

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
CENTRAL REGION

**MASON CITY MUNICIPAL AIRPORT, MCW
MASON CITY, CERRO GORDO COUNTY, IOWA**

ENVIRONMENTAL ASSESSMENT

FOR

Passenger Terminal Replacement Project
and other work as described within.

February 2022

Prepared by: Foth Infrastructure & Environment LLC

For: Mason City Municipal Airport

This Environmental Assessment becomes a Federal document when evaluated, signed, and dated by the Responsible Federal Aviation Administration (FAA) Official.

SCOTT D TENER



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Date: 2022.02.28 14:26:56 -06'00'

Responsible FAA Official

Date

Environmental Assessment

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1. Proposed Action

1.1 Introduction

Foth Infrastructure & Environment, LLC has prepared this Environmental Assessment (EA) for the proposed Passenger Terminal Replacement project on behalf of the Mason City Municipal Airport (MCW).

This EA has been prepared pursuant to the requirements of the National Environmental Policy Act (NEPA) of 1969 implementing NEPA regulations issued by the Council on Environmental Quality (40 Code of Federal Regulations (CFR) 1500-1508), and the Airport and Airway Improvement Act of 1982 (Public Law 97-248), as amended. The purpose of this EA is to identify and assess the potential environmental impacts of the Proposed Action and its reasonable alternatives. Depending upon whether certain environmental thresholds of significance are exceeded or not, this EA may lead either to a Finding of No Significant Impact (FONSI) or to the requirement for the preparation of an Environmental Impact Statement (EIS). The Federal Aviation Administration (FAA) is the lead Federal agency to ensure compliance with NEPA for this Proposed Action.

1.2 Proposed Action

The Proposed Action consists of the development and operation of a replacement terminal at the airport, as depicted on Figure 3-1. The Proposed Action includes the following major elements:

- Construct a new terminal facility with all public spaces on one level west of the existing terminal to meet current building codes, Americans with Disabilities Act (ADA) requirements, and Transportation Security Administration (TSA) standards for passenger terminal facilities.
- Expand the terminal apron to the west to meet standards for regional jet and narrow body charter operations.
- Extend the access road to provide curbside service to the proposed terminal building to meet Statewide Urban Design and Specifications (SUDAS) standards.
- Expand the parking areas to increase capacity to meet local municipality parking requirements.
- Demolish (partial or full) the existing terminal, FAA annex, and restaurant.

This Proposed Action is included in the MCW's latest Airport Layout Plan (ALP) which was conditionally approved on December 2, 2021.

1.3 Timeframe of the Proposed Action

Design and construction of the proposed terminal replacement project would only occur after the FAA has issued a finding on this EA. If the FAA approves the Proposed Action at the beginning of 2022, design, demolition, and construction activities are proposed to begin in 2022 (after FAA approval) and continue into 2024. The FAA annex will be demolished and the apron expansion will occur in 2022 to accommodate construction of the new terminal. The access road and parking lot improvements will be staged from 2022 through 2024. Opening of the new replacement terminal is proposed for the spring of 2024. Demolition or repurposing of the existing terminal and restaurant will occur after the new terminal is in operation.

2. Purpose and Need

The following section discusses the purpose of and need for the project. This EA analyzes alternatives that would address those needs and accomplish that purpose.

2.1 Introduction

This EA was prepared in accordance with FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions.

2.2 Purpose and need

The existing terminal building is inadequate to support current operations at MCW and is in need of significant expansion and modernization. The issue will only intensify with recovery from COVID-19. The following statements present the problems or needs being addressed.

The need to increase the capacity of the public lobby and gatehold area

The MCW Terminal Narrative Report noted an increase in passenger activity (Foth, 2021). A copy of the Terminal Narrative Report can be found in Appendix A. Historically, the primary aircraft were 9-seaters, eventually increasing to 19-seaters. In 2021, 50-seat regional jets began utilizing MCW. The existing lobby and gatehold areas at the airport are incapable of adequately serving 50-seat regional jets. The current gatehold area is limited to 35 people per fire code restrictions; however, Transportation Security Administration (TSA) screening changes have further reduced the size of the gatehold area, which presently can comfortably accommodate approximately 20 passengers. The lobby and gatehold areas are not large enough to serve 50-seat regional jet service currently needed, nor the projected 75-seat jet service that is anticipated to be served in the future.

Both of these areas are significantly undersized during normal operations, which is of even greater consequence during the COVID-19 pandemic when social-distancing requirements are in place. The gatehold area is critically undersized and cannot accommodate safe social distancing practices.

The need to create an adequate checkpoint screening area

As the Design Hour Enplanements increased from 9 to 50, the required security screening/checkpoint area is also increased. The existing terminal screening area is inadequate to process the increased number of passengers processed through the facility at one time. Additionally, there is no space for the modern equipment that the TSA currently utilizes to effectively screen passengers.

Similarly, during times of increased space requirements experienced during a pandemic such as COVID-19, there are no options for spacing queued passengers while accommodating social distancing requirements, as each area of the terminal is already critically undersized to handle normal operations.

The need to provide adequate inbound/outbound baggage

The inbound and outbound baggage area is smaller than the required area for 50-seat jet service. Additionally, the baggage area does not include areas to screen baggage out of sight of passengers and does not have space to accommodate modern screening equipment. There is also not a secure area to inspect suspect luggage identified during initial screening.

The need to provide an accessible facility

The public lobby, ticketing, security screening, restrooms, and gatehold room are all significantly undersized and lack the required accessibility accommodations. The second floor of the terminal is not accessible per Federal Americans with Disabilities Act (ADA) requirements. Other portions of the terminal building, such as facility restrooms, are also not ADA compliant. The existing gatehold area has only a single unisex restroom, and there is no family restroom or mother's room.

The need to comply with code requirements

The passenger gatehold area does not meet fire code requirements for the accommodation of passenger numbers associated with larger aircraft. The following code deficiencies have been noted: the existing terminal is not equipped with fire sprinkler system and the second floor knee wall is too short. Additionally, the building is in need of mechanical, lighting, and plumbing upgrades to meet current requirements.

The need to address facility deterioration

There is exterior deterioration at the windows, doors, roof, joints, and architectural finishes. Lead based paint and asbestos are present within the building and will require abatement if the existing terminal is improved.

Aviation Activity

From 2000 through 2011, the Mason City Municipal Airport averaged 13,008 enplanements per year. Disruptions in service between 2012 and 2014 negatively impacted annual enplanements, but between 2015 and 2019 enplanements rose steadily from 5,577 to a pre-pandemic peak of 8,164 enplanements. With introduction of 50 seat jet service and the resulting increase in monthly enplanements over the past six months it is expected that in 2022 the airport will again cross the 10,000-enplanement threshold, and track along the forecast from the Master Plan which was completed in 2017. The Master Plan forecast anticipates 14,600 enplanements in 2026, and 23,900 enplanements in 2036 (Coffman Associates & Foth, 2017). A copy of the Chapter 2 – Aviation Demand Forecast from the 2017 Master Plan is provided in Appendix B.

As evidenced by historic enplanement levels at the Mason City Municipal Airport dating back to the 1980s, maintaining sustained enplanement levels between 12,000 and 18,000 is reasonable. With continued Essential Air Service subsidies, increasing employment levels and incomes in the region, and sustained jet-service it is reasonable for the Airport Commission to plan towards long term enplanement levels about 20,000 passengers.

3. Alternatives

This section defines the no action, the preferred alternative (Proposed Action), and reasonable alternatives. It also briefly explains the screening process and why each alternative meets or does not meet the Purpose and Need and whether it is considered reasonable or not reasonable.

3.1 Background

MCW Terminal Narrative Report (Foth, 2021a) discusses the history of the existing terminal building at the airport and describes the problem statement which was used to develop the project purpose and need. The Narrative Report also identified and evaluated four alternatives for the project. A copy of the Terminal Narrative Report can be found in Appendix A.

After the initial Narrative Report evaluation, it was determined that Historic and Section 4(f) resources were the primary affected resources related to the Proposed Action. A Section 4(f) Statement was prepared to further evaluate the alternatives (Foth, 2022). A copy of the Section 4(f) Statement can be found in Appendix C. MCW utilized the procedural requirements for complying with Section 4(f) from DOT Order 5610.1C to determine if there were any feasible and prudent alternatives that would completely avoid the use of the Section 4(f) resource. After it was determined that there were no feasible and prudent alternatives that avoid the Section 4(f) resource, MCW evaluated the alternative that “causes the least overall harm in light of the statute’s preservationist purpose.” (23 CFR 774.3).

3.2 Reasonable Alternative 1 – No Action

With the No Action alternative, necessary facility maintenance would be completed without any expansion or material change to the facility. The No Action alternative would not meet the purpose and need of addressing the fact that the existing terminal building is inadequate to support current operations at MCW and is in need of significant expansion and modernization.

The No Action alternative would result in unacceptable safety and operational problems. The existing lobby and gatehold areas would continue to violate fire code restrictions when 50-seat regional jet service is in operation. Additionally, the terminal would continue to have inadequate space for the modern TSA equipment needed to effectively screen passengers. The airport would continue to operate with an insufficiently sized baggage area that lacks private baggage screening areas and secure luggage inspection areas. The airport would lack required ADA accessibility accommodations including ADA-compliant access to the second floor of terminal and inadequate restroom facilities. The terminal would continue to be in violation of fire code requirements for larger aircraft, would continue to have code deficiencies, and would continue to need mechanical, lighting, and plumbing upgrades to meet current requirements.

Although the No Action Alternative does not meet the project purpose and need, in addition to being a Council on Environmental Quality/National Environmental Policy Act (CEQ/NEPA) requirement, it does serve as a baseline for a comparison of impacts to the preferred alternative and is therefore retained for analysis.

3.3 Reasonable Alternative 2 – Preferred Alternative, Replacement Terminal – West Location

Reasonable Alternative 2, which is the Preferred Alternative (Proposed Action), would result in the construction of a new terminal immediately west of the existing facility. The proposed location of the western terminal is depicted on Figure 3-1. The new terminal would have an ADA compliant lobby, restrooms, TSA screening area, gatehold, and luggage areas sized to accommodate the existing need of 50-seat passenger regional jets and allowing for possible expansion to 75-seat passenger regional jets. The new terminal would include private and secure baggage screening and inspection areas. The building would be code compliant with updated mechanical, lighting, and plumbing features. Additionally, the new terminal would provide all office and public meeting rooms on the first floor of the building and there would be the ability to expand the terminal to meet future growth needs. Replacing the existing terminal with a new building would eliminate the exterior deterioration, asbestos, and lead based paint issues found in the existing terminal.

Construction of the Preferred Alternative would require the terminal apron to be expanded approximately 2,600 SY to the west, and the access road would need to be extended to access the curbside of the new terminal building. The parking areas would also need to be expanded to accommodate the passengers associated with the larger aircraft. Figure 3-1 shows a schematic of a potential parking lot and access road reconfiguration.

The new building will be designed to meet current energy code requirements while having updated mechanical, electrical and plumbing systems. The updated building and operational systems will result in reductions in long-term operating costs.

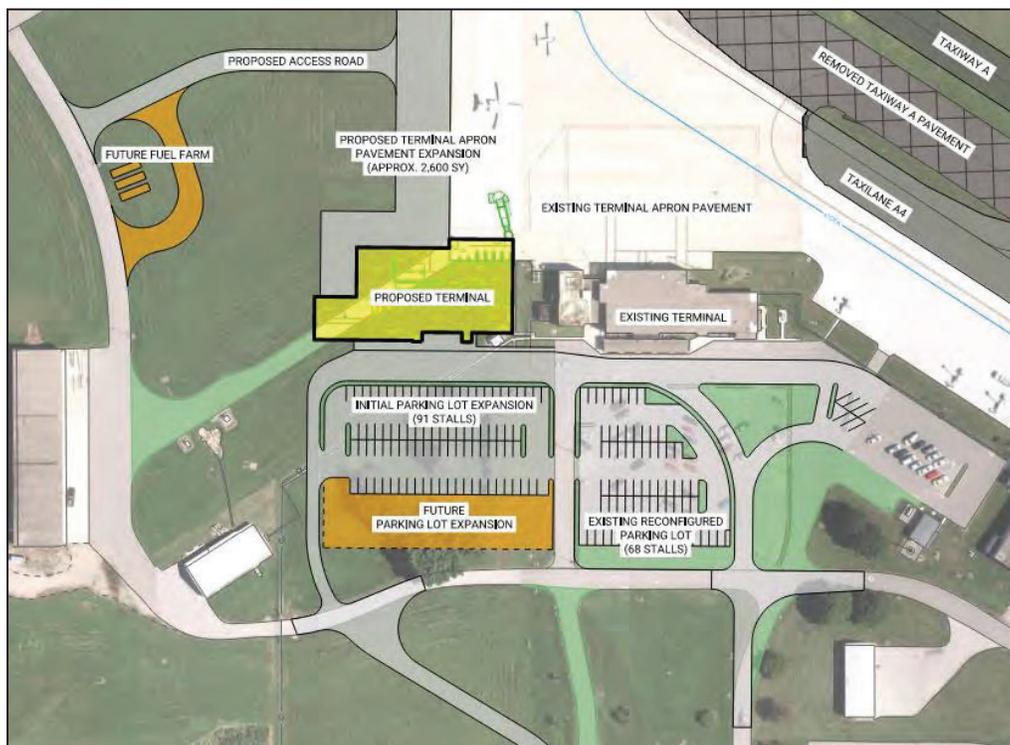


Figure 3-1: Alternative 2 – Proposed Action

The Preferred Alternative best meets the purpose and need of the project by expanding and modernizing the terminal building so it supports current operations. The Preferred Alternative is estimated to cost \$10.8 to \$14 million. While construction of a new terminal is more expensive than Alternative 4, the new facility will more efficiently meet space programming requirements, will have all new mechanical, electrical, and plumbing systems, will be ADA compliant, and will meet current energy efficient design requirements, thus reducing long-term operating costs.

One goal of MCW was to be able to maintain operations of the airport during the duration of construction and to be able to re-use existing parking and apron areas, where possible. The Preferred Alternative allows MCW to utilize the existing apron and parking lots with expansions occurring west of the existing facilities. The layout of the new terminal west of the existing building allow operations to continue during construction of the new facility. The existing terminal, apron and parking areas can continue to be used for the duration of construction.

Based on MCW's specific goals and FAA operational requirements, MCW has selected Alternative 2, the Preferred Alternative, as the Proposed Action. This alternative best meets the purpose and need compared to the other alternatives and will be carried forward for further environmental evaluation.

3.4 Reasonable Alternative 3 – Replacement Terminal, South Location

Alternative 3 would result in the construction of a new terminal immediately south of the existing facility. The new terminal would have the same features as the Preferred Alternative with a mirrored building layout, as depicted on Figure 3-2. The new terminal would have an ADA compliant lobby and restroom, as well as TSA screening, gatehold, and luggage areas sized to accommodate the existing need of 50-seat passenger regional jets and allowing for possible expansion to 75-seat passenger regional jets. The new terminal would include private and secure baggage screening and inspection areas. The building would be code compliant with updated mechanical, lighting, and plumbing features. Replacing the existing terminal with a new building would eliminate the exterior deterioration, asbestos, and lead based paint issues found in the existing terminal.

Alternative 3 has a larger apron area, would require a larger area of parking lot replacement, and more extensive access road reconstruction compared to the Preferred Alternative. For Alternative 3, an estimated 6,650 SY of new apron would need to be added to accommodate airplane access to the new terminal. Since the new terminal building would impact the existing parking lot, the lot would need to be expanded to the south to accommodate passengers during and after construction. Figure 3-2 shows a schematic of a potential parking lot and access road reconfiguration if Alternative 3 were selected.

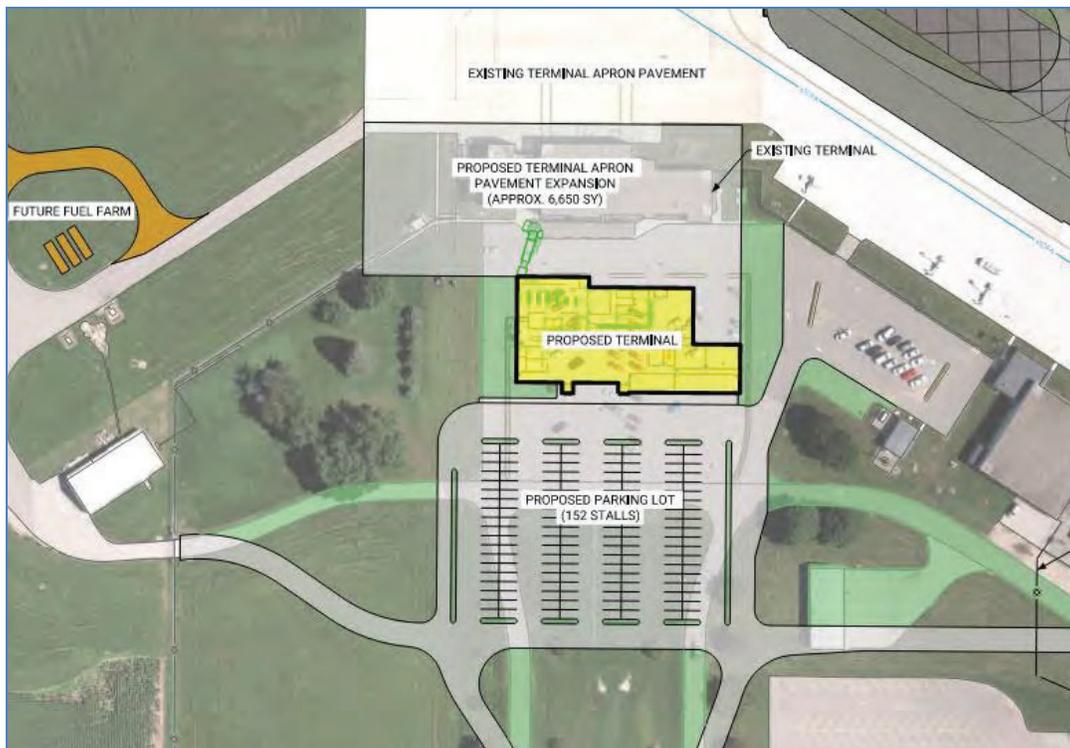


Figure 3-2: Alternative 3 – South Terminal Location

Alternative 3 would meet the purpose and need of the project by expanding and modernizing the terminal building so it supports current operations. This alternative is estimated to cost \$10.8 to \$14 million. While construction of a new terminal is more expensive than Alternative 4, the new facility will more efficiently meet space programming requirements, will have all new mechanical, electrical, and plumbing systems, will be ADA compliant, and will meet current energy efficient design requirements, thus reducing long-term operating costs.

The location of the new terminal building would increase the difficulty of maintaining operations during the duration of construction and would require a more elaborate construction staging plan and management of airport passengers. The existing parking lot will need to be demolished to accommodate the new terminal; therefore the new parking lot would need to be constructed at the beginning of construction. Passengers will need to be safely directed from the new parking lot, around the new terminal construction zone to the existing terminal while the new terminal is being built. After construction of the new terminal is completed access to the apron will need to be maintained while the existing terminal is demolished and the apron area is expanded to reach the new terminal. The logistics and construction staging of Alternative 3 are more complex than the Preferred Alternative.

Although Alternative 3 meets the purpose and need, the larger apron area, larger parking lot expansion, and substantial challenges directing passengers around the construction zone to the existing terminal, among other complex construction staging and operations issues, were factors considered in not selecting Alternative 3.

3.5 Reasonable Alternative 4 – Renovate Existing Terminal

Alternative 4 would include renovating and expanding the existing terminal. The renovation would include constructing a new mechanical/electrical utility building. The existing FAA Annex building would be demolished and the existing terminal would be expanded to the west to provide additional area for a security checkpoint and gatehold areas. The terminal would also be expanded to the north to accommodate a larger baggage claim area and bag screening. In addition to the expansion, the remaining facility would be renovated to modernize finishes and update maintenance systems. A new elevator would be added to provide ADA compliance to the second floor of the terminal. A schematic of the potential renovation is depicted in Figure 3-3.

Because of the historic nature of the building, it will not be feasible to achieve the energy code requirements during the remodeling. The wall insulation is much less than current standards require, and there is no insulation present below the floor grade of the building; it will not be possible to make these features meet current energy code requirements without physically removing walls and flooring of the entire structure.

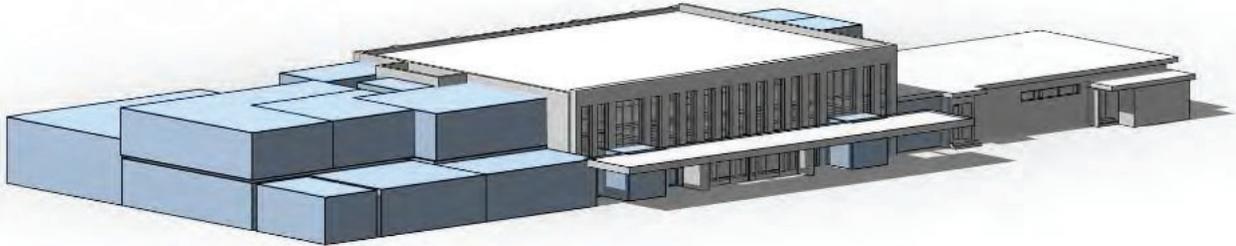


Figure 3-3: Alternative 4 – Existing Terminal Renovation

Alternative 4 would partially meet the purpose and need of the project by expanding and modernizing the existing terminal building so it supports current operations. The renovation would not address the existing building envelope which does not meet current energy code requirements. Alternative 4 would require major renovations to the existing terminal building including expansion to the west and north. Alternative 4 is estimated to cost \$8.5 to \$11.5 million; however, hidden problems with the existing structure may be encountered during the remodeling, potentially increasing the cost of the project. Long-term operation and maintenance costs are anticipated to be more significant with this alternatives. During renovation, substantial disruption to existing operations will occur as a result of phased construction in an operating building. MCW would be investing substantial resources in retrofitting a building that is ill-suited for the needed infrastructure.

Remodeling the existing building requires more square feet to achieve the same features as a new terminal. Additionally, the layout and functionality of the remodeled terminal would not be as efficient as new construction. The remodeling design requires compromises to be made to retrofit the ill-suited infrastructure to meet the long term needs of the airport. Additionally, continuing operations and maintaining FAA required security measures in an undersized building for the duration of the remodeling project would be difficult.

Alternative 4 only partially meets the purpose and need. Additionally, difficulties maintaining existing passenger operations while remodeling an undersized aged structure to meet long-term needs of the airport factored into MCW not selecting Alternative 4.

4. Affected Environment & Environmental Consequences

4.1 Introduction

This section is organized by resource topics, with the impacts of all alternatives combined under resource headings. It provides concise analysis, environmental impacts, and conceptual measures needed to mitigate those impacts only for resources affected by at least one of the alternatives. The Affected Environment existing conditions were evaluated in 2021.

4.2 Project Location

The location of the MCW is depicted on Figure 4-1 and Figure 4-2. An aerial photograph of the airport can be seen on Figure 4-3. Photos depicting the current conditions of the MCW FAA annex, terminal, and restaurant can be found in the Section 4(f) Statement in Appendix C.



Figure 4-1: Location Map

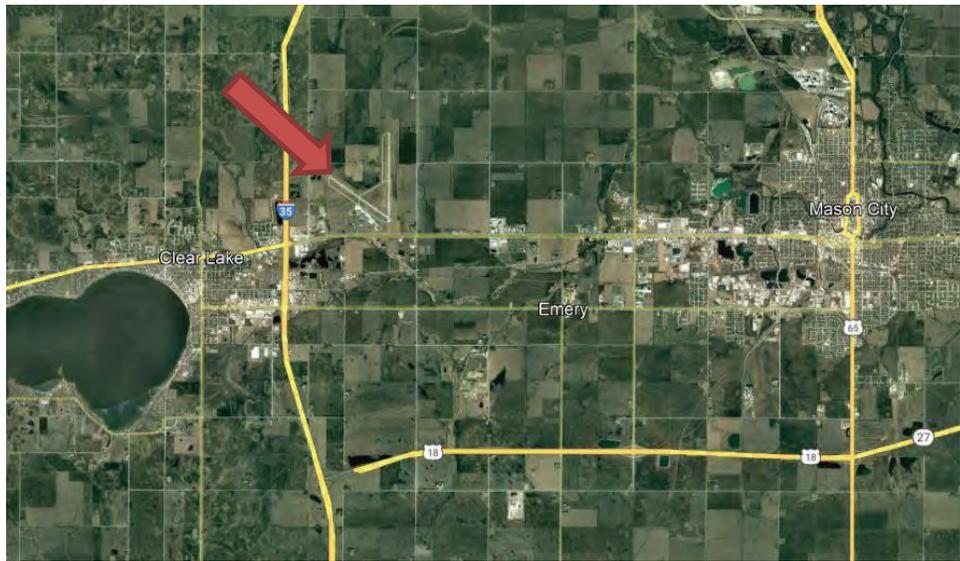


Figure 4-2: Vicinity Map



Figure 4-3: Airport Property Boundary

4.3 Identification of the Study Areas and Analysis Years

To evaluate environmental impacts, two study areas are defined, the General Study Area and the Detailed Study Area. The General Study Area depicts the areas surrounding the airport as shown on Figure 4-3. The Detailed Study Area depicts the area that may be physically disturbed (direct impacts) with the development of the Proposed Action, as depicted on Figure 4-4.

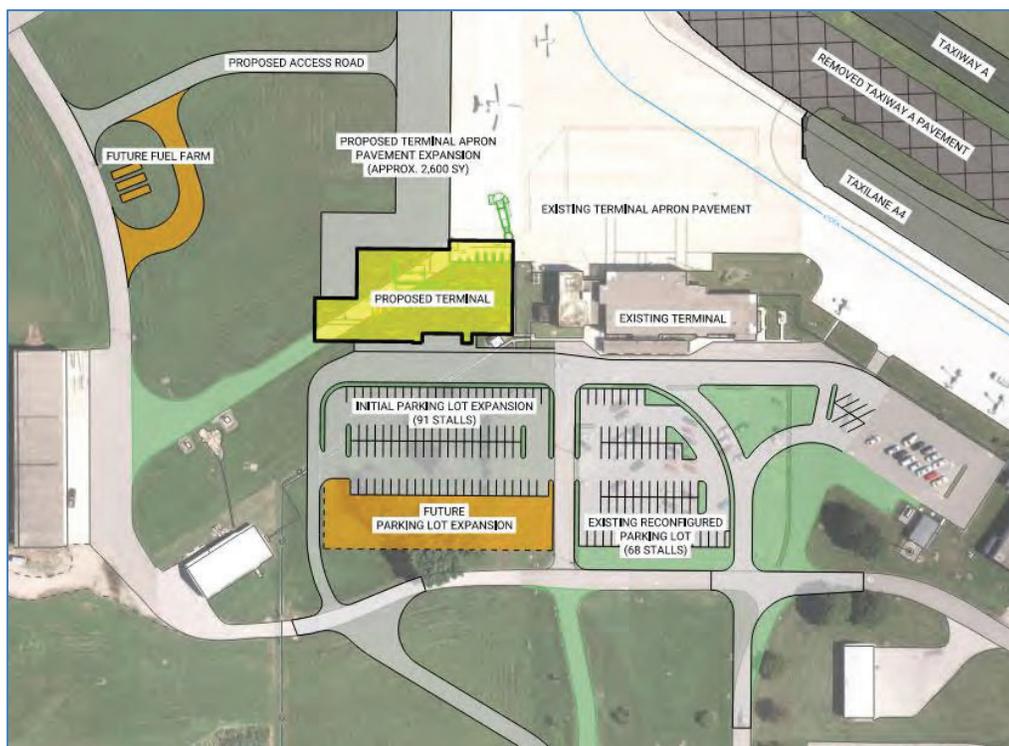


Figure 4-4: Detailed Study Area

4.4 Environmental Impact Categories Not Affected

These resources were considered but not analyzed in detail in this environmental assessment. Based on the results of the site visit and research, the Proposed Action would have no direct or indirect impact to the following categories:

- Air Quality: the airport is not located in a Clean Air Act non-attainment or maintenance area. The project has the capacity to increase the landside capacity through the addition of up to 40 parking spaces.
- Biological Resources: The U.S. Fish and Wildlife Service (FWS) was consulted through the Information for Planning and Consultation (IPaC) system to obtain the federally-listed T&E species. Suitable habitat for the federally-listed species is not present in the study area. The mowed and maintained vegetation and landscaped trees within the study area are not suitable habitat for the five listed bat, insect and flowering plant species. The FWS confirmed that there are no critical habitats within the study area. A list of the state T&E species from the Iowa Department of Natural Resources (IDNR) Natural Area Inventory was reviewed. In an email dated October 18, 2021, the Iowa Department of Natural Resources (IDNR) indicated that they have no records or rare

species and significant natural communities in the study area and found no site-specific records that would be impacted by the Proposed Action. A copy of the correspondence regarding biological resources can be found in Appendix D.

- Climate: The Proposed Action is anticipated to have no impact to climate.
- Coastal Resources: There are no coastal zones in Iowa.
- Farmlands: Farmland will not be impacted by the Proposed Action.
- Hazardous Materials: Asbestos and lead based paint is present within the existing terminal, FAA annex and restaurant and a diesel generator is located within the study area. Prior to demolition of the building, the asbestos and lead based paint within the buildings will be abated in accordance with federal and state regulations. The diesel generator and any remaining fuel will be reused or properly disposed.
- Solid Waste: Solid waste generated from the demolition of the buildings will be legally disposed at a landfill and/or recycling center.
- Pollution Prevention: The area of impervious surface will increase following construction of the parking lot and apron expansions. Stormwater runoff will be managed in accordance with the National Pollution Discharge Elimination System (NPDES) permit and Stormwater Pollution Prevention (SWPPP) guidelines. An existing dry bottom stormwater detention basin will be expanded as necessary to accommodate increased stormwater runoff. The contractor will be responsible for preparing and submitting the NPDES Permit prior to commencing construction operations. The contractor is also responsible for compliance and maintenance associated with the SWPPP.
- Archeological and Cultural Resources: A Phase I Cultural Resource Survey of the study area concluded that the area was heavily disturbed and had no evidence of an intact cultural component (Bear Creek Archeology, Inc., 2021). A copy of the Phase I Cultural Resource Survey can be found in Appendix E.
- Land Use: The Proposed Action is consistent with the plans, goals, policy, zoning and local controls for the area where the airport is located. The project sponsor, the Mason City Municipal Airport, provided a letter regarding the existing and planned land use, which can be found in Appendix F.
- Natural Resources and Energy Supply: The new terminal building is anticipated to be more energy efficient and will use less natural resources during operations.
- Noise and Noise-Compatible Land Use: The Proposed Action will not result in an increase in aircraft operations and will not change the airfield configuration. Additionally, there are no sensitive noise areas in the project vicinity that will be impacted by the Proposed Action.

A noise exposure analysis was completed as part of the Airport Master Plan (Coffman Associates & Foth, 2017). The standard methodology for analyzing noise conditions at airports involves the use of a computer simulation model to produce noise exposure contours that are overlain on a map of the airport and vicinity to graphically represent aircraft noise conditions. When compared to land use, zoning, and general plan maps, the noise exposure contours may be used to identify areas that are currently, or have the potential to be, exposed to aircraft noise. Day-night noise level (DNL) is the metric currently accepted by the FAA, Environmental Protection Agency (EPA), and Department of Housing and Urban Development (HUD) as an appropriate measure of cumulative noise exposure. These three agencies have each identified the 65 decibel (dB) DNL noise contour as the threshold of incompatibility.

According to the Master Plan, the future land use plans adopted by the City of Clear Lake (2008) and Cerro Gordo County (2003) indicate that the land north and east of the airport is planned for agricultural development, similar to what exists presently, and the land to the south and west is planned for industrial, commercial, and open space/recreational land uses. Noise exposure contours evaluated for Airport Master Plan depict the baseline condition (2015) and long range condition (2036) based on the operational forecasts discussed in Appendix B. Composite maps depicting the 65 db DNL noise exposure contours and City of Clear Lake and Cerro Gordo County future land use plans are included in Appendix G. The exhibits depicts that the 65 db DNL noise exposure contours remain entirely on airport property in both the baseline and long range conditions. The long range DNL contours confirm that the Proposed Action will not result in increased noise outside of the airport property.

- Socioeconomic, Environmental Justice, and Children’s Environmental Health: There are no minority or low-income populations in or near the study area.
- Visual Effects: The Proposed Action will not produce light emission impacts and there will be no visual or aesthetic impacts as a result of the Proposed Action.
- Water Resources: Wetland, surface waters, floodplains, and wild/scenic rivers are not present within the study area. Groundwater will not be impacted by the Proposed Action.

4.5 Department of Transportation Act, Section 4(f)

This section presents the analysis of potential impacts to Section 4(f) resources as a result of the No Action Alternative and the Proposed Action. Section 4(f) protects significant publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historic sites. Section 4(f) provides that the Secretary of Transportation may approve a transportation project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge, or land of an historic site of national, state, or local significance, only if there is no feasible and prudent alternative to using that land and the project includes all possible planning to minimize harm resulting from the use.

4.5.1 Affected Environment

The FAA has determined that the Mason City Municipal Airport is eligible for the National Register of Historic Places (NRHP) as a Historic District and three historic buildings at the Airport are individually eligible for inclusion in the NRHP under Criteria A and C. Therefore, the historic district, its contributing resource and the individually eligible resources are considered Section 4(f) resources. In an email dated August 24, 2021, the Iowa State Historic Preservation Officer (SHPO) concurred with the FAA’s determination of an “Adverse Effect” finding. The identified resources were described in the Architectural & Historical Survey and Evaluation report (Bergland + Cram, 2021) and the historic structures are depicted on Figure 4-5. Figure 4-6 depicts the historic district and the three contributing resources identified within the historic district. A copy of the Architectural & Historical Survey and Evaluation report can be found in Appendix H and copies of the SHPO correspondence can be found in Appendix I.



Figure 4-5: Section 4(f) Historic Structures



Figure 4-6: Section 4(f) Historic District and Contributing Resources

4.5.2 Thresholds of Significance

As stated in Exhibit 4-1 of FAA Order 1050.1F and Paragraph 5.3.7 of the 1050.1F Desk Reference, a significant impact would occur when the action involves more than a minimal physical use of a Section 4(f) resource or a “constructive use” based on an FAA determination that the aviation project would substantially impair the Section 4(f) resource. Substantial impairment occurs when the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished. A significant impact would not occur if mitigation measures eliminate or reduce the effects of a use below the threshold of significance.

4.5.3 Environmental Consequences

The following items describe the environmental consequences of the No Action Alternative, Reasonable Alternatives, and the Proposed Action.

No Action

The No Action Alternative would avoid a physical use of the Section 4(f) resource, as limited changes to the existing terminal would be made; however, it would not meet the purpose and need of addressing the fact that the existing terminal building is inadequate to support current operations at MCW and is in need of substantial expansion and modernization.

Reasonable Alternatives

Both Reasonable Alternatives would result in a physical use of the National Register-eligible Mason City Municipal Airport Historic District, which is a Section 4(f) resources. Alternative 3, construction of a new terminal directly south of the existing terminal, would impact the historic district with the demolition of the terminal, restaurant and FAA annex to accommodate the new terminal and expanded apron. There would be no opportunity to repurpose the terminal or restaurant with Alternative 3 based on the south terminal placement.

Alternative 4, renovation of the existing terminal, would require major changes to the existing terminal building including expansion to the west and north. The proposed expansion and renovation of the existing structure may physically destroy or damage the historic property or alter the property in a way that is inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties, which would affect the significance of the architecture of the existing terminal. The change would constitute an adverse impact under Section 106 and a physical use of the National Register-eligible Mason City Municipal Airport Historic District the same as if it were demolished.

Proposed Action

The Proposed Action would result in a physical use of part of the National Register-eligible Mason City Municipal Airport Historic District, which is a Section 4(f) resource with the demolition of the FAA tower and either the demolition of the terminal and restaurant, or the repurposing of the terminal and restaurant for another aeronautical use.

Physical Use

Where an action would involve the use of a Section 4(f) property, Section 4(f) requires that prior to approving the action, the FAA must determine that there is no feasible or prudent alternative that would avoid the use of the Section 4(f) property and that the

project includes all possible planning to minimize harm resulting from the use. As defined in 23 CFR § 774.17, “all possible planning” means that all reasonable measures to minimize harm or mitigate adverse impacts must be included in the project. With regard to historic sites, this means the measures as agreed by the FAA and the SHPO in accordance with the consultation process under the regulations implementing Section 106 of the National Historic Preservation Act (Section 106). As the Proposed Action would involve a use, a separate Section 4(f) evaluation was prepared. See Appendix C for the Section 4(f) Statement.

There are no alternatives that address the purpose and need of the project and are both prudent and feasible. The FAA has consulted with MCW, the SHPO, and the Mason City Historic Preservation Commission (HPC) under Section 106 to develop a Memorandum of Agreement (MOA). The MOA outlines the mitigation measures needed to resolve adverse effects of the Proposed Action on the National Register-eligible Mason City Municipal Airport Historic District. The mitigation measures are a requirement of the Proposed Action and would address the Section 4(f) requirement that the project include all possible planning to minimize harm when there is a use of a Section 4(f) resource.

As described above, the only physical use of a Section 4(f) resource is of part of the National Register-eligible Mason City Municipal Airport Historic District. The MOA outlines the mitigation measures needed to resolve the adverse effects under Section 106 of the Proposed Action on the historic district. Execution of the MOA and implementation of its terms also would fulfill the Section 4(f) requirement that the project include all possible planning to minimize harm and reduce the effects of the use of the Section 4(f) resource below the threshold of significance. Execution of the MOA and implementation of its terms is a requirement of the Proposed Action. Therefore, the Proposed Action will not result in a significant impact.

Constructive Use

The Proposed Action would not result in new incompatible land uses due to noise associated with the operation of the new replacement terminal. A review of impact categories, including air quality, water resources, compatible land use, light emissions and visual impacts, and socioeconomic impacts, determined there are no significant impacts to any of the impact categories listed above. Therefore, it can be concluded that the Proposed Action would not result in a constructive use of any Section 4(f) resource.

4.6 Historical, Architectural, Archeological, and Cultural Resources

The FAA evaluates direct and indirect impacts from federal actions on historic, architectural, archaeological, and other cultural resources under Section 106 of the National Historic Preservation Act of 1966 (54 USC § 300101 et seq.) the principal statute concerning such resources. Section 106 requires federal agencies to take into account the effects of their undertakings on properties that are listed in or determined eligible for inclusion in the NRHP and to consult with the SHPO, Tribal Historic Preservation Officers, and other parties to develop and evaluate alternatives or modifications to the undertaking where necessary to avoid, minimize, or mitigate adverse effects on historic properties. The independent federal agency overseeing federal historic preservation and tribal programs, the Advisory Council on Historic

Preservation (ACHP), must be afforded a reasonable opportunity to comment on such undertakings subject to Section 106. The ACHP limits its involvement in individual Section 106 reviews to situations that meet the criteria in Appendix A of the regulations at 36 CFR part 800.

The scale of the undertaking and the extent of FAA involvement define the scope of the Section 106 review, including FAA's obligation to identify historic properties, assess effects, and develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties. In this case, FAA's role is limited to approval or disapproval of an Airport Layout Plan depicting the project sponsor's proposal, as it may be modified through consultation, and potential approval or disapproval of Federal funding.

The FAA provided opportunity for 14 tribes to consult on the proposed Undertaking's potential to affect properties with religious and cultural significance. No Tribes accepted the invitation to participate in the consultation. See Appendix K.

The FAA, MCW, SHPO, and the HCP engaged in the Section 106 consultation process for this project. See Appendix I includes information about the Section 106 process and FAA's efforts to consult regarding effects of the Proposed Action.

4.6.1 Affected Environment

FAA is obligated under 36 CFR 800.4(b)(1) to make a "reasonable and good faith effort" to identify historic properties potentially affected by the undertaking. Because the nature of this action involves replacement of an existing terminal with a proposed terminal of approximately the same footprint, primary impacts of this undertaking are limited to that site and the FAA focused its identification efforts in that area. The FAA also considered historic resources in a broader area potentially affected indirectly, as described below.

Area of Potential Effects

The Area of Potential Effects (APE) is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties" (36 CFR § 800.16(d)). For purposes of Section 106, the term "historic properties" can include architectural, archeological, or cultural resources. The determination of the APE considers the character of a project area and the potential for resources to be found.

The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking (36 CFR § 800.16(d)). The APE must include all direct and reasonably foreseeable indirect effects. Although the NHPA regulations do not define the term "indirect effect," the FAA typically uses the term to refer to noise and visual impacts that do not physically alter historic resources. Because this type of impact often covers a much larger area, but does not have the potential to affect below-ground resources, the FAA frequently defines separate APEs for direct and indirect effects.

For this analysis, the FAA established both a Direct APE and an Indirect APE. The Direct APE and Indirect APE for the undertaking, which respectively take into account potential for direct and indirect impacts, are shown on Figure 4-7.

Direct APE

The undertaking would include ground disturbance and construction activities within the existing terminal complex, an area which has been extensively developed and used for Airport operations. The Direct APE was defined as the area within which physical disturbance of the site or demolition of existing structures may occur.

Indirect APE

An Indirect APE was identified to capture potential effects of noise and visual intrusions on historic properties in the vicinity of the undertaking. The airport property boundary was used for the limits of the indirect APE.



Figure 4-7: Area of Potential Effect

Identification of Historic Properties

Direct APE

In December 2021, an archeological and cultural resource survey was conducted of the Direct APE in compliance with Section 106 of the NHPA. See Appendix E for the survey report prepared by Bear Creek Archeology, Inc. The survey was conducted to determine whether there was a potential for below-ground historic properties within the Direct APE. The survey included an archaeological background records review and an intensive pedestrian survey. No archeological or cultural resources were discovered during the survey.

In June 2021, an architectural and historical property evaluation of the Direct APE was prepared by Bergland + Cram. See Appendix H for the evaluation. Based on this evaluation, the FAA has determined that the Mason City Municipal Airport is eligible for the NRHP as a historic district significant under Criterion A in the area of Transportation for its association with post WWII federal funding of aviation infrastructure and under Criterion C in the area of architecture for its Mid-Century Modern style. See Appendix I for the FAA's determination. The boundaries of a potential Mason City Municipal Airport Historic District encompass the largely unaltered airfield, the airport's unique boulevard-like entrance drive, and the restaurant, FAA annex (tower), and terminal building. These buildings and structures form a significant and cohesive linkage that collectively convey the historic and architectural significance of the historic district.

Indirect APE

Consistent with the "Reasonable and Good Faith" identification standard under 36 CFR 800.4(b)(1) and in light of the absence of any ground disturbing activities in this area, the FAA did not undertake archeological investigations in the Indirect APE. The FAA relied primarily on a review of existing information. No known archaeological sites, historical buildings, or structures are located within the Indirect APE.

4.6.2 Thresholds of Significance

FAA Order 1050.1F, Exhibit 4-1 provides that the FAA has not established a significance threshold for Historical, Architectural, and Cultural Resources. A factor to consider is whether the action would result in a finding of Adverse Effect through the Section 106 process; however, an adverse effect finding is not automatically a significant impact triggering preparation of an EIS.

4.6.3 Environmental Consequences

No Action

With the No Action Alternative, only limited changes to the existing terminal complex would be made and would remain as they are today. Therefore, no impacts to historical, architectural, archaeological, or cultural resources would occur.

Reasonable Alternatives

Both Reasonable Alternatives would result in changes to the National Register-eligible Mason City Municipal Airport Historic District. Alternative 3, construction of a new terminal directly south of the existing terminal, would impact the historic district with the demolition of the terminal, restaurant and FAA annex to accommodate the new terminal and expanded apron. There would be no opportunity to repurpose the terminal or restaurant with Alternative 3 based on the south terminal placement.

Alternative 4, renovation of the existing terminal, would require major changes to the existing terminal building including expansion to the west and north. The proposed expansion and renovation of the existing structure may physically destroy or damage the historic property or alter the property in a way that is inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties, which would affect the significance of the architecture of the existing terminal. The change would constitute an adverse impact under Section 106 and a physical use of the National Register-eligible Mason City Municipal Airport Historic District the same as if it were demolished.

Proposed Action

Direct Impacts

With the proposed demolition of the FAA annex, restaurant, and terminal or possible repurposing of the restaurant and terminal for another aeronautical use; construction of a new terminal building; and reconfiguration of apron, construction of new parking lot, and reconfiguration of the entrance road; in accordance with 36 CFR 800.4 and 36 CFR 800.5, the Proposed Action would constitute an adverse effect to the historic district which is eligible for inclusion on the NRHP. The SHPO has concurred with this adverse effect determination. Aside from the proposed demolition of the FAA annex and either demolition or repurposing of the restaurant and terminal, there would be no direct impacts to any other buildings or structures individually eligible or potentially eligible to the NRHP. The entrance boulevard/access road is a contributing resource to the Historic District but not individually eligible for listing on the NRHP.

Indirect Impacts

Since no known archaeological sites, historical buildings, or structures are located within the Indirect APE, there would be no indirect impacts due to the Proposed Action.

Conclusion and Proposed Mitigation Measures

The FAA consulted with MCW, the SHPO, and the HPC to develop a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (Section 106). The MOA, found in Appendix I, outlines the measures needed to mitigate the adverse effect to the historic district due to the Proposed Action. The mitigation measures (stipulations) of the MOA are a requirement of the Proposed Action.

The mitigation measures (stipulations) in the MOA include:

- A. PHOTOGRAPHIC RECORD OF TERMINAL COMPLEX: Prior to the demolition of the existing terminal complex (restaurant, FAA annex, and terminal building), the Airport Commission will create a photographic record of the terminal complex in accordance with the National Register Photo Policy Standards. The SHPO will consult on the selection of images to be printed for archival purposes.
- B. WEBSITE HISTORY: Prior to the demolition of the existing terminal complex (restaurant, FAA annex, and terminal building), the Airport Commission, in consultation with the Historic Commission, will create and display on the Airport's website the history of the existing terminal complex based on the photographic record (see Mitigation Measure A) and historic buildings survey (see Mitigation Measure C).
- C. HISTORIC BUILDINGS SURVEY: Local architecture firm Waggoner & Waggoner are documented as the lead architecture firm for the terminal complex (restaurant, FAA annex, terminal building). This firm produced a variety of work locally commonly consisting of educational facilities, medical facilities, and office/commercial projects. Prior to demolition of the existing terminal complex (restaurant, FAA annex, and terminal building), the Airport Commission, in consultation with the Historic Commission, will contract with a historic preservation specialist meeting the Secretary of Interior's standards for historian and/or architectural historian with an emphasis in transportation, to complete an intensive level survey of Mason City Municipal Airport's terminal and

buildings within the city limits of Mason City designed by the architectural firm Waggoner & Waggoner.

- D. ECONOMIC ANALYSIS: Prior to demolition of the existing terminal complex (restaurant, FAA annex, and terminal building), the Airport Commission will complete an economic analysis to determine feasibility for the reuse of the terminal and restaurant for other aeronautical purposes.

Although the Proposed Action will result in an adverse effect, mitigation measures in the MOA are intended to resolve adverse effects. Through implementation of these measures, impacts will be mitigated below the level of significance and therefore the Proposed Action would not result in a significant impact to this category of resources under NEPA.

4.7 Cumulative Impacts

Cumulative impacts are those that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, whether Federal or non-Federal. A review of the Proposed Action’s effects on resources when combined with other past, present, and reasonably foreseeable actions has determined that there are no significant cumulative impacts.

4.8 Summary of Affected Environment and Environmental Consequences

This section summarizes the environmental impacts and/or benefits associated with the implementation of the Proposed Action and the No Action alternative. Table 4-1 summarizes the potential impacts and mitigation measures.

Table 4-1 Summary of Impact Category Determinations and Mitigation

Impact Category	Proposed Action Impacts	Proposed Action Mitigation	No Action Impacts	No Action Mitigation
Air Quality	None	None required	None	None required
Biological Resources	None	None required	None	None required
Climate	None	None required	None	None required
Coastal Resources	None	None required	None	None required
Section 4(f)	Physical Use impact to historic district	Implement the stipulations of the MOA to resolve adverse effects	None	None required
Farmlands	None	None required	None	None required
Hazardous Materials, Solid Waste, & Pollution Prevention	None	None required	None	None required

Impact Category	Proposed Action Impacts	Proposed Action Mitigation	No Action Impacts	No Action Mitigation
Historical and Architectural	Adverse effect to historic district	Implement the stipulations of the MOA to resolve adverse effects	None	None required
Archeological and Cultural Resources	None	None required	None	None required
Land Use	None	None required	None	None required
Natural Resources and Energy Supply	None	None required	None	None required
Natural Resources and Energy Supply	None	None required	None	None required
Noise and Noise Compatible Land Use	Same as existing	None required	Same as existing	None required
Socioeconomic, Environmental Justice, & Children's Health	None	None required	None	None required
Visual Effects	None	None required	None	None required
Wetlands, Floodplains, Surface Water, Groundwater, Wild/Scenic Rivers	None	None required	None	None required
Cumulative Impacts	None	None required	None	None required

5. Summary of Public Involvement

MCW completed a Public Open House from 4:00 to 6:00 pm on October 5, 2021 at the Mason City Municipal Airport. The intent of the meeting was to inform the public about the Proposed Action and NEPA process and to allow the public to speak to MCW and FAA representatives. The public was notified about the meeting before the scheduled public meeting date in the September 30, 2021 edition of the Mason City Globe Gazette newspaper. Both a legal ad and display ad were published. In addition, the public was also notified of the public meeting online at <http://flymcw.com> and via the airport's social media channels. In addition to the Open House, a Commission meeting was held on October 11, 2021 where the public was provided the opportunity to comment on the Proposed Action. There were no public attendees to the Commission meeting. Comments received during the October 11, 2021 open house can be found in Appendix J.

A Public Open House was held on January 18, 2022 and a Public Hearing was held on January 31, 2022 at the Mason City Municipal Airport regarding the draft Environmental Assessment. The intent of the meetings were to inform the public about the Proposed Action and NEPA

process and to allow the public to provide comment of the Draft EA, Draft 4(f) Statement, and Draft MOA. The public was notified about the meetings prior to the scheduled public meetings on December 30, 2021 through the Mason City Globe-Gazette newspaper. Both a legal ad and display ad were published. In addition, the public was also notified of the public meetings online at <http://flymcw.com> and via the airport's social media channels. There were no attendees to the January 18, 2022 open house and the only attendees to the public hearing were members of the local press. Proof of publication, display boards from the open house, public hearing procedures, and minutes from the public hearing can be found in Appendix J.

Three comments were received during the public comment period, which expired on February 10, 2022. The written comments and responses are summarized on Table 1 in Appendix J. Additionally, Section 4.4 of the EA was revised to provide supplemental information regarding noise impacts resulting from the Proposed Action.

6. List of Preparers & Qualification

The EA was prepared by Eva Moritz, P.E. Mrs. Moritz is a Lead Environmental Engineer at Foth Infrastructure & Environment who has over 20 years of experience with environmental permitting and preparation of NEPA documents. Mrs. Moritz was assisted by Mr. Adam Wilhelm, P.E. Mr. Wilhelm is a Client Director and Aviation Engineer who is knowledgeable about the proposed terminal replacement project.

The following contractors assisted with preparation of documents that have been included in the EA:

- Bergland + Cram: Mason City Municipal Airport Architectural & Historical Survey and Evaluation
- Bear Creek Archeology, Inc.: Phase I Cultural Resources Survey for a Land Parcel at the Mason City Municipal Airport.

7. List of Agencies/Tribes/Persons Consulted

The following entities were consulted with as part of the Proposed Action:

- Iowa Tribe of Oklahoma
- Miami Tribe of Oklahoma
- Omaha Tribe
- Ponca Tribe of Nebraska
- Yankton Sioux Tribe of South Dakota
- Sac and Fox Tribe of the Mississippi
- Flandreau Santee Sioux Tribe of South Dakota
- Lower Sioux Indian Community in the State of Minnesota
- Menominee Indian Tribe of Wisconsin
- Prairie Island Indian Community in the State of Minnesota
- Santee Sioux Nation, Nebraska
- Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, South Dakota
- Spirit Lake Tribe, North Dakota
- Upper Sioux Community, Minnesota
- State Historic Preservation Office (SHPO)

- Mason City Historic Preservation Commission
- United States Fish and Wildlife Service using Information for Planning and Consultation (IPaC) database
- Iowa Department of Natural Resources (IDNR)

Copies of the tribal coordination documents can be found in Appendix K and SHPO coordination letters can be found in Appendix I. The IPaC and IDNR consultation results regarding endangered species can be found in Appendix D.

8. References

Bear Creek Archeology, Inc. (2021). *Phase I Cultural Resource Survey for a Land Parcel at teh Mason City Municipal Airport*. Cresco.

Bergland + Cram. (2021). *Mason City Municipal Airport Architectural & Historical Survey and Evaluation*. Mason City.

Coffman Associates & Foth. (2017). *Airport Master Plan*. Johnston.

Foth. (2021). *MCW Terminal Narrative Report*. Johnston.

Foth. (2022). *Section 4(f) Statement*. Johnston.