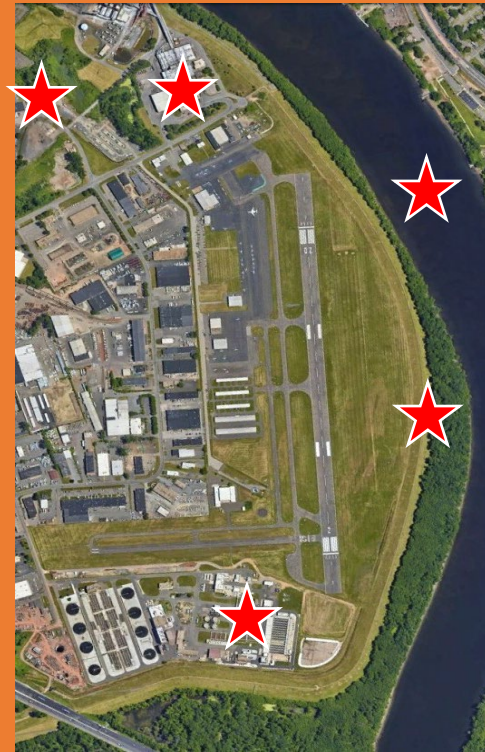
ALTERNATIVE USE OPTION #3 – AIRPORT CLOSES

Economic Market
Analysis and Scan

Environmental
Assessment



Remediation and
Development Plan for
Highest and Best Uses.
(commercial, residential, and
recreational opportunities)



Federal, State or Local
governmental obstacles

- FAA Actions
- Local Zoning
- Local Boards for Permitting Approval
- Army Corp of Engineer
- DEEP Remediation Plans
- Sale of Airport for Market Value
- Remediation Costs of Property
- Relocation of Assets on the Site
 - Planes
 - Business
 - State Police facilities
 - CT Aero Tech School



Economic Impacts

Planning Actions

- IMPLAN modeling for the Highest and Best Use
- Potential Tax Impact
- Development Costs of Alternatives
- Permitting Actions
- Environmental Remedial Actions
- Stormwater Plans and Permits

DEFINITIONS

Hard Costs and Soft Cost:

- Hard costs represent the tangible expenses incurred during a project, such as materials, labor, and equipment.
 - (Examples: Construction costs, land acquisition expenses, equipment purchases.)
- Soft costs refer to the indirect expenses associated with a project that are not directly related to physical construction but are necessary for project completion.
 - Examples: Architectural design fees, permits, legal fees, marketing expenses.

Hard and soft cost analysis ensures comprehensive cost estimation, enabling better financial planning and risk management.

DEVELOPMENT COST

HORIZONTAL DEVELOPMENT COSTS

	Scenario 2	Scenario 3	Scenario 4
Hard Cost			
Soil Remediation	(\$1,500,000)	(\$1,500,000)	(\$1,500,000)
Abatement and Demolition	-	(\$6,600,000)	(\$6,600,000)
Roadways	(\$759,600)	(\$13,649,000)	(\$21,321,500)
Water and Sewer	(\$422,000)	(\$3,421,300)	(\$3,421,300)
Power	(\$337,600)	(\$2,737,000)	(\$2,737,000)
Telecommunications	(\$422,000)	(\$3,421,300)	(\$3,421,300)
Park/Open Space	(\$295,400)	(\$2,394,900)	(\$2,394,900)
Subtotal Hard Cost	(\$3,736,600)	(\$33,723,500)	(\$41,396,000)
Soft Costs	(\$938,400)	(\$8,414,800)	(\$8,847,200)
Financing Costs	(\$435,000)	(\$3,916,200)	(\$4,988,000)
Total Horizontal Infrastructure Costs	(\$5,110,000)	(\$46,054,500)	(\$55,231,200)

Source: Tighe and Bond, Perkins Eastman, BFJ, and HR&A

DEFINITIONS

Residual Land Value Analysis (RLVA)

A financial modeling technique to determine the maximum price a developer can pay for a piece of land while still achieving the desired rate of return on investment.

- Helps developers make informed decisions about land acquisition by quantifying the financial feasibility of a project.
- *Risk Management*: Identifies potential risks and uncertainties associated with the development, enabling developers to mitigate them proactively.

DEVELOPMENT COST

REPOSITIONING SCENARIOS FOR RESIDUAL LAND VALUE ANALYSIS

	Scenario 2*	Scenario 3	Scenario 4
Site Area (acres)	18 ac	204 ac	204 ac
Development Program (GSF)			
Townhome	-	-	660,000 GSF
8-Story Mid-rise Residential	-	-	472,320 GSF
4-Story Low-rise Residential	-	-	2,028,738 GSF
Industrial	200,000 GSF	2,360,000 GSF	262,000 GSF
Retail	20,000 GSF	100,000 GSF	105,600 GSF
Office	-	140,000 GSF	-
Indoor Recreation	-	-	255,000 GSF
Outdoor Recreation	-	75,000 GSF	75,000 GSF
Total Development Program	220,000 GSF	2,675,000 GSF	3,858,658 GSF
<i>Sitewide FAR</i>	<i>0.28</i>	<i>0.30</i>	<i>0.43</i>
Residential Program (in dwelling units)			
Townhome	-	-	220 Units
8-Story Mid-rise Residential	-	-	472 Units
4-Story Low-rise Residential	-	-	2,029 Units
Total Dwelling Units	-	-	2,721 Units
<i>Sitewide Density</i>	<i>N/A</i>	<i>N/A</i>	<i>13.34 DU/acre</i>
Total Parking Spaces	360 Spaces	4,520 Spaces	5,966 Spaces
<i>Parking Spaces per 1,000 GSF of Development</i>	<i>1.64</i>	<i>1.69</i>	<i>1.55</i>

* - This scenario also includes the enhancement of IIFD through the development of 65,000 SF of aviation-related industrial and office uses on the grounds of the airport. For calculating the relative value of repositioning scenarios, this new development on airport grounds is not included.

DEVELOPMENT COST

RESIDUAL LAND VALUE BY SCENARIO

Category	Scenario 2	Scenario 3	Scenario 4
Gross Project Value	\$49,638,000	\$603,434,000	\$1,037,994,000
Less: Cost of Sale for Rental Uses	(\$745,000)	(\$9,052,000)	(\$15,570,000)
Less: Developer Profit	(\$6,112,000)	(\$74,298,000)	(\$127,803,000)
Less: Total Development Cost	(\$46,066,000)	(\$565,973,000)	(\$1,406,610,000)
Total Residual Land Value	(\$3,285,000)	(\$45,888,000)	(\$511,989,000)
<i>Residual Land Value Per SF Land Area</i>	<i>(\$4 per Land SF)</i>	<i>(\$5 per Land SF)</i>	<i>(\$58 per Land SF)</i>
<i>Residual Land Value Per GSF</i>	<i>(\$15 per GSF)</i>	<i>(\$17 per GSF)</i>	<i>(\$133 per GSF)</i>

DEFINITIONS

Net Present Value (NPV):

- NPV is a financial metric used to evaluate the profitability of an investment by comparing the present value of all expected cash flows against the initial investment.
- Significance: A positive NPV indicates that the investment is expected to generate returns higher than the required rate of return, while a negative NPV implies the opposite.

Internal Rate of Return (IRR):

- IRR is the discount rate at which the NPV of all cash flows associated with an investment equals zero.
- IRR helps determine the rate of return an investment is expected to generate, and it is used to compare different investment opportunities.

NPV and IRR aid in decision-making by providing insights into the potential returns and risks associated with an investment.

DEVELOPMENT COST

RETURN METRICS

Table 55: Return Metrics Over 30-Year Analysis Period

Scenario	Total Benefits	Total Costs	IRR	NPV @ 4.00%	Payback Period
Scenario 2	\$92,200,000	(\$7,400,000)	57%	\$43,400,000	5 Years
Scenario 3	\$724,300,000	(\$70,800,000)	32%	\$287,300,000	7 Years
Scenario 4	\$1,175,200,000	(\$868,100,000)	5%	\$27,000,000	24 Years

Table 56: Return Metrics Over 30-Year Analysis Period – Alternative Start Date for Full Closure Scenarios

Scenario	Project Start Date	IRR	NPV @ 4.00%	Payback Period
Scenario 2	Year 1	57%	\$43,400,000	5 Years
Scenario 3	Year 10	32%	\$96,800,000	17 Years
Scenario 4	Year 10	-7%	(\$91,200,000)	+30 Years*

* - Payback period beyond the 30-year analysis period.

Explain Net benefits -definition

CONCLUSION

ECONOMIC ANALYSIS OF AIRPORT REPOSITIONING SCENARIOS

Scenario Analysis Results:

- Scenario 3 Delay: Delaying airport closure to Year 10 decreases IRR negligibly but significantly reduces NPV from \$287 million to \$97 million, affecting the long-term fiscal outlook.
- Scenario 4 Delay: Experiences a drastic drop in IRR to -7% and NPV to negative \$91 million, indicating financial infeasibility.
- Payback Period: For Scenario 3, extends to 17 years within a 30-year frame; Scenario 4's return period exceeds 30 years, marking it unsustainable.

Optimal Choice: Scenario 2

- Reasons for Selection: Exceptional IRR at 57%, lower initial investment, and consistent increase in tax revenues. High IRR and reasonable NPV confirm it as the most prudent and sustainable investment.
- Considerations: Assumptions on benefits and costs are conceptual and subject to change with real implementation. Long-term market trends and potential airport closure complications are acknowledged uncertainties.

Conclusion: Economic performance, particularly the high IRR and NPV of Scenario 2, aligns with broader strategic considerations, making it the preferred and most sustainable pathway for airport property repositioning.

Questions and Answers

