

Burlington International Airport Airport Master Plan Update

Technical Advisory Committee Meeting # 4

February 12, 2020



AGENDA

- Introductions
- Status of the Master Plan Update
- Passenger & Tenant Survey
- Forecast & Facility Requirement Summary
- Development Concepts
 - Runway 1-19/Hotspot Issues/Airfield Geometry
 - Terminal Aircraft Maintenance Relocation
 - GA Improvements
 - Access Roads
- Next Steps

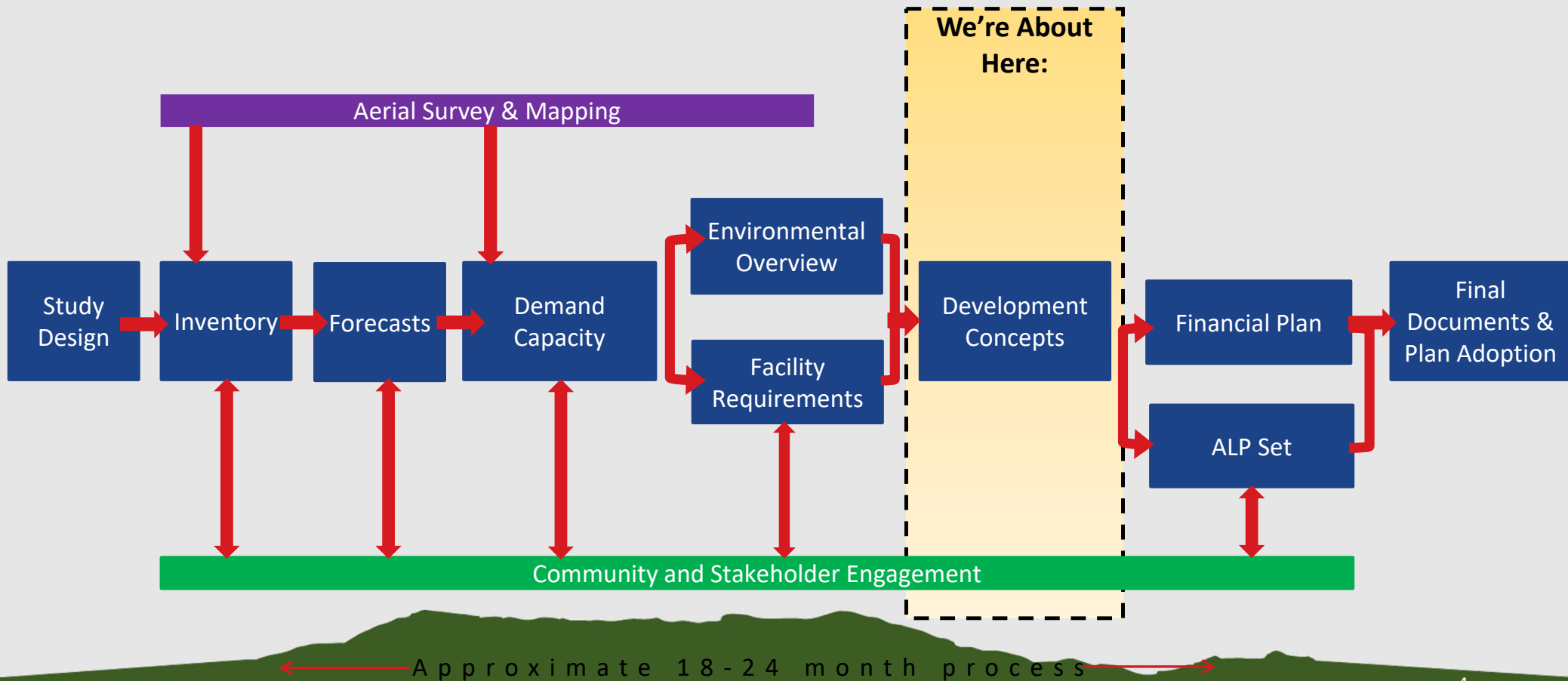


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 - Passenger Terminal Building Concept
 - Airport Maintenance Building Relocation
 - GA and Air Cargo Improvements
 - Access Roads
- Next Steps



STATUS OF AIRPORT MASTER PLAN



Passenger/Tenant Experience

- TAC/RAC Input
- Passenger Experience
- Tenant Experience

 Burlington International Airport

Burlington International Airport

A SWOT analysis is a strategic planning tool that identifies an organization's *Strengths, Weaknesses, Opportunities and Threats*.

As a member of the Advisory Committee, you will help steer the Airport Master Plan for the Burlington International Airport for the next 10-20 years, by providing feedback on the strengths and weaknesses. Your information will be used to stimulate conversations and decisions by September 7.

1. Please list up to 3 Strengths

Strength 1

Strength 2

Strength 3

2. Please list up to 3 Weaknesses

Weakness 1

Weakness 2


Weakness 3

3. Please list up to 3 Opportunities

Opportunity 1

Opportunity 2

Opportunity 3

 Burlington International Airport

We need YOUR help! By answering the following questions, you will influence the future facility needs of the airport. Please let us know in this short survey (3 minutes or less), which is part of our Master Plan Study looking at the needs of the Burlington International Airport (BTV) over the next 10-20 years. Thank you for your help!

* 1. Are you departing on a flight out of Burlington today?

Yes

No

 Burlington International Airport

BTV Tenants Survey

We need YOUR help! By answering the following questions, you will influence the future facility needs of the airport. Please let us know in this short survey (3 minutes or less), which is part of our Master Plan Study looking at the needs of the Burlington International Airport (BTV) over the next 10-20 years. Thank you for your help!

* 1. About what percent of time do you use each runway? (enter a number, do not include "%," must add to 100)

Runway 1-19

Runway 15-33

2. What apron do you use?

Near Heritage/Pratt & Whitney

Near Vermont Flight Academy/Alert Hangars

Near Taxiway A/Runway 1

3. Are you planning on adding aircraft to your fleet?

Yes

No

Passenger & Tenant Survey Results

1,200 passengers responded to the survey. **Key findings:**

- Why did you choose BTV – “location”
- 97% passengers indicated that traffic was not an issue getting to the airport
- 40% passengers indicated TSA took longer than expected
- 55% indicated here is insufficient food vendors
- 52% indicated there were no delays exiting the airport



FORECAST SUMMARY



RECOMMENDED FORECAST

| Year | Enplanements | Total Operations | | | | | Based Aircraft |
|----------------------------------|--------------|------------------|--------------|--------------|---------------|---------------|----------------|
| | | Air Carrier | GA | Cargo | Military | Total | |
| 2017 | 591,558 | 21,467 | 37,332 | 1,396 | 8,567 | 68,762 | 92 |
| 2018 | 667,004 | 24,082 | 37,655 | 1,422 | 8,567 | 71,727 | 93 |
| 2023 | 695,171 | 24,480 | 39,449 | 1,563 | 5,954 | 71,446 | 97 |
| 2028 | 724,528 | 24,899 | 41,263 | 1,717 | 5,954 | 73,832 | 102 |
| 2033 | 755,124 | 25,340 | 43,101 | 1,886 | 5,954 | 76,281 | 106 |
| 2038 | 787,012 | 25,804 | 45,063 | 2,071 | 5,954 | 78,892 | 111 |
| AAGR 2018- 2038 | 0.8% | 0.3% | 0.9% | 1.9% | -1.8% | 0.5% | 0.9% |
| Growth 2018- 2038 | 18.0% | 7.1% | 19.7% | 45.6% | -30.5% | 10.0% | 19.7% |

AIRPORT FACILITY SUMMARY



Terminal – Ticketing & Baggage Screening

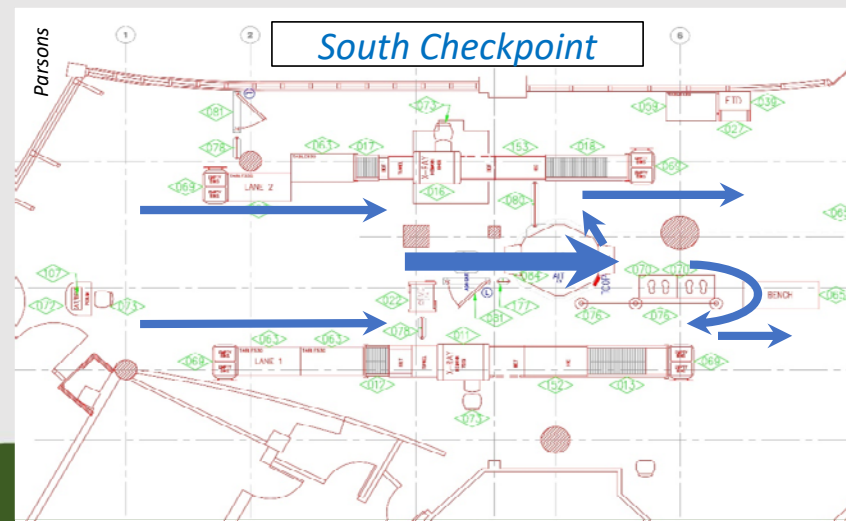
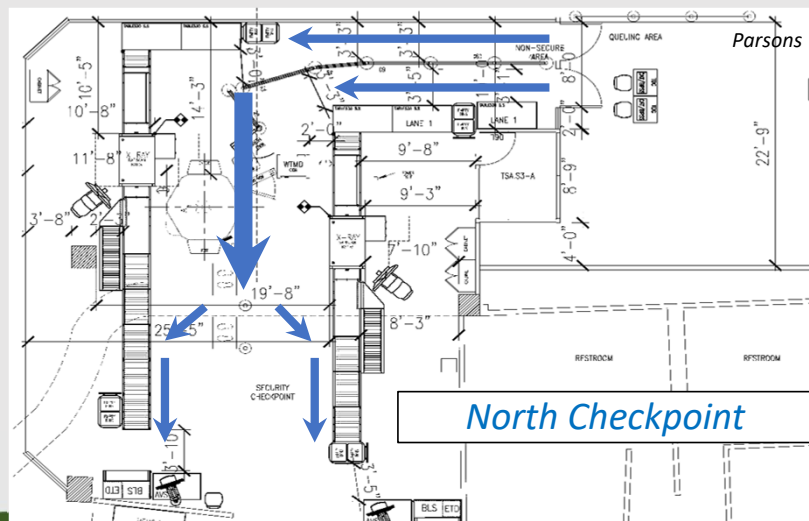


Terminal Summary – Baseline Requirements

| Terminal Functional Area | Existing Terminal Area | Ultimate Requirement | Surplus (Deficit) | % |
|--------------------------------------|------------------------|----------------------|-------------------|--------------|
| Passenger Boarding Gates | 10 | 11 | (1) | -11% |
| Check-In / Ticketing | 7,460 | 9,544 | (2,084) | -28% |
| Outbound Baggage Screening & Makeup | 1,099 | 8,611 | (7,512) | -684% |
| Passenger Screening Checkpoint | 5,714 | 10,289 | (4,575) | -56% |
| Passenger Lounges / Holdrooms | | | | |
| Hold Rooms | 10,298 | 10,999 | (701) | -7% |
| Concessions | 9,891 | 14,934 | (5,043) | -51% |
| Core Terminal Areas Subtotal | 47,118 | 64,743 | (17,625) | -37% |
| Other Functions/Tenants | 92,482 | 25,648 | 66,834 | 72% |
| Total Passenger Terminal Area | 139,600 | 90,391 | 49,209 | 35.3% |

Terminal - Security Checkpoint

| Passenger Screening Area | Existing Terminal Area | Ultimate Requirement | Surplus (Deficit) | % |
|---|------------------------|------------------------------|-------------------|------|
| Existing Screening Lanes (both checkpoints) | 4 Lanes | 6 Lanes (with consolidation) | (2) | -50% |
| Checkpoint Area (SF) - Combined | 5,714 SF | 10,289 SF | (4,575) SF | -56% |



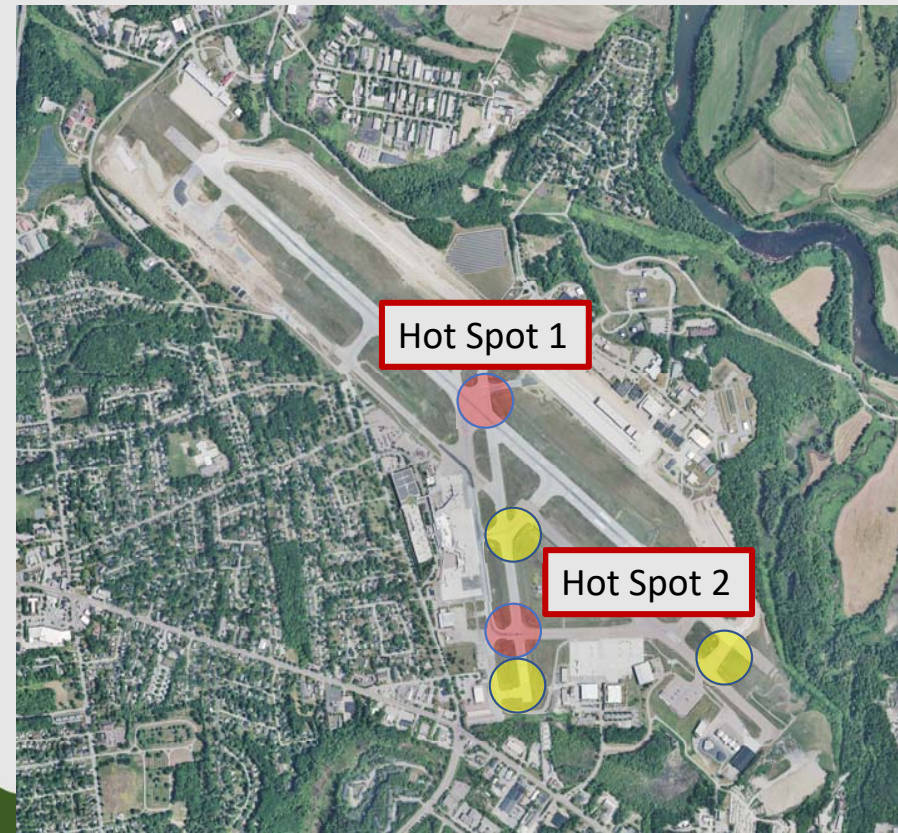
Airside Requirements - Runways

- Runway 15-33 – 8,319 x 150 (C/D IV) – Satisfies Requirements
 - Existing Length Scenario: FedEx Boeing 757 to Memphis
 - Future Length Scenario: Boeing 737/Airbus 320
- Runway 1-19 – 4,112 x 75 (B-I) – Satisfies Requirements
 - Existing and Future: Cessna 172



Taxiway Requirements / Geometry

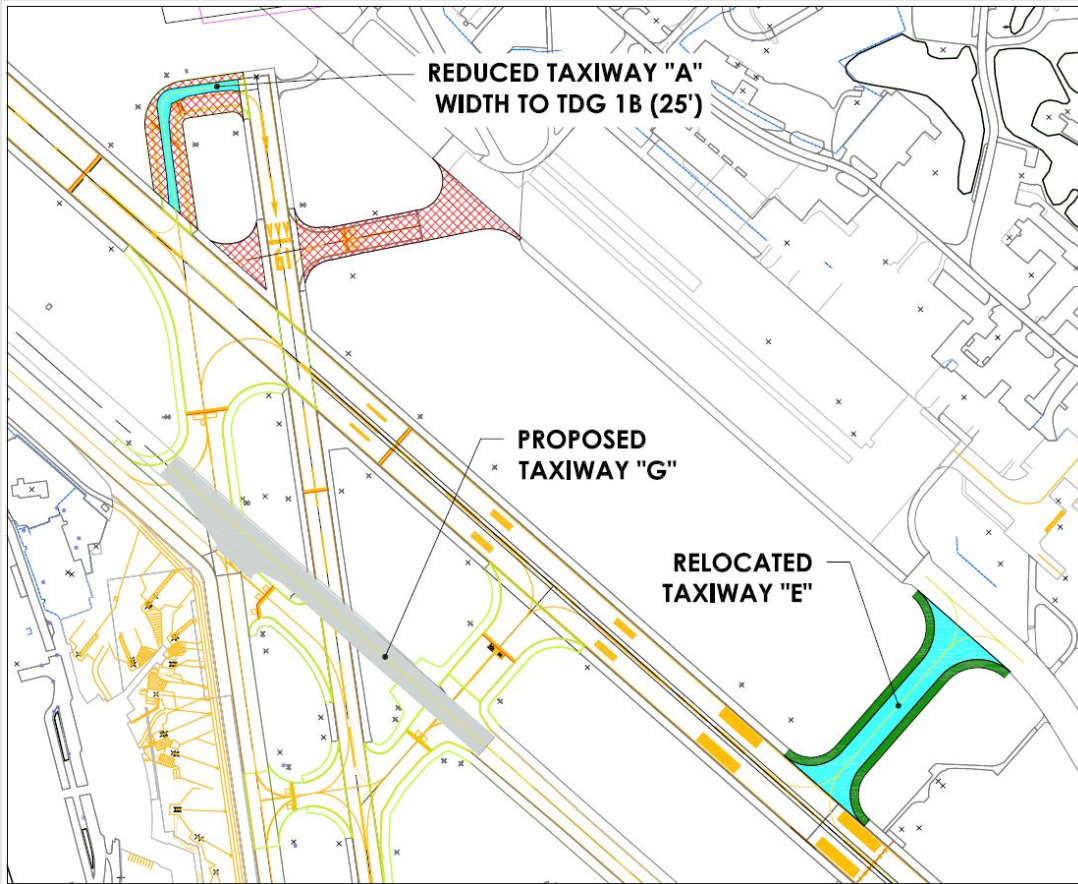
- Hot Spot 1: Wrong Runway Departure
 - Wide Expanse of Pavement
 - 3 Node Concept
- Hot Spot 2: Taxiway C Crossing Runway 1-19
- Direct Apron to Runway connections
 - Taxiway B, J, L



AIRFIELD DEVELOPMENT CONCEPTS

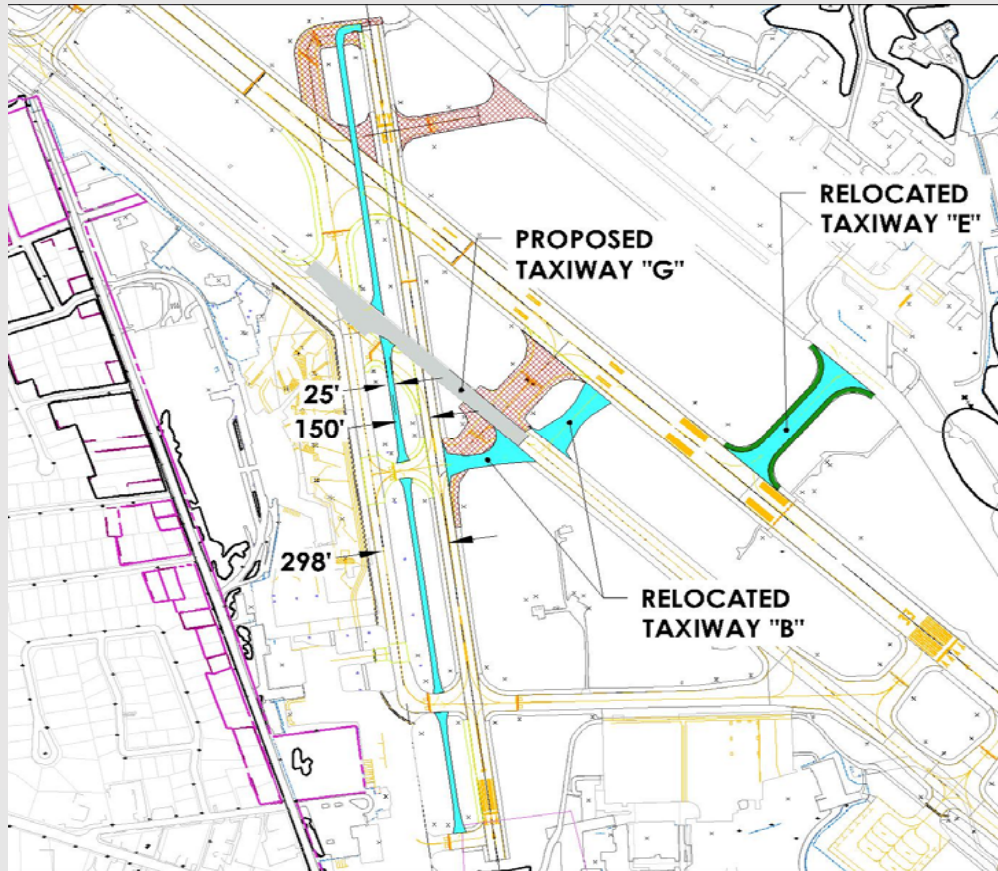


HOTSPOT 1 MITIGATION - CONCEPTS



- **Relocation of Taxiway E**
- Eliminates acute angle intersection with Runway 15-33
- Relocate to connect to Taxiway D
- Eliminates unneeded pavement
- Reduces width of Taxiway A north of Runway 15-33

HOTSPOT 1 MITIGATION - CONCEPTS



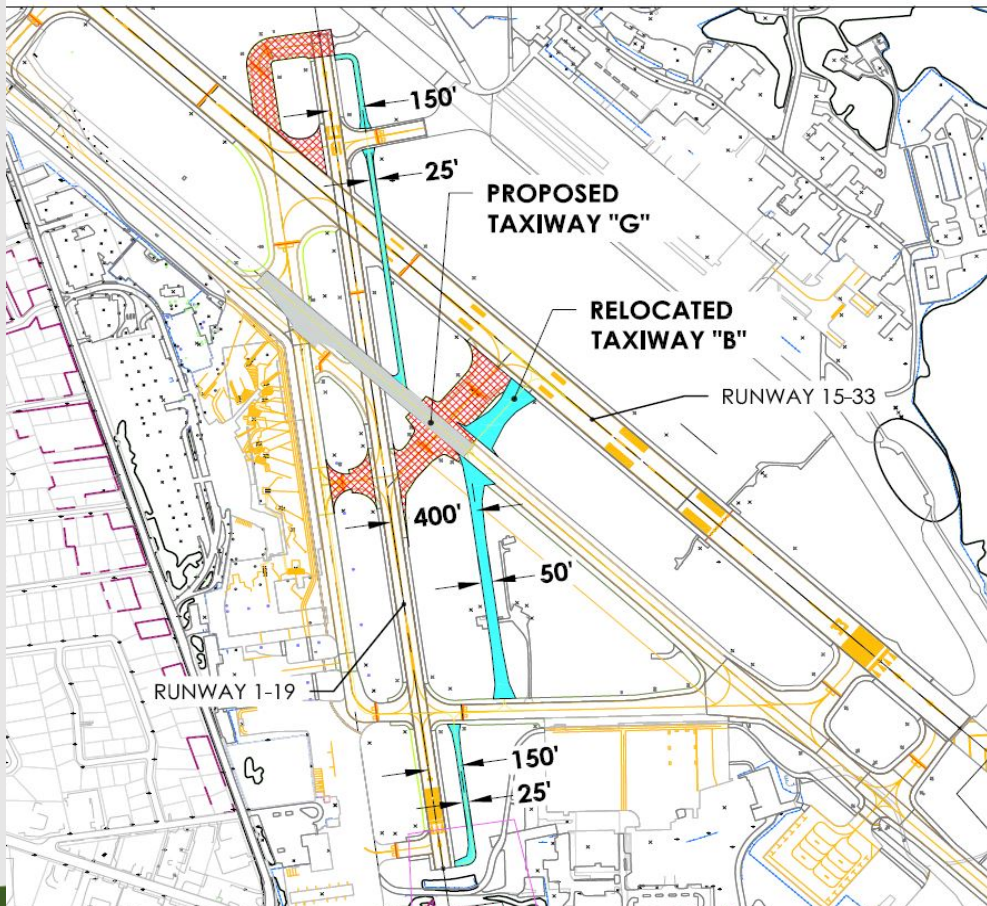
- **New GA Parallel Taxiway (West of Runway 1-19)**

- Reduces GA traffic on Taxiway A
- Proximity of taxiways may create issues at Runway 15-33
- Taxiway A would continue to be a 'movement area'
- Requires Modification to Standards

- **Relocate Taxiway B**

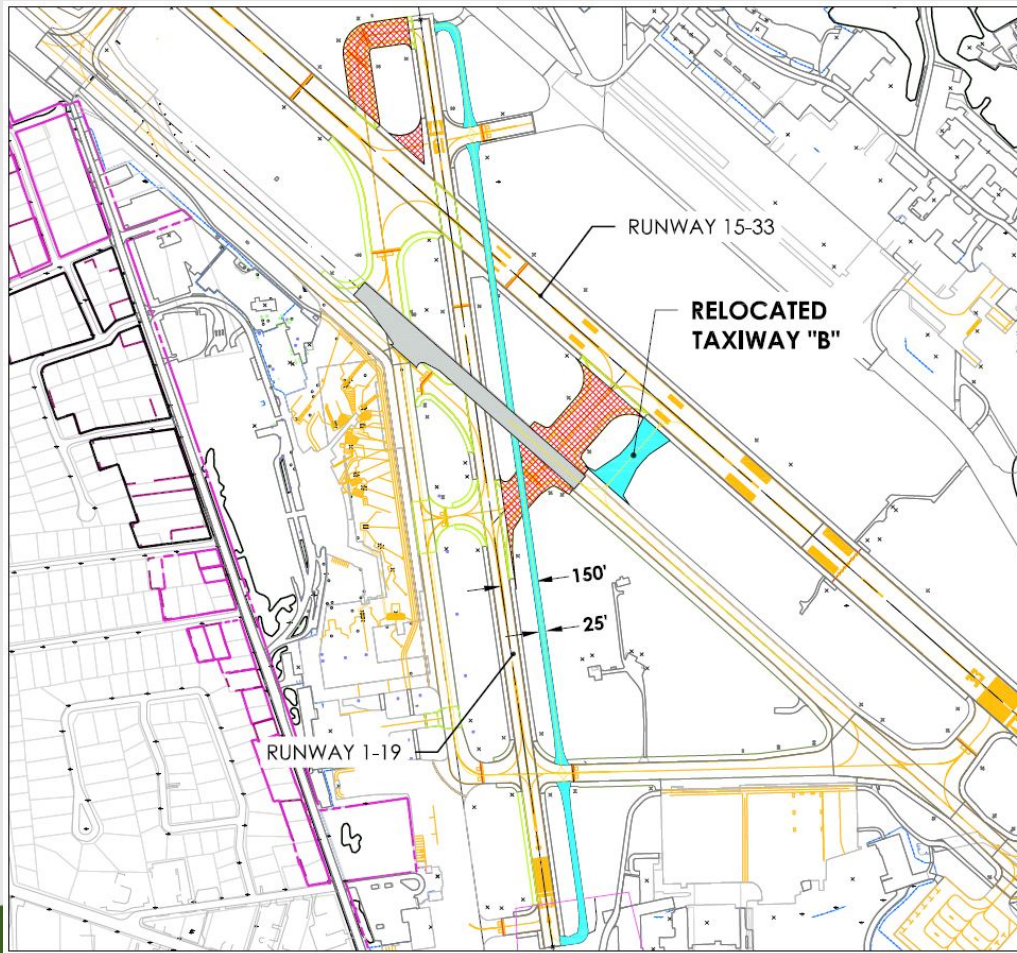
- Eliminates acute angle to Runway 1-19
- Retains direct apron access

HOTSPOT 1 MITIGATION - CONCEPTS



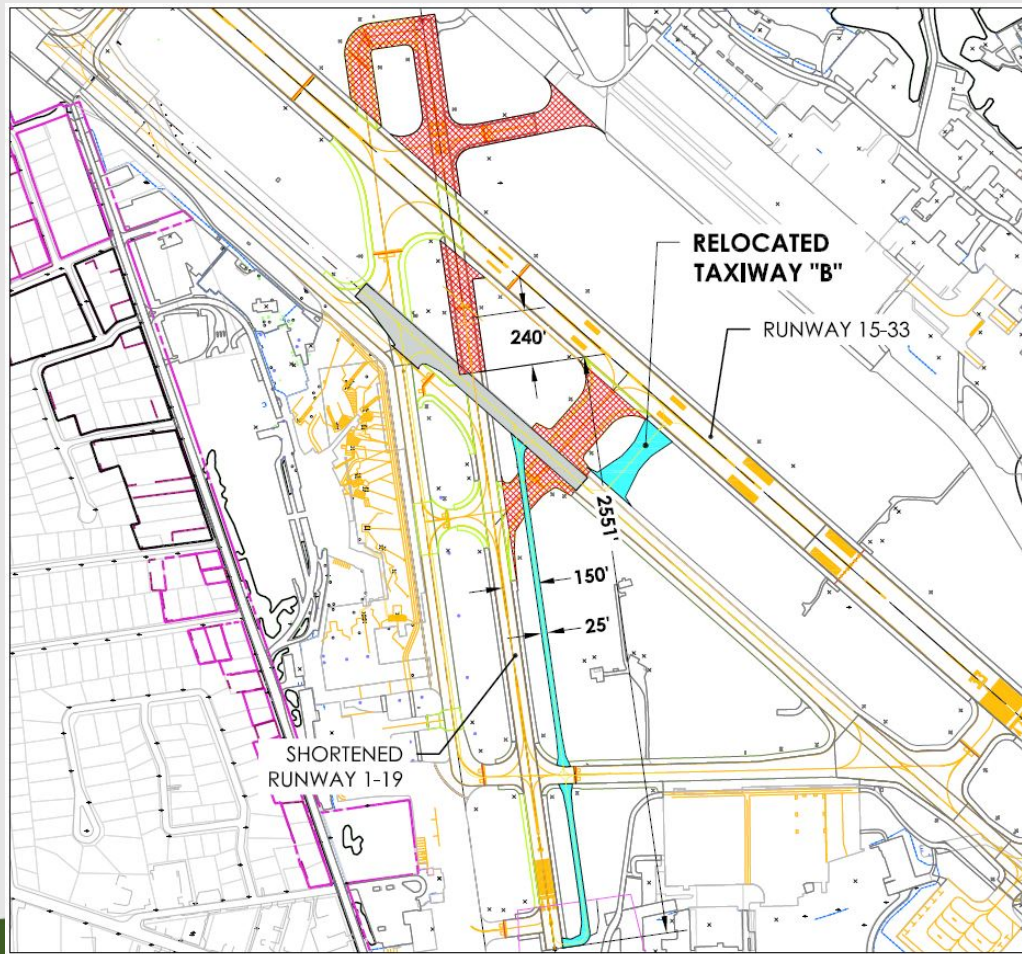
- **New Parallel Taxiway (East of Runway 1-19)**
 - Reduces GA traffic on Taxiway A
 - Narrow GA Taxiway connecting to main runway
 - Staggered Taxiway may confuse pilots
 - Provide Terminal By-Pass Taxiway
 - Impacts ASR
- **Relocate Taxiway B**
 - Eliminates acute angle to Runway 1-19

HOTSPOT 1 MITIGATION - CONCEPTS



- **New GA Parallel Taxiway (East of Runway 1-19)**
 - Reduces GA traffic on Taxiway A
 - May not eliminate Hotspot 1
 - Narrow GA Taxiway connecting to main runway
- **Relocate Taxiway B**
 - Eliminates acute angle to Runway 1-19
 - Increase taxiing distances

HOTSPOT 1 MITIGATION - CONCEPTS



- **Shorten Runway 1-19**

- New GA taxiway reduces traffic on Taxiway A
- Completely eliminates Hotspot 1
- Removal of excess pavement

- **Relocate Taxiway B**

- Eliminates acute angle to Runway 1-19
- Increase taxiing distances

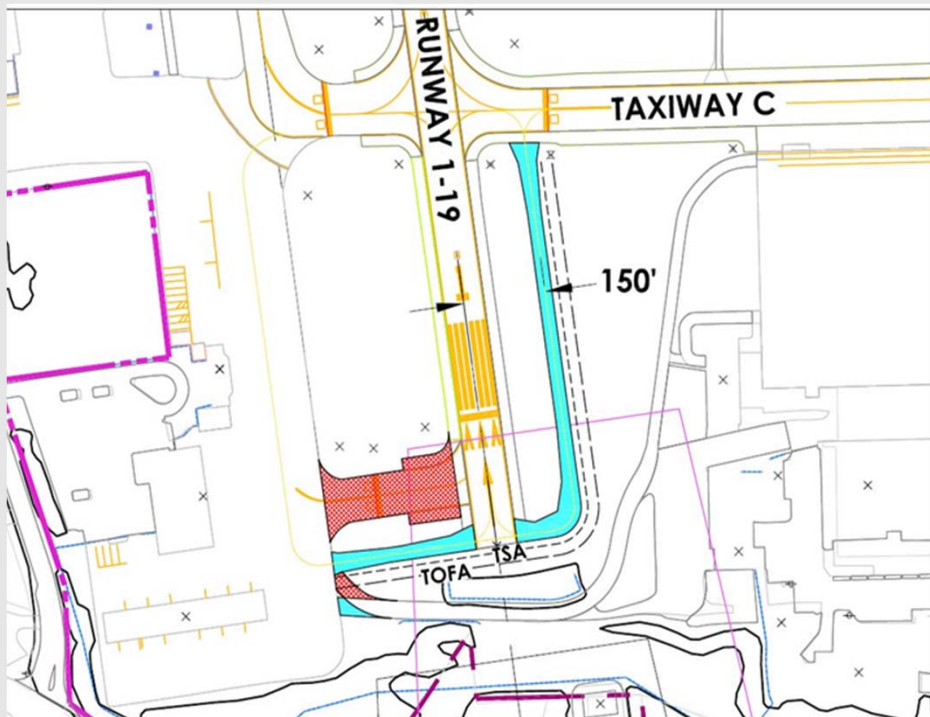
HOTSPOT 2 MITIGATION CONCEPTS



- **Add Guard Lights on Taxiway C**

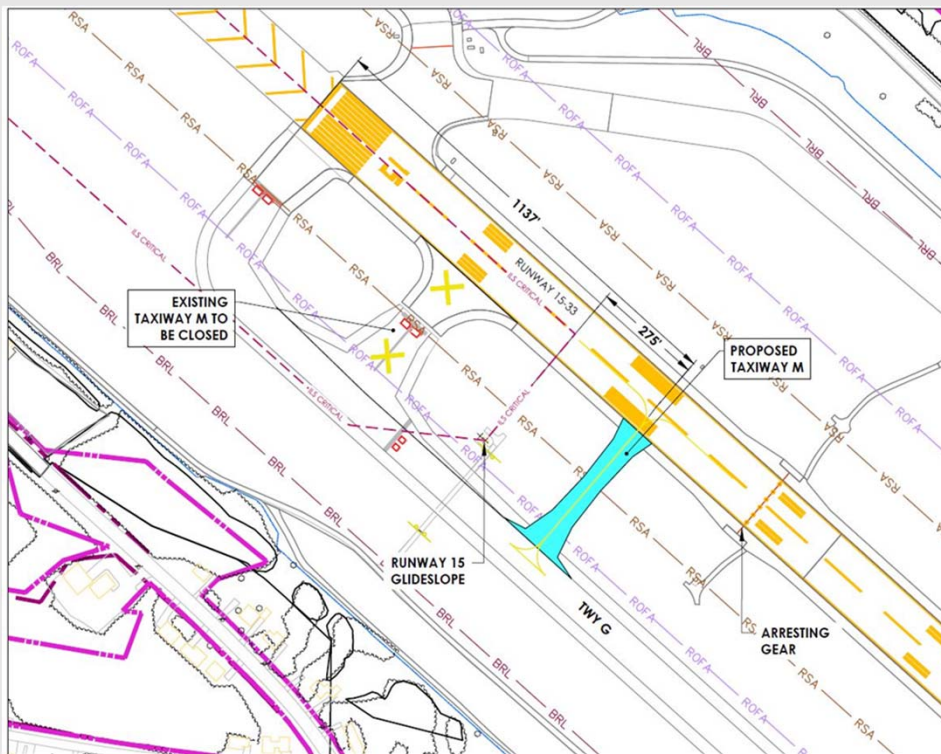
- Provides greater awareness for crossing Runway 1-19

AIRFIELD GEOMETRY - CONCEPTS



- **Add GA Taxiway to Runway 1**
 - Avoid crossings of Runway 1-19
 - Provides access to/from south end of runway
- **Relocated Taxiway L**
 - Removes direct apron to runway access
 - Provides access to/from south end of runway

RELOCATED TAXIWAY M



- **Relocation Taxiway M**

- Removes Taxiway L from ILS Critical Area
- Add By-Pass for Intersection departures

LANDSIDE DEVELOPMENT CONCEPTS

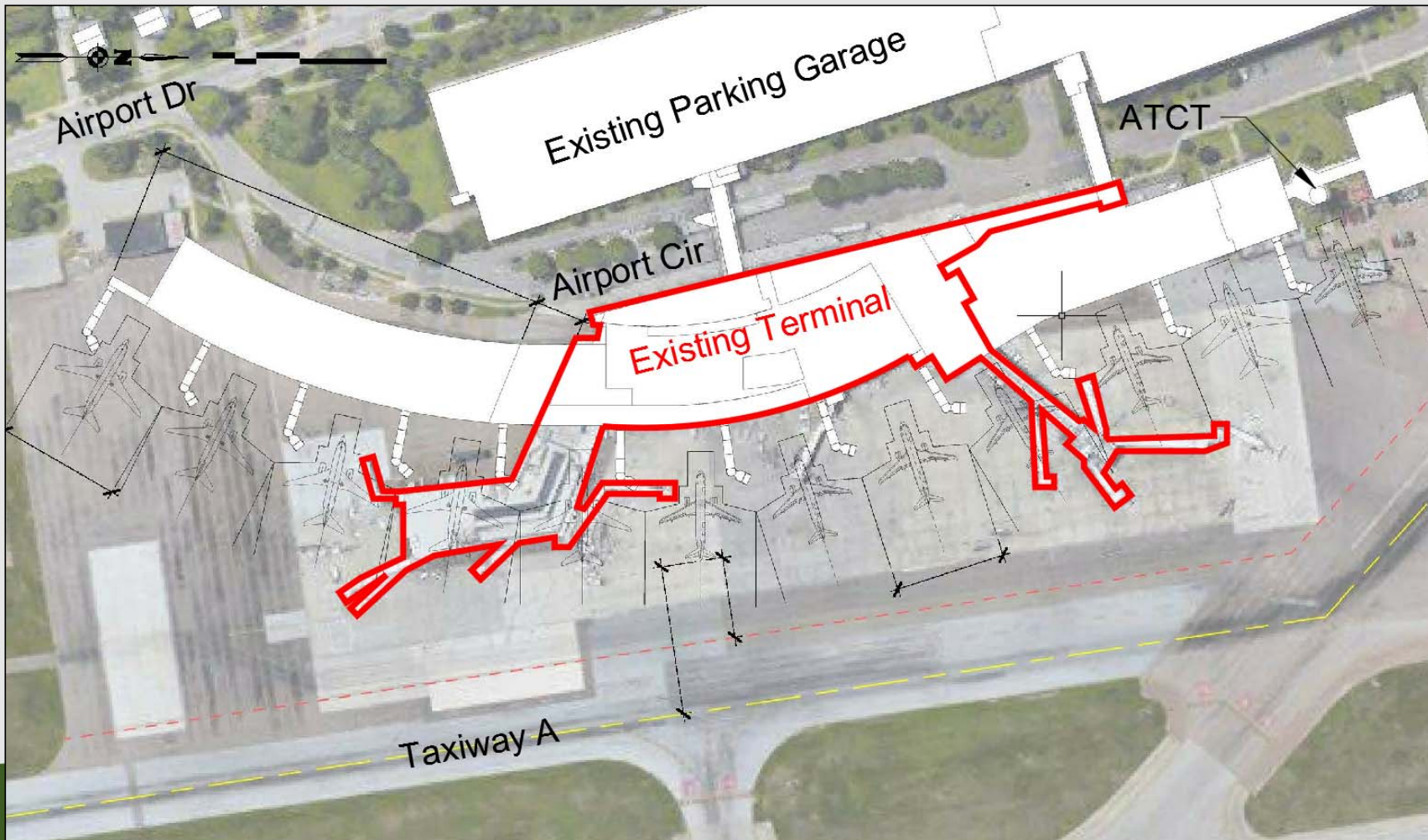


Existing Terminal Building

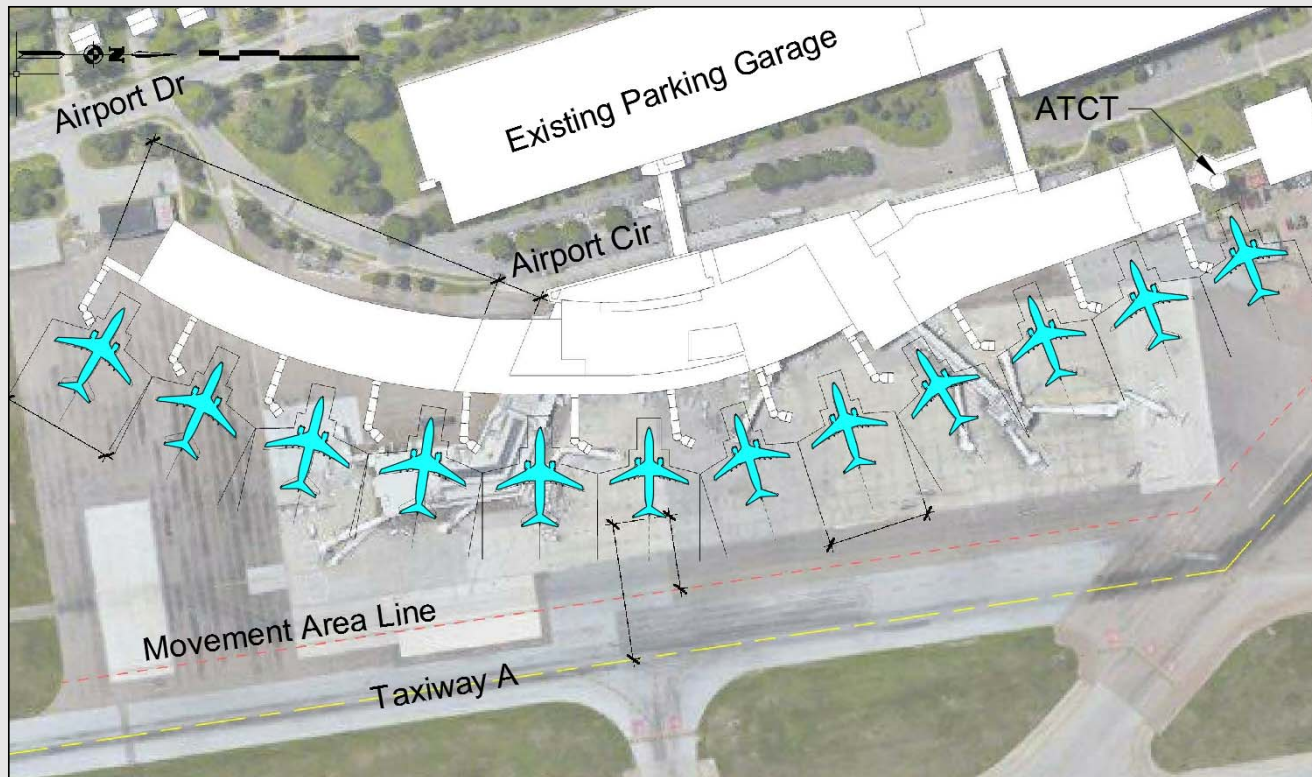


- Site restricted by
 - Taxiway A and Runway 1-19
 - Surrounding Roads
- Gate layout designed for Turboprops & Regional Jets
- Aircraft pushback enters Movement Area
- Internal Building Constraints
 - Split Passenger Screening Areas
 - Congestion in Holdrooms
 - Limited Concessions
- Inadequate holdroom size

PROPOSED TERMINAL BUILDING CONCEPT

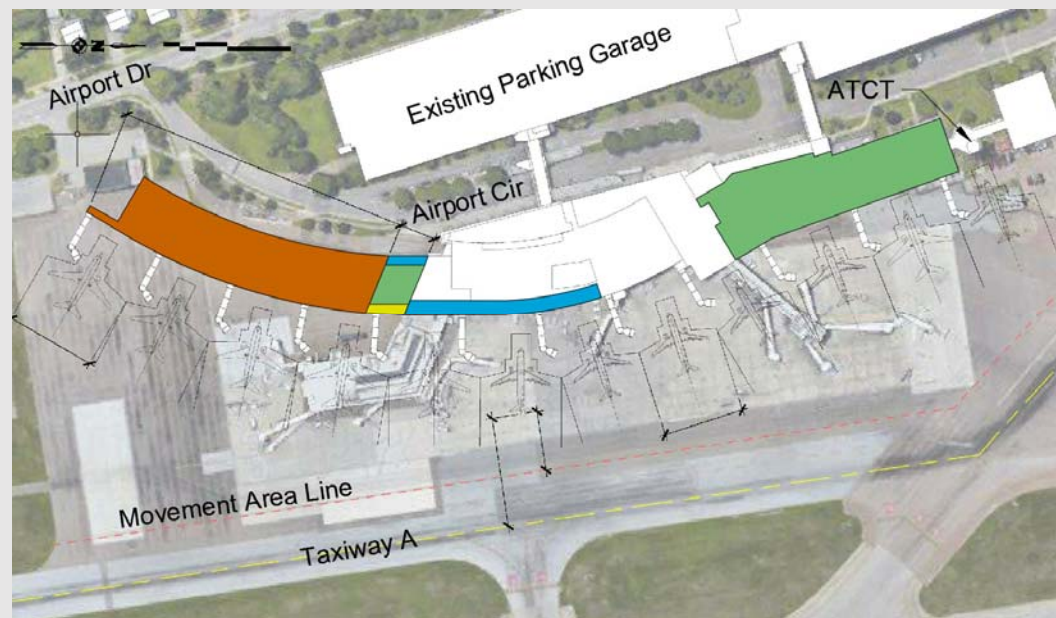


PROPOSED AIRCRAFT PARKING LAYOUT



- Efficient Use of Apron Space with 12 Contact Gate Positions
- Additional Area Between Gates and Taxiway A
- Pushbacks Can Avoid Entering Movement Area

PROPOSED TERMINAL DEVELOPMENT PHASING



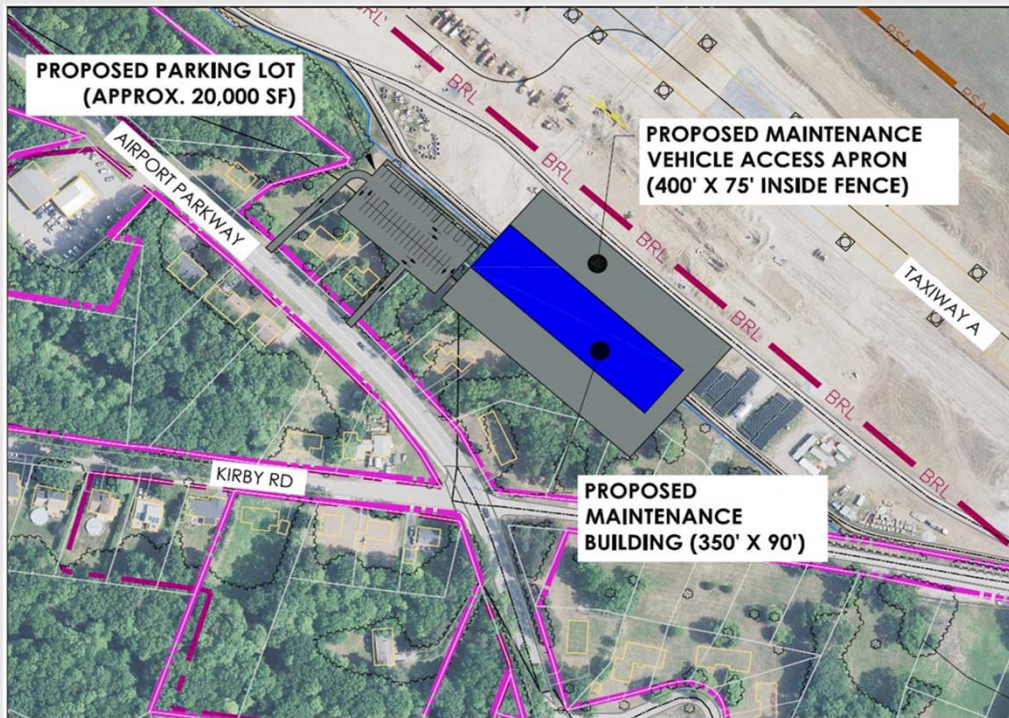
Phase 1A

Phase 1B

Phase 2

Phase 3

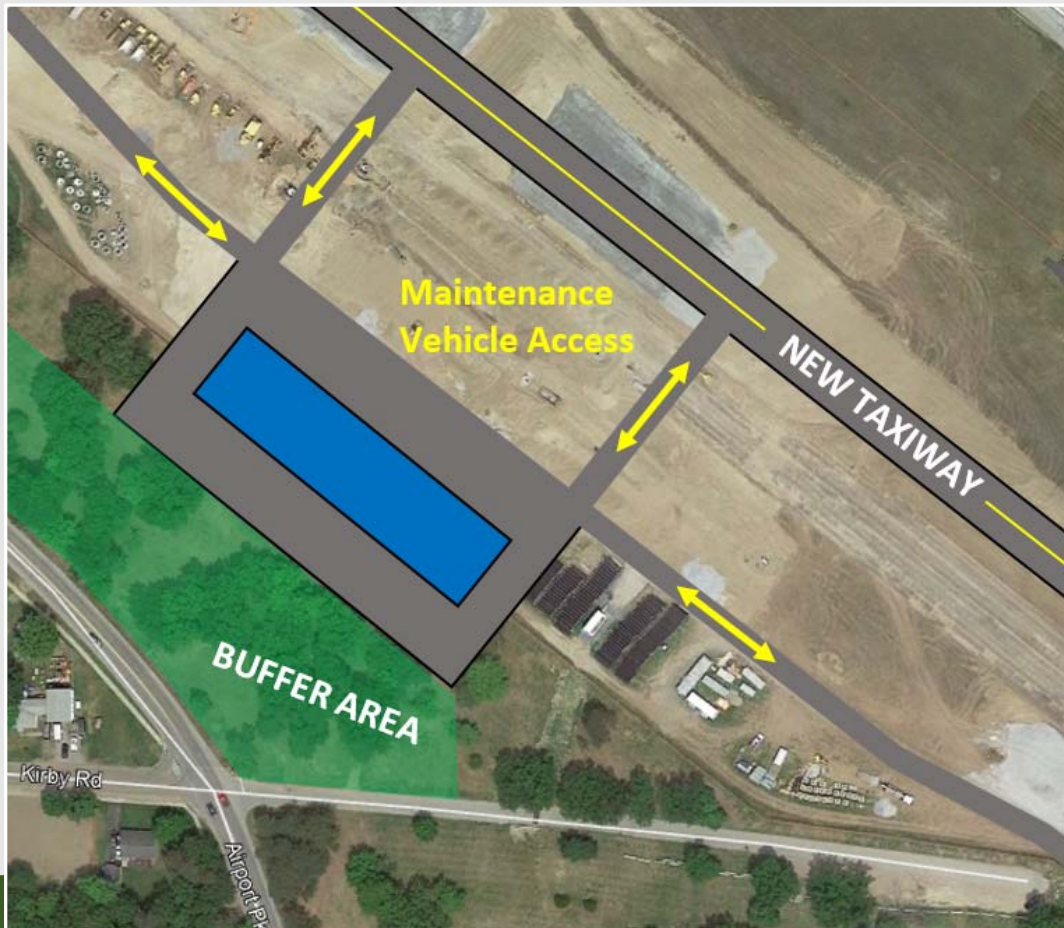
AIRPORT MAINTENANCE FACILITY RELOCATION



- Existing Facility is Undersized (some equipment stored outside)
- Existing location is constrained & distant from main runway

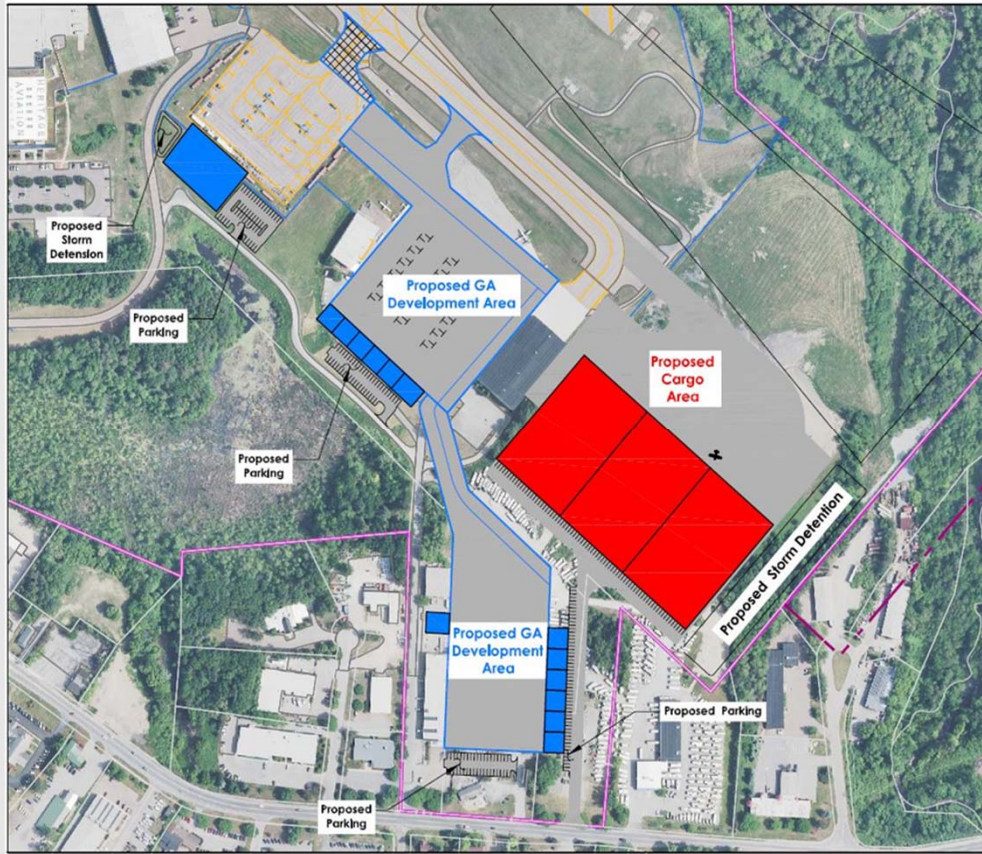


AIRPORT MAINTENANCE FACILITY RELOCATION



- Proposed Facility with direct access to new Taxiway G
- Unconstrained Site for All Maintenance Equipment
- **Buffer Area** Retained between Airport Parkway & Chamberlin Neighborhood
- Note: Airport vehicles Do **Not** Use public roads

GA AND AIR CARGO IMPROVEMENTS



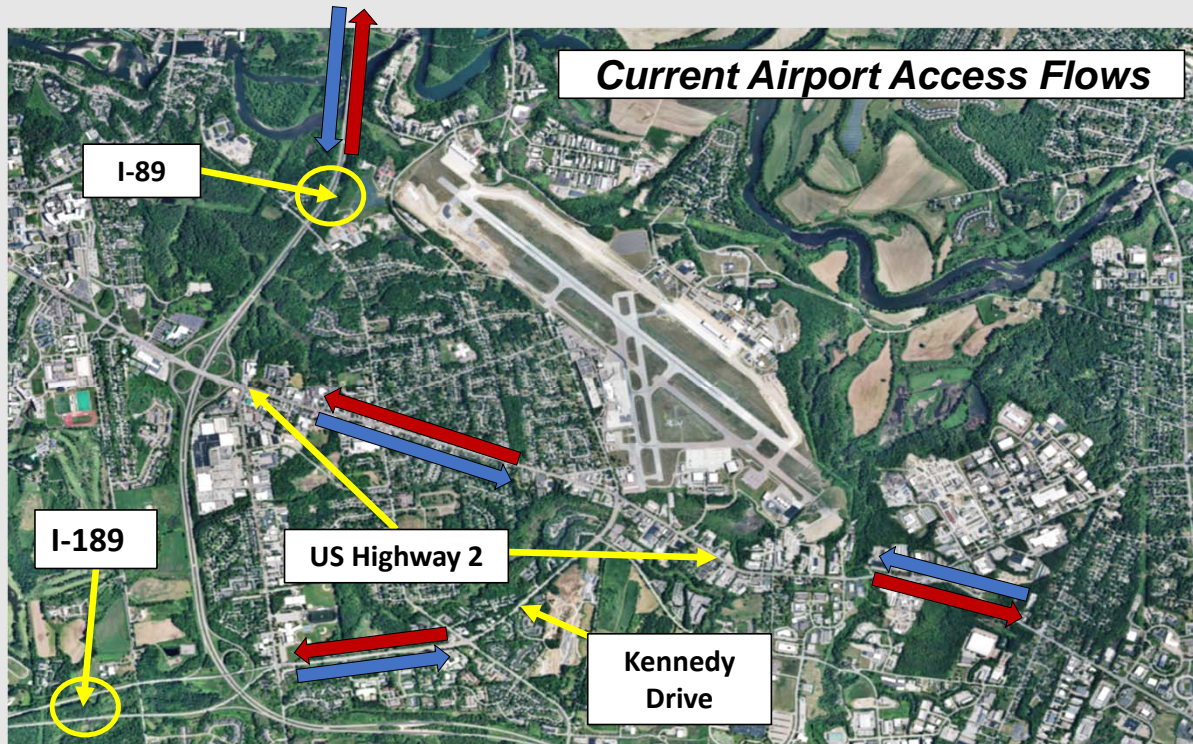
- General Aviation Hangar Development
- General Aviation Apron Expansion
- Air Cargo Expansion
- Provide Buffer Along Airport Dr



GROUND ACCESS IMPROVEMENTS CONCEPTS



GROUND ACCESS IMPROVEMENT CONCEPTS

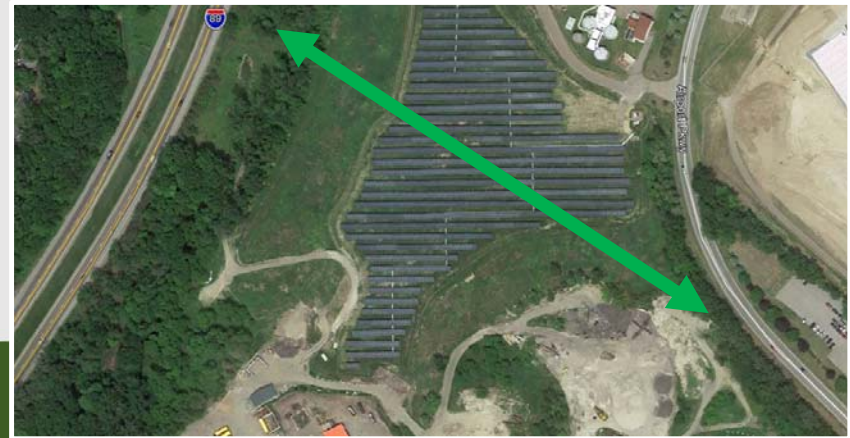


- Airport Share of Regional Traffic is low
- Traffic problems & solutions are regional
- FAA and Airport funding can not be used for Off Airport Projects

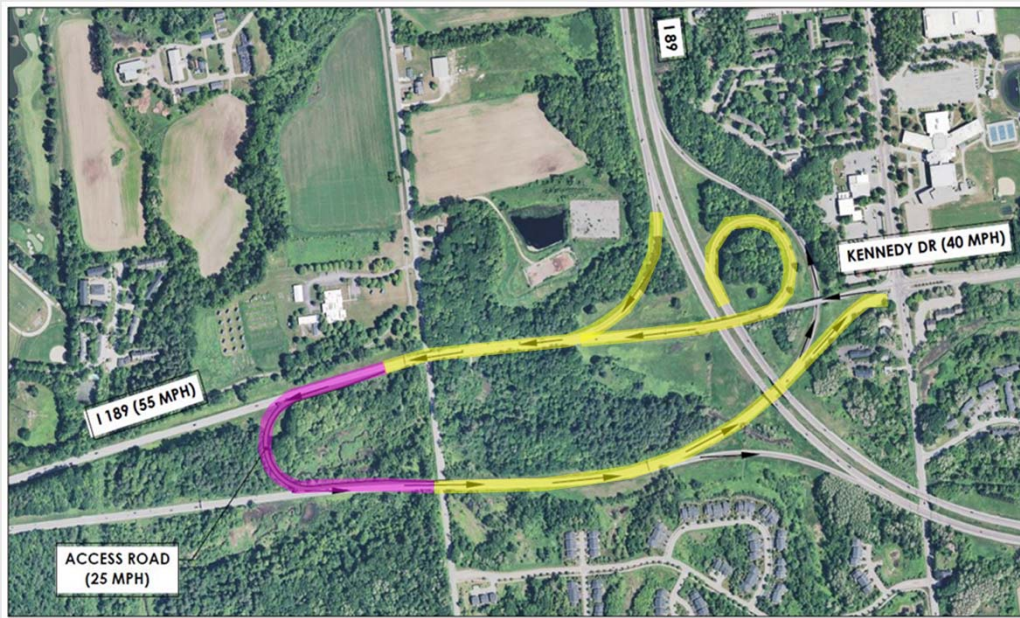
I-89 NEW INTERCHANGE 14B CONCEPT



- Construct new I-89 Interchange
- Provides new east/west access to airport
- Connects into Airport Parkway, to Terminal Building
- Avoids Route 2 and Kennedy Drive



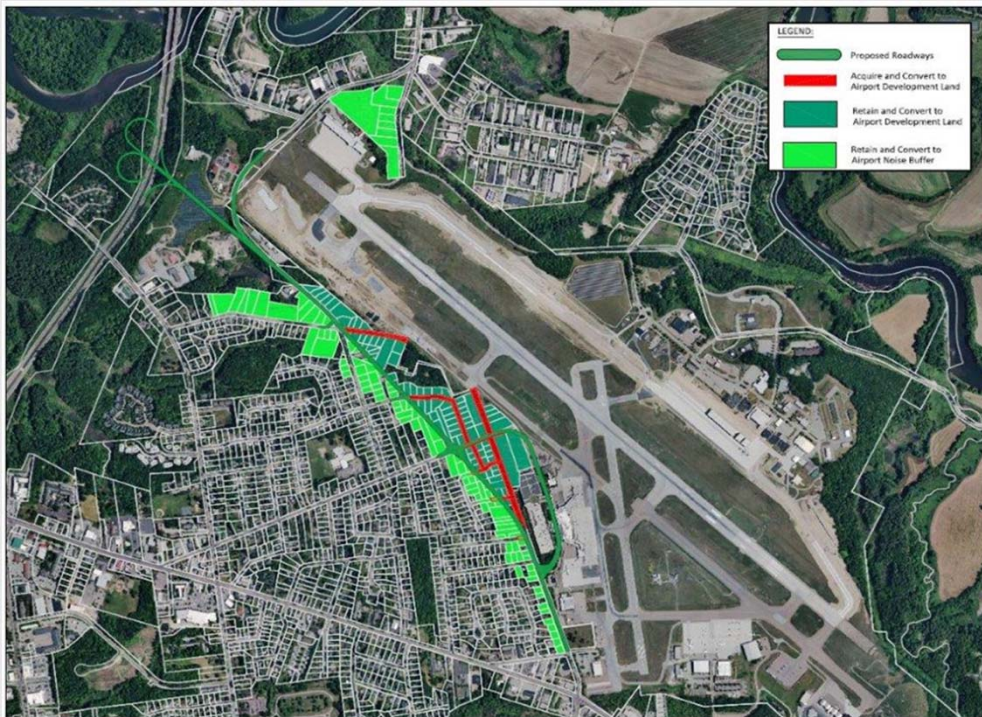
I-189 TURNAROUND CONCEPT



- Construct new I-189 U-turn ramp
- Provides east/west connection to I-89 N/S
- Tie into Kennedy Drive for direct access to Airport



AIRPORT DRIVE DEVELOPMENT CONCEPT



- Improve & Relocate Airport Drive
- Create a “Boulevard Type” Roadway with Landscaping
- Uses property acquired through airport noise program
- Retain a buffer area between Chamberlin Neighborhood

AIRPORT DRIVE DEVELOPMENT CONCEPT



NEXT STEPS

- Prepare Environmental Overview
- Prepare Development Concepts
- ALP Preparation



QUESTIONS/COMMENTS

Any questions or comments regarding the Airport Master Plan or any of the information discussed today?

Available for contact anytime:

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