



APPENDIX D

Alternatives Workshops

D.1 | ALTERNATIVES WORKSHOP #1

D.2 | ALTERNATIVES WORKSHOP #2

D.3 | ALTERNATIVES WORKSHOP #3

D.4 | ALTERNATIVES WORKSHOP #4

D.5 | EVALUATION MATRIX



APPENDIX D.1

Alternatives Workshop #1

Alternatives Workshop #1

July 30, 2019



MASTER PLAN 2040

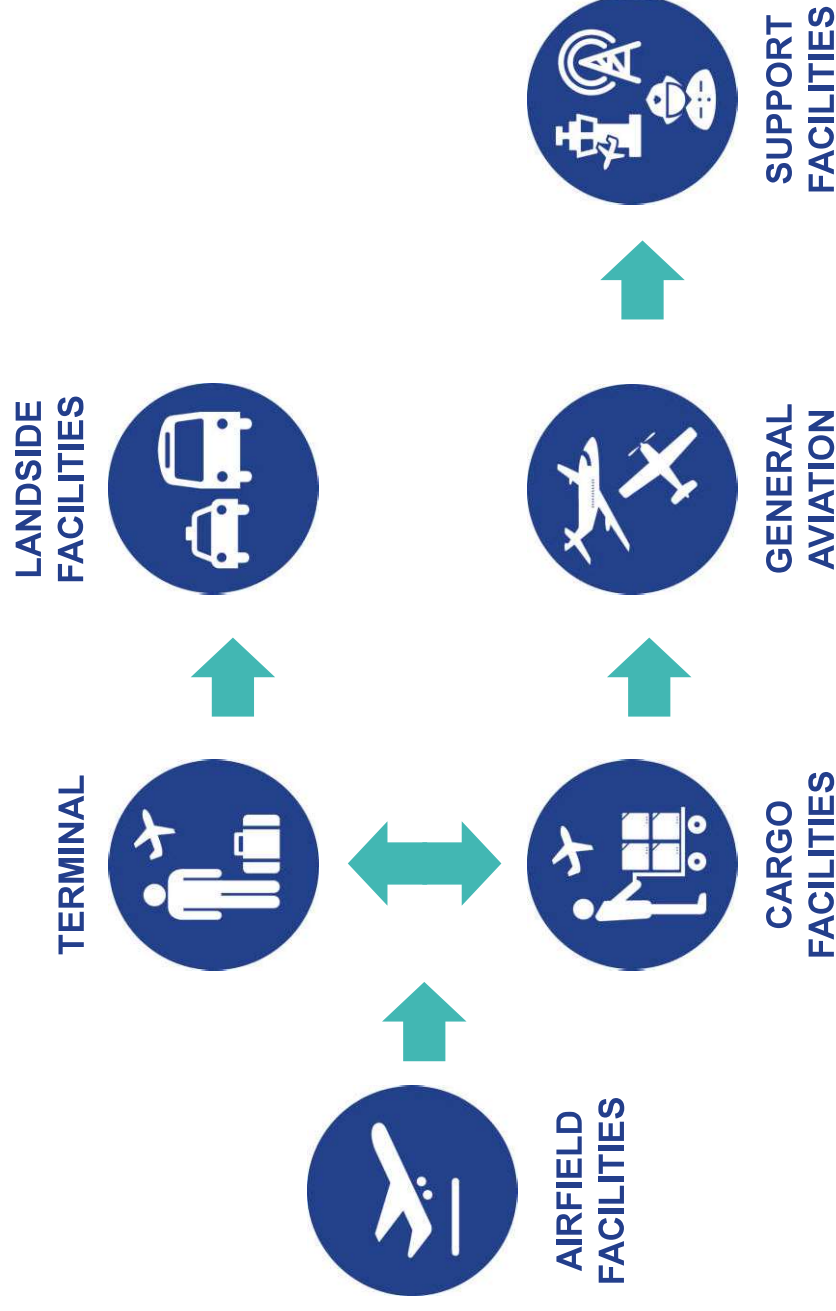


Alternatives Planning Overview

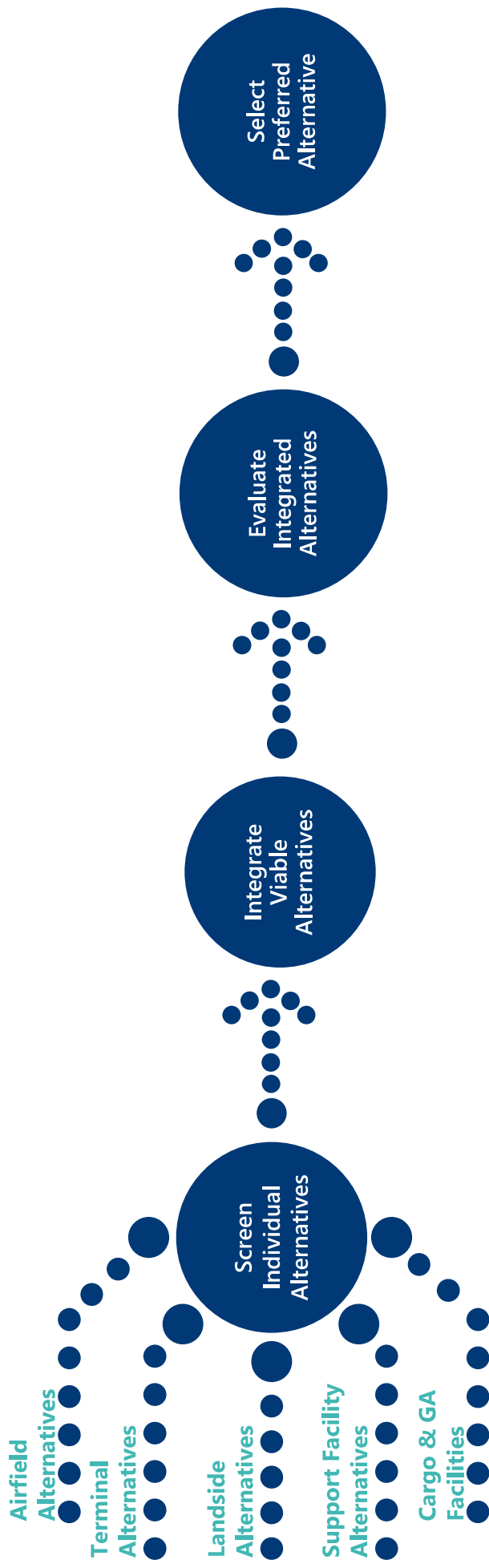
- Workshop schedule
- Process
- Goals
- Subject areas
 - Airfield facilities (runway focus)
 - Cargo/General Aviation/Support facilities
 - Terminal facilities
 - Landside facilities (curbside, roadway, parking, rental car, etc.)

Alternatives Planning Process

- Meet defined aeronautical needs
- Comply with FAA criteria
- Consider operational safety and efficiency
- Recognize hierarchy among facilities



Alternatives Planning Process



Workshop #1 Goals

- Explore conceptual alternatives to meet needs
 - Accommodate High Scenario Forecast requirements to protect flexibility
 - Develop Airport Layout Plan, Implementation Plan, Financial Analysis, and CIP on Baseline Forecast
- Generate additional and derivative development alternatives
- Reflect MKE priorities and preferences
- Generate comprehensive groups of alternatives (by topic)
- Next steps (Workshop #2)
 - Present full range of initial alternatives
 - Present screening results (eliminate infeasible/undesirable alternatives)
 - Present set of integrated alternatives for further evaluation
 - Prepare evaluation criteria/matrix

Airfield Challenges

- Qualitative
 - 10,000-foot runway requirement to meet WI ANG mission preferences
 - Airfield hot spots / complex intersections
 - Compliance with FAA criteria/standards
 - FAA funding challenges
 - Proximity of RW 1R-19L to WI ANG facilities
 - Operational redundancy (in case of runway out of service)
 - Runway length to serve international markets
 - Noise Abatement
- Quantitative
 - Forecast demand between 60 and 75 percent of Annual Service Volume (trigger for planning additional capacity)
 - Preserve adequate wind coverage and crosswind capabilities

Cargo Facilities Challenges

- Qualitative
 - Inefficient facility configuration for some tenants
 - Dispersed facilities
 - Long term growth opportunities/capabilities
 - Ramp congestion and facility adjacency challenges
- Quantitative
 - Cargo ramp expansion
 - Existing unmet need/demand
 - Penetrations of CFR Part 77 surfaces (parked aircraft)
 - Landside adequacy for larger transportation vehicles (truck maneuvering)

GA Facilities Challenges

- Qualitative
 - Inefficient facility configuration for some tenants
 - Dispersed facilities
 - Long term growth opportunities/capabilities
 - Opportunity for consolidation
 - Airfield/runway/landside (non-secure) access
- Quantitative
 - GA ramp expansion
 - Existing unmet need/demand

Support Facilities Challenges

- Qualitative
 - Preserve flexibility for demand-based expansion
 - Meet pent-up demand and ability to accommodate future needs
 - Supplemental GRE capability (ground noise coverage)
 - Future ARFF index changes
 - Potential relocation of facilities to allow for “highest and best use” of existing land/facilities
- Quantitative
 - Maintenance area expansion and consolidation of facilities

Terminal Challenges

- Qualitative
 - Concourse E integration
 - SSCP Consolidation potential
 - Integration of near-term gating considerations (Gate Optimization Study)
- Quantitative
 - Aircraft spacing allowing for maximum parking flexibility
 - Holdroom and passenger amenities spaces/dimensions
 - Additional check-in positions required after 2028
 - Additional SSCP lanes required by 2028 (Concourse C, if no consolidation)
 - Additional 10,000-15,000 sq ft baggage make-up space required (through 2040)
 - Additional gates: +4 to +10 gates, depending on operational assumptions (does not include Concourse E)

Terminal Challenges

- Terminal Requirements Summary – Forecast High Scenario LOS



Note: LOS reflects facility capacity relative to space required to meet demand.

Landside Challenges

- Qualitative
 - Create “front-door” visibility at MKE entrance
 - Potential for enhancing parking revenue by expanding on-airport facilities
 - Vertical clearances/low ceiling heights in parking structure
 - Driver experience and ease of wayfinding (complexity of navigation)
 - Simplify access along Howell Ave. and Airport Spur
 - Taxi dispatch and circulation within terminal roadway
- Quantitative
 - Short sight distances and vehicle weave distances
 - Ease curbside and on-airport roadway congestion during peak periods
 - Potential for consolidation of facilities (CONRAC and/or Ground Transportation Center [GTC])
 - Close-in vs. remote facilities (off-airport site options?)
 - Ability to repurpose future facilities should mode share shift
- Additional public parking (2,600-4,600 spaces required by 2040)