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## Appendix I – Section 4(f) Evaluation

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# United States Department of the Interior

OFFICE OF THE SECRETARY  
Office of Environmental Policy and Compliance  
Custom House, Room 244  
200 Chestnut Street  
Philadelphia, Pennsylvania 19106-2904

IN REPLY REFER TO:

October 13, 2023

4112.1  
ER 23/0382

Misty Peavler  
Federal Aviation Administration  
Detroit Airports District Office  
FAA Great Lakes Region Airports Division  
11677 South Wayne Road, Suite 107  
Romulus, Michigan 48174

**Re: Draft Section 4(f) Evaluation for the Kalamazoo County/Kalamazoo Battle Creek International Airport Runway 17-35 Extension Project, Kalamazoo County, Michigan.**

Dear Misty Peavler:

The Department of the Interior (Department) has reviewed the draft Section 4(f) evaluation for the proposed Kalamazoo County Airport/Kalamazoo Battle Creek International Airport (AZO) Runway 17-35 extension project. The project is proposed to meet increased operational demands, enhance safety, and meet the Federal Aviation Administration (FAA) design criteria. AZO is a commercial service airport owned by Kalamazoo County, MI, and daily operations at the airport are managed by the Kalamazoo County Aeronautics Board of Trustees. The FAA is the lead agency for this project's Section 4(f) evaluation.

## **Section 4(f) Properties**

The draft Section 4(f) evaluation considers effects under Section 4(f) of the Department of Transportation Act of 1966 (codified at 49 U.S.C. 303) associated with the project. Section 4(f) applies to publicly owned parks, recreation areas, wildlife and waterfowl refuges, or significant historic resources. Implementation of the proposed action would result in the physical use of two Section 4(f) properties, which are both historic resources. There are no public parks, recreation areas, or refuges in the project area.

### Bloomfield Subdivision Historic District

The Bloomfield Subdivision Historic District was constructed in the post-World War II era and was determined eligible for inclusion on the National Register of Historic Places under Criterion A for Community Planning and Development. The period of significance was determined to be from 1947 to 1966.

The district consists of 280 contributing properties and 38 noncontributing properties and was organized into clusters of distinct land uses, with single-family residential, multi-family residential, and commercial parcels grouped together within the district with varied streetscape architecture.

#### Single-Family Cluster

This cluster is the primary land use within the subdivision. Most houses are one story forms with some half story and two-story houses. The similarity in parcel sizes, setbacks, and landscaping, there is little variation block-to-block in the way of sightlines and general setting. The houses share common features, most were constructed by a variety of builders and display several differences of forms and styles typical for the period and location, and do not necessarily share a specific model or type.

#### Multi-Family Cluster

Multi-family residential properties make up the lowest number of parcels in the Bloomfield subdivision, with seven multi-family properties likely constructed between 1955 and the mid-1970s.

#### Commercial Cluster

The Commercial cluster is made up of a mix of commercial property types developed at various periods from the late 1940s onward. Today, there are 14 commercial buildings in the subdivision—ten of which are at least 50 years of age only some of which designed by the subdivision developer (Hurni).

### **Alternatives**

FAA considered a no action alternative and six action alternatives. The no action alternative and two of the action alternatives are avoidance alternatives, which were found to be feasible but not prudent. Four additional action alternatives were considered: Alternative 1) 1,000-foot extension of Runway 17-35 with a reconfigured intersection of Taxiway C and Runway 17; Alternative 2) 1,150-foot extension of Runway 17-35 with a reconfigured intersection of Taxiway C and Runway 17 (Preferred Alternative); Alternative 3) 1,000-foot extension of Runway 35 and Alternative 4) 1,000-foot extension of Runway 17 with a reconfigured intersection of Taxiway C and Runway 17.

Four of the seven alternatives avoid Section 4(f) properties but were found not to be prudent or feasible. The three remaining alternatives carried forward for least overall harm analysis were alternative 1, 2 and 4. Both alternative 1 and 4 were determined to not meet the project's stated purpose and need. The FAA's least overall harm analysis concluded that Alternative 2, 1,150-foot extension of Runway 17-35 with a reconfigured intersection of Taxiway C and Runway 17 would cause the least overall harm of those alternatives that meet the purpose and need.

### **Assessment of Effect and Proposed Mitigations**

The FAA determined that the proposed 1,150-foot extension of Runway 17-35 with a reconfigured intersection of Taxiway C and Runway 17 Alternative would result in an adverse effect to these historic properties under Section 106 of the National Historic Preservation Act (NHPA). In January 2022, the Michigan (MI) SHPO did not concur with the no adverse effect determination on the National Register-eligible Bloomfield Subdivision historic district under

Section 106 and instead determined that the undertaking would result in an Adverse Effect to the historic resource due to the effects to the resource's integrity of setting from large-scale tree removal. Documentation of Adverse Effect was submitted to MI SHPO for review in June 2022. The Advisory Council on Historic Preservation (ACHP) and two interested parties were notified of the potential for adverse effect and were invited to collaborate on mitigation. The FAA submitted a letter to the ACHP in May 2022, and the ACHP declined to participate in a letter dated June 16, 2022. The FAA submitted a Memorandum of Agreement (MOA) that outlines mitigation measures to resolve the adverse effect to the MI SHPO in June 2023.

The FAA has proposed that the following mitigation measures be included in the MOA:

- Tree replanting  
Mitigation efforts entail a Certified Arborist (Arborist) working on behalf of the Airport to replant trees within the Bloomfield Subdivision Historic District that will be removed as a result of the undertaking. Replacement trees will be selected by the arborist and sited so as to best mitigate the adverse effects to the property's Integrity of Setting. Tree replanting is scheduled to be completed within one (1) year of tree removal. Coordinating with affected property owners, the Airport or its agent will help to determine the number of replacement trees planned for each parcel, which will be replanted with a low-growing variety identified by the Arborist as an acceptable replacement. Property owners will be provided the opportunity to decline replacement trees within their legal parcel in writing. In instances when property owners decline replacement trees, the Airport or its agent will coordinate with the Arborist to identify locations within tree lawns that are suitable for tree planting. A tree lawn tree will be planted for each declined tree. Trees located within tree lawns (between the curb and the sidewalk) will be replanted tree-for-tree without coordination with property owners.
- Bloomfield Subdivision Historic District research  
In addition to tree replanting, additional research should be conducted on the Bloomfield Subdivision Historic District within one (1) year of MOA execution. This includes the items below, which the FAA will provide to the City of Kalamazoo Division of Planning and the Kalamazoo County Historical Society: Digital photographs of the Bloomfield Subdivision Historic District taken during the initial Section 106 identification survey conducted by Mead & Hunt, in JPG format. Digital copies of the research materials related to the Bloomfield Subdivision Historic District collected during the Section 106 process, in PDF format.
- Bloomfield Subdivision Historic District History Report  
As further mitigation, the Airport or its agent will develop a Bloomfield Subdivision History Report to provide an interpretive document about the development history of the subdivision. Publication and distribution details will be provided in an initial report outline. The outline and report will be reviewed by FAA and SHPO.

#### **Section 4(f) Comments**

The Department concurs with the FAA's determination that the proposed action would constitute an adverse effect to the Bloomfield Subdivision under Section 106 of the NHPA. The Department recommends that consultation continue with all Section 106 consulting parties pursuant to 36 CFR § 800.6 and that the project not proceed until an MOA to resolve adverse

effects is executed that is satisfactory to all parties.

The Department recommends the Environmental Assessment consider that removing the large number of character-defining canopy trees, would impact other aspects of integrity; design, materials, workmanship, feeling and association. Also, that the replacement trees even once matured would not entirely address the integrity of the district due to the lower height of the proposed species. Lastly the Department recommends addressing noise levels for each alternative carried forward, currently only one addresses noise.

For issues concerning Section 4(f) resources, please contact April Newman, Environmental Protection Specialist, Regions 3/4/5, National Park Service, [April\\_Newman@nps.gov](mailto:April_Newman@nps.gov). We appreciate the opportunity to provide these comments.

Sincerely,

**JOHN  
NELSON** Digitally signed  
by JOHN NELSON  
Date: 2023.10.13  
12:32:10 -04'00'

John V. Nelson  
Regional Environmental Officer

Cc: NPS/April Newman, [april\\_newman@nps.gov](mailto:april_newman@nps.gov)

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# **Section 4(f) Evaluation**

## **Kalamazoo County/Kalamazoo Battle Creek International Airport (AZO) Runway 17-35 Extension Project**

**Kalamazoo County, Michigan**

Prepared for

**Federal Aviation Administration**

Prepared by

**Mead  
& Hunt**

[www.meadhunt.com](http://www.meadhunt.com)

August 2023

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## 1. Introduction

Section 4(f) of the U.S. Department of Transportation (DOT) Act of 1966 (codified as 49 U.S. Code [USC] 303) states that the Federal Aviation Administration (FAA) may not approve the use of a property protected under Section 4(f) unless it first determines:

- That there is no feasible and prudent alternative that avoids use of land from the property, or that any use of Section 4(f) property would be a *de minimis* impact;
- That the project includes all possible planning to minimize harm resulting from the use of the Section 4(f) property.

DOT Order 5610.1D lists DOT procedures for meeting Section 4(f) requirements. The FAA uses Federal Highway Administration (FHWA)/Federal Transit Administration (FTA) Section 4(f) regulations (23 CFR 774) and the FHWA Section 4(f) Policy Paper as guidance to the extent relevant to FAA programs.

A Section 4(f) property, as defined at 23 CFR 774.17, includes publicly owned land of a public park, recreation area, or wildlife and waterfowl refuges of national, state, or local significance, or land of a historic site of national, state, or local significance. Where the use of a Section 4(f) property cannot be avoided, the FAA may approve, from among the remaining alternatives, that use of a Section 4(f) property if it causes the least overall harm to the Section 4(f) property. A Section 4(f) use is defined in 23 CFR 774.17 and includes:

- When land is permanently incorporated into a transportation facility;
- When there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose determined by the criteria in 23 CFR 774.13; or
- Where there is a constructive use of a Section 4(f) property as determined by the criteria in 23 CFR 774.15.

Chapter 7, Section 3.g. of FAA's *Environmental Desk Reference for Airport Actions* states that a physical use of a Section 4(f) property occurs:<sup>1</sup>

- When the proposed project or a reasonable alternative would physically occupy a portion or all of a Section 4(f) resource;
- When the proposed project permanently incorporates the resource for project purposes through acquisition or easement;

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<sup>1</sup> Federal Aviation Administration, *FAA Environmental Desk Reference for Airport Actions, Chapter 7, 2007*, Section 3.g., [https://www.faa.gov/airports/environmental/environmental\\_desk\\_ref](https://www.faa.gov/airports/environmental/environmental_desk_ref).

- If alteration of structures or facilities located on Section 4(f) properties is necessary, even though the action does not require buying the property; or
- If temporary occupancy meets one of the following conditions:
  - The duration of project occupancy is greater than the duration needed to build a project and there is a change in ownership of the land;
  - The project's work scope is major in the nature and magnitude of changes to the Section 4(f) resource;
  - Anticipated permanent adverse physical impacts would occur and a temporary or permanent interference with Section 4(f) activities or purposes would occur;
  - The land use is not fully restored (i.e., it is not returned to a condition that is at least as good as that existing before the project); or
  - There is no documented agreement with the appropriate Federal, state, or local official having jurisdiction over the resources with regard to the conditions noted [above].

*De minimis* impacts to Section 4(f) properties are also defined and addressed in 23 CFR 774.17. For historic properties, a *de minimis* impact is defined as determination of either “no adverse effect” or “no historic properties affected” in compliance with Section 106 of the National Historic Preservation Act of 1966 (Section 106). For parks, recreation areas, and wildlife and waterfowl refuges, a *de minimis* impact is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

Reasonable alternatives to the proposed action are developed and evaluated as part of the planning process and in accordance with the Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA), and FAA and FHWA guidance on Section 4(f) resources. According to 23 CFR 774.17, an alternative is not prudent if it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need. An alternative is not feasible if it cannot be built as a matter of sound engineering judgement. Alternatives that do not adequately meet the project's purpose and need can be dropped from further consideration. This Section 4(f) Evaluation provides an alternatives analysis, describes measures taken to minimize harm, and summarizes coordination with the Michigan State Historic Preservation Officer (SHPO) as the Official With Jurisdiction (OWJ) over the Section 4(f) properties. The purpose of the alternatives analysis is to identify alternatives that address the project purpose and need while causing the least overall harm to Section 4(f) properties. Four alternatives avoid the Section 4(f) property: No Action, Build a New Airport at a Different Location, Use Another Airport in the Vicinity, and Alternative 3. Three alternatives were evaluated with a Least Overall Harm Analysis because they do not avoid the Section 4(f) property. One alternative, Alternative 2, meets the project purpose and need but does not avoid the Section 4(f) property.

Appendix A contains two matrices that summarize the project alternatives. Appendix B provides maps of the project area showing identified Section 4(f) properties and evaluated project alternatives. Appendix C provides recordation of correspondence with the Official Jurisdiction and Appendix D provides additional photographs of the Bloomfield Subdivision Historic District.

## **2. Description of the Proposed Action**

The proposed action would be undertaken by the Kalamazoo County Airport/Kalamazoo Battle Creek International Airport (Airport, also abbreviated as AZO) in Kalamazoo County, Michigan. The Airport is owned by Kalamazoo County and has a total size of 832 acres, including existing Airport facilities and area held for future development. The FAA is the lead federal agency for the proposed action and is responsible for project review and approval, as the Airport operates under an FAA license. The proposed action would extend the length of the primary runway (Runway 17/35) at the airport from 6,502 feet to 7,650 feet, including realignment of the taxiway, relocation of an existing railroad spur, avigation easements, removal of obstructions in runway, relocation of existing airfield NAVAIDs, and the development of new aircraft approach and departure procedures for Runway 17/35.

As a result of the proposed action, at least 275 trees from an estimated 103 parcels within the Bloomfield Subdivision Historic District are proposed for removal and will result in an adverse effect to the historic resource. The proposed action meets the criteria of adverse effect because the undertaking will result in a change of the character of the resource's use or of physical features that contribute to its historic significance. More specifically, the large-scale removal of mature trees will result in a drastic alteration that will diminish the integrity of the district's setting. Avigation easements are proposed for the individual parcels within the Bloomfield Subdivision Historic District to give the Airport the right to maintain the airspace free of obstructions and allow for the removal of trees on the properties.

### **3. Purpose and Need**

The purpose of the project is to meet the runway takeoff and landing length requirements of aircraft that currently operate at AZO, which are projected to gradually increase operations over time, and to enhance safety and improve aircraft movement by correcting airfield geometry deficiencies associated with the intersection of Taxiway C and Runway 17.

The proposed action is needed because the existing length of the primary runway (Runway 17/35) constrains the operations of commercial and private aircraft and limits the Airport's ability to serve the air transportation needs of the region. Also, the intersection of Taxiway C and Runway 17 has a history of runway incursions and needs to be reconfigured to provide taxiway geometry that meets FAA design criteria.

The following statements present the problems or needs being addressed.

- **The Need to Extend Runway 17/35**

The existing 6,502-foot primary runway is inadequate for many commercial service and business jet aircraft to operate at their maximum gross takeoff weight and needs to be extended. Additional runway length would allow aircraft to operate at full capacity and eliminate the need to make cargo concessions and reduced passengers to decrease aircraft operating weight. Some narrow-bodied and regional jet aircraft make weight concessions in reduced passenger, cargo, and fuel loads to safely takeoff and land within the length available on Runway 17/35.

These concessions impact the level of service that can be offered and limit the markets that can be profitably served by air carriers. Additional runway length will allow aircraft to operate with greater passenger and fuel loads resulting in improved service and increased market opportunities. The existing length of Runway 17/35 negatively impacts the economic vitality of the businesses operating at the Airport as well as the surrounding community and limits the range of destinations that can be reached non-stop from the Airport.<sup>2</sup>

The existing length of Runway 17/35 was evaluated in the *2013 Master Plan Update* to determine its adequacy to meet the takeoff and landing distance requirements of existing and projected aircraft expected to operate at the Airport over the next 20 years. It was determined that the existing runway length restricts the operations of current and future aircraft and limits the Airport's ability to serve the commercial air transportation needs of the region. The *2013 Master Plan Update*, which the FAA accepted, recommended alternatives that provided additional runway length to meet the operational demands of both existing aircraft and aircraft projected to use the Airport in the future. Existing and future aircraft types and expected number of operations were updated in 2020 through the completion of a *Forecast Projections of Aviation Demand* report.<sup>3</sup>

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<sup>2</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft Environmental Assessment*, 2022.

<sup>3</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Master Plan Final Report*, n.d.

- **The Need to Improve Airfield Geometry**

The existing airfield geometry allows runway incursions and results in less efficient movement of aircraft. Five runway incursions have been documented since 2008 at the intersection of Taxiway C with Runway 17/35 (incursion events are detailed in the 2017 *Runway Incursion Mitigation Study* [RIM Study], which is available from the Airport). While unclear taxiway markings and airport signage, as well as pilot unfamiliarity, can be factors in runway incursions, the geometry of runway and taxiway intersections is usually the primary contributing factor. The 2017 RIM Study identified the existing intersection of Taxiway C and Runway 17/35 as deficient and recommended corrective action.<sup>4</sup>

Taxiway C also needs to be realigned to standardize its intersection with Runway 17/35 to comply with FAA Advisory Circular (AC) 150/5300-13B, Section 4.3.5. FAA design standards discourage direct access to a runway without requiring a turn by aircraft prior to reaching the runway. FAA guidance focuses on geometric design of taxiway intersections to enable safe and efficient taxiing while minimizing excess pavement. To comply with FAA guidance, the configuration of taxiway intersections should provide 75- to 90-degree turns wherever possible. To meet the requirements of FAA design guidance and accomplish the goals of the 2017 RIM Study, reconfiguration of the intersection of Taxiway C and Runway 17/35 is needed.

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<sup>4</sup> Mead & Hunt, Inc., *Runway Incursion Mitigation Study, Kalamazoo/Battle Creek International Airport*, 2017.

## **4. Area of Potential Effects**

The Area of Potential Effects (APE) for the proposed action was identified from results of a LIDAR (Light Detection and Ranging) obstruction survey by Mead & Hunt, Inc. (Mead & Hunt) and includes the Bloomfield Subdivision Historic District (encompassing all 318 contributing and noncontributing resources), 24 parcels to the north and south of the airport that are not located within the district boundaries, and areas directly impacted by tree removals, railroad realignment, and installation of new lighting. In addition, the APE for the proposed action includes a small portion of the Upjohn/Pfizer property located at the south end of Runway 17/35. Elements of the project, such as FAA light extensions and the abandonment of the existing Norfolk-Southern rail line, will extend onto Pfizer-owned property. A cultural resources assessment, prepared by Golder Associates in 2021, identified no historically significant or National Register of Historic Places (National Register)-eligible resources within the portion of the APE intersecting with the Upjohn/Pfizer property. As a result, Golder recommended the planned project would not affect any potential historic properties.<sup>5</sup>

In the residential area to the north of the Airport, the APE was expanded to account for the full extent of the Bloomfield Subdivision Historic District (District) in order to identify effects to the historic resource and includes parcels within the District where select trees are obstructions to the 40:1 departure surface of Runway 17. The APE was defined to include parcels with complete and/or partial removal of obstructions and those adjacent to proposed rail realignment, as well as those areas for proposed light installation. An APE map is provided in Figure 1.

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<sup>5</sup> Golder & Associates, "Desktop and Visual Cultural Resources Assessment, Pfizer Property- Runway 17/35 Extension and Taxiway C Realignment, Kalamazoo, Michigan," 2021, 1–3.

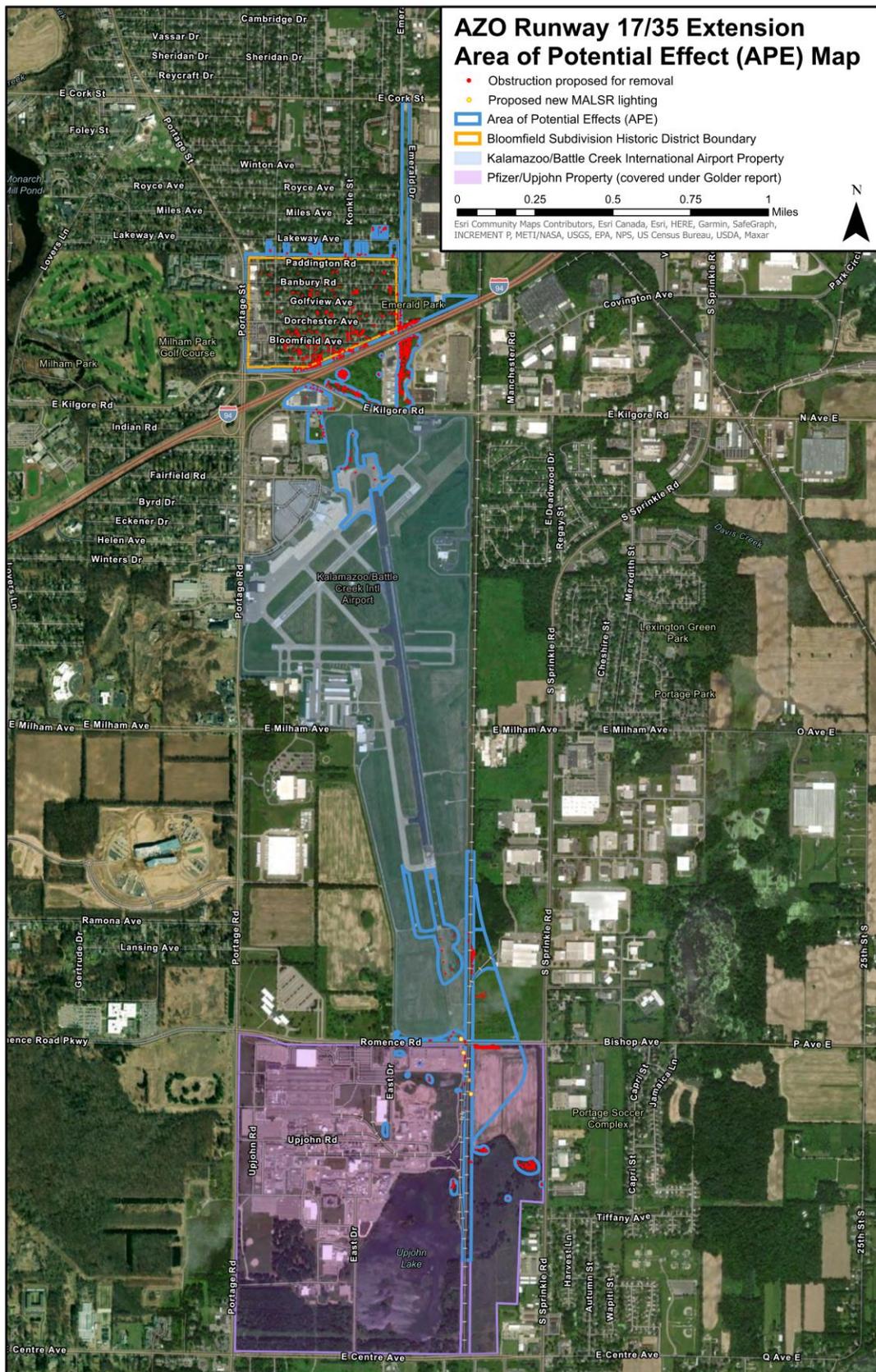


Figure 1. APE map showing the trees marked for removal in red for Alternatives 1 and 2.

## **5. Description of Section 4(f) Properties**

On behalf of the FAA, Mead & Hunt architectural historians conducted a reconnaissance-level survey in November 2019 and a Determination of Eligibility survey for the resource in 2021 to identify above-ground resources located within the APE. As a result of the survey, the Bloomfield Subdivision Historic District was determined eligible for the National Register under *Criterion A* for Community Planning and Development. The Michigan State Historic Preservation Office (SHPO) concurred with eligibility findings in a letter dated January 26, 2022 (see Appendix C).<sup>6</sup>

Located at the northern end of the APE, the Bloomfield subdivision reflects an important historic trend in Community Planning and Development associated with the southward growth of the Kalamazoo area's residential and industrial areas—two land uses that are interrelated in this theme—during the post-World War II (postwar) era. Research indicated that the Bloomfield subdivision was developed as a response to immediate housing shortages following the war, providing housing and a large commercial strip near the new industrial facilities located south of Kalamazoo's central core in the Kalamazoo and Portage Townships, including the Sutherland Paper Company and the Upjohn Company. The subdivision also showed a trendsetting response to community planning by providing five full blocks of commercial properties fronting Portage Street, as a way of supporting the neighborhood with convenience retail and service options. Such a large swath of land dedicated to commercial development had not been planned or implemented in the Kalamazoo/Portage area until executed as part of the Bloomfield subdivision. As one of the earliest postwar subdivisions in this area, the platting and development of the Bloomfield subdivision influenced the platting of other subdivisions nearby, transforming the agricultural landscape between Kalamazoo and Portage into postwar subdivisions. As the largest postwar development—and one of the earliest—constructed as part of the Kalamazoo/Portage area's significant pattern of development southward from the Kalamazoo central core, the Bloomfield subdivision serves as the best representative subdivision reflecting this important local trend in Community Planning and Development.<sup>7</sup>

The District is recommended eligible for listing in the National Register under Criterion A, encompassing the historic boundaries and landscape features of the neighborhood (see Figure 2). The district consists of 280 contributing properties and 38 noncontributing properties. The period of significance extends from 1947 to 1966. In a letter dated January 26, 2022, the Michigan SHPO did not concur with the FAA's finding that the proposed runway extension project would result in No Adverse Effect to the National Register-eligible District under Section 106 and instead determined that the undertaking would result in an Adverse Effect to the historic resource due to the effects to the resource's integrity of setting from large-scale tree removal.<sup>8</sup>

The Bloomfield subdivision encompasses a postwar development in the Milwood neighborhood, located in the southeastern part of Kalamazoo. The general boundaries of the district are as follows: Portage Street at the west; Paddington Road at the north, including those parcels fronting Paddington Road;

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<sup>6</sup> Matuk, Brian, *Bloomfield Subdivision Historic District Identification Form* (Mead & Hunt, Inc., 2021).

<sup>7</sup> Mead & Hunt, Inc., *Bloomfield Subdivision Historic District Identification Form*.

<sup>8</sup> Mead & Hunt, Inc., *Kalamazoo Airport ACHP E106 Form*, 2022.

**Section 5**  
**Description of Section 4(f) Properties**

Pennway Street and Emerald Drive Park at the east; and Interstate Highway 94 (I-94) and its associated westbound off-ramp at Portage Street at the south, encompassing a total of 106.5 acres.<sup>9</sup>

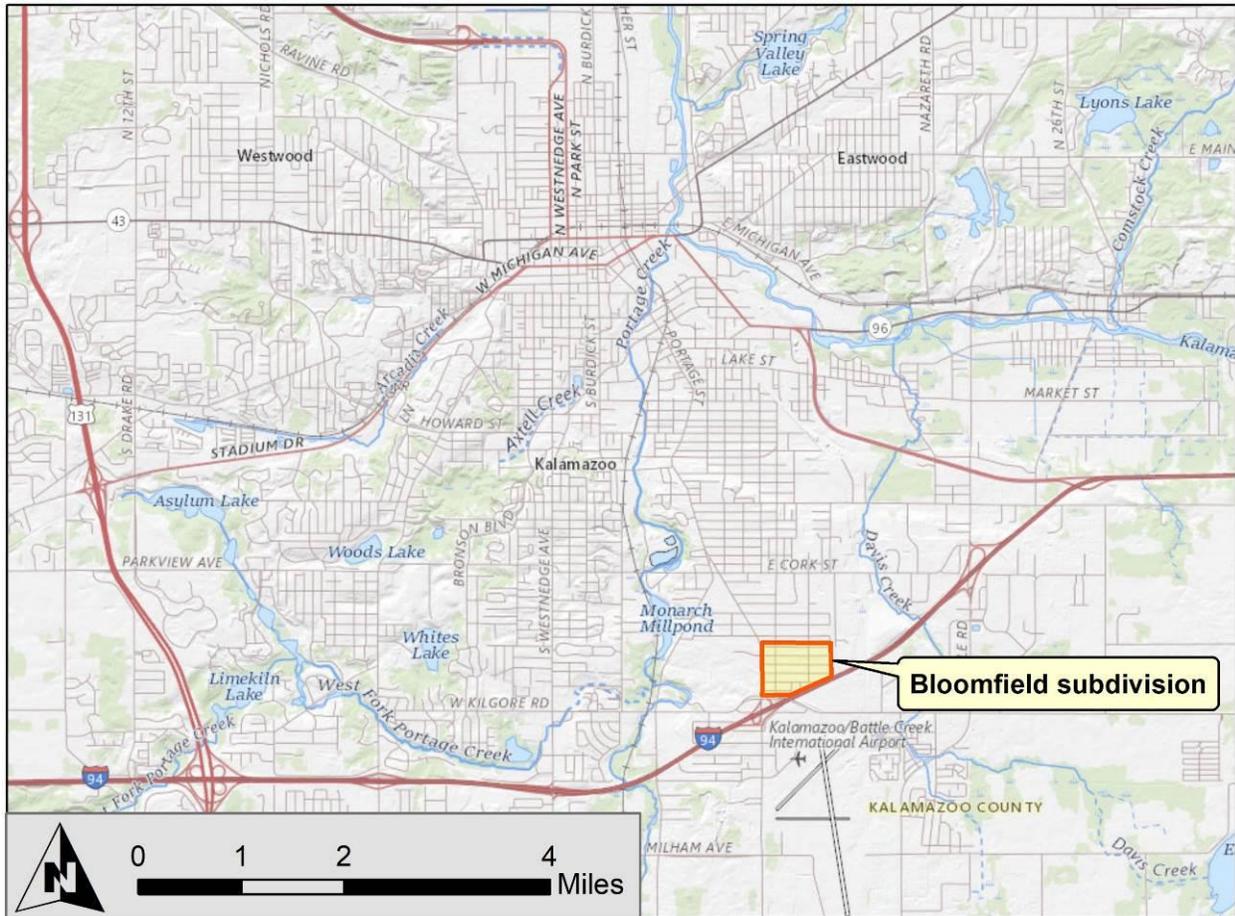


Figure 2. Map showing the location of the Bloomfield subdivision related to the larger Kalamazoo area.

The properties in question are privately owned by various owners. There are 296 single-family residences, 14 commercial buildings, and seven multi-family residential properties in the District. The subdivision has streets laid in a rectilinear plan, serving as an extension of the street pattern exhibited by the earlier Lakeway Park subdivision to the north. Primarily consisting of single-family residential parcels, the subdivision was conceptualized by developer Harry A. Hurni to include a commercial shopping center across six blocks of the east side of Portage Street, located along the western edge of the subdivision, and two commercial buildings designed by Hurni. A few multi-family apartment buildings were constructed on parcels between the commercial parcels on Portage Street and the single-family houses that make up the majority of the neighborhood. Emerald Drive Park provides a greenspace buffer between the industrial facilities to the east of the Bloomfield and Lakeway Park subdivisions. The park has grassy fields and lines of mature trees along its eastern edge at Emerald Drive.<sup>10</sup>

<sup>9</sup> Mead & Hunt, Inc., *Bloomfield Subdivision Historic District Identification Form*.

<sup>10</sup> Mead & Hunt, Inc., *Bloomfield Subdivision Historic District Identification Form*.

The Bloomfield subdivision was organized into clusters of distinct land uses, with single-family residential, multi-family residential, and commercial parcels grouped together within the district (see Figure 3). With varied streetscape architecture, appearance, and overall character within the district, each land use cluster is best described separately. Following is a more detailed description of the subdivision, split between commercial, multi-family residential, and single-family residential properties.



*Figure 3. Map of the Bloomfield subdivision showing the functions of the parcels and the historic property boundaries.*

**A. Single-family cluster**

Single-family residences are the primary land use in the Bloomfield subdivision and are mainly located on the parcels east of Moreland Street. Only 17 of the 296 single-family residential parcels are located west of Moreland Street, in the area primarily served by commercial and multi-family residential properties.

Streetscapes in this part of the subdivision do not substantially vary from block to block, with most houses exhibiting one-story forms, though one-and-one-half- and two-story forms are also present. Setbacks remain consistent for most houses at approximately 40 feet from the sidewalk, with variation for corner parcels that only exhibit an approximate 25-foot setback from the street. Streets are approximately 30 feet wide with grassy curb strips and sidewalks fronting the houses. There are no curb strips or sidewalks

**Section 5**  
**Description of Section 4(f) Properties**

along Konkle Street, nor along the west sides of Moreland and Somerset Streets. While some street trees are located on curb strips, most are planted in the property setbacks, and vary widely by species, maturity, height, and canopy. Given the similarity in parcel sizes, setbacks, and landscaping, there is little variation block-to-block in the way of sightlines and general setting. While many residences within the Bloomfield subdivision share common features, most were constructed by a variety of builders and display several differences of forms and styles typical for the period and location, and do not necessarily share a specific model or type.<sup>11</sup>



*Figure 4. Streetscape along Somerset Avenue, view northeast.*



*Figure 5. Streetscape along Banbury Road between Pennway Street and Konkle Street, view southwest.*

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<sup>11</sup> Mead & Hunt, Inc., *Bloomfield Subdivision Historic District Identification Form*.



Figure 6. View of Emerald Drive Park from the intersection of Pennway Street and Paddington Road, view northeast.



Figure 7. This c.1948 house at 2022 Paddington Road is presumed to be one of the original houses constructed by Harry A. Hurni, developer of the Bloomfield subdivision, view southeast.

## B. Commercial properties cluster

The commercial strip along Portage Street—and immediately adjacent side streets—is made up of a mix of commercial property types developed at various periods from the late 1940s onward. Today, there are 14 commercial buildings in the Bloomfield subdivision—ten of which are at least 50 years of age. While all parcels along Portage Street were reserved for commercial use at the time each Bloomfield plat was

recorded, only some of the parcels appear to have been designed by Hurni, the Bloomfield subdivision developer. Other commercial properties appear to have been designed and constructed privately.<sup>12</sup>



*Figure 8. One of the two Hurni-designed buildings within the larger Bloomfield Shopping Center, at 4231 Portage Street at the southeast corner of Bloomfield Avenue. This building was constructed in 1955.*



*Figure 9. Several Bloomfield Shopping Center buildings located on Portage Street on the block between Dorchester Avenue and Bloomfield Avenue, view east from sidewalk along Portage Street. The address range for these buildings is 4203-5217 Portage Street.*

### **C. Multi-family cluster**

Multi-family residential properties make up the lowest number of parcels in the Bloomfield subdivision, with seven multi-family properties.<sup>13</sup> This cluster of multi-family residential properties is located between Moreland Street and the commercial properties along Portage Street. By 1955 it appears only one fourplex on Golfview Avenue had been constructed. The larger apartment buildings were primarily constructed in the mid-1960s to mid-1970s and are typically two to three stories in height and of brick construction with associated paved surface parking lots or carports immediately adjacent. The smaller multi-family residential buildings include one duplex, one triplex, and one fourplex.<sup>14</sup>

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<sup>12</sup> Mead & Hunt, Inc., *Bloomfield Subdivision Historic District Identification Form*.

<sup>13</sup> Some apartment complexes have multiple buildings on a single parcel, while others have associated surface parking on adjacent parcels, or the buildings appear to straddle two parcels.

<sup>14</sup> Mead & Hunt, Inc., *Bloomfield Subdivision Historic District Identification Form*.



Figure 10. Bloomfield Apartments at 1706-1714 Bloomfield Avenue, constructed in 1964, view southwest from Bloomfield Avenue between Portage Street and Moreland Street.



Figure 11. Multi-family residential building at 1713 Dorchester Avenue, constructed c.1970, view northwest from Dorchester Avenue between Portage Street and Moreland Street.

#### D. Typology of building types within the Bloomfield subdivision

Mead & Hunt developed a typology of buildings within the Bloomfield subdivision based on property type, function, form, and architectural style for all properties with buildings over 50 years of age (309 of the 318 total properties). Nine properties are under 50 years of age and are not included in the typology. General categories were first split by property type into three categories: single-family residential, multi-family residential, and commercial properties. Within these larger categories, properties were further categorized based on style and form for houses, number of units for multi-family properties, and functions or form for commercial properties. For single-family residential properties, Mead & Hunt identified eight subtypes based on form and architectural style. Multi-family residential properties were identified with two subtypes: low-unit (two to four units) and apartment (five-plus units). Commercial properties were categorized by a combination of form, type, and function. The subtypes identified for all categories are listed in the Table 1.<sup>15</sup>

<sup>15</sup> Mead & Hunt, Inc., *Bloomfield Subdivision Historic District Identification Form*.

**Section 5**  
**Description of Section 4(f) Properties**

**Table 1. Property types and numbers of each type in the Bloomfield subdivision**

<b>Residential Property Type</b>	<b>Count</b>
Type 1: One-story Minimal Traditional form with side-gable roof	81
Type 2: One-story Minimal Traditional or Transitional Ranch with hip roof	37
Type 3: Minimal Traditional, Transitional Ranch, or Ranch style with gable roof and/or intersecting gable	95
Type 4: One-and-one-half- and two-story houses with Colonial Revival influences	21
Type 5: One-and-one-half-story Cape Cod or Minimal Traditional form	15
Type 6: One-story Ranch style with emphasis on horizontality	41
Type 7: Split-level or Two-story Ranch style	2
Type 8: Two- to four-unit multi-family building	3
Type 9: Five-plus-unit multi-family apartment	4
<b>Commercial Property Type</b>	<b>Count</b>
Type A: Small stand-alone retail/service storefront	3
Type B: Shopping center	3
Type C: Service station	1
Type D: Large retail storefront	1
Type E: Automatic car wash	1
Type F: Bank	1

## **6. Alternatives Analysis**

This section presents project alternatives that were evaluated during the alternatives analysis process to determine if there are any feasible and prudent alternatives that avoid use of the Section 4(f) property. As noted in Section 1, the FAA uses FHWA/FTA regulations as guidance for completing Section 4(f) evaluations. FHWA/FTA regulations at 23 CFR 774.17 define the following for purposes of evaluating feasible and prudent alternatives:

1. A feasible and prudent alternative is one that avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the resource to the preservation purpose of the statute.
2. An alternative is not feasible if it cannot be built as a matter of sound engineering judgment.
3. An alternative is not prudent if:
  - i. It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;
  - ii. It results in unacceptable safety or operational problems;
  - iii. After reasonable mitigation, it still causes:
    - a. Severe social, economic, or environmental impacts;
    - b. Severe disruption to established communities;
    - c. Severe disproportionate impacts to minority or low-income populations; or
    - d. Severe impacts to environmental resources protected under other Federal statutes;
  - iv. It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
  - v. It causes other unique problems or unusual factors; or
  - vi. It involves multiple factors in paragraphs (3)(i) through (3)(v), that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

This section was prepared to determine different options that may reasonably meet the needs of the proposed project at AZO. Preliminary costs for alternatives in this section are provided; however, comprehensive costs will be developed during the final design of the Preferred Alternative.

Alternatives discussed in this section were the result of FAA accepted planning studies identified below and available upon request from the Airport:

- *Master Plan Update* completed in March 2013
- *Runway Incursion Mitigation (RIM) Study* completed in December 2017
- *Projections of Aviation Demand* completed in 2020
- *Runway Protection Zone (RPZ) Analysis for Runway 17/35* completed in September 2021.

Three preliminary alternatives were selected from the *2013 Master Plan Update* for further evaluation during the EA. They were selected because they proposed a 1,000-foot extension of Runway 17/35,

which would allow most existing and projected commercial aircraft expected to use the Airport in the future to operate with greater passenger and fuel loads and reach additional markets and destinations.<sup>16</sup>

The 2017 RIM Study included alternatives that would correct geometry deficiencies and mitigate runway incursions at the intersection of Taxiway C and Runway 17. One alternative, identified as the recommended course of action for correcting taxiway geometric deficiencies, from the 2017 RIM Study is evaluated in this EA.<sup>17</sup>

The 2021 RPZ Analysis for Runway 17/35 analyzed the potential impacts of shifting the approach and departure RPZs at both runway ends to accommodate various extensions to Runway 17/35 as described in the 2013 Master Plan Update and 2017 RIM Study. Potential RPZ impacts are included in the analysis of each build alternative described below.<sup>18</sup>

Lastly, the *Projections of Aviation Demand* provides data on the current and future aircraft fleet mix currently operating at AZO and the number of projected operations the Airport can expect over a 20-year planning horizon. The study also helped in developing the build alternatives to meet the project's purpose and need for greater runway length on Runway 17/35, and associated actions, to meet the operating needs of the critical aircraft at Airport.<sup>19</sup>

Section 6.D, Summary of impacts summarizes potential impacts of each build alternative. Table 2 compares the anticipated impacts from each build alternative using a ranking system and a side-by-side comparison.

## **A. Safety area definitions and FAA design standards**

To help evaluate the proposed alternatives being considered in this section, it is valuable to understand the requirements of safety areas and design standards associated with Runway 17/35. Safety areas and design standards, as defined by the FAA in AC 150/5300-13B, *Airport Design*, are important in evaluating potential alternatives because they are a controlling factor for each runway end and for determining potential impacts. No alternative will be considered technically feasible and therefore reasonable if it does not meet the safety area standards and design requirements outlined in this section, per 40 CFR § 1508.1(z). This section includes a definition of the different safety areas important to this project required by FAA design standards.

Runway Safety Area (RSA): The RSA is a two-dimensional graded area surrounding the runway surface constructed to enhance the safety of airplanes in the event of an unintended excursion from the runway's paved surface. This area must be:

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<sup>16</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Master Plan Final Report*.

<sup>17</sup> Mead & Hunt, Inc., *Runway Incursion Mitigation Study, Kalamazoo/Battle Creek International Airport*.

<sup>18</sup> Mead & Hunt, Inc., *FAA Great Lakes Region Runway Protection Zone Alternative Analysis*, n.d.

<sup>19</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport EA Runway 17/35 Projections of Aviation Demand*, September 2020.

- Cleared and graded with no potentially hazardous humps, ruts, depressions, or other surface variations
- Adequately drained to prevent water accumulation
- Capable, under normal (dry) conditions of supporting snow removal equipment, rescue and firefighting equipment, and occasional aircraft passage without causing structural damage to the aircraft.
- Free of objects, except for those that need to be in the RSA because of their function, and then, to the extent practical, mounted on low impact (frangible) structures.

The existing RSA for Runway 17/35 extends 1,000 feet beyond each runway end at a width of 500 feet.

Runway Object Free Area (ROFA): An ROFA is a two-dimensional ground surface surrounding a runway. The ROFA clearing standards preclude above-ground objects protruding above the elevation of the nearest point of the RSA, except those required to be within the ROFA for navigation, ground maneuvering, aircraft taxi, and aircraft holding purposes. No other objects are permitted.

Runway Protection Zone (RPZ): An RPZ is a trapezoidal surface that extends outward from the approach end of the runway that is designed to protect aircraft, people, and property on the ground by clearing this area of incompatible land uses. The FAA requires airport operators to have sufficient interest in the control of activities in this area through property interest or aviation easements to prevent incompatible uses. Some land uses (such as agricultural activities) are allowed in this area while other uses (such as residential developments, churches, schools) and objects of height (such as trees, towers, and tall buildings) are prohibited.

The existing RPZ for each end of Runway 17/35 varies due to the differences in approach visibility minimums. For Runway 17, the RPZ is 1,700 feet long, 500 feet wide at the inner width, and 1,010 feet wide at the outer width. For Runway 35, the RPZ is 2,500 feet long, 1,000 feet wide at the inner width, and 1,750 feet at the outer width.

As previously mentioned, to determine potential RPZ impacts of the proposed project, a separate technical report was completed for Runway 17/35 (RPZ Analysis). The RPZ Analysis evaluated land uses within the RPZs of each build alternative to determine incompatible land uses. The findings of each build alternative are summarized and explained below.<sup>20</sup>

Approach Surface: The approach surface is centered longitudinally on a runway and extends outward and upward from each end of the primary surface. The dimensions of the approach surface at each end of a runway are based on the type of runway and the approach for that runway end. For other than utility runways, the approach surface extends horizontally based upon the approach slope. See Figure 12 for a

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<sup>20</sup> Mead & Hunt, Inc., *FAA Great Lakes Region Runway Protection Zone Alternative Analysis*.

visual diagram of the approach surface boundary, which requires the removal of objects that penetrate the approach surface line.

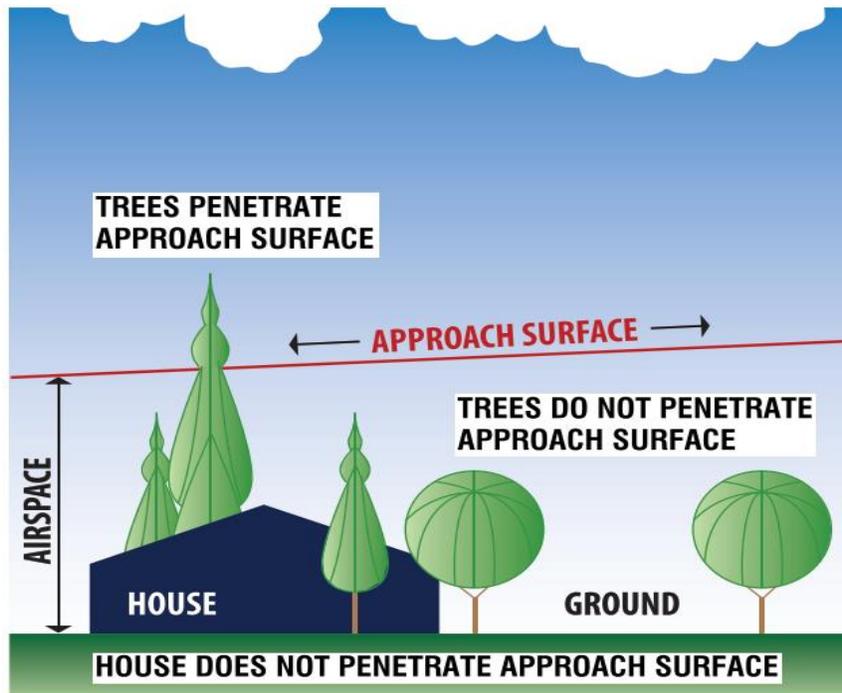


Figure 12. Approach surface example. Source: Mead & Hunt.

## B. Avoidance alternatives

### (1) No Action Alternative

The No Action Alternative assumes that no action would be taken to extend Runway 17/35 or to correct taxiway geometric deficiencies in accordance with FAA AC 150/5300-13B, Section 4.3.5 at the intersection of Taxiway C and Runway 17. Under this alternative, the Airport would remain in its current state with no plans to provide additional runway length as requested by existing users or comply with FAA guidance for geometric design of taxiway intersections that enables safe and efficient taxiing while minimizing excess pavement. As such, the No Action Alternative does not meet the project's purpose and need of providing a compliant air transportation facility with enhanced takeoff lengths for improved service at the Airport nor does it provide improved geometry safety for Taxiway C.

The No Action Alternative does not meet the purpose and need of the proposed project, and therefore is not a prudent alternative.

### (2) Build a new airport at a different location

Generally, the development and construction of a new airport is considered when an existing airport is approaching or has exceeded operational capacity, and it is not feasible to expand at its current location. This is not the case at AZO, which is projected to have adequate capacity for the near future and can practicably expand at its current location.

Substantial improvements and investments have been made at the current site with future improvement projects currently planned. Closing the existing Airport to relocate to a different location would create a significant loss of public and private investment and would be fiscally irresponsible considering past federal, state, and local investments. The benefits of developing another airport facility are limited. Development of a new site to replace the functions of AZO would likely require considerable land acquisitions and have private property impacts, have unacceptable environmental impacts, and may cause severe residential and commercial relocations. Site preparation and construction of new facilities to provide equivalent services at AZO would take years to accomplish, and the cost of such actions would be extraordinary.<sup>21</sup>

Although constructing a new airport would accomplish the project's purpose and need of additional primary runway length and improved airfield geometry, this alternative would result in severe social, environmental, and economic impacts when compared to retaining the airport at its existing location. In light of these impacts, construction of a new airport is not a prudent alternative.

### **(3) Use another airport in the vicinity**

Two comparable commercial service airports in the vicinity of AZO were considered as replacement facilities for the Airport. These are Gerald R. Ford International Airport (GRR) in Grand Rapids, Michigan, and South Bend International Airport (SBN) in South Bend, Indiana. Both airports meet the project's purpose and need of providing a primary runway that is at least 7,502 feet in length and airfield geometry that minimizes the potential for runway incursions. However, these airports are a considerable distance from AZO (GRR and SBN are approximately 45 miles and 54 miles from AZO, respectively). Additionally, AZO is part of the National Plan of Integrated Airport Systems (NPIAS) and is considered important to the success of the national air transportation system and thus eligible to receive Federal grants under the Airport Improvement Program (AIP). Requiring existing users of AZO to relocate 45 miles or more from a functioning facility as well as expecting the FAA to surrender an asset considered a national resource is unreasonable.

Relocating Airport operations to another facility and abandoning the existing infrastructure is not a viable or reasonable alternative since there is a demonstrated need to provide an airport in the Kalamazoo region. This option would cause the FAA and Kalamazoo County to lose their public and private investment in the facility. This alternative would also be limited by FAA's Grant Assurances that require airports to commit to maintaining a safe and operational facility for 20 years in response to receiving federal money for projects. This alternative would cause severe economic impacts in addition to failing to meet the project's purpose and need and is therefore not a prudent or feasible option.<sup>22</sup>

### **(4) Summary**

Based on the analysis of the above alternatives, there is no feasible and prudent alternative that avoids use from all Section 4(f) properties.

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<sup>21</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft Environmental Assessment (EA)*.

<sup>22</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft EA*.

## C. Use alternatives

### (1) Alternative 1 – 1,000-foot extension of Runway 17/35 with a reconfigured intersection of Taxiway C and Runway 17

Alternative 1 proposes an extension of Runway 17/35 by 150 feet to the north at the approach end of Runway 17 and 850 feet to the south at the approach end of Runway 35. To implement the recommended 2017 RIM Study improvements that address the design issues of Taxiway C's access to Runway 17/35, this alternative also proposes to shift and reconstruct Taxiway C so that it intersects Runway 17/35 at a 90-degree angle. This alternative would result in Runway 17/35 having a usable runway length of 7,502 feet, as shown in Figure 5.2.

Alternative 1 provides 7,502 feet of runway length, thus failing to meet the runway length requirements of 7,650 feet, but it does correct the Taxiway C intersection geometry deficiency, as described in FAA AC 150/5300-13B, Section 4.3.5.

The shifting of the Runway 17 threshold by 150 feet to the north introduces at least approximately 275 tree obstructions on an estimated 103 parcels within the approach of Runway 17 in the Bloomfield Subdivision Historic District north of I-94. Each of the 103 estimated parcels has one or more tree obstructions, which may necessitate a full tree removal for one or a cluster of trees, or could only require the trimming of trees within the approach surface. Furthermore, property owners with obstructions may choose to remove all trees within their parcel, thus making an exact number of trees slated for removal difficult. The need to acquire additional permanent easements to mitigate for these obstructions adds to the cost of this alternative.

Shifting of the runway thresholds also requires changes to approach procedures and the location of Navigational Aids (NAVAIDs). This includes the Runway End Identifier Lights (REILs) and Precision Approach Path Indicator (PAPI) for Runway 17 as well as relocation of the Medium Intensity Approach Light System with Runway Alignment Indicator Lights (MALSR), glide slope antenna, and PAPI at the approach end of Runway 35.

Shifting the location of the Runway 17 RPZ 150 feet to the north introduces few new incompatible land uses, since Kilgore Road, Kilgore Service Road, on-airport service and perimeter access roads, and a portion of the parking lot and building for a Ryder Truck Rental facility located north of Kilgore Road are currently located within the existing RPZ. Further, AZO has existing easements over these properties. Alternative 1 would introduce a new incompatible land use, with the inclusion of a small section of the I-94 right-of-way in the relocated RPZ. While a small portion of the I-94 right-of-way would be located within the relocated RPZ, the expressway itself would not be.<sup>23</sup>

On the Runway 35 end, the shift of the RPZ to the south resulting from the proposed 850-foot runway extension would move the RPZ off airport property and introduce new incompatible land uses. The relocated RPZ would encroach on Pfizer-owned land and Romence Road. The primary incompatible land use within the shifted RPZ would be Romence Road, with a contractor vehicle parking lot for the Pfizer

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<sup>23</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft EA*.

manufacturing facility to the south of Romence Road also located within the shifted RPZ. An on-airport perimeter access road and future service road for the Runway 35 approach lighting system would also be within the relocated RPZ. This alternative would necessitate the acquisition of easements over these land uses. The existing Norfolk Southern rail line would also fall within the shifted RPZ, as a result requiring relocation outside the new RPZ, adding to the cost of this alternative. A plan sheet of Alternative 1 is provided in Figure 13.<sup>24</sup>

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<sup>24</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft EA*.

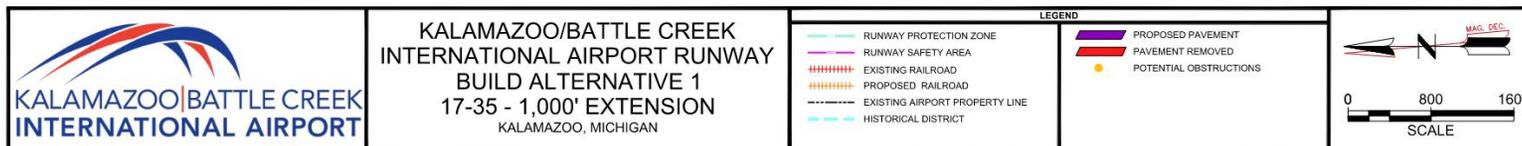
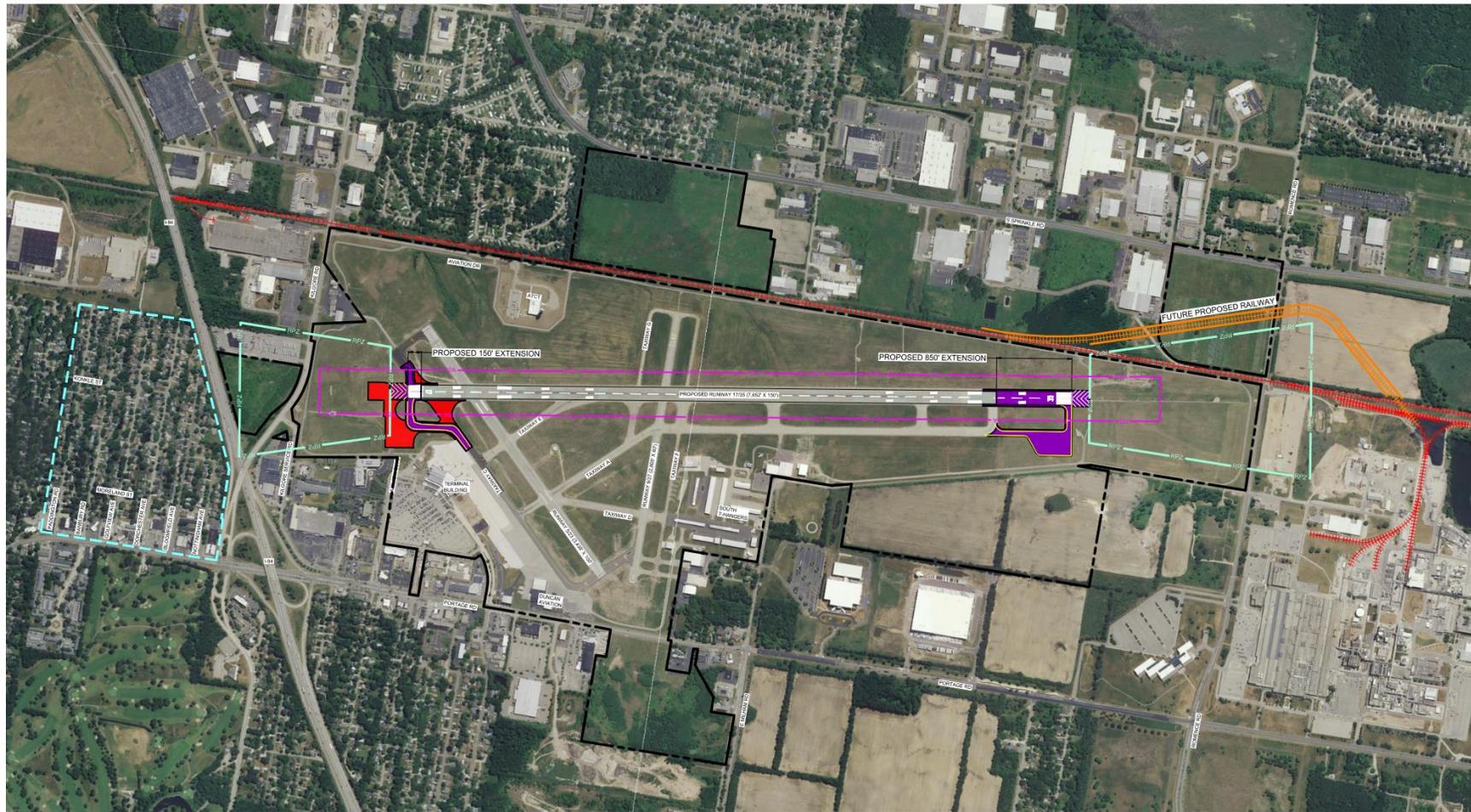


Figure 13. Plan sheet of Alternative 1.

Potential environmental impacts of implementing Alternative 1 include impacts to farmland, wetlands, and habitat for threatened and endangered species. It is anticipated that up to 6.42 acres of protected prime farmland and farmland of local importance at the Runway 35 end may be impacted primarily because of the relocation of the Norfolk Southern railroad.<sup>25</sup>

A wetland delineation identified a total of 4.0 acres of regulated wetland in the vicinity of Alternative 1 (3.779 acres at the Runway 17 end and 0.227 acres at the Runway 35 end). It is anticipated that 0.40 acres would be impacted with the construction of Alternative 1.<sup>26</sup>

Wooded areas found near both runway ends provide potential forested habitat for the Northern Long-eared Bat (federally endangered) and Indiana Bat (federally endangered). Any tree removal deemed necessary to implement Alternative 1 would be accomplished by selective tree removal completed during time periods that the resource agency recommends appropriate for minimizing impacts to any potential bat populations. See Table 2 at the end of this section for a comparison of impacts of each alternative.<sup>27</sup>

Alternative 1 would not meet the project's purpose and need. While it would reconstruct the intersection of Taxiway C and Runway 17/35, it would not provide 7,650 feet of runway length needed by aircraft that currently use the Airport and are projected to use the Airport in the future. Alternative 1 would also constitute an Adverse Effect to the National Register-eligible Bloomfield Subdivision Historic District under Section 106. The Section 4(f) use is the removal of at least 275 trees on an estimated 103 parcels, requiring permanent easements from the properties, because they are obstructions. The estimated total cost to implement Alternative 1 is \$39.2 million (2020 dollars).

**(2) Alternative 2 – 1,150-foot extension of Runway 17/35 with a reconfigured intersection of Taxiway C and Runway 17 (Preferred Alternative)**

Alternative 2 proposes to extend Runway 17/35 by 150 feet to the north at the approach end of Runway 17 and 1,000 feet to the south at the approach end of Runway 35. As with Alternative 1, this alternative addresses the design deficiencies of the Taxiway C and Runway 17/35 intersection by shifting and reconstructing Taxiway C so that it intersects Runway 17/35 at a 90-degree angle. With this alternative, the total usable length of Runway 17/35 would be 7,652 feet.

As with Alternative 1, shifting of the Runway 17 threshold by 150 feet to the north introduces at least approximately 275 tree obstructions on an estimated 103 parcels in the Bloomfield Subdivision Historic District north of I-94 that could necessitate removal. For more detail on why an exact number of tree obstructions is difficult to quantify, please refer to the explanation given above in Alternative 1. The tree removal and trimming would also add to the cost of this alternative and require new permanent easements to clear obstructions. Shifting of the runway thresholds requires changes to approach procedures and the relocation of NAVAIDs. This includes the REILs and PAPI for Runway 17 as well as relocation of the MALSR, glide slope antenna, and PAPI at the approach end of Runway 35. A plan sheet of this alternative is provided in Figure 14.

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<sup>25</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft EA*.

<sup>26</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft EA*.

<sup>27</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft EA*.

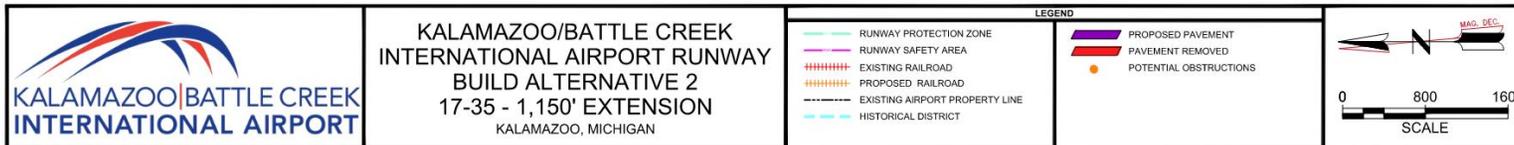
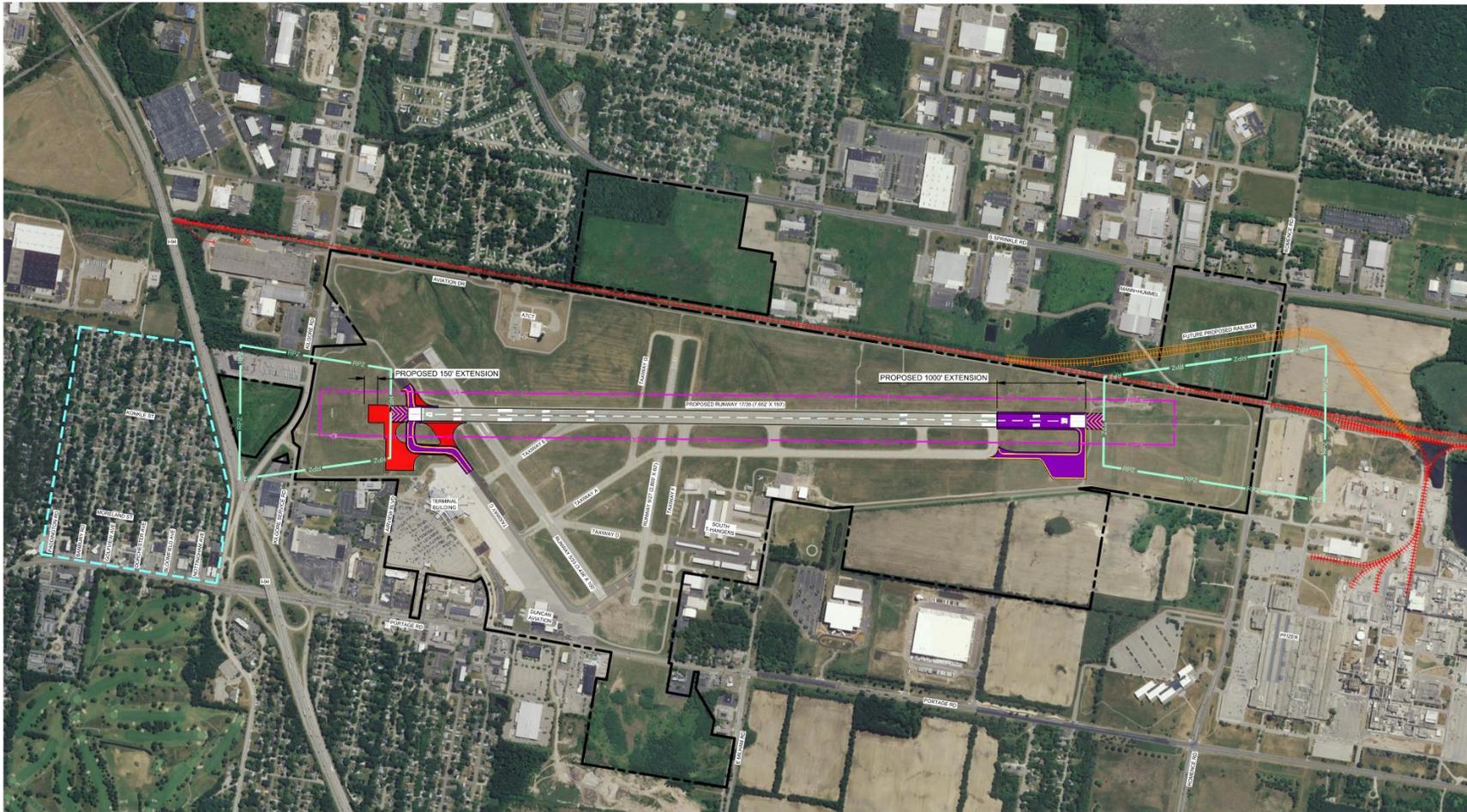


Figure 14. Plan sheet of Alternative 2.

The relocated Runway 17 RPZ would introduce few new incompatible land uses, since Kilgore Road, Kilgore Service Road, on-airport service and perimeter access roads, and a portion of the parking lot and building for a Ryder Truck Rental facility located north of Kilgore Road are currently located within the existing RPZ. AZO has existing easements over these properties. Alternative 2 would introduce a new incompatible land use, with the inclusion of a small section of the I-94 right-of-way in the relocated RPZ. As with Alternative 1, the existing I-94 right-of-way is located within the relocated RPZ; however, the expressway itself would not be.

On the Runway 35 end, the shift of the RPZ to the south resulting from the proposed 1,150-foot runway extension would move the RPZ off airport property and introduce new incompatible land uses. The relocated RPZ would encroach on Pfizer-owned land and Romence Road. The primary incompatible land use within the shifted RPZ would be Romence Road, with a contractor vehicle parking lot for the Pfizer manufacturing facility to the south of Romence Road also located within the shifted RPZ. An on-airport perimeter access road and future service road for the Runway 35 approach lighting system would also be within the relocated RPZ. This alternative would necessitate the acquisition of easements over these land uses. The existing Norfolk Southern rail line would also fall within the shifted RPZ, as a result requiring relocation outside the new RPZ, adding to the cost of this alternative.

Expected environmental impacts implementing Alternative 2 include impacts to farmland, wetlands, and habitat for threatened and endangered species. No federally protected farmland is located at the Runway 17 end of the project area; however, prime farmland and farmland of local importance is found at the Runway 35 end. It is anticipated that up to 5.96 acres of protected farmland may be impacted with the relocation of the Norfolk Southern railroad outside of the shifted Runway 35 RPZ.<sup>28</sup>

A wetland delineation identified a total of 4.0 acres of regulated wetland in the vicinity of Alternative 2 (3.779 acres at the Runway 17 end and 0.227 acres at the Runway 35 end). It is anticipated that 0.40 acres would be impacted with the construction of Alternative 2.<sup>29</sup>

Wooded areas found near both runway ends provide potential forested habitat for the Northern Long-eared Bat and Indiana Bat (both federally endangered). Any required tree removals would be completed during appropriate seasonal time periods as directed by resource agencies for mitigating impacts to any protected bat populations. See Table 2 at the end of this section for a comparison of impacts of each alternative.<sup>30</sup>

Alternative 2 is the only alternative that provides a 7,650-foot runway extension and corrects the geometry of the Taxiway C and Runway 17 intersection, thus fully meeting the purpose and need of the project and meeting the goals and planning objectives from both the *2013 Master Plan Update* and the 2017 RIM Study.

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<sup>28</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft EA*.

<sup>29</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft EA*.

<sup>30</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft EA*.

Extending the runway to a length of 7,650 feet also provides an additional margin of safety for landing distance assessments when the runway is contaminated with water, snow, or ice, which is frequently experienced during the winter season. This would help to maintain airfield capacity since the number of flight delays and cancellations that result from contaminated airfield conditions would decrease due to increased aircraft braking distances available.

Alternative 2 fully meets the project's primary purpose and need of providing a 7,650-foot runway length to accommodate the operational demands of current and future commercial and business jet aircraft at AZO. This alternative also corrects the nonstandard airfield geometry at the intersection of Taxiway C and Runway 17. However, Alternative 2 would constitute an Adverse Effect to the National Register-eligible Bloomfield Subdivision Historic District under Section 106 and is therefore considered a use of the Section 4(f) properties. The Section 4(f) use is the removal of at least 275 trees on an estimated 103 parcels, requiring permanent easements from the properties, because they are obstructions. Alternative 2 is estimated to cost \$40.0 million (2020 dollars).

**(3) Alternative 3 – 1,000-foot extension of Runway 35**

Alternative 3 proposes to extend Runway 17/35 by 1,000 feet to the south at the approach end of Runway 35. This alternative would not shift and reconstruct the Taxiway C and Runway 17/35 intersection but would result in Runway 17/35 having a usable length of 7,502 feet.

This alternative avoids the potential impacts from the 150-foot extension of Runway 17 to the north associated with the implementation of Alternatives 1, 2, and 4. Tree obstructions and acquisitions of easements in the Bloomfield Subdivision Historic District, incompatible land use impacts, the relocation of the REILs and PAPI for Runway 17, and the relocation of the localizer antenna for Runway 35 would not be required by this alternative. A plan sheet of this alternative is provided in Figure 15

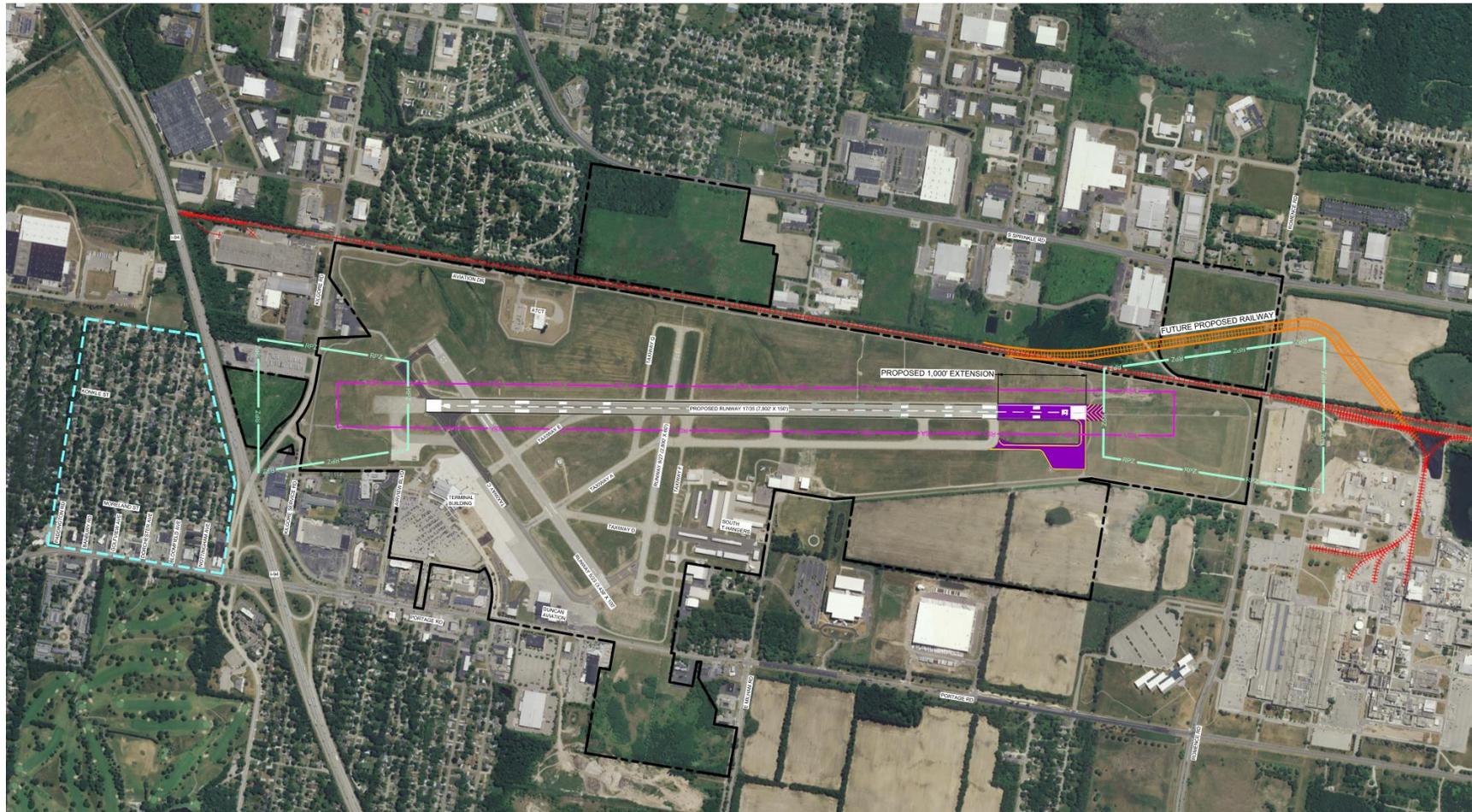
Potential incompatible land use impacts at the Runway 35 end are the same as with Alternative 2. This alternative relocates the RPZ beyond Airport property and onto Romence Road and Pfizer-owned property. The primary incompatible land use is Romence Road. An on-airport perimeter access road and future service road for the Runway 35 approach lighting system would be located within the shifted RPZ, as would a Pfizer contractor vehicle parking lot. This alternative would require the acquisition of easements over these land uses. The existing Norfolk Southern rail line would also fall within the shifted RPZ and would need to be relocated as a result, adding to the cost of this alternative. Impacts to farmland, wetlands, and habitat for threatened and endangered species are expected with the implementation of Alternative 3. However, anticipated environmental impacts of Alternative 3 are expected to be slightly less as this alternative does not propose to shift and reconstruct the intersection of Taxiway C and Runway 17/35.<sup>31</sup>

Up to 5.96 acres of protected farmland would be impacted with the relocation of the Norfolk Southern railroad. It is expected that 0.17 acres of wetlands would be impacted with the construction of Alternative 3. This is less than Alternative 1 and Alternative 2.<sup>32</sup>

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<sup>31</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft EA*.

<sup>32</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft EA*.



	<p align="center"><b>KALAMAZOO/BATTLE CREEK          INTERNATIONAL AIRPORT RUNWAY          BUILD ALTERNATIVE 3          17-35 - 1,000' EXTENSION</b>          KALAMAZOO, MICHIGAN</p>	<p>— RUNWAY PROTECTION ZONE</p> <p>— RUNWAY SAFETY AREA</p> <p>— EXISTING RAILROAD</p> <p>— PROPOSED RAILROAD</p> <p>— EXISTING AIRPORT PROPERTY LINE</p> <p>— HISTORICAL DISTRICT</p>	<p><b>LEGEND</b></p> <p>— PROPOSED PAVEMENT</p> <p>— PAVEMENT REMOVED</p> <p>● POTENTIAL OBSTRUCTIONS</p>	<p align="right">NAG DEC.</p>  <p>0 800 1600          SCALE</p>

Figure 15. Plan sheet of Alternative 3.

Wooded areas found near the Runway 35 end provide potential forested habitat for the Northern Long-eared Bat and Indiana Bat, both federally endangered. To reduce potential impacts on bat population, tree removals necessary to implement Alternative 3 would be accomplished during recommended tree removal restriction periods as directed by appropriate resource agencies. See Table 2 at the end of this section for a comparison of impacts of each alternative.<sup>33</sup>

While Alternative 3 avoids the use of the Section 4(f) historic resource, Alternative 3 does not fully meet the project's purpose and need, because it does not address the Taxiway C and Runway 17 intersection in accordance with FAA design guidance described in FAA AC 150/5300-13B, Section 4.3.5. Alternative 3 also does not provide a usable runway length of 7,652 feet, thus failing to meet the needs of existing and future users. Alternative 3 has an estimated cost of \$36.5 million (2020 dollars).

**(4) Alternative 4 – 1,000-foot extension of Runway 17 with a reconfigured intersection of Taxiway C and Runway 17**

Alternative 4 proposes to extend Runway 17/35 1,000 feet to the north at the approach end of Runway 17. No extensions or alterations to Runway 35 are proposed in this alternative. This alternative also proposes to reconstruct the intersection of Taxiway C and Runway 17 to connect at a 90-degree angle at the relocated threshold. With this alternative, Runway 17/35 would have a usable length of 7,502 feet. A plan sheet of this alternative is provided in Figure 16.

While Alternative 4 avoids impacts associated with extending the runway to the south at the approach end of Runway 35, namely the rerouting of the Norfolk Southern rail line and the various incompatible land uses and required easements within the relocated RPZ, this alternative would cause substantial impacts to the north. Moving the threshold of Runway 17 1,000 feet to the north would place more of I-94 inside the relocated PRZ compared to other build alternatives and would result in many new incompatible land uses not experienced with the other build alternatives. A major disadvantage with this alternative would be the requirement to relocate and reconstruct Kilgore Road outside the new RSA, as roads are not allowed within RSA areas.

This alternative would also have the most tree obstructions in the Bloomfield Subdivision Historic District of any build alternative, thus requiring the greatest amount of tree removal. For more detail on why an exact number of trees proposed for removal is difficult to quantify, please refer to the explanation given under Alternative 1. Moving the Runway 17 threshold 1,000 feet closer to the Bloomfield Subdivision Historic District in the Milwood neighborhood would require new acquisitions and/or permanent easements of many residential and commercial properties to clear obstructions within the relocated Runway 17 RPZ and approach surface. The RPZ under Alternative 4 would extend into the southeast quadrant of the Bloomfield Subdivision Historic District, which include the streets of Nottingham Avenue, Bloomfield Avenue, and Dorchester Avenue. Tree obstruction removal would be much more extensive along these streets.

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<sup>33</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft EA*.

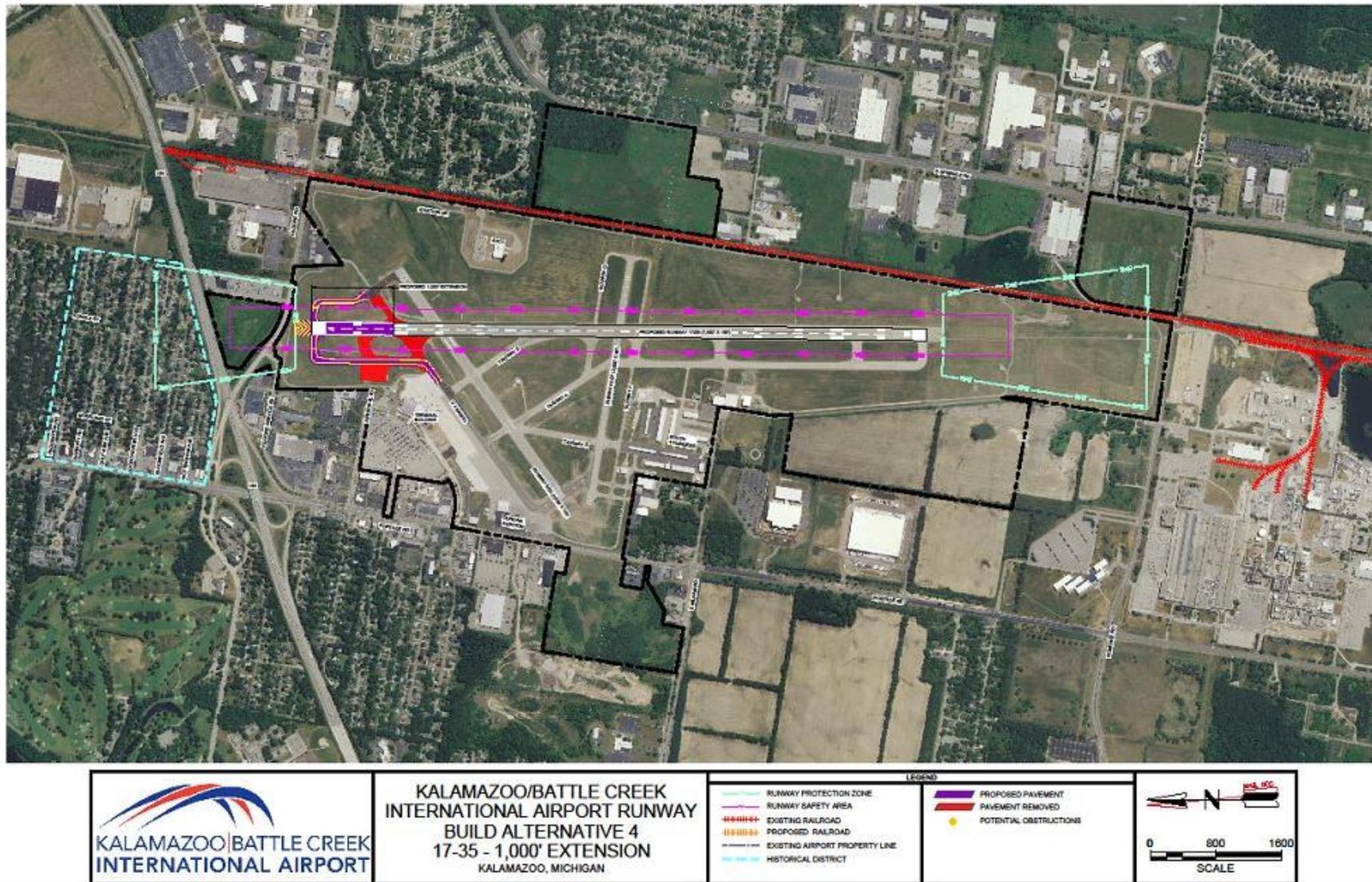


Figure 16. Plan sheet of Alternative 4.

Significant public controversy would be anticipated with this alternative because of the expected amount of required easements/acquisitions and the high likelihood there would be an unacceptable increase in aircraft noise levels (defined by FAA as 65 decibels DNL [Day-Night Average Sound Level] with an anticipated increase of 1.5 decibels or more due to the proposed action<sup>34</sup>), because the Runway 17 threshold is 1,000 feet closer to noise sensitive land uses (residential homes). The shifting of the runway threshold would also require the relocation of the REILs and PAPI for Runway 17 as well as the localizer antenna for Runway 35. There would be no impacts to farmland, but 0.22 acres of wetlands would be impacted, as well as potential forested habitat for the Northern Long-eared Bat and Indiana Bat at the end of Runway 17.<sup>35</sup>

Alternative 4 does not meet the project's purpose and need of correcting the geometric deficiencies of the Taxiway C and Runway 17/35 intersection, and it fails to provide 7,650 feet of usable runway length. This alternative would have considerable socioeconomic impacts, a high probability of increased noise exposure to residents, and a greater likelihood of considerable public controversy. Additionally, Alternative 4 would constitute an Adverse Effect to the National Register-eligible Bloomfield Subdivision Historic District under Section 106 and therefore would be considered a use of the Section 4(f) property. Alternative 4 has an estimated cost of \$13.9 million (2020 dollars). This estimated cost does not include the expense of relocating/realigning Kilgore Road, which would significantly increase the cost of this alternative.

#### **D. Summary of impacts**

Table 2 provides an overview of the expected impacts of each build alternative, and the No Action Alternative. Potential impacts are colored coded either in "red" or "green" to aid in a visual understanding of the advantages and disadvantages of each alternative. Red represents the alternative with the highest impact in a specific category while green indicates the least impact in a particular category. The same criteria were used for each build alternative to allow an "apples-to-apples" comparison to better evaluate the alternatives. Based on the analysis, the No Action and Alternative 3 avoid the Section 4(f) property, and Alternatives 1, 2, and 4 do not avoid the Section 4(f) property.

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<sup>34</sup> Federal Aviation Administration, "Noise Regulation Policy Guidance," n.d., [https://www.faa.gov/regulations\\_policies/policy\\_guidance/noise/history](https://www.faa.gov/regulations_policies/policy_guidance/noise/history).

<sup>35</sup> Mead & Hunt, Inc., *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft EA*.

**Table 2. Summary of impacts**

Category	Criterion	No Action Alternative	Alternative 1	Alternative 2 (Preferred)	Alternative 3	Alternative 4
<b>Project Purpose and Need</b>	Provides 7,650 Feet of Runway Length	No	No	Yes	No	No
	Corrects Taxiway C Geometric Deficiencies	No	Yes	Yes	No	Yes
	Provides a 1,000-Foot Runway Extension at Runway 35 End	No	No	Yes	Yes	No
<b>Implementation Factors</b>	Requires Norfolk Southern Railroad Relocation	No	Yes	Yes	Yes	No
	Requires NAVAIDs Relocation	No	Yes	Yes	Yes	Yes
	Amount of New Incompatible Land Uses within Runway 17 RPZ	No	Low	Low	None	High
	Amount of New Incompatible Land Uses within Runway 35 RPZ	No	Med	High	High	None
	Intensity of New Obstruction Removals in Milwood Neighborhood	Med	Med	Med	None	High
	Requires New Easements to Remove Obstructions in Runway 17/35 Approaches	No	Yes	Yes	Yes	Yes
	Level of Expected Public Opposition	None	Low	Low	Low	High
	Requires Kilgore Rd. Relocation	No	No	No	No	Yes
<b>Environmental Impacts</b>	Potential Impacts to Wetlands (acres)	0	0.40	0.40	0.17	0.22
	Impacts to Bloomfield Subdivision Historic District	No	Med	Med	None	High
	Potential Farmland Impacts (acres)	0	6.42	5.96	5.96	0.0
	Presence of Potential Forested Habitat for Northern Long-eared Bat and Indiana Bat	No	Yes	Yes	Yes	Yes
	Likelihood of Increased Noise Exposure to Noise Sensitive Land Uses	None	None	None	None	High
<b>Cost</b>	Estimated Cost to Implement (2020 dollars)	\$0	\$39.2 million	\$40.0 million	\$36.5 million	\$13.9 million
Green and red shading represent the highest or lowest intensity of impact when compared to the other build alternatives for a specific category.						

Source: Mead & Hunt.

## **7. Least Overall Harm Analysis**

### **A. Introduction**

Based on the alternatives analysis, four alternatives avoid the Section 4(f) property and three use the Section 4(f) property. When there is no prudent and feasible avoidance alternative, the FAA must choose from the remaining alternatives, all of which result in a use of Section 4(f) property. The FAA must analyze the remaining alternatives and select the alternative that causes the least overall harm in light of Section 4(f)'s preservationist purpose. This is known as "least overall harm analysis."<sup>36</sup> The three remaining alternatives carried forward for least overall harm analysis are:

- **Alternative 1** – 1,000-foot extension of Runway 17/35 with a reconfigured intersection of Taxiway C and Runway 17
- **Alternative 2** – 1,150-foot extension of Runway 17/35 with a reconfigured intersection of Taxiway C and Runway 17 (Preferred Alternative)
- **Alternative 4** – 1,000-foot extension of Runway 17 with a reconfigured intersection of Taxiway C and Runway 17

The least overall harm analysis is conducted through application and comparison of seven factors:

1. The ability to mitigate adverse impacts to each Section 4(f) property including any measures that result in benefits to the property;
2. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;
3. The relative significance of each Section 4(f) property;
4. The views of the officials with jurisdiction over each Section 4(f) property;
5. The degree to which each alternative meets the purpose and need for the project;
6. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
7. Substantial differences in costs among the alternatives.

A matrix summarizing the least overall harm analysis is provided in Appendix A-2.

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<sup>36</sup> Federal Aviation Administration, *FAA Airports Desk Reference: Chapter 7 Section 4(f) Resources*, n.d.

**B. Alternative 1**

Alternative 1 would extend Runway 17/35 by 150 feet to the north at the approach end of Runway 17 and 850 feet to the south at the approach end of Runway 35. This alternative also proposes to shift and reconstruct Taxiway C, correcting the runway geometry deficiency. Still, the new runway length would be short of the FAA requirement of 7,650 feet. An application of the factors used in the least overall harm analysis is described below:

- Alternative 1 would require tree obstruction removal for more than 275 trees on an estimated 103 parcels throughout the National Register-eligible Bloomfield Subdivision Historic District as well as the need for additional easements and costs, resulting in the “use” of the Section 4(f) historic resource. The effects to the District, namely the removal of trees that adversely impact the resource’s historic integrity of setting, would constitute an Adverse Effect as determined through Section 106 consultation with the Michigan SHPO. Mitigation for the potential adverse effects to the Section 4(f) historic resource, elaborated upon in the Memorandum of Agreement (MOA), would include the replanting of appropriate trees in consultation with a qualified arborist throughout the District as well as additional research and documentation on the history of the neighborhood.
- The relative severity of the remaining harm to the District is equal to that of Alternative 2, which would also require the removal of at least 275 trees and would have an adverse effect on the historic resource’s integrity of setting. In contrast, Alternative 1 presents less remaining harm to the Section 4(f) property than Alternative 4, which would require the greatest amount of tree obstruction removal.
- Alternative 1 has not been reviewed by the Michigan SHPO; however, it is assumed that because the effects to the Section 4(f) historic property of Alternative 1 would be almost identical to those of Alternative 2, the Michigan SHPO would concur with the finding that Alternative 1 would result in an Adverse Effect to the District.
- The shifting of the runway would require changes to approach procedures and the relocation of NAVAIDs. The runway extension and relocated RPZ would also result in the introduction of new incompatible land uses, such as Romence Road, service roads, and a Norfolk-Southern rail line within the RPZ. Potential environmental impacts of Alternative 1 include impacts to farmland, wetlands, and habitat for threatened and endangered species. These impacts to non- Section 4(f) resources are roughly equal to those of Alternative 2, but are less than those resulting from Alternative 4.
- The total cost to implement Alternative 1 is estimated to be \$39.2 million, slightly less than Alternative 2 and substantially more than Alternative 4.
- Alternative 1 does not meet the project’s stated purpose and need, as it does not provide the required runway length requirement of 7,650 feet needed by aircraft that currently use the Airport and are projected to use the future.

### **C. Alternative 2**

Alternative 2 proposes to extend Runway 17/35 by 150 feet to the north at the approach end of Runway 17 and 1,000 feet to the south at the approach end of Runway 35. As with Alternative 1, this alternative addresses the design deficiencies of the Taxiway C and Runway 17/35 intersection by shifting and reconstructing Taxiway C so that it intersects Runway 17/35 at a 90-degree angle. With this alternative, the total usable length of Runway 17/35 would be 7,652 feet. An application of the factors used in the least overall harm analysis is described below:

- Like Alternative 1, Alternative 2 would require tree obstruction removal for more than 275 trees on an estimated 103 parcels throughout the National Register-eligible Bloomfield Subdivision Historic District as well as the need for additional easements and costs, resulting in the “use” of the Section 4(f) historic resource. The effects to the District, namely the removal of trees that adversely impact the resource’s historic integrity of setting, would constitute an Adverse Effect as determined through Section 106 consultation with the Michigan SHPO. Mitigation for the potential adverse effects to the Section 4(f) historic resource, elaborated upon in the MOA, would include the replanting of appropriate trees in consultation with a qualified arborist throughout the District as well as additional research and documentation on the history of the neighborhood.
- The relative severity of the remaining harm to the District is equal to that of Alternative 1, which would also require the removal of at least 275 trees and would have an adverse effect on the historic resource’s integrity of setting. In contrast, Alternative 2 presents less remaining harm to the Section 4(f) property than Alternative 4, which would require the greatest amount of tree obstruction removal.
- The Michigan SHPO has determined that Alternative 2 would result in an Adverse Effect to the Section 4(f) property, the District.
- The shifting of the runway would require changes to approach procedures and the relocation of NAVAIDs. The runway extension and relocated RPZ would also result in the introduction of new incompatible land uses, such as Romence Road, service roads, and a Norfolk-Southern rail line within the RPZ. Potential environmental impacts of Alternative 2 include impacts to farmland, wetlands, and habitat for threatened and endangered species. These impacts to non-Section 4(f) resources are roughly equal to those of Alternative 1, but are less than those resulting from Alternative 4.
- The total cost for Alternative 2 is estimated to be \$40 million (2020 dollars), slightly more than Alternative 1 and substantially more than Alternative 4.
- Alternative 2 would meet the proposed project’s purpose and need by meeting the full runway length requirement of 7,650 feet and correcting the geometry of Taxiway C and Runway 17 intersection.

## **D. Alternative 4**

Alternative 4 proposes to extend Runway 17/35 1,000 feet to the north at the approach end of Runway 17. This alternative also proposes to reconstruct the intersection of Taxiway C and Runway 17/35 to connect at a 90-degree angle at the relocated threshold. No extension is proposed at the Runway 35 end. With this alternative, Runway 17/35 would have a usable length of 7,502 feet, short of the FAA runway length requirement. An application of the factors used in the least overall harm analysis is described below:

- While Alternative 4 avoids impacts associated with extending the runway to the south at the approach end of Runway 35, namely the rerouting of the Norfolk Southern rail line and the various incompatible land uses and required easements within the relocated RPZ, this alternative would cause substantial impacts to the north. This alternative would require the greatest amount of tree obstruction removal throughout the National Register-eligible Bloomfield Subdivision Historic District of any build alternative, requiring additional easements and costs. Alternative 4 would remove more trees than Alternatives 1 and 2, with the runway protection zone extending into the district's boundary in the southeast quadrant. The effects to the District under Alternative 4, namely the removal of trees affecting the resource's Integrity of Setting, would constitute an Adverse Effect as determined through Section 106 consultation with the Michigan SHPO and would result in the use of the Section 4(f) property. Mitigation for the potential adverse effects to the Section 4(f) historic resource, elaborated upon in the MOA, would include the replanting of appropriate trees in consultation with a qualified arborist throughout the District as well as additional research and documentation on the history of the neighborhood.
- The relative severity of the remaining harm to the District is the greatest under Alternative 4, which would require more tree removal than Alternatives 1 and 2, adversely impacting the historic resource's integrity of setting.

Alternative 4 has not been reviewed by the Michigan SHPO; however, it is assumed that because the tree removal and easement acquisition impacts to the District under Alternative 4 would be greater than those of Alternative 2, the Michigan SHPO would concur with the finding that Alternative 4 will result in an Adverse Effect to the District.

- Moving the threshold of Runway 17 1,000 feet closer to I-94 and introducing more of the interstate inside the relocated RPZ would cause many new incompatible land uses not experienced with the other build alternatives. Significant public controversy would be anticipated with this alternative because of the expected amount of required easements / acquisitions and the high likelihood that there would be an unacceptable increase in aircraft noise levels (defined by FAA as 65 decibels DNL [Day-Night Average Sound Level] with an anticipated increase of 1.5 decibels or more due to the proposed action), because the Runway 17 threshold is 1,000 feet closer to noise sensitive land uses (residential homes). These impacts to non-Section 4(f) resources are the most severe in Alternative 4.
- Alternative 4 has an estimated cost of \$13.9 million (2020 dollars), which is the least costly out of the three remaining alternatives. This estimated cost does not include the expense of

relocating/realigning Kilgore Road. Moving Kilgore Road would significantly increase the cost of this alternative

- Alternative 4 does not meet the project's purpose and need of correcting the geometric deficiencies of the Taxiway C and Runway 17/35 intersection, and it fails to provide 7,650 feet of usable runway length.

## **E. Summary**

Based on the above analysis, Alternative 2 would fully meet the project's purpose and need, while Alternatives 1 and 4 would not meet the purpose and need. Alternative 4 would have greater harm to the Section 4(f) property compared with Alternatives 1 and 2. The ability to mitigate adverse impacts to the Bloomfield Subdivision Historic District and the views of the Michigan SHPO as Official With Jurisdiction are essentially the same under Alternatives 1, 2, and 4. Alternative 2 is the most expensive out of all four alternatives, although only slightly more expensive than Alternative 1

## **8. Recommended Alternative**

Based on the alternatives analysis as presented in Sections 6 and 7, Alternative 2 results in the least overall harm in light of Section 4(f)'s preservation purpose while also fully meeting the project's purpose and need, through application of the seven balancing factors. Alternative 2, the 1,150-foot extension of Runway 17/35 with a reconfigured intersection of Taxiway C and Runway 17, is therefore selected as the recommended project alternative.

## **9. Measures to Minimize and Mitigate Harm**

The FAA, Airport, Michigan SHPO, and Michigan Strategic Fund are currently negotiating a Section 106 MOA. In addition to mitigation planning, the FAA has designed alternatives that minimize the impacts to the Section 4(f) property, as described below:

### **A. Minimization efforts**

Alternative 2 (the preferred alternative) is designed and shifted with a larger lengthening of Runway 17/35 at the south end rather than extending towards the north in order to minimize impacts to the Bloomfield Subdivision Historic District, a Section 4(f) property.

Additionally, Alternative 2 (the preferred alternative) would avoid an effect upon the structures on the Pfizer-owned property, which are outside of the project APE. Only the parking area of the Pfizer-owned property is within the APE, where it intersects with the RPZ.

### **B. Mitigation**

The draft MOA includes several measures to mitigate harm to the Section 4(f) properties:<sup>37</sup>

#### **(1) Tree replanting**

Mitigation efforts entail a Certified Arborist (Arborist) working on behalf of the Airport to replant trees within the Bloomfield Subdivision Historic District that will be removed as a result of the undertaking. Replacement trees will be selected by the arborist and sited so as to best mitigate the adverse effects to the property's Integrity of Setting. Tree replanting is scheduled to be completed within one (1) year of tree removal.

Coordinating with affected property owners, the Airport or its agent will help to determine the number of replacement trees planned for each parcel, which will be replanted with a low-growing variety identified by the Arborist as an acceptable replacement. Property owners will be provided the opportunity to decline replacement trees within their legal parcel in writing. In instances when property owners decline replacement trees, the Airport or its agent will coordinate with the Arborist to identify locations within tree lawns that are suitable for tree planting. A tree lawn tree will be planted for each declined tree.

Trees located within tree lawns (between the curb and the sidewalk) will be replanted tree-for-tree without coordination with property owners.

#### **(2) Bloomfield Subdivision Historic District research**

In addition to tree replanting, additional research should be conducted on the Bloomfield Subdivision Historic District within one (1) year of MOA execution. This includes the items below, which the FAA will provide to the City of Kalamazoo Division of Planning and the Kalamazoo County Historical Society:

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<sup>37</sup> Federal Aviation Administration, "Memorandum of Agreement Between the Federal Aviation Administration, the Kalamazoo/Battle Creek International Airport, and the Michigan State Historic Preservation Officer Regarding Kalamazoo/Battle Creek International Airport Runway 17/35 Extension, Kalamazoo and Portage, Michigan," 2023.

**Section 9**  
**Measures to Minimize and**  
**Mitigate Harm**

- 1) Digital photographs of the Bloomfield Subdivision Historic District taken during the initial Section 106 identification survey conducted by Mead & Hunt, in JPG format.
- 2) Digital copies of the research materials related to the Bloomfield Subdivision Historic District collected during the Section 106 process, in PDF format.

**(3) Bloomfield Subdivision Historic District history report**

As further mitigation, the Airport or its agent will develop a Bloomfield Subdivision History Report to provide an interpretive document about the development history of the subdivision. Publication and distribution details will be provided in an initial report outline. The outline and report will be reviewed by FAA and SHPO.

## **10. Coordination with Official With Jurisdiction over the Section 4(f) Resource**

The SHPO is the Official With Jurisdiction for historic sites protected under Section 4(f). Because the Bloomfield Subdivision Historic District is an National Register-eligible property, the FAA has participated in consultation with the SHPO in accordance with Section 106 regarding this project. The following provides the date and summary of the SHPO coordination, as well as consultation with other potential consulting parties. Copies of the SHPO coordination are provided in Appendix C.

- April 2019: Section 106 consultation with the Michigan SHPO and other consulting parties was initiated. A total of 17 various local, state, and federal agencies and 15 Native American tribes were contacted as part of public involvement and consultation efforts for the project's Environmental Assessment.
- June 2020: Open House held with project stakeholders to introduce and kickoff the project.
- October 2020: Architectural survey of the Millwood Neighborhood (Bloomfield Subdivision Historic District) conducted by Mead & Hunt.
- 2020: Property owners within the Bloomfield Subdivision Historic District, as well as the Milwood Neighborhood Association, were consulted as part of the Environmental Assessment (EA) process. Representatives of the project team contacted and interacted with these consulting parties through a public involvement meeting on February 26, 2020, an update letter to the Milwood Neighborhood Association dated June 2020, and another update letter to property owners dated October 2020.
- January 2022: The Michigan SHPO concurred with National Register eligibility findings in a letter dated January 26, 2022. The SHPO did not concur with the FAA's finding that the proposed runway extension project would result in No Adverse Effect to the National Register-eligible Bloomfield Subdivision historic district under Section 106 and instead determined that the undertaking would result in an Adverse Effect to the historic resource due to the effects to the resource's integrity of setting from large-scale tree removal.
- May-June 2022: The Advisory Council on Historic Preservation (ACHP) and two interested parties were notified of the potential for adverse effect and invited to collaborate on mitigation. The FAA submitted a letter to the ACHP in May 2022, and the ACHP declined to participate in a letter dated June 16, 2022.
- May 2022: Property owners of parcels within the boundaries of the Bloomfield Subdivision Historic District were notified of the project's potential to cause an adverse effect to the historic district under Section 106, in a letter dated May 20, 2022.
- June 2022: Documentation of Adverse Effect submitted to Michigan SHPO for review.

**Section 10**  
**Coordination with Official With Jurisdiction**  
**Over the Section 4(f) Resource**

- October 19, 2022: An additional public meeting occurred, where the project team explained the identification of the Bloomfield Subdivision Historic District and the adverse effect to the historic property. At this meeting, the Project team also discussed potential mitigation options, and solicited feedback from the public on those options and additional options to consider. A total of four written comments were received from meeting attendees; they were primarily concerned with aircraft noise levels or the general removal of trees. Written comments that discussed tree removal were not specific to impacts on the historic district, but rather were focused on change to their property's landscape and loss of shade. Some verbal comments received from attendees were in support of certain trees on their property being removed as a result of the project, as some were in poor health; other verbal comments received were concerned with the loss of mature trees on their property and in their neighborhood. No verbal or written comments expressed concern over the impacts that the loss of trees would have on the setting of the historic district. Other interested parties include the Kalamazoo County Historical Society and the City of Kalamazoo, with whom suggestions for mitigation measures were requested but were not returned.
  
- June 22, 2023: Draft MOA submitted to Michigan SHPO for review.

## **11. Conclusion**

Based on the analysis presented in this evaluation, there are four avoidance alternatives and three alternatives that use the Section 4(f) property. The Least Overall Harm Analysis determined the preferred option, Alternative 2, results in the least overall harm among the use alternatives. The project includes all possible planning to minimize harm resulting from the use of Section 4(f) properties. FAA's final determination is withheld until after this draft statement has been circulated to the appropriate agencies and all issues have been appropriately evaluated.

## References Cited

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[https://www.faa.gov/airports/environmental/environmental\\_desk\\_ref](https://www.faa.gov/airports/environmental/environmental_desk_ref).
- . "Memorandum of Agreement Between the Federal Aviation Administration, the Kalamazoo/Battle Creek International Airport, and the Michigan State Historic Preservation Officer Regarding Kalamazoo/Battle Creek International Airport Runway 17/35 Extension, Kalamazoo and Portage, Michigan," 2023.
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- . *Kalamazoo Airport ACHP E106 Form*, 2022.
- . *Kalamazoo/Battle Creek International Airport EA Runway 17/35 Projections of Aviation Demand*, September 2020.
- . *Kalamazoo/Battle Creek International Airport Master Plan Final Report*, n.d.
- . *Kalamazoo/Battle Creek International Airport Runway 17/35 Extension Draft Environmental Assessment*, 2022.
- . *Runway Incursion Mitigation Study, Kalamazoo/Battle Creek International Airport*, 2017.

## **Appendix A. Project Alternatives Matrices**

**Appendix A-1. Alternatives Evaluation Matrix**

**Appendix A-2. Least Overall Harm Analysis Matrix**

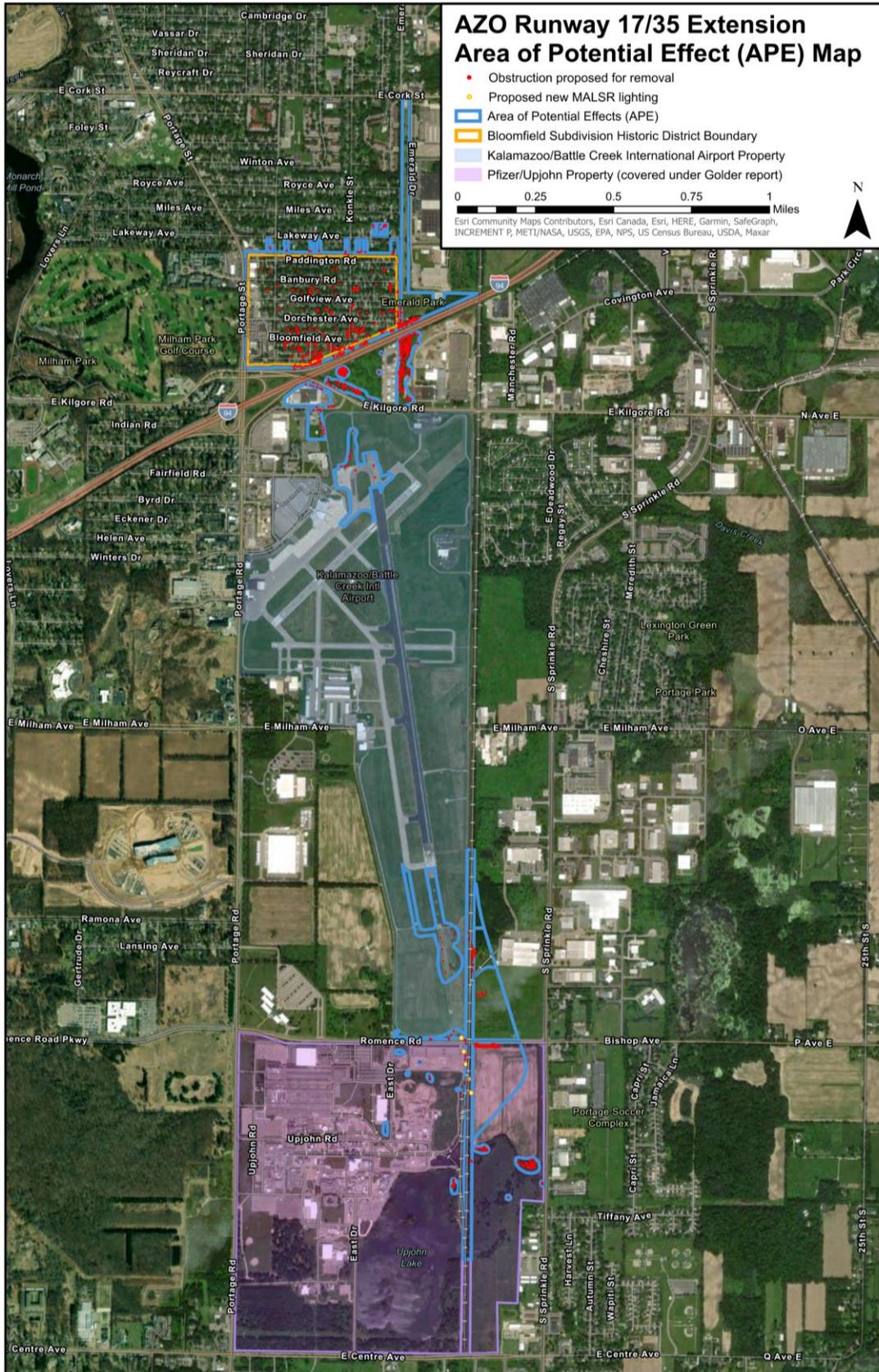
## Appendix A-1. Alternatives Evaluation Matrix

Evaluation Criteria	Alternatives						
	No Build Alternative	Built New Airport Alternative	Use Another Airport Alternative	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Uses Section 4(f) Property?	No	No	No	Yes	Yes	No	Yes
Meets Project Purpose and Need?	No	Yes	No	No	Yes	No	No
Total Cost?	\$0	Unknown (substantially higher than Alternatives 1-4)	unknown	\$39.2 million	\$40 million	\$36.5 million	\$13.9 million
Other Social, Economic, or Environmental Impacts?	No	Yes	Yes - negative impact on the regional economy.	Yes	Yes	Yes	Yes
Constructability/Safety/Design Issues?	No	Yes	No	Yes, runway length requirement not met	No	Yes, runway length and geometry requirements not met	Yes, runway length and geometry requirements not met
Feasible and Prudent Alternative?	No	No	No - does not address the need to provide an airport in the Kalamazoo region.	No	Yes	No	No

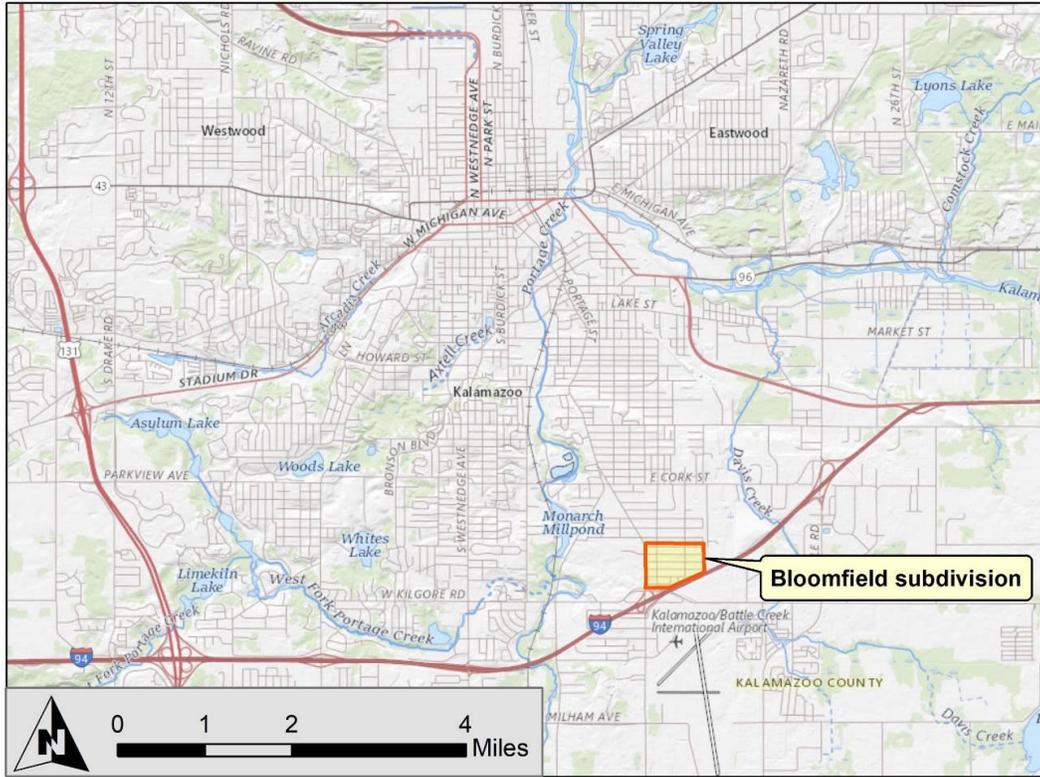
## Appendix A-2. Least Overall Harm Analysis Matrix

Least Overall Harm Analysis Factors	Alternatives		
	Alternative 1	Alternative 2	Alternative 4
Ability to mitigate adverse effects to each Section 4(f) property	Yes	Yes	Yes
Relative severity of harm after mitigation	Equal to Alternative 2: tree removal would affect the Integrity of Setting for the Bloomfield Subdivision Historic District	Equal to Alternative 1: Tree removal would affect the Integrity of Setting for the Bloomfield Subdivision Historic District	Highest, as more trees would need to be removed with more severe alteration of the Integrity of Setting for the historic resource.
Relative significance of impacted Section 4(f) properties	Equal	Equal	Equal
Views of Officials With Jurisdiction	Assumed to be Adverse Effect to the Bloomfield Subdivision historic district based on results of Section 106 consultation for Alternative 2	SHPO has determined an Adverse Effect to the Bloomfield Subdivision historic district.	Assumed to be an Adverse Effect to the Bloomfield Subdivision historic district based on the results of Section 106 consultation for Alternative 2
Degree to which alternative meets purpose and need	Does not meet purpose and need	Fully meets purpose and need	Does not meet purpose and need
Magnitude of adverse impacts to non-Section 4(f) resources	Equal to Alternative 2	Equal to Alternative 1	Highest
Substantial differences in costs	\$39.2 million	\$40 million	\$13.9 million

## **Appendix B. Maps**



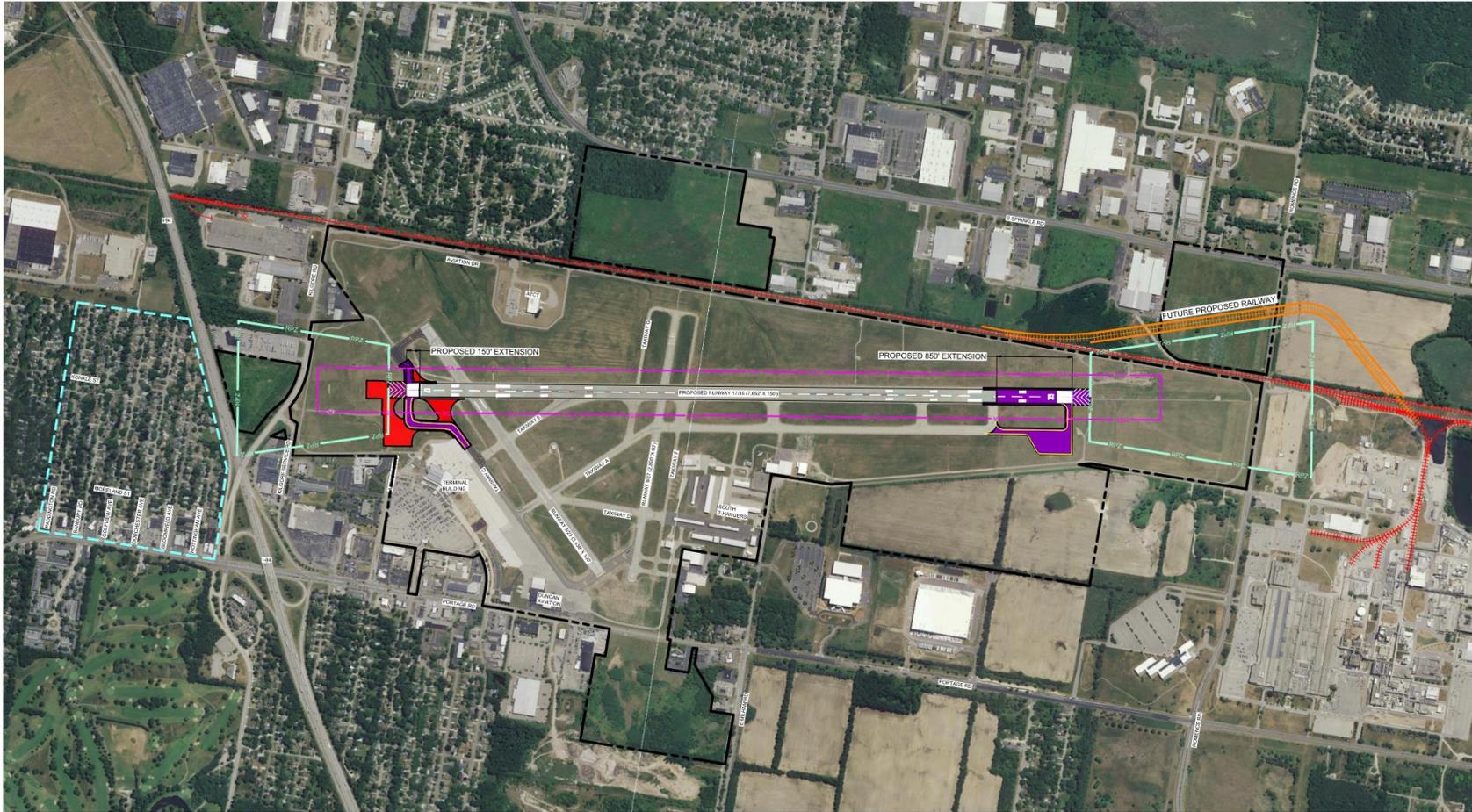
APE map showing the trees marked for removal in red for Alternatives 1 and 2.

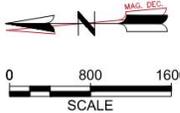
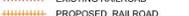
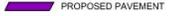


Map showing the location of the Bloomfield subdivision related to the larger Kalamazoo area.

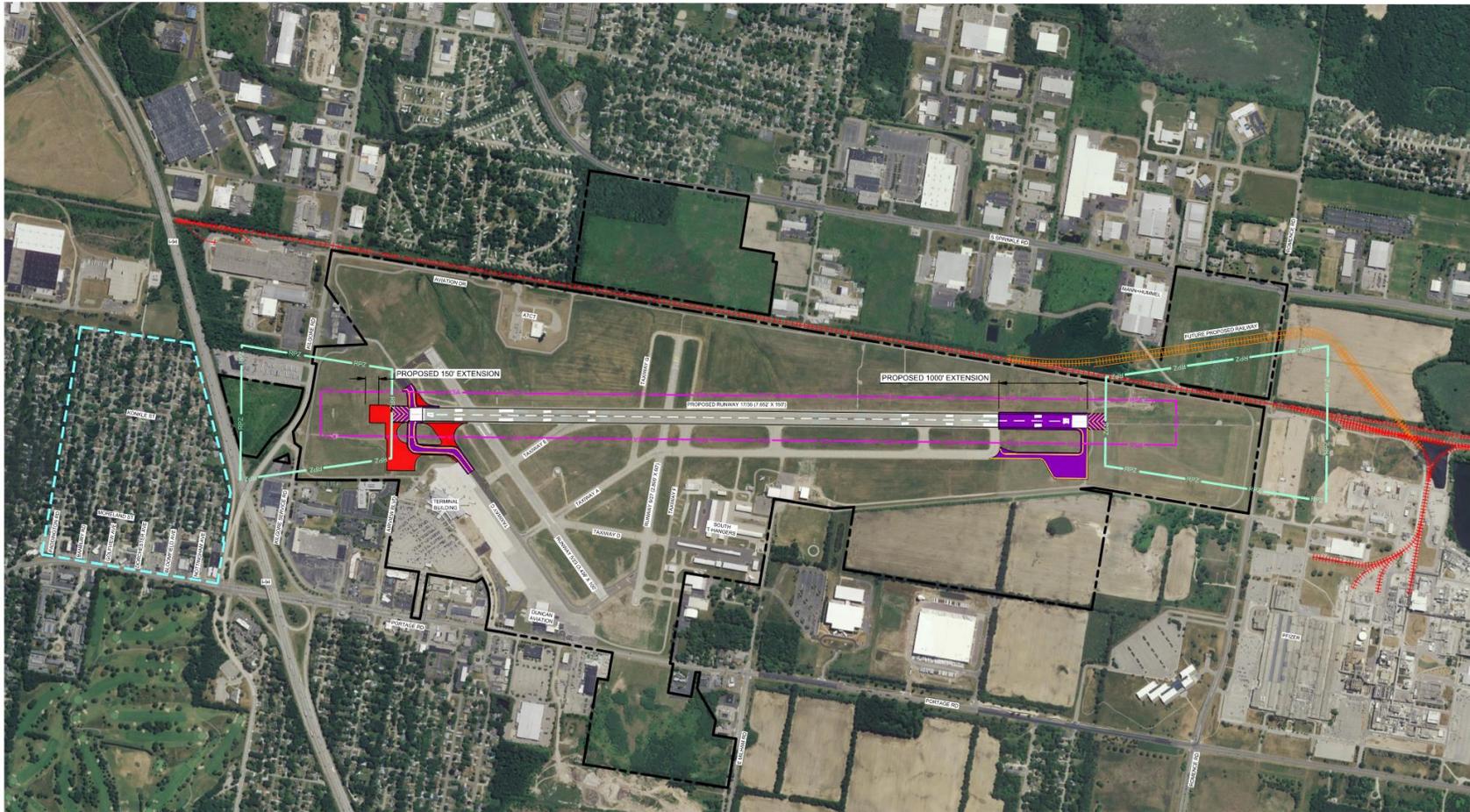


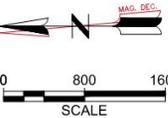
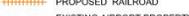
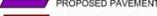
Map of Bloomfield subdivision showing the functions of the parcels and the historic property boundaries.



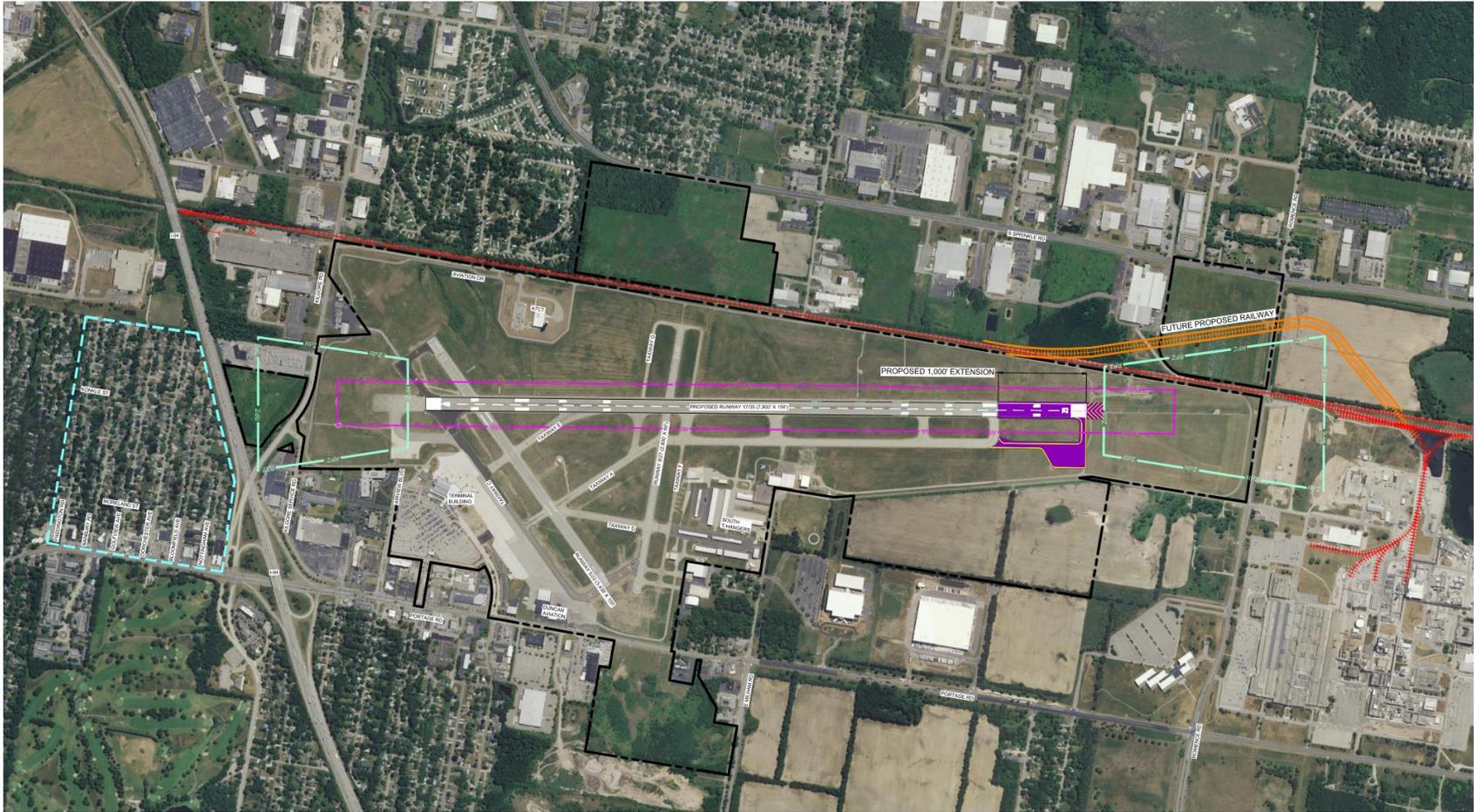
	<p align="center"><b>KALAMAZOO/BATTLE CREEK INTERNATIONAL AIRPORT RUNWAY BUILD ALTERNATIVE 1 17-35 - 1,000' EXTENSION</b> KALAMAZOO, MICHIGAN</p>	<p align="center"><b>LEGEND</b></p>		
		<ul style="list-style-type: none"> <li> RUNWAY PROTECTION ZONE</li> <li> RUNWAY SAFETY AREA</li> <li> EXISTING RAILROAD</li> <li> PROPOSED RAILROAD</li> <li> EXISTING AIRPORT PROPERTY LINE</li> <li> HISTORICAL DISTRICT</li> </ul>	<ul style="list-style-type: none"> <li> PROPOSED PAVEMENT</li> <li> PAVEMENT REMOVED</li> <li> POTENTIAL OBSTRUCTIONS</li> </ul>	

*Alternative 1 – 1,000-Foot Extension of Runway 17/35 with a Reconfigured Intersection of Taxiway C and Runway 17.*



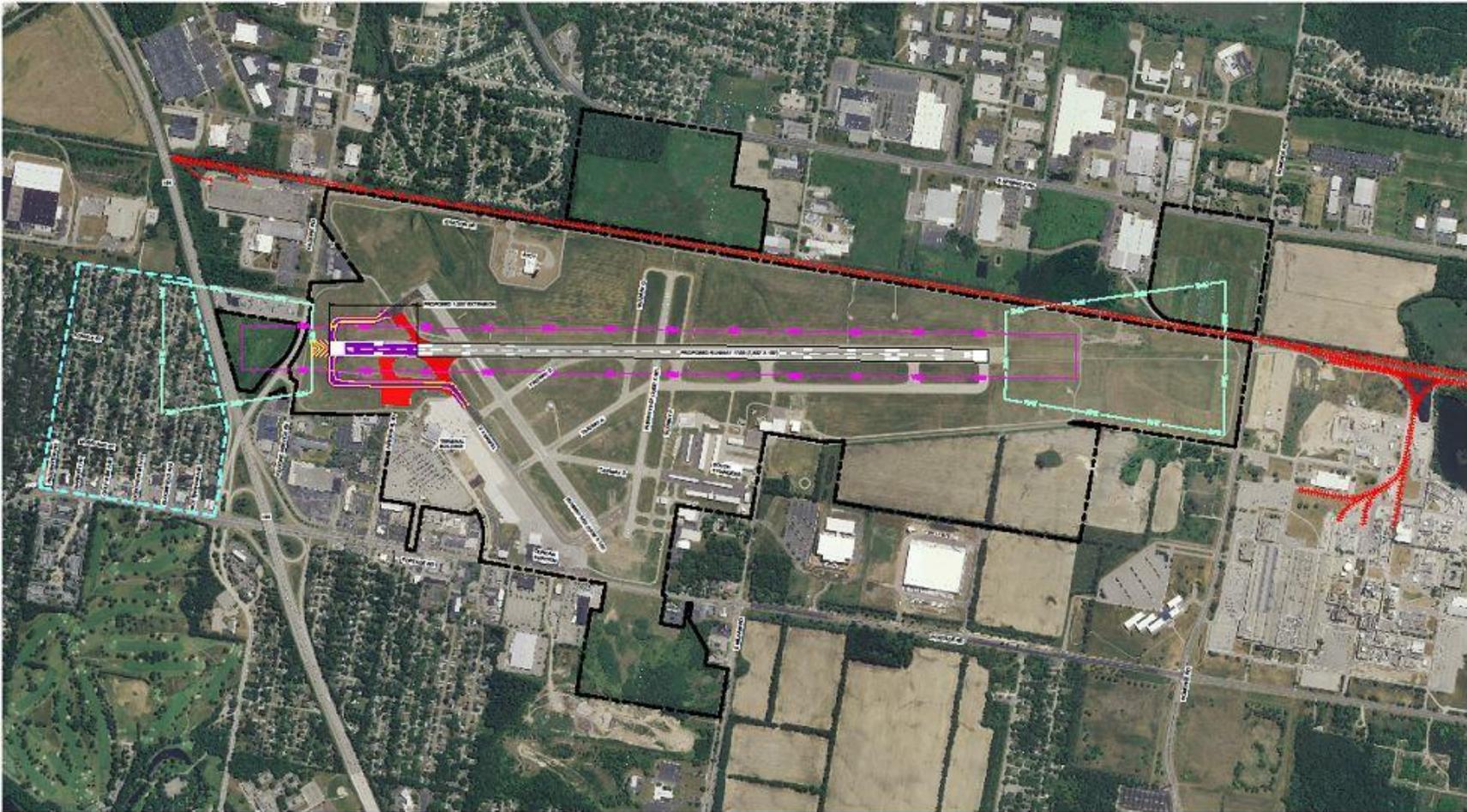
	<p align="center"><b>KALAMAZOO/BATTLE CREEK INTERNATIONAL AIRPORT RUNWAY BUILD ALTERNATIVE 2 17-35 - 1,150' EXTENSION</b> KALAMAZOO, MICHIGAN</p>	<p align="center"><b>LEGEND</b></p>		
		<ul style="list-style-type: none"> <li> RUNWAY PROTECTION ZONE</li> <li> RUNWAY SAFETY AREA</li> <li> EXISTING RAILROAD</li> <li> PROPOSED RAILROAD</li> <li> EXISTING AIRPORT PROPERTY LINE</li> <li> HISTORICAL DISTRICT</li> </ul>	<ul style="list-style-type: none"> <li> PROPOSED PAVEMENT</li> <li> PAVEMENT REMOVED</li> <li> POTENTIAL OBSTRUCTIONS</li> </ul>	

*Alternative 2 – 1,150-Foot Extension of Runway 17/35 with a Reconfigured Intersection of Taxiway C and Runway 17.*



	<p><b>KALAMAZOO/BATTLE CREEK INTERNATIONAL AIRPORT RUNWAY BUILD ALTERNATIVE 3 17-35 - 1,000' EXTENSION KALAMAZOO, MICHIGAN</b></p>	<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li><span style="color: cyan;">—</span> RUNWAY PROTECTION ZONE</li> <li><span style="color: magenta;">—</span> RUNWAY SAFETY AREA</li> <li><span style="color: red;">     </span> EXISTING RAILROAD</li> <li><span style="color: orange;">     </span> PROPOSED RAILROAD</li> <li><span style="color: black;">- - -</span> EXISTING AIRPORT PROPERTY LINE</li> <li><span style="color: cyan;">---</span> HISTORICAL DISTRICT</li> </ul>	<ul style="list-style-type: none"> <li><span style="color: purple;">■</span> PROPOSED PAVEMENT</li> <li><span style="color: red;">■</span> PAVEMENT REMOVED</li> <li><span style="color: yellow;">●</span> POTENTIAL OBSTRUCTIONS</li> </ul>	<p style="text-align: right; font-size: small;">MAG. DEC.</p>  <p style="text-align: center;">0      800      1600 SCALE</p>
		<p style="text-align: center;">PROPOSED 1,000' EXTENSION</p> <p style="text-align: center;">EXISTING RUNWAY 1735 (7,800' X 150')</p>		

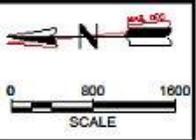
*Alternative 3 – 1,000-Foot Extension of Runway 35.*



**KALAMAZOO/BATTLE CREEK  
INTERNATIONAL AIRPORT RUNWAY  
BUILD ALTERNATIVE 4  
17-35 - 1,000' EXTENSION  
KALAMAZOO, MICHIGAN**

- LEGEND**
- RUNWAY PROTECTION ZONE
  - RUNWAY SAFETY AREA
  - EXISTING RAILROAD
  - PROPOSED RAILROAD
  - EXISTING AIRPORT PROPERTY LINE
  - HISTORICAL DISTRICT

- PROPOSED PAVEMENT
- PAVEMENT REMOVED
- POTENTIAL OBSTRUCTIONS



Alternative 4 – 1,000-Foot Extension of Runway 17 with a Reconfigured Intersection of Taxiway C and Runway 17.

**Appendix C.      Coordination with Official with Jurisdiction**



# APPLICATION FOR SHPO SECTION 106 CONSULTATION

Submit one application for each project for which comment is requested. Consult the *Instructions for the Application for SHPO Section 106 Consultation Form* when completing this application.

Mail form, all attachments, and check list to: Michigan State Historic Preservation Office, 300 North Washington Square, Lansing, MI 48913

## I. GENERAL INFORMATION

- New submittal
- More information relating to SHPO ER# [SHPO Project #](#)
- Submitted under a Programmatic Agreement (PA)  
PA Name/Date: [PA name/date, if applicable](#)

a. **Project Name:** **Kalamazoo/Battle Creek International Airport Runway 17-35 Extension**

b. **Project Municipality:** City of Kalamazoo, City of Portage

c. **Project Address (if applicable):** Airport address: 5235 Portage Road, Portage, MI. Project activities proposed for nearby properties in two clusters. The north cluster of properties is generally bound by Portage Road at the west, Paddington Road at the north, Pennway Road at the east, and the northern airport property boundary at the south. The south cluster of properties is generally bound by the airport property and Romence Road at the north, Sprinkle Road at the east, the Pfizer property at the south, and Portage Road at the west.

d. **County:** Kalamazoo County

## II. FEDERAL AGENCY INVOLVEMENT AND RESPONSE CONTACT INFORMATION

a. **Federal Agency:** Federal Aviation Administration (FAA)

**Contact Name:** Guadalupe Cummins

**Contact Address:** 11677 S. Wayne Road **City:** Romulus **State:** Michigan **Zip** 48174

**Email:** [guadalupe.cummins-sanchez@faa.gov](mailto:guadalupe.cummins-sanchez@faa.gov)

**Specify the federal agency involvement in the project:** Lead federal agency responsible for funding (through the Airport Improvement Project (AIP) and approval.

b. **If HUD is the Federal Agency: 24 CFR Part 50**  **or Part 58**

**Responsible Entity (RE):** [Name of the entity that is acting as the Responsible Entity](#)

**Contact Name:** [RE Contact name](#)

**Contact Address:** [RE mailing address](#) **City:** [RE city](#) **State:** [RE State](#) **Zip:** [RE zip code](#)

**RE Email:** [RE contact's email](#) **Phone:** [RE contact's phone #](#)

c. **State Agency Contact (if applicable):** Michigan Department of Transportation, Office of Aeronautics

**Contact Name:** Steve Houtteman, Aeronautics Environmental Specialist

**Contact Address:** 2700 Port Lansing Road **City:** Lansing **Zip:** 48906-2160

**Email:** [HouttemanS@michigan.gov](mailto:HouttemanS@michigan.gov) **Phone:** 616-299-2654

d. **Applicant (if different than federal agency):** [Name of Applicant's agency/firm](#)

**Contact Name:** [Applicant contact's name](#)

**Contact Address:** [Applicant contact's mailing address](#) **City:** [Applicant's city](#) **State:** [Applicant contact's state](#)

**Zip:** [Applicant contact's zip code](#)

**Email:** [Applicant contact's email](#) **Phone:** [Applicant contact's phone #](#)

e. **Consulting Firm (if applicable):** Mead & Hunt, Inc.

**Contact Name:** Emily Pettis

**Contact Address:** 2440 Deming Way **City:** Middleton **State:** WI **Zip:** 53562

**Email:** [emily.pettis@meadhunt.com](mailto:emily.pettis@meadhunt.com) **Phone:** 608-273-6380



## APPLICATION FOR SHPO SECTION 106 CONSULTATION

### III. PROJECT INFORMATION

#### a. Project Location and Area of Potential Effect (APE)

i. **Maps.** Please indicate all maps that will be submitted as attachments to this form.

- Street map, clearly displaying the direct and indirect APE boundaries
- Site map
- USGS topographic map Name(s) of topo map(s): [Name\(s\) of topo map\(s\)](#)
- Aerial map
- Map of photographs
- Other: Map of obstructions within the Bloomfield Subdivision Historic District

ii. **Site Photographs**

iii. **Describe the APE:**

The Area of Potential Effect (APE) includes 24 full parcels to the north and south of the airport that are not located within the district boundaries, the Bloomfield Subdivision Historic District (encompassing all 318 contributing and noncontributing resources), and areas directly impacted by tree removals, railroad realignment, and installation of new lighting. In the residential area to the north of the Kalamazoo/Battle Creek International Airport (Airport), the APE was expanded to account for the full extent of the potentially eligible Bloomfield Subdivision Historic District (District) to identify effects to the District as a historic property. As such, the previously recorded resource P51433 at 1936 Paddington Road, located within the District, is recommended as noncontributing to the District and is not assessed for project effects, as there are no tree removals nor any other proposed activity on or adjacent to the resource that has potential to cause an adverse effect to P51433.

iv. **Describe the steps taken to define the boundaries of the APE:**

The APE was defined to include parcels with complete and/or partial removal of obstructions and those adjacent to proposed rail realignment. It also includes those areas for proposed light installation. As this is an obstruction removal project, noise impacts were not a consideration in defining the APE.

#### b. Project Work Description

Describe all work to be undertaken as part of the project:

Project work includes the complete and/or partial removal of obstructions determined to be within the Airport runway approach sightline for Runway 17 (north of the airport) or for Runway 35 (south of the Airport) and will require acquisition of avigation easements from select property owners. Also proposed is the installation of new 200-foot Medium Intensity Approach Lighting System With Runway Alignment Indicator Lights (MALSR) lighting towers to the southeast of the Airport property, and relocation of a portion of the existing Norfolk Southern rail line to accommodate the MALSR lighting towers and necessary vertical clearance. The project is funded in part by the Federal Aviation Administration (FAA) and Michigan Department of Transportation (MDOT).

Mead & Hunt was retained to complete the architecture/history work, with the exception of the Pfizer property, which is partially location in the APE. Pfizer retained Golder, Inc. to complete cultural resource investigations on their property. The Golder report is included under this cover. Mead & Hunt was not responsible for survey and evaluation of above-ground resources within Pfizer and was not granted access to the property.

### IV. IDENTIFICATION OF HISTORIC PROPERTIES

#### a. Scope of Effort Applied

i. **List sources consulted for information on historic properties in the project area** (including but not limited to SHPO office and/or other locations of inventory data).

Mead & Hunt conducted in-person research that included the following repositories: Michigan State Historic Preservation Office (SHPO), the Zhang Legacy Collections Center at Western Michigan University, and Kalamazoo Public Library (Central Library Branch). Email or telephone consultation was conducted



# APPLICATION FOR SHPO SECTION 106 CONSULTATION

with Sharon Ferraro, Historic Preservation Coordinator at the City of Kalamazoo, and Steve Rossio at the Portage District Library. Online research was conducted across a variety of sources.

- ii. Provide documentation of previously identified sites as attachments.
- iii. **Provide a map** showing the relationship between the previously identified properties and sites, your project footprint and project APE.
- iv. Have you reviewed existing site information at the SHPO:  Yes  No
- v. Have you reviewed information from non-SHPO sources:  Yes  No

## b. Identification Results

### i. Above-ground Properties

A. Attach the appropriate Michigan SHPO Architectural Identification Form for each resource or site 50 years of age or older in the APE. Refer to the *Instructions for the Application for SHPO Section 106 Consultation Form* for guidance on this.

B. **Provide the name and qualifications of the person who made recommendations of eligibility for the above-ground identification forms.**

**Name** Emily Pettis **Agency/Consulting Firm:** Mead & Hunt, Inc.

Is the individual a 36CFR Part 61 Qualified Historian or Architectural Historian  Yes  No

Are their credentials currently on file with the SHPO?  Yes  No

If NO attach this individual's qualifications form and resume.

ii. **Archaeology** (complete this section if the project involves temporary or permanent ground disturbance) Submit the following information using attachments, as necessary.

A. **Attach Archaeological Sensitivity Map.**

B. **Summary of previously reported archaeological sites and surveys:**

See Section 4.0 Literature Review (pages 5-7) in Attachment E Phase I Archaeological Survey by Lawhon for a summary and tables of previously reported archaeological sites and surveys.

C. **Town/Range/Section or Private Claim numbers:** Township 3S, Range 11W, Sections 2, 11, 12, 13

D. **Width(s), length(s), and depth(s) of proposed ground disturbance(s):** Width and depth varies across the project area. However, project activities include approximately 42 acres of ground disturbance at an average depth of 42 inches.

E. **Will work potentially impact previously undisturbed soils?**  Yes  No

**If YES, summarize new ground disturbance:**

See attached Phase I Archaeological Survey by Lawhon.

F. **Summarize past and present land use:**

Area was patchwork of agricultural fields, woodlots, and swamps in the nineteenth century. No buildings or structures indicated in the project area based on historical maps and archival research. The Airport was present from the mid-1920s to the present day, expanding over the course of the twentieth century.

G. **Potential to adversely affect significant archaeological resources:**

Low  Moderate  High

**For moderate and high potential, is fieldwork recommended?**  Yes  No

**Briefly justify the recommendation:**

No archaeological sites identified. See attached Phase I Archaeological Survey by Lawhon.

H. **Has fieldwork already been conducted?**  Yes  No

**If YES:**

Previously surveyed; refer to A. and B. above.

Newly surveyed; attach report copies and provide full report reference here:

Lawhon & Associates, Inc. *Phase I Archaeology Survey, Runway 17/35 Extension and Railroad Relocation Project, Kalamazoo/Battle Creek International Airport, Kalamazoo County, Michigan, L&A Project No: 18-0486.* Prepared for Mead & Hunt, Inc. 11 September 2019.



## APPLICATION FOR SHPO SECTION 106 CONSULTATION

I. **Provide the name and qualifications of the person who provided the information for the Archaeology section:**

**Name:** Andrew R. Sewell, RPA and Justin P. Zink, RPA **Agency/Firm:** Lawhon & Associates, Inc.

Is the person a 36CFR Part 61 Qualified Archaeologist?  Yes  No

Are their credentials currently on file with the SHPO?  Yes  No

If NO, attach this individual's qualifications form and resume.

*Archaeological site locations are legally protected.*

*This application may not be made public without first redacting sensitive archaeological information.*

### V. IDENTIFICATION OF CONSULTING PARTIES

a. **Provide a list of all consulting parties**, including Native American tribes, local governments, applicants for federal assistance/permits/licenses, parties with a demonstrated interest in the undertaking, and public comment:

The following are consulting parties for this project:

- Milwood Neighborhood Association
- Property owners of parcels where project activities are proposed to occur
- Sharon Ferraro, Historic Preservation Coordinator, Community Planning and Development, City of Kalamazoo (245 North Rose, Suite 101, Kalamazoo, MI 49007)
- Brian Conway, State Historic Preservation Officer, SHPO, State Housing Development Authority (735 E. Michigan Avenue, Lansing, Michigan 48909)
- Steve Houtteman, Aeronautics Environmental Specialist, Project Support Unit - Office of Aeronautics, MDOT (2700 Port Lansing Road, Lansing, MI 48906)
- Tony Duffiney, State Director, United States Department of Agriculture – Animal and Plant Health Inspection Service (USDA – APHIS) Wildlife Services (2803 Jolly Road, Suite 100, Okemos, MI 48864)
- Jim Watling, Supervisor, Michigan Department of Environment, Great Lakes, and Energy, Water Resources Division, Transportation Review Unit (525 W Allegan Street, Lansing, MI 48933)
- Charlie Simon, Chief, U.S. Army Corps of Engineers, Detroit District, Regulatory & Permits (477 Michigan Avenue, Room 603, Detroit, MI 48226-2550)
- James K. Joseph, Regional Director, Federal Emergency Management Agency, Region 5 (536 South Clark Street, 6th Floor, Chicago, Illinois 60605)
- Jean Gagliardo, District Conservationist, USDA, Natural Resource Conservation Service, Portage Service Center (5950 Portage Road, Portage, MI 49002)
- Scott Hicks, Field Office Supervisor, U.S. Fish & Wildlife - Michigan Field Office (2651 Coolidge Road, Suite 101, East Lansing, MI 48823)
- Kenneth Westlake, Chief, Environmental Protection Agency Region 5, National Environment Policy Act Implementation Section (77 West Jackson Boulevard, Chicago, Illinois, 60604)
- Rebekah Kik, Director, Community Planning & Development, City of Kalamazoo (415 E Stockbridge Avenue, Kalamazoo, MI 49001)
- Chris Forth, Deputy Director of Planning, Department of Community Development, Planning (7900 S. Westnedge Avenue, Portage, MI 49002)
- Jodi Stefforia, Planning & Zoning Administrator, Charter Township of Comstock (6138 King Hwy, Kalamazoo, MI 49048)
- John Speeter, Supervisor, Pavilion Township (7510 East Q Avenue, Scotts, MI 49088)
- Patrick Hudson, Planning & Zoning Administrator, Kalamazoo Charter Township (1720 Riverview Drive, Kalamazoo, MI 49004)
- Lotta Jarnefelt, Director, Planning & Development Department, Kalamazoo County (201 West Kalamazoo Avenue, Kalamazoo, MI 49007)
- Shannon Hanna, Natural Resources Deputy, Michigan Department of Natural Resources, Executive Division (525 W Allegan Street, Lansing, MI 48933)
- Bay Mills Indian Community of Michigan (12140 West Lakeshore Drive, Brimley, MI 49175)



## APPLICATION FOR SHPO SECTION 106 CONSULTATION

- Grand Traverse Band of Ottawa and Chippewa Indians of Michigan (2605 NW Bayshore Drive, Suttons Bay, MI 49682)
- Hannahville Indian Community of Michigan (N14911 Hannahville B1 Road, Wilson, MI 49896-9728)
- Huron Potawatomi, Inc (2221 1-1/2 Mile Road, Fulton, MI 49052)
- Keweenaw Bay Indian Community of Michigan (Keweenaw Bay Tribal Center, 107 Beartown Road, Baraga, MI 49908)
- Lac Vieux Desert Band of Lake Superior Chippewa of Michigan (4698 US 45, Watersmeet, MI 49969)
- Little River Band of Ottawa Indians (2608 Government Center Drive, Manistee, MI 49660)
- Little Traverse Bay Bands of Odawa Indians (7500 Odawa Circle, Harbor Springs, MI 49740-9692)
- Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians (2872 Mission Drive, Shelbyville, MI 49344)
- Pokagon Band of Potawatomi Indians of Michigan (58620 Sink Road, Dowagiac, MI 49047)
- Saginaw Chippewa Indian Tribe of Michigan (7070 East Broadway, Mt. Pleasant, MI 48858)
- Sault-Ste. Marie Tribe of Chippewa Indians of Michigan (523 Ashman Street, Sault Ste. Marie, MI 49783)
- Burt Lake Band of Ottawa and Chippewa Indians (6461 Brutus Road, Box 206, Brutus, MI 49716)
- Grand River Band of Ottawa Indians (1316 Front Ave NW, Grand Rapids, MI 49504)
- Nottawaseppi Huron Band of Potawatomi (1485 Mno-Bmadzewen Way, Fulton, MI 49052)

b. **Provide a summary of consultation with consultation parties:**

As part of early agency coordination, the project team solicited consulting parties to identify key issues that will need to be addressed during the National Environmental Policy Act (NEPA) process. See Attachment C for correspondence documents described below.

Unless otherwise noted, letters dated April 3, 2019, were sent to representatives of Native American Tribes and government agencies listed above in Section V.a asking for comments on specific areas of concern/regulatory jurisdictions, specific benefits of the project for that party or to the public, any available technical information/data for the project site, and potential mitigation/permitting requirements for project implementation. Government agency representatives listed above were invited to an in-person meeting in Kalamazoo on June 26, 2019, where Bill Ballard of Mead & Hunt and Ernest Gubry of FAA invited comment on each agency's potential concerns about anticipated impacts and mitigations requirements.

Milwood property owners and the Milwood Neighborhood Association have been consulted as part of the Environmental Assessment (EA) process. Representatives of the project team have contacted and interacted with these consulting parties through a public involvement meeting on February 26, 2020, an update letter to the Milwood Neighborhood Association dated June 2020, and another update letter to Milwood property owners dated October 2020. An additional public involvement meeting will be scheduled for early 2022.

Email communication between Mead & Hunt Historian Brian Matuk and City of Kalamazoo Historic Preservation Coordinator Sharon Ferraro in December 2019, September and October 2020, and February 2021 assisted with identifying historic properties within the APE. Draft Section 106 findings were sent via email to Sharon Ferraro in October 2021, and were discussed during a Microsoft Teams call between Ms. Ferraro and project team members on October 13, 2021.

c. **Provide summaries of public comment and the method by which that comment was sought:**

Public comment was received through emails to Craig A. Williams, AAE, Airport Director, who fielded the correspondence.

## VI. DETERMINATION OF EFFECT

**Guidance for applying the Criteria of Adverse Effect can be found in *the Instructions for the Application for SHPO Section 106 Consultation Form*.**

a. **Basis for determination of effect:**

Mead & Hunt historians investigated all properties within the APE, with the exception of the Pfizer Inc.- owned parcels near the southern end of the airport property. Golder, Inc. was retained by Pfizer to complete the



## APPLICATION FOR SHPO SECTION 106 CONSULTATION

identification, evaluation, and effects analysis for project activities proposed to occur on this multi-parcel property. Please reference the Golder report and its supplemental memorandum for these findings (Attachment G).

Field survey and research efforts undertaken by Mead & Hunt historians determined there is one historic property located within the APE: the Bloomfield Subdivision Historic District (District). A post-World War II (postwar) residential subdivision located in the Milwood neighborhood north of the Airport property, the identified resource was recommended eligible for listing in the National Register of Historic Places (National Register) as a result of this study. The District encompasses 318 total resources across approximately 106 acres of land, and was found to be significant under National Register *Criterion A* as the best representation of a planned subdivision reflective of the important southward growth trend in the Kalamazoo/Portage area during the postwar era. The proposed project activities include removal of select trees on properties within the historic district; no buildings will be demolished as part of the project scope. The Criteria of Adverse Effects were applied to the proposed project as it relates to the District.

Under Section 106 regulations—36 CFR Part 800.5(a)(1)—“adverse effects” occur when an undertaking may directly or indirectly alter characteristics of a historic property that qualify it for inclusion in the National Register. 36 CFR Part 800.5(a)(2) provides seven examples of adverse effects on historic properties. The seven examples of adverse effects include:

- (i) Physical destruction of or damage to all or part of the property;
- (ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary's standards for the treatment of historic properties (36 CFR part 68) and applicable guidelines;
- (iii) Removal of the property from its historic location;
- (iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
- (v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;
- (vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian Tribe or Native Hawaiian Organization; and
- (vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

The proposed project will not cause a physical change to any buildings or structures on the property; therefore, examples (i) and (ii) do not apply. The proposed project will not remove buildings or structures located within the District from their historic locations; therefore, example (iii) does not apply. The proposed project will result in the removal of several trees on private property and tree lawns within the District, having potential to impact the historic setting of the District; therefore, example (iv) applies. The proposed project will not introduce visual, atmospheric or audible elements that diminish the integrity of the District's significant historic features; therefore, example (v) does not apply. The proposed project will not result in neglect of the properties or a transfer of ownership; therefore, examples (vi) and (vii) do not apply.

Only example (iv) applies and is discussed below as it relates to proposed tree removals within the District.



# APPLICATION FOR SHPO SECTION 106 CONSULTATION

## Bloomfield Subdivision Historic District

*Example (iv) Change of the character of the property's use or physical features within the property's setting that contribute to its historic significance*

The proposed project includes the removal or partial removal (tree trimming) of select trees within the District. These trees are located within tree lawns, within front yards where some blocks have trees planted in rows behind the sidewalk, or within private residential backyards. See Attachment A for a localized APE map that shows obstruction points identified for removal and partial removal within the District. Photographs of the district streetscape are presented in Attachment J.

### Analysis

Platted between 1948 and 1955, the Bloomfield Subdivision reflects the significant local trend of southward growth of Kalamazoo's residential and industrial areas during the postwar era. The District stands out from other postwar residential subdivisions of the period in the larger Kalamazoo/Portage area as it was one of the largest to have been constructed during the period, and was platted with an integrated multi-block commercial shopping center along Portage Street—the major thoroughfare along the subdivision's western boundary.

The District was not found to reflect any significant trend in residential subdivision design. Unlike many other postwar developments in the region, the subdivision's layout is indistinguishable from other subdivisions developed prior to World War II and distinct from other postwar Kalamazoo/Portage area subdivisions that better display typical postwar layout concepts. Rather than a curvilinear or geometric street network, the Bloomfield Subdivision continued the linear street layout as the Interwar-platted Lakeway Park Subdivision to the north. Historic photographs suggest rows of trees were planted in the tree lawns or front yards of most houses around the time of construction—many of which are extant.

As the District is not significant as having a planned landscape, its trees serve as just one of many components of the district's setting; others being the street layout as platted, uniform setbacks, postwar architecture, and distinct three-part organization of land uses. Most blocks of the Bloomfield Subdivision would still retain a general mature tree canopy even after the select trees or branches are removed as part of this project. More importantly, the overall setting of the District would not be compromised, as it would still retain other elements that cumulatively convey a feeling of time and place. As such, proposed tree removals would not change the character of the District's residential use, or change the physical features that contribute to its overall historic significance related to local patterns of postwar residential development.

### b. Determination of effect

- No historic properties will be affected**
- Historic properties will be affected** and the project will (check one):
  - have **No Adverse Effect** on historic properties within the APE.
  - have an **Adverse Effect** on one or more historic properties in the APE and the federal agency, or federally authorized representative, will consult with the SHPO and other parties to resolve the adverse effect under 800.6.
- More Information Needed:** We are initiating early consultation. A determination of effect will be submitted to the SHPO at a later date, pending results of survey.

Federally Authorized Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Type or Print Name: \_\_\_\_\_

Title: \_\_\_\_\_



## APPLICATION FOR SHPO SECTION 106 CONSULTATION

### ATTACHMENT CHECKLIST

#### Identify any materials submitted as attachments to the form:

- Additional federal, state, local government, applicant, consultant contacts
- Maps of project location
  - Number of maps attached: (3): APE Map; Bloomfield Subdivision Finding of Effect Map; Previously Recorded Resources
- Site Photographs
  - Map of photographs
- Plans and specifications
- Other information pertinent to the work description: Proposed Action Map for Runway Extension, Railroad Relocation, and MALSR lighting installation
- Documentation of previously identified historic properties
- Architectural Properties Identification Forms
- Map showing the relationship between the previously identified properties, your project footprint, and project APE
- Above-ground qualified person's qualification form and resume
- Archaeological sensitivity map
- Survey report
- Archaeologist qualifications and resume
- Other: Lawhon Report, Golder Report, Consultation Records, Previously Recorded Resource Records, Section 106 Above-Ground Identification Table



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Detroit Airports District Office  
11677 South Wayne Road  
Suite 107  
Romulus, MI 48174

April 3, 2019

Chairperson  
Bay Mills Indian Community of Michigan  
12140 West Lakeshore Drive  
Brimley, MI 49175

Re: Early Coordination Review of Proposed Improvements  
Kalamazoo/Battle Creek International Airport, Kalamazoo, Michigan

Dear Chairperson:

On behalf of the Federal Aviation Administration (FAA), this letter serves to inform you of a project planned for the Kalamazoo/Battle Creek International Airport (Airport), Kalamazoo, Michigan.

The FAA has authorized the Airport to explore the potential impacts of a 1,150-foot extension of Runway 17/35 and realignment of Taxiway C. The proposed project would extend the existing 6,502-foot runway to an overall runway length of 7,652 feet (150' to the north and 1,000' to the south) and reconfigure Taxiway C at the approach end of Runway 17.

A summary of the proposed action includes:

- Extend Runway 17 by 150 feet
- Extend Runway 35 by 1,000 feet
- Realign Taxiway C at the approach end of Runway 17
- Extend parallel Taxiway B to match Runway 17/35 extension
- Relocate an existing railroad spur (owned by Norfolk Southern) on the south end of the Airport, including land acquisition
- Obstruction clearing on Runway 17 and Runway 35
- Preliminary aviation easements/land acquisition in both Runway 17 and Runway 35 approaches for obstruction clearing
- Relocate existing aircraft navigational aids

«F4»

April 3, 2019

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- Noise analysis to lift/modify an existing noise curfew for aircraft operating at night
- Development of new aircraft procedures for Runway 17/35
- Completion a hazardous materials Phase I and Phase II Environmental Site Assessments on acquired property

Major ground disturbance activities include construction of a runway extension, taxiway reconfiguration, relocation of a railroad, addition of lighting facilities, and relocation of existing aircraft navigational aids. The enclosed figures illustrate the site location and approximate project area limits.

The FAA would be pleased to receive your comments regarding this project, information you wish to share pertaining to archaeological or historical resources located in the project area, or notification that you would like to become an interested party under Section 106 of the National Historic Preservation Act. In order to sufficiently address key project issues and maintain the project schedule, your comments are requested by **May 20, 2019**.

Your response should be addressed to:

Mr. Ernest Gubry  
Federal Aviation Administration  
Detroit Airports District Office  
11677 South Wayne Road, Suite 107  
Romulus, Michigan 48174  
(734) 229-2905 / Ernest.Gubry@faa.gov

Sincerely,



Ernest Gubry  
Environmental Protection Specialist

Enclosures

cc: Dave Reid, Airport Director  
William Ballard, Mead & Hunt



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Detroit Airports District Office  
11677 South Wayne Road  
Suite 107  
Romulus, MI 48174

April 3, 2019

Tony Duffiney  
State Director  
USDA - APHIS Wildlife Services  
2803 Jolly Road, Suite 100  
Okemos, MI 48864

Re: Early Coordination Review of Proposed Improvements  
Kalamazoo/Battle Creek International Airport, Kalamazoo, Michigan

Dear Mr. Duffiney:

The Federal Aviation Administration (FAA) has authorized the Kalamazoo/Battle Creek International Airport (Airport) to explore the potential impacts of a 1,150-foot extension of Runway 17/35 and realignment of Taxiway C. The proposed project would extend the existing 6,502-foot runway to an overall runway length of 7,652 feet (150' to the north and 1,000' to the south) and reconfigure Taxiway C at the approach end of Runway 17.

The extension of Runway 17/35 would provide additional length to accommodate the commercial service aircraft that operate at the Airport. The Taxiway C realignment would correct geometry deficiencies and improve situational awareness of aircraft operating on the airfield.

To proceed with the proposed action, an Environmental Assessment (EA) will be necessary to define and analyze potential impacts of the proposed action and evaluate any reasonable alternatives. This EA will also be developed to further determine whether any potential impacts are significant enough to necessitate an Environmental Impact Statement (EIS). During the EA project, investigations will be conducted to identify potential Social, Economic, and Environmental (SEE) impacts related to the improvements being proposed. These SEE impacts will be documented and considered as required by the National Environmental Policy Act (NEPA).

The FAA is the lead federal agency and as such, the EA will be prepared in accordance with NEPA, FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*.

Tony Duffiney

April 3, 2019

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It should be noted that the FAA does not necessarily endorse the proposed project, nor have they agreed to a Preferred Alternative. The FAA has merely directed the Airport to fully evaluate the Purpose and Need, any prudent and feasible alternatives including the No-Build Alternative, and to identify associated impacts in order to select a Preferred Alternative. A summary of the proposed action includes:

- Extend Runway 17 by 150 feet
- Extend Runway 35 by 1,000 feet
- Realign Taxiway C at the approach end of Runway 17
- Extend parallel Taxiway B to match Runway 17/35 extension
- Relocate an existing railroad spur (owned by Norfolk Southern) on the south end of the Airport, including land acquisition
- Obstruction clearing on Runway 17 and Runway 35
- Preliminary aviation easements/land acquisition in both Runway 17 and Runway 35 approaches for obstruction clearing
- Relocate existing aircraft navigational aids
- Noise analysis to lift/modify an existing noise curfew for aircraft operating at night
- Development of new aircraft procedures for Runway 17/35
- Completion a hazardous materials Phase I and Phase II Environmental Site Assessments on acquired property

As part of our early agency coordination, we are attempting to identify key issues that will need to be addressed during the NEPA process. To accomplish this, your organization's comments are being requested for the above referenced project as it relates to the following:

- Your specific areas of concern / regulatory jurisdiction
- Specific benefits of the project for your organization or to the public
- Any available technical information / data for the project site
- Potential mitigation / permitting requirements for project implementation

For your convenience, several maps and figures are enclosed that illustrate the site location and approximate project area limits. In order to sufficiently address key project issues and maintain the project schedule, your comments are requested by **May 20, 2019**.

Please send your written or email comments to:

MEAD & HUNT, Inc.  
William Ballard, AICP  
2605 Port Lansing Road  
Lansing, MI 48906  
517-321-8334  
william.ballard@meadhunt.com

Tony Duffiney

April 3, 2019

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In addition to the early coordination request described above, the Airport will be holding a future on-site agency scoping meeting. The purpose of this meeting is to provide project background information, tour the project area, discuss agency concerns, and solicit comments to assist the Airport and the FAA in developing a comprehensive EA. The exact date and time of the on-site meeting has not been determined but is tentatively scheduled for the month of June 2019. An official invite will be sent to your organization when a date has been selected.

Sincerely,

A handwritten signature in cursive script that reads "Ernest Gubry". The signature is written in black ink on a white background.

Ernest Gubry

Environmental Protection Specialist, Detroit - ADO

734-229-2905

Enclosures

Cc: Dave Reid, Airport Director  
William Ballard, Mead & Hunt

### Agency & Political Coordination - Master List

Salutation line	Contact Name	Title	Organization	Address	City, State, Zip	Phone
Mr. Duffiney	Tony Duffiney	State Director	USDA - APHIS Wildlife Services	2803 Jolly Rd., Suite 100,	Okemos, MI 48864	517-336-1928
Mr. Watling	Jim Watling	Supervisor	EGLI, Water Resources Division, Transportation Review Unit	525 W Allegan St	Lansing, MI 48933	517-599-9002
Mr. Simon	Charlie Simon	Chief	U.S. Army Corps of Engineers, Detroit District, Regulatory & Permits	477 Michigan Avenue, Room 603	Detroit, MI 48226-2550	313-226-2218
Mr. Joseph	James K. Joseph	Regional Director	Federal Emergency Management Agency, Region 5	536 South Clark Street, 6th Floor	Chicago, Illinois 60605	312-408-5500
Ms. Gagliardo	Jean Gagliardo	District Conservationist	USDA, Natural Resource Conservation Service, Portage Service Center	5950 Portage Rd	Portage, MI 49002	269-382-5121 ext 3
Mr. Hicks	Scott Hicks	Field Office Supervisor	US Fish and Wildlife - Michigan Field Office	2651 Coolidge Road, Suite 101	East Lansing, Michigan 48823	517-351-6274
Mr. Westlake	Mr. Kenneth Westlake	Chief	EPA Region 5 , NEPA Implementation Section	77 West Jackson Boulevard	Chicago, Illinois 60604	
Ms. Hanna	Shannon Hanna	Natural Resources Deputy	Michigan Department of Natural Resources, Executive Division	525 W Allegan St	Lansing, MI 48933	517-284-5810
Mr. Conway	Brian Conway	State Historic Preservation Officer	Michigan State Historic Preservation Office, State Housing Development Authority	735 E Michigan Ave	Lansing, MI 48909	
Mr. Speeter	John Speeter	Supervisor	Pavilion Township	7510 East Q Ave	Scotts, MI 49088	
Ms. Stefforia	Jodi Stefforia	Planning & Zoning Administrator	Charter Township of Comstock	6138 King Hwy	Kalamazoo, MI 49048	
Mr. Hudson	Patrick Hudson	Planning & Zoning Administrator	Kalamazoo Charter Township	1720 Riverview Dr	Kalamazoo, MI 49007	
Ms. Jarnefelt	Lotta Jarnefelt	Director	Kalamazoo County, Planning & Development Department	201 West Kalamazoo Ave	Kalamazoo, MI 49007	
Mr. Forth	Chris Forth	Deputy Director of Planning	City of Portage, Department of Community Development, Planning	7900 S Westnedge Ave	Portage, MI 49002	
Ms. Kik	Rebekah Kik	Director	City of Kalamazoo, Community Planning and Development	415 E Stockbridge Ave	Kalamazoo, MI 49001	

### Native American Coordination - Master List

Salutation line	Contact Name	Title	Organization	Address	City, State, Zip	Phone
Chairperson			Bay Mills Indian Community of Michigan	12140 West Lakeshore Drive	Brimley, MI 49175	
Chairperson			Grand Traverse Band of Ottawa and Chippewa Indians of Michigan	2605 NW Bayshore Drive	Suttons Bay, MI 49682	
Chairperson			Hannahville Indian Community of Michigan	N14911 Hannahville B1 Road	Wilson, MI 49896-9728	
Chairperson			Huron Potawatomi, Inc	2221 1-1/2 Mile Road	Fulton, MI 49052	
Chairperson			Keweenaw Bay Indian Community of Michigan	Keweenaw Bay Tribal Center, 107 Beartown Road	Baraga, MI 49908	
Chairperson			Lac Vieux Desert Band of Lake Superior Chippewa of Michigan	4698 US 45	Watersmeet, MI 49969	
Chairperson			Little River Band of Ottawa Indians	2608 Government Center Drive	Manistee, MI 49660	
Chairperson			Little Traverse Bay Bands of Odawa Indians	7500 Odawa Circle	Harbor Springs, MI 49740-9692	
Chairperson			Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians	2872 Mission Dr	Shelbyville, MI 49344	
Chairperson			Pokagon Band of Potawatomi Indians of Michigan	58620 Sink Road	Dowagiac, MI 49047	
Chairperson			Saginaw Chippewa Indian Tribe of Michigan	7070 East Broadway	Mt. Pleasant, MI 48858	
Chairperson			Sault-Ste. Marie Tribe of Chippewa Indians of Michigan	523 Ashman Street	Sault Ste. Marie, MI 49783	
Chairperson			Burt Lake Band of Ottawa and Chippewa Indians	6461 Brutus Road, Box 206	Brutus, MI 49716	
Chairperson			Grand River Band of Ottawa Indians	1316 Front Ave NW	Grand Rapids, MI 49504	



## Meeting Agenda

## AZO EA Agency Meeting

<b>Project Name:</b>	AZO Environmental Assessment
<b>Meeting Date / Time:</b>	June 26, 2019 / 1:00 PM

<b>Meeting Location:</b>	Kalamazoo/Battle Creek International Airport – Main Conference Room		
<b>Client:</b>	Kalamazoo/Battle Creek International Airport	<b>Mead &amp; Hunt Proj. No.:</b>	1113900-180195.01

1. Introductions
  
2. Team Roles / Contact Info
  - Airport (Amanda Woodin, 269-366-3001 / amwood@kalcounty.com)
    - Client, project oversight, approval authority
  - FAA (Ernest Gubry, 734-229-2905 / Ernest.Gubry@faa.gov)
    - Lead federal agency, project oversight, approval authority
  - Mead & Hunt (Bill Ballard, 517-321-8334 / william.ballard@meadhunt.com)
    - Consultant Project Mgr., preparation of the Environmental Assessment (EA)
  
3. Purpose of Meeting
  - Discuss the proposed airport improvements, anticipated impacts, agency concerns, mitigation requirements, and conduct a site visit
  - Working meeting / ask questions
  
4. Purpose and Need of Project
  - The purpose of the project is to provide an Airport facility that meets the demands of current and future users.
    - Meet the operational demands of existing and projected aircraft by providing additional length on Rwy 17/35.
      - The existing runway length (6,502 ft) requires most current / future commercial turbojet aircraft to make weight concessions in reduced passenger, cargo, and fuel loads to safely takeoff and land.
      - Need for additional length was identified in 2013 Master Plan.
    - Improve airfield movement by correcting geometry deficiencies associated with the intersection of Taxiway C and Runway 17.
      - Five runway incursions have been documented since 2008. (Runway incursions occur when an aircraft or vehicle mistakenly enters a runway.)
      - The 2017 Runway Incursion Mitigation (RIM) Study identified the existing intersection as deficient and recommended corrective action.

- Remove the existing noise curfew that limits nighttime operations.
  - Existing noise curfew at the Airport restricts aviation activity from 11:00 PM to 6:30 AM.
  - The noise curfew was established over 40 years ago and based on now retired aircraft. Aircraft today are much quieter and more efficient than when the noise curfew was first implemented.
  - Given the increasing demand for passenger service and the projected growth at the Airport, eliminating the noise curfew will provide airline and business passengers with more options and allow the commercial air carriers an opportunity to operate at full capacity.

#### 5. Alternatives Being Considered to Meet Purpose and Need of Project

- New airport location
- Use of other airports in the vicinity
- No Action Alternative (runway would remain in current condition)
- Build Alternatives:
  - 1,000-foot Runway Extension (150' on Rwy 17 end / 850' on Rwy 35 end)
  - 1,150-foot Runway Extension (150' on Rwy 17 end / 1000' on Rwy 35 end)
  - 1,000-foot Runway Extension of Runway 35
  - 1,000-foot Runway Extension of Runway 17
  - 650-foot Runway Extension of Runway 17
  - Runway 17/35 Realignment & Extension
  - Use of Engineered Material Arresting System (EMAS)
  - Declared Distances / Displaced Threshold
- Consideration of other Build Alternatives resulting from early agency scoping

#### 6. Purpose and Need Supports the 1,150-foot extension alternative

- Runway 17/35 would be extended by 1,150 feet (1,000 feet to the south, 150 feet to the north), providing an overall length of 7,652 (existing length is 6,502 ft)
- A summary of the proposed action includes:
  - Extend Runway 17 end by 150 feet
  - Extend Runway 35 end by 1,000 feet
  - Realign Taxiway C at the approach end of Runway 17
  - Extend parallel Taxiway B to match Runway 17/35 extensions
  - Relocate an existing railroad spur (owned by Norfolk Southern Railroad) on the south end of the Airport, including land acquisition
  - Seek preliminary aviation easements/land acquisition in both Runway 17 and Runway 35 approaches for obstruction clearing
  - Clear obstructions in Runway 17 and Runway 35 approaches

- Relocate existing airfield NAVAIDs
- Conduct noise analysis to lift/modify existing noise curfew for aircraft operating at night
- Develop new aircraft approach procedures for Runway 17/35
- Complete hazardous materials Phase I and Phase II Environmental Site Assessments on area of ground disturbance

## 7. Early Agency Coordination

- Letters sent out April 3rd. Requested comments by May 20th
- 17 different federal, state, local agencies were contacted (i.e. EPA, USFWS, Corps, EGLE (MDEQ), MDNR, City, County, Townships...)
- 15 Native American Tribes were contacted
- Responses to date:
  - USEPA – Variety of comments / information (contamination, noise, EJ, air quality, climate, invasive plant species, T&E species, sustainable development, water resources, BMP for construction).
  - Army Corps of Engineers – No authorization needed from the Corps, coordinate with EGLE.
  - EGLE – Submit a MIWaters request to start preliminary review.
  - USFWS – Project area falls within the range of the Indiana bat / Northern long-eared bat. If suitable habitat is removed, consultation under Section 7 of ESA is required.
  - Kalamazoo County – Project is included in County Master Plan, concerned with potential adverse impacts to adjacent residents / neighborhoods, agrees that newer aircraft have lower noise levels, project would improve airport for existing and future users.
  - Kalamazoo Metropolitan County Planning Commission - Include details on expected increased noise or other disturbances to the residents or traffic on the roads, including mitigation. Provide examples or statistics of the airport's role in the economic development of the region.
  - City of Portage – City owns property to be impacted by the project, provided design considerations for an existing 16-inch watermain along NSRR and Romence Rd, agreements are required for proposed RR crossings.

## 8. Current Work in Progress

- EA chapters
  - P&N chapter currently undergoing FAA legal review
  - Alternative Considered chapter under development
- Preliminary design of alternatives
- Land acquisition / easement negotiations
- Coordination with Pfizer, Mann + Hummel, and Norfolk Southern Railroad is ongoing
- Wetland delineation
- Biotic resources

- Phase I / II ESA (hazmat)
- Historic (above-ground)
- Archeology (shovel probes)
- Noise analysis / modeling
- Air quality / modeling
- Environmental work on Pfizer property being completed by Golder Associates

#### 9. Potential Impacts / Challenges to Date

- Public Involvement – potential obstruction removals in residential neighborhoods
- Property Impacts – potential land acquisitions / easements for railroad relocation and light lane extension (MALSR lights south of Romence Rd on Pfizer property)
- Wetland impacts – minor impacts due to railroad relocation

#### 10. Project Milestones / Tentative Schedule

- Public Meeting / Noise Mtg #1 – September 2019
- Public Meeting / Noise Mtg #2 – January 2020
- Draft EA available for public and agency review – August 2020
- Public Hearing – September 2020
- Final EA & FONSI – January 2021
- Land acquisition / easements completion – December 2022
- Final design completion – December 2022
- Construction start / completion – March 2024 thru November 2025

#### 11. Other Items

### **Purpose of an Environmental Assessment**

Federally funded airport improvements constitute a “Federal Action” and are subject to the requirements of the National Environmental Policy Act (NEPA).

The NEPA process addresses the impacts of federal actions on the human environment, including noise, socioeconomic, land use, air quality, and water quality. Before the FAA can approve a project, an EA is required to assess the potential social, environmental, and economic impacts.

The FAA as the Lead Federal Agency and the Airport as the project sponsor are preparing this EA to evaluate the potential environmental effects of the proposed Runway 17/35 extension to comply with NEPA requirements.

An EA typically takes between 12 to 18 months to complete.

Place highlighted text in this column.

## Environmental Assessment (EA) Public Meeting #1

*February 26, 2020*

*5:30 PM to 7:30 PM*



# Open House Stations

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## #1 About the Project

This station provides basic information about the proposed project including the project's history, why the project is needed, and a tentative project schedule.

## #2 Alternatives

This station has information about the "build" alternatives being considered during the Environmental Assessment (EA). These alternatives were selected from the approved 2013 Airport Master Plan and 2017 Runway Incursion Mitigation Study. They were chosen to meet the Purpose and Need of the project. All build alternatives are on display at this station including the Preliminary Preferred Alternative.

## #3 Property Impacts

Stop by this station for an overview of Federal Aviation Administration's criteria related to runway protection zones and obstructions. There is some preliminary information available based on the new aerial survey regarding potential impacts to property near the airport. The predominate obstructions identified off-airport property are trees.

## #4 Regulatory Requirements

This station has information about what an EA is, the regulatory requirements of an EA and why the Airport is completing one. The environmental categories being evaluated are also listed and a flowchart is provided to illustrate the steps involved in completing an EA project.

## #5 Environmental

This station has information about the environmental field investigations that have been conducted to date, including wetlands and other water resources, threatened and endangered species, and archeological resources. Information regarding upcoming technical work is also provided.

## #6 Noise Analysis

This station has detailed information about how the noise analysis will be conducted. This station provides definitions of terminology and noise metrics, discussion of the proposed noise modelling, and how noise impacts will be defined.

## #7 Public Comment

The comment area has paper comment forms for your use. Fill them out and leave them in the comment box or, if you prefer, take one with you and mail it back.

## **Kalamazoo/Battle Creek International Airport**

### **Update – Runway Extension Environmental Assessment**

Although it seems like our world has come to a stand still in many ways, time moves on regardless. We recognize that our neighbors value updates on our runway extension project and the Airport was graciously invited to come speak at a Milwood Neighborhood Association meeting this month. However, with the pandemic in play that was pushed to December. In lieu of meeting face-to-face, Airport staff thought we'd share an update on the Runway 17/35 Extension project

**Quick Project Synopsis:** The Federal Aviation Administration (FAA) authorized the Airport to explore the potential impacts of a 1,150-foot extension of Runway 17/35, and a realignment of Taxiway C. The project would extend the existing 6,502-foot runway to an overall runway length of 7,652 feet. Most of this extension (1000 feet) will be to the south, with the remaining length (150 feet) to the north to accommodate the Taxiway C realignment. This realignment is necessary to comply with updated FAA safety standards. The project can be boiled down to three phases — planning, design, and construction. The Airport is currently in the planning phase of this project and, more specifically in the Environmental Assessment (EA) portion to define and analyze potential impacts of the extension and evaluate any reasonable alternatives

**COVID-19 Impacts:** We were happy to host a public information session on February 26th at the Air Zoo. Attendance was high and good information was shared both ways. Though some of the planning processes have slowed due to impacts of operating in the pandemic and workloads in federal and state offices, work on the environmental assessment is ongoing and moving forward. We are fortunately in a phase of the project that accommodates remote assignments, and regular teleconferences remain scheduled to discuss various aspects of the project. Some studies have also been delayed, such as the noise analysis and air quality analysis, until the FAA can determine a more accurate projection of future aircraft activity.

**Cultural Resources and Historic Evaluations:** One component of the Environmental Assessment process is to identify any impacts to historically significant areas. As part of the process, the Michigan State Historic Preservation Office requested additional information regarding the Milwood Subdivision. Due to its age, Milwood is identified as a potential post-World War II neighborhood, requiring some additional studies. At the May Airport Board meeting, the Board approved the additional work, and it is now pending FAA approval. Once authorization is finalized, additional work associated with the post-World War II assessments will commence and the findings will be incorporated into the environmental assessment.

**Fieldwork and Technical Studies:** The consultant recently completed fieldwork associated with the identification of wetlands, threatened and endangered species, and hazardous materials. Current progress includes developing draft reports and coordinating with state and federal regulatory agencies regarding findings and approvals. The reports will be available for public review once they are finalized in the next several months.

**Obstruction Analysis:** As discussed during our open house in February, there are approximately 50 parcels in the Milwood Subdivision that we will need to coordinate with to address obstructions to the Runway 17 Approach Surface. The FAA is currently reviewing departure standards for Runway 35, which could identify additional obstructions in the Milwood area. Once this review is complete, we will move forward with addressing any identified obstructions.

**Tentative Project Schedule (subject to change):**

- Open House #1 project kickoff / introduction – Held February 26, 2020
- Open House #2 alternatives considered / noise analysis results – September 2020
- Draft EA available for public and agency review – November 2020
- Public Hearing – January 2021
- Final EA Report – April 2021
- Land acquisition & easements – Start February 2021 – Complete March 2022
- Final design complete – March 2022
- Construction start / completion – June 2024 thru November 2025

**MDOT Kilgore Road Project:** Please note that the MDOT project, which is already underway, on I-94 near Portage and Kilgore Roads is separate from the Airport's runway extension project and has its own separate funding, design, environmental review, and construction timeframes. While they are separate, the Airport and MDOT have had several meetings to discuss coordination efforts, and to fully understand the scope of the respective projects at hand.

We hope that our community partners and stakeholders find this to be an informative update on what is a critical project for our area. We encourage you to reach out if you have any questions or concerns regarding this or any other matter involving the Airport. Stay safe and stay healthy.

Craig Williams, AAE  
Airport Director



October 1, 2020

Re: Field Work for Future Airport Improvement Projects

Dear Resident:

From October 19<sup>th</sup> through October 23<sup>rd</sup>, consultants working on behalf of the Kalamazoo/Battle Creek International Airport will conduct field work in the Milwood neighborhood to support the Runway 17/35 extension project. The field work will include survey or data collection of historic buildings or cultural resources to develop baseline information to support the planning assessment for the project.

All survey or data collection will be completed from the road right-of-way. No access to private property is required. We are asking for your cooperation by allowing field personnel to document resources in the area.

So why is the airport collecting data on historic buildings in the neighborhood? Basically, Milwood may be considered a historic neighborhood and this type of data collection is a requirement for federally funded projects to ensure that federal agencies are aware of if and how a project might affect historic properties.

Should you have any questions feel free to contact the Airport's project manager, Eric Bjorkman or myself by calling the Airport at (269) 388-3668.

Sincerely,

A handwritten signature in cursive script that reads "Craig Williams".

Craig Williams, A.A.E.

Airport Director

Kalamazoo/Battle Creek International Airport



«MrMs» «First» «Last»  
«OWNER\_ADDRESS»  
«OWNER\_CITY», «OWNER\_STATE» «OWNER\_ZIP»

Dear «MrMs» «Last»:

Work continues on the planning for the runway extension at the Kalamazoo/Battle Creek International Airport. The planning includes an environmental assessment covering a wide array of topics to determine if there are impacts to the area surrounding the airport. One of those topics is to assess any impacts to historic properties around the airport. To support this, the study team completed a cultural resources technical study to determine if there were any potential impacts to historic properties in the area.

In compliance with Section 106 of the National Historic Preservation Act, project historians determined that the Bloomfield Subdivision (Milwood) is eligible for listing in the National Register of Historic Places as a historic district. The State Historic Preservation Office agreed with the finding. A copy of the Bloomfield Subdivision Historic District boundary map is attached.

The initial question is – what does this mean? The runway is planned to extend to the south by 1,000’ and 150’ to the north. I’ve included an image of the planned runway extension with the letter. Other sections of the environmental assessment planning study identified trees that the FAA determines penetrate the airspace used to provide a safety margin for aircraft landing and departing the runway.

Coordination with the State Historic Preservation Office indicates that the proposed tree removals within the Bloomfield Subdivision Historic District will result in an adverse effect to the neighborhood. The National Historic Preservation Act requires greater coordination with the impacted neighborhood, and project historians will work with property owners, local preservation organizations, other interested parties, and the Airport to develop measures to mitigate this adverse effect to the Historic District.

To provide a greater understanding of the process, the project team will host a public meeting. This meeting will cover topics that include – potential impacts to the Bloomfield Subdivision Historic District, suitable mitigation measures, and answer your questions or concerns. The Airport will send an invitation to all property owners within the District when the meeting is scheduled.

For more information on the Section 106 process, please visit the following website: <https://www.achp.gov/digital-library-section-106-landing/citizens-guide-section-106-review>. If you have any questions, please feel free to contact me at 269-388-3668 or via e-mail at [cawill@kalcounty.com](mailto:cawill@kalcounty.com).

Sincerely,

A handwritten signature in black ink that reads "Craig Williams". The signature is written in a cursive style with a large initial "C" and "W".

Craig Williams, AAE  
Airport Director  
Kalamazoo/Battle Creek International Airport



GRETCHEN WHITMER  
GOVERNOR

STATE OF MICHIGAN  
MICHIGAN STRATEGIC FUND  
STATE HISTORIC PRESERVATION OFFICE

QUENTIN L. MESSER, JR.  
PRESIDENT

January 26, 2022

GUADALUPE CUMMINS SANCHEZ  
FEDERAL AVIATION ADMINISTRATION  
DETROIT AIRPORTS DISTRICT OFFICE  
11677 SOUTH WAYNE ROAD SUITE 107  
ROMULUS MI 48174

RE: ER22-179 Kalamazoo/Battle Creek International Airport AZO Runway 17/35, T3S, R11W,  
Sec. 2, 11, 12, 13, City of Kalamazoo & City of Portage, Kalamazoo County (FAA)

Dear Ms. Cummins-Sanchez:

Under the authority of Section 106 of the National Historic Preservation Act of 1966, as amended, we have reviewed the proposed undertaking at the above-noted location. The State Historic Preservation Officer (SHPO) does not concur with the determination that the undertaking will not have an adverse effect on historic properties within the area of potential effects of this undertaking. Based on the information provided for our review, it is the opinion of the SHPO that the proposed undertaking will have an **adverse effect** on the Bloomfield Subdivision Historic District, which appears to meet the criteria for listing in the National Register of Historic Places as the best representation of a planned subdivision reflective of the important southward growth trend in the Kalamazoo/Portage area during the postwar era.

This undertaking meets the criteria of adverse effect because: *the undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association*, 36 CFR § 800.5(a)(1). Specifically, the undertaking will result in a change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance. More specifically, the large-scale removal of mature trees will result in a drastic change that will diminish the integrity of the property's setting.

Federal agencies are required to avoid, minimize, or mitigate adverse effects. Please note that if the federal agency and the SHPO concur that the adverse effect cannot be avoided, the Section 106 process will not conclude until the consultation process is complete, an MOA is developed, executed, and implemented, and, if applicable, the formal comments of the Advisory Council have been received, 36 CFR § 800.6. For more information on your responsibilities and obligations for projects that will have an adverse effect on historic properties under 36 CFR § 800.6, please review the enclosed materials.

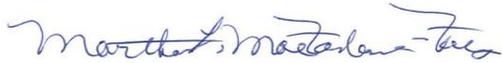
We remind you that federal agency officials or their delegated authorities are required to involve the public in a manner that reflects the nature and complexity of the undertaking and its effects on historic properties per 36 CFR § 800.2(d). The National Historic Preservation Act also requires that federal agencies consult with any Indian tribe and/or Tribal Historic Preservation Officer (THPO) that attach religious and cultural significance to historic properties that may be affected by the agency's undertakings per 36 CFR § 800.2(c)(2)(ii).



The opinion of the SHPO is based on the materials provided for our review. If you believe that there is material that we should consider that might affect our finding, or if you have questions, please contact Brian Grennell, Cultural Resource Management Coordinator, at (517) 335-2721 or by email at GrennellB@michigan.gov. **Please reference our project number in all communication with this office regarding this undertaking.**

Finally, the State Historic Preservation Office is not the office of record for this undertaking. You are therefore asked to maintain a copy of this letter with your environmental review record for this undertaking. Thank you for this opportunity to review and comment, and for your cooperation.

Sincerely,



Martha MacFarlane-Faes  
Deputy State Historic Preservation Officer

MMF:MJH:BGG

Enclosures

copy: Advisory Council on Historic Preservation  
Steve Houtteman, MDOT Office of Aeronautics  
Emily Pettis, Mead & Hunt, Inc.



**Advisory Council on Historic Preservation  
Electronic Section 106 Documentation Submittal System (e106) Form  
MS Word format**

**Send to: *e106@achp.gov***

**Please review the instructions at [www.achp.gov/e106-email-form](http://www.achp.gov/e106-email-form) prior to completing this form. Questions about whether to use the e106 form should be directed to the assigned ACHP staff member in the Office of Federal Agency Programs.**

**I. Basic Information**

**1. Purpose of notification.** Indicate whether this documentation is to:

- Notify the ACHP of a finding that an undertaking may adversely affect historic properties
- Invite the ACHP to participate in a Section 106 consultation
- Propose to develop a project Programmatic Agreement (project PA) for complex or multiple undertakings in accordance with 36 C.F.R. 800.14(b)(3)
- Supply additional documentation for a case already entered into the ACHP record system
- File an executed MOA or PA with the ACHP in accordance with 800.6(b)(iv) (where the ACHP did not participate in consultation)
- Other, please describe

[Click here to enter text.](#)

**2. ACHP Project Number** (If the ACHP was previously notified of the undertaking and an ACHP Project Number has been provided, enter project number here and skip to Item 7 below): [Click here to enter text.](#)

**3. Name of federal agency** (If multiple agencies, list them all and indicate whether one is the lead agency):

The Federal Aviation Administration (FAA) is the lead federal agency for this Airport Improvement Project (AIP).

**4. Name of undertaking/project** (Include project/permit/application number if applicable):

Kalamazoo/Battle Creek International Airport (Airport) Runway 17/35 Extension

**5. Location of undertaking** (Indicate city(s), county(s), state(s), land ownership, and whether it would occur on or affect historic properties located on tribal lands):

T2S, R11W and T3S, R11W, City of Kalamazoo and City of Portage, Kalamazoo County, Michigan

ADVISORY COUNCIL ON HISTORIC PRESERVATION

401 F Street NW, Suite 308 ☐ Washington, DC 20001-2637

Phone: 202-517-0200 ☐ Fax: 202-517-6381 ☐ [achp@achp.gov](mailto:achp@achp.gov) ☐ [www.achp.gov](http://www.achp.gov)

**6. Name and title of federal agency official and contact person for this undertaking, including email address and phone number:**

Guadalupe Cummins  
 Environmental Protection Specialist  
 FAA Detroit Airports District Office  
 11677 S. Wayne Road, Suite 107  
 Romulus, MI 48174  
[guadalupe.cummins-sanchez@faa.gov](mailto:guadalupe.cummins-sanchez@faa.gov)  
 734.229.2900

**II. Information on the Undertaking\***

**7. Describe the undertaking and nature of federal involvement** (if multiple federal agencies are involved, specify involvement of each):

Project work includes the complete and/or partial removal of obstructions determined to be within the Airport runway approach sightline for Runway 17 (north of the Airport) and for Runway 35 (south of the Airport) and will require acquisition of avigation easements from select property owners. Also proposed is the installation of new 200-foot Medium Intensity Approach Lighting System with Runway Alignment Indicator Light (MALSR) lighting towers to the southeast of the Airport property, and relocation of a portion of the existing Norfolk Southern rail line to accommodate the MALSR lighting towers and necessary vertical clearance. The project is funded in part by the FAA and Michigan Department of Transportation (MDOT).

**8. Describe the Area of Potential Effects (APE):**

The Area of Potential Effect (APE) includes the Bloomfield Subdivision Historic District (encompassing all 318 contributing and noncontributing resources), as well as 24 full parcels to the north and south of the Airport that are not located within the district boundaries. The APE was delineated to include all parcels within the district boundaries, as well as areas directly impacted by tree removals, railroad realignment, and installation of new lighting.

**9. Describe steps taken to identify historic properties:**

Mead & Hunt, Inc. (Mead & Hunt) architectural historians conducted a reconnaissance-level survey in November 2019 to identify above-ground resources located within the APE. One Determination of Eligibility (DOE) was performed for the property that appears to have potential for National Register of Historic Places (National Register) eligibility (see Appendix A): the Bloomfield Subdivision Historic District. The Michigan State Historic Preservation Office (SHPO) concurred with eligibility findings in a letter dated January 26, 2022 (see Appendix B). See Appendix A for full historic property information.

**10. Describe the historic property** (or properties) and any National Historic Landmarks within the APE (or attach documentation or provide specific link to this information):

One historic property was identified within the APE. The Bloomfield Subdivision Historic District was recommended eligible for listing in the National Register under *Criterion A*. A post-World War II (postwar) residential subdivision located in the Milwood neighborhood north of the Airport property, the district encompasses 318 total resources across approximately 106 acres of land, and was found to be significant as the best representation of a planned subdivision reflective of the important southward growth trend in the Kalamazoo/Portage area during the postwar era, with a period of significance of 1947-1966. The district consists primarily of a residential neighborhood with a commercial strip located along Portage Street, a major thoroughfare along the western boundary of the district. Laid across rectilinear tree-lined streets, the district mainly consisting of single-family houses, with some multi-family apartment complexes closer to the commercial areas of the district. The district also retains good integrity overall, due to limited alterations to the general character, layout, and land use.

**11. Describe the undertaking's effects on historic properties:**

The project proposes to remove a large number of trees from various parcels within the Bloomfield Subdivision Historic District.

**12. Explain how this undertaking would adversely affect historic properties** (include information on any conditions or future actions known to date to avoid, minimize, or mitigate adverse effects):

The removal of trees within the Bloomfield Subdivision Historic District meets the criteria of adverse effect because the undertaking will result in a change of the character of the property's use or of physical features that contribute to its historic significance. More specifically, the large-scale removal of mature trees will result in a drastic change that will diminish the integrity of the property's setting.

**13. Provide copies or summaries of the views provided to date by any consulting parties, Indian tribes or Native Hawai'ian organizations, or the public**, including any correspondence from the SHPO and/or THPO.

\* see *Instructions for Completing the ACHP e106 Form*

For a record of the early agency and tribal coordination letter, see the attached Early Agency Letter Template, Tribal Letter Template, and Master Distribution List (Appendix C). The maps and a letter were sent to everyone on the distribution list. No tribal responses were received. Government agency representatives listed above were invited to an in-person meeting in Kalamazoo on June 26, 2019, where Bill Ballard of Mead & Hunt and Ernest Gubry of the FAA invited comment on each agency's potential concerns about anticipated impacts and mitigations requirements.

Property owners within the Bloomfield Subdivision Historic District, as well as the Milwood Neighborhood Association, have been consulted as part of the Environmental Assessment (EA) process. Representatives of the project team have contacted and interacted with these consulting parties through a public involvement meeting on February 26, 2020, an update letter to the Milwood Neighborhood Association dated June 2020, and another update letter to property owners dated October 2020. Property owners of parcels within the boundaries of the Bloomfield Subdivision Historic District were notified of the project's potential to cause an adverse effect to the historic district in a letter mailed on May 20, 2022. Invitations to an additional public meeting, anticipated for July 2022, will be sent at a future date.

All correspondence to date is presented in Appendix C.

**III. Additional Information**

**14. Please indicate the status of any consultation that has occurred to date, including whether there are any unresolved concerns or issues the ACHP should know about in deciding whether to participate in consultation.** Providing a list of consulting parties, including email addresses and phone numbers if known, can facilitate the ACHP's review response.

Consultation with the following groups is ongoing:

- Milwood Neighborhood Association
- Kalamazoo County Historical Society, Steve Rossio, President, srossio@portagelibrary.info
- Kalamazoo Valley Museum
- Kalamazoo Historic Preservation Commission
- Bloomfield Subdivision Historic District property owners

**15 Does your agency have a website or website link where the interested public can find out about this project and/or provide comments? Please provide relevant links:**

Yes. Information on the proposed project is available to the public at this link:  
<https://flyazo.com/runway-extension-project/>

**16. Is this undertaking considered a “major” or “covered” project listed on the Federal Infrastructure Projects Permitting Dashboard? If so, please provide the link:**

The project is not considered “major” or “covered.”

**The following are attached to this form** (check all that apply):

- Section 106 consultation correspondence (Appendix C)
- Maps, photographs, drawings, and/or plans (Appendix A)
- Additional historic property information (Appendix A)
- Consulting party list with known contact information (Appendix C)
- Other:



«MrMs» «First» «Last»  
«OWNER\_ADDRESS»  
«OWNER\_CITY», «OWNER\_STATE» «OWNER\_ZIP»

Dear «MrMs» «Last»:

The Kalamazoo/Battle Creek International Airport cordially invites you to attend a public information meeting regarding the evaluation of aircraft noise associated with the planned extension of the airport's primary runway (Runway 17/35) and potential impacts to the Bloomfield Subdivision Historic District. The public meeting will be held on **October 19th from 5:30 PM to 7:30 PM at the Air Zoo Aerospace & Science Museum located at 6151 Portage Rd, Portage, MI 49002.**

The public meeting will include updated information about the project, the selection of the preliminary preferred alternative, latest environmental findings, potential property impacts, and a revised project schedule. The primary focus of the meeting, however, will be to present the results of the recently completed noise analysis and to discuss the potential impacts to the Bloomfield Subdivision Historic District, which has been identified as being eligible for listing in the National Register of Historic Places (National Register) by the Michigan State Historic Preservation Office (SHPO).

The noise analysis examined future aircraft noise levels associated with the proposed 1,150-foot extension of Runway 17/35 as well as aircraft noise levels that could be expected if the existing aircraft noise curfew was removed. Relevant maps and information will be provided that illustrate the expected noise levels on properties adjacent to the airport now and in future years. Members of the project team will be available to discuss the results of the noise analysis and explain what future noise levels may look like once the project is constructed.

As you may know from previous correspondence sent in May, coordination with the SHPO indicates that required tree removals in the National Register-eligible Bloomfield Subdivision Historic District within the Milwood Neighborhood, will result in an "adverse effect" on the Historic District. These trees penetrate the airspace protection surfaces that provide a safety margin for arriving and departing aircraft. Because of the "adverse effect" determination by SHPO, Section 106 of the National Historic Preservation Act requires coordination with the impacted neighborhood and other stakeholders to develop measures to mitigate impacts to the eligible Historic District. During the meeting, project team members will be available to answer questions regarding the Historic District eligibility, discuss impacts to historic resources, and solicit feedback from neighborhood residents on potential mitigation options. A copy of the Bloomfield Subdivision Historic District boundary map is attached.

The meeting will be an open house format with no formal presentation given, so attendees may arrive any time between 5:30 PM and 7:30 PM. The event is open to the public and all interested parties are encouraged to attend. The meeting will be an informal, walk-through event where individuals will have the opportunity to review maps and exhibits, ask questions, provide feedback, and discuss the project with project team members. Members from the project team will be available to answer questions on an individual basis. An opportunity to provide written comments will also be provided.

In compliance with the Americans with Disabilities Act, individuals needing special accommodations (including auxiliary communicative aids and services) during the meeting should notify Craig Williams, Airport Director, by e-mail at [cawill@kalcounty.com](mailto:cawill@kalcounty.com) or (269) 388-3668 at least three days prior to the event.

If you are unable to attend, presentation materials will be available for review in the days following the public meeting. You are encouraged to review the meeting materials found at <https://flyazo.com/runway-extension-project/> and submit written comments or concerns by mail or email. Comments must be received by November 21<sup>st</sup> to be included in the project record. Please send comments to:

Craig Williams, A.A.E.  
Airport Director  
5235 Portage Rd.  
Portage, MI 49002  
(269) 388-3668  
[cawill@kalcounty.com](mailto:cawill@kalcounty.com)

Sincerely,

A handwritten signature in black ink that reads "Craig Williams". The signature is written in a cursive, flowing style.

Craig Williams, A.A.E.  
Airport Director  
Kalamazoo/Battle Creek International Airport

## Dianna Litvak

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**From:** Peavler, Misty (FAA) <misty.peavler@faa.gov>  
**Sent:** Thursday, June 22, 2023 12:35 PM  
**To:** Slagor, Scott (LEO)  
**Cc:** Emily Pettis  
**Subject:** AZO MOA and Case Study for Review  
**Attachments:** 230622\_AZO MOA.pdf; 230504\_AZO Section 106 Case Study.pdf

**Categories:** Filed by Newforma

Good Afternoon Scott,

I have attached the AZO, Kalamazoo-Battle Creek Airport's MOA and Case Study for SHPO review.

Please let me know if you have any questions.

Thanks,

**MISTY PEAVLER | ENVIRONMENTAL PROTECTION SPECIALIST**

Federal Aviation Administration  
Detroit Airports District Office  
FAA Great Lakes Region Airports Division  
Misty.Peavler@faa.gov  
Office: (734) 229-2906

**Appendix D.      Photographs of Bloomfield Subdivision Historic  
District**





*Photo 1. Bloomfield Subdivision streetscape, looking east on Nottingham Avenue toward Somerset Avenue. Tree removal is proposed on these parcels, with most obstructions located in back yards.*



*Photo 2. Bloomfield Subdivision streetscape, looking southeast on Somerset Avenue from Bloomfield Avenue. Tree removal is proposed in the front back yards of these parcels.*



*Photo 3. Bloomfield Subdivision streetscape, looking east on Bloomfield Avenue toward Somerset Avenue. This block has some of the most front yard trees proposed for removal in the entire district.*



*Photo 4. Bloomfield Subdivision streetscape, looking northeast on Bloomfield Avenue from Somerset Avenue. Minimal tree removal is proposed for this block.*



*Photo 5. Bloomfield Subdivision streetscape, looking south on Mayfair Street from Bloomfield Avenue. Tree removal is proposed on these parcels, with obstructions located in both front and back yards.*



*Photo 6. Bloomfield Subdivision streetscape, looking east on Dorchester Avenue toward Konkle Street. All obstructions proposed for removal on this block are located in back yards, rather than in tree lawns or front yards.*



*Photo 7. Bloomfield Subdivision streetscape, looking south on Konkle Street toward Dorchester Avenue. Tree removal is proposed on these parcels, with almost all obstructions located in front yards.*



*Photo 8. Bloomfield Subdivision streetscape, looking east on Dorchester Avenue toward Pennway Street and the southwest corner of Emerald Drive Park. From this view, most trees proposed for removal are in the far at the end of the block, in a park outside the district.*



*Photo 9. Bloomfield Subdivision streetscape, looking north on Pennway Avenue from Dorchester Avenue. Tree removal is proposed on the residential parcels at the left, located at the far southeastern corner of the District, and at the Emerald Drive Park at right, located outside of the District.*



*Photo 10. Bloomfield Subdivision streetscape, looking east on Golfview Avenue from just east of Moreland Street. Along the entire length of Golfview Avenue, only three trees proposed for removal are within the tree lawns or front yards; the remainder of obstructions along these blocks are located in back yards.*



*Photo 11. Bloomfield Subdivision streetscape, looking northwest toward Golfview Avenue from Konkle Street. Tree removal proposed for this block is mainly limited to back yards.*



*Photo 12. Bloomfield Subdivision streetscape, looking west on Banbury Road toward Konkle Street. Tree removal is proposed on some of these parcels, with almost all removals proposed for back yards, rather than tree lawns or front yards.*



*Photo 13. Bloomfield Subdivision streetscape, looking east on Paddington Road at Moreland Street. Limited tree removal is proposed for all three blocks of Paddington Road, and entirely limited to private back yards.*