ultium cells

# SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

DOE/EA-2189-S1

Lansing, MI Battery Cell Manufacturing Plant

Department of Energy, Loan Programs Office –
Advanced Technology Vehicles Manufacturing

November 2022

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## Acronyms and Abbreviations

| Acronym/Abbreviation | Definition |
|---|---|
| APE | Area of Potential Effect |
| ATVM Program | Advanced Technology Vehicle Manufacturing Loan Program |
| BMP | best management practice |
| CAA | Clean Air Act |
| CFR | Code of Federal Regulations |
| CO | carbon monoxide |
| $CO_2e$ | carbon dioxide equivalent |
| County | Eaton County, Michigan |
| DOE | U.S. Department of Energy |
| EA | Environmental Assessment |
| ECOS | Environmental Conservation Online System |
| EGLE | Michigan Department of Environment, Great Lakes, and Energy |
| EO | Executive Order |
| EPA | U.S. Environmental Protection Agency |
| EV | electric vehicles |
| FEMA | Federal Emergency Management Agency |
| GHG | greenhouse gas |
| GM | General Motors Holdings LLC |
| HAP | hazardous air pollutant |
| HUC | Hydrologic Unit Code |
| I- | Interstate |
| IPaC | Information for Planning and Consultation |
| LGES | LG Energy Solution |
| LOS | level of service |
| LPO | Loan Programs Office |
| LID | low-impact development |
| MDOT | Michigan Department of Transportation |
| MGD | million gallons per day |

| Acronym/Abbreviation | Definition |
|---|---|
| NAAQS | National Ambient Air Quality Standards |
| NATA | National-Scale Air Toxics Assessment |
| NEPA | National Environmental Policy Act |
| NHPA | National Historic Preservation Act |
| NMP | n-methyl pyrrolidone |
| $NO_X$ | nitrogen oxides |
| NPDES | National Pollutant Discharge Elimination System |
| NRHP | National Register of Historic Places |
| NSR | New Source Review |
| PM | particulate matter |
| $PM_{10}$ | particulate matter of a diameter of less than 10 micrometers |
| $PM_{2.5}$ | particulate matter of a diameter of less than 2.5 micrometers |
| Project | Proposed Action, providing financial assistance for the construction and tooling of a new battery-manufacturing facility and site preparation of a recycling building in Lansing, Michigan |
| PSD | Prevention of Significant Deterioration |
| SHPO | State Historic Preservation Office |
| $SO_X$ | sulfur oxides |
| tpy | tons per year |
| TSCA | Toxic Substance Control Act |
| Ultium | Ultium Cells LLC |
| USFWS | U.S. Fish and Wildlife Service |

# 1.0 PURPOSE AND NEED

## 1.1 Purpose and Need for Agency Action

The purpose and need for agency action is to comply with the U.S. Department of Energy (DOE) mandate under Section 136 of the Energy Independence and Security Act of 2007 to select projects for financial assistance that are consistent with the goals of the Act.

Ultium Cells LLC (Ultium), a joint venture between General Motors Holdings, LLC (together with its affiliates, each referred to herein as GM) and LG Energy Solution (LGES), proposes a phased development of multiple battery cell manufacturing facilities that includes tooling an existing manufacturing facility in Lordstown, Ohio, constructing and tooling a manufacturing facility near Spring Hill, Tennessee, and constructing and tooling a manufacturing facility in Lansing, Michigan. The facilities will be used to mass-produce automotive battery cells to supply the growing demand from GM's next generation of battery-electric vehicles.

Ultium has applied for a loan pursuant to DOE's Advanced Technology Vehicle Manufacturing Loan Program (ATVM Program). The ATVM Program was created by the Energy Independence and Security Act of 2007 to provide incentives for projects that retrofit, expand, or create manufacturing facilities in the United States for advanced technology vehicles or qualifying components, including engineering costs. The primary goal of the ATVM Program is to improve fuel economy for light-duty vehicles and thereby reduce ozone precursors, greenhouse gas (GHG) emissions, and particulate matter emissions associated with vehicle emissions.

The tooling of the recently constructed battery-manufacturing facility in Lordstown, Ohio, and construction of a new 2.8-million-square-foot battery-manufacturing facility and a 120,000-square-foot battery cell material recycling facility near Spring Hill, Tennessee, was reviewed in the DOE Environmental Assessment (EA) DOE/EA-2189, available at https://www.energy.gov/sites/default/files/2022-08/LPO_Ultium_Lordstown-SpringHill_EA_FONSI_August2022.pdf. Subsequently, Ultium proposed to construct and tool a new 2.8-million-square-foot battery-manufacturing facility and perform site preparation work for a battery cell recycling building that will be constructed, tooled, and operated by others in Lansing, Michigan. The new Lansing, Michigan, battery cell manufacturing facility and recycling building will be immediately adjacent (to the southwest) of the existing GM manufacturing plant in Lansing, on property owned by GM. Collectively, the three battery cell manufacturing facilities will utilize the most advanced manufacturing processes to produce battery cells efficiently, with little waste. The battery cells manufactured in both Spring Hill and Lordstown primarily will be used in GM's line of all-electric vehicles (EV) assembled at the existing Spring Hill, Tennessee, Ingersoll, Ontario, and Hamtramck and Orion, Michigan, vehicle assembly plants. The battery cells manufactured in Lansing will primarily be used in GM's line of all-EV assembled at vehicle assembly plants located in Detroit/Hamtramck and Orion, Michigan, and Ontario, Canada. These zero-emission EVs will displace vehicles with internal combustion engines and their associated emissions, such as ozone precursors, particulate matter, and GHGs that contribute to global warming, as is consistent with the primary goal of the ATVM Program. Financially supporting Ultium's proposals would help bring battery cells and batteries to market and into greater use, while contributing to the expansion of zero-emission propulsion, thereby reducing overall national emissions of air pollutants and human-caused GHGs.

## 1.2 Background

The ATVM Program is administered by DOE's Loan Programs Office (LPO). LPO originates, underwrites, and services loans to eligible automotive manufacturers and component manufacturers to finance reequipping, expanding, or establishing manufacturing facilities in the United States to produce Advanced Technology Vehicles and qualifying components and the costs of associated engineering integration performed in the United States.

To fund the expansion, Ultium has applied to the DOE ATVM Program for financial assistance. On review of Ultium's initial application by the DOE LPO, the application was determined as substantially complete per the rules governing the ATVM Program in 10 Code of Federal Regulations (CFR) Part 611. Ultium

was subsequently invited to enter into the LPO's due diligence process. The information regarding construction and tooling of the Lansing battery-manufacturing facility was not yet ripe to support a decision by LPO about whether to provide financial assistance for this phase of the Project; therefore, the Lansing site was not included in the scope of DOE/EA-2189 for the Lordstown, Ohio, and Spring Hill, Tennessee, facilities. This document is a supplemental EA for the construction and tooling of the battery-manufacturing facility and site preparation of the recycling building in Lansing, Michigan.

## 1.3 Scope of Environmental Assessment

In accordance with the National Environmental Policy Act (NEPA), LPO prepared an EA (DOE/EA-2189) to address the procurement and installation of battery-manufacturing equipment (i.e., tooling) in an existing facility in Lordstown, Ohio, and the construction and tooling of the Spring Hill, Tennessee, facility, and the construction of a recycling building at the Spring Hill facility. This document is a supplemental EA for the construction and tooling of the battery-manufacturing facility and site preparation of the recycling building in Lansing, Michigan.

This Supplemental EA allows LPO to consider the environmental impacts of its action (i.e., financial assistance/ATVM loan) to support the construction and tooling of the battery-manufacturing facility and site preparation of the recycling building in Lansing, Michigan. Therefore, the scope of the Proposed Action (providing a loan to Ultium) encompasses the construction and tooling of a new battery cell manufacturing facility and site preparation of a recycling building in in Lansing, Michigan.

For the Proposed Action, referred to in this document as the Project, several factors influence the scope of issues analyzed in this Supplemental EA. The location of the new facility and recycling building is on land that was previously disturbed from agricultural activities and/or during construction of an existing vehicle assembly plant immediately to the east of the Project site, and several permits have been issued or are in the process of being issued by regulatory authorities (see Appendix A, *Permits and Approvals*). Any permits necessary for facility operations will be obtained from the appropriate federal, state, or local regulating authority prior to facility operation. In addition, Ultium will apply for an individual U.S. Environmental Protection Agency (EPA) ID number for the disposal of waste from the facility.

Based on LPO's review of the scope of the Project (i.e., construction and tooling of the new battery-manufacturing facility and site preparation of a recycling building in Lansing, Michigan), the existing site conditions, and permit status, the scope of the issues analyzed in this Supplemental EA includes:

- Aesthetics and Visual Resources
- Air Quality
- Biological Resources
- Cultural Resources, including Native American interests
- Noise
- Public and Occupational Health and Safety
- Socioeconomics and Environmental Justice
- Traffic and Transportation
- Waste Management
- Water Resources, including wetlands, groundwater, and surface water

These resource areas were identified as potentially being affected by the Project in Lansing, Michigan, and each was assessed to determine the nature, extent, and significance of those impacts (see Section 3, *Environmental Consequences*). The assessment combined desktop research and analysis of existing available information with select field studies, including site assessments related to cultural resources, wetlands, floodplains, and Threatened and Endangered Species.

Resources not included in this Supplemental EA include soils and geology and land use and recreation. Because the new facility is outside of centers of urban development and adjacent to an existing manufacturing facility within a previously disturbed property zoned as Heavy Industrial, impacts on land use and recreation resources are not anticipated. Furthermore, the Project does not include geological

impacts from excavation or other similar activities, and the existing Project site soils have been historically disturbed due to abutting construction and agricultural practices. Therefore, the aforementioned resources are not included in the scope of this Supplemental EA.

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# 2.0 DESCRIPTION OF THE PROPOSED ACTION

Under the Proposed Action, the Project involves the construction and tooling of a battery cell manufacturing facility and the site preparation for a battery-recycling building, all on the north side of Davis Highway between Guinea Road and Nixon Road, in the City of Lansing, Eaton County, Michigan. The facility will be used to build lithium-ion battery cells designed for use in EVs and other applications, and general site preparation activities will be performed to prepare for the construction, tooling, and operation of a future recycling facility by others. The battery cell manufacturing facility supports GM's overall development and manufacturing of EVs. Due to the timing of Ultium's application to the ATVM Program, site development activities were initiated prior to LPO's consideration of whether to issue an ATVM loan to Ultium.

The Project involves Ultium constructing a new battery cell manufacturing facility and associated infrastructure to the southwest of the existing GM assembly plant. The new facility will consist of a 2.8-million-square-foot building housing five large process operations (i.e., Receiving/Mixing, Electrode, Assembly, Formation, and Shipping), with several attendant structures and features to provide various support functions. Attendant structures include parking areas, shipping and receiving areas, access roads, stormwater management facilities, a substation, a guard house, hazardous materials storage, recycling areas, landscapes areas, and water supply tanks (see **Figure 1**, Site Location Map, and **Figure 2**, Site Layout).

The overall area of the Project site may disturb up to 203 acres within a 331-acre Project site, which includes the following:

- A 188-acre area for new construction (the 2.8-million-square-foot manufacturing facility, associated attendant structures, and site preparation for the battery recycling building).
- A 14.9-acre utility corridor.
- Within the 203-acre limits of disturbance, up to 89 acres will be permanently affected. Permanent features include approximately 47 acres from the proposed building footprint, 9 acres from additional structures and the site preparation for the future recycling building, 23 acres from roads, sidewalks, and parking, and 10 acres from stormwater retention basins. General construction activities and the creation of lawn and landscaped areas and utility easements will temporarily affect 114 acres.

Access to the Project site is through Davis Highway and Nixon Road. Under the Project and in accordance with requirements from the Eaton County Road Commission, Davis Highway and Nixon Road will be improved to include additional road rights-of-way along 50 feet on the northern and eastern sides of the roadways, and Davis Highway will be improved to meet all-season road standards. The majority of the Project site has been previously disturbed by agricultural and industrial activities. The following subsections describe the construction and operation of the Project.

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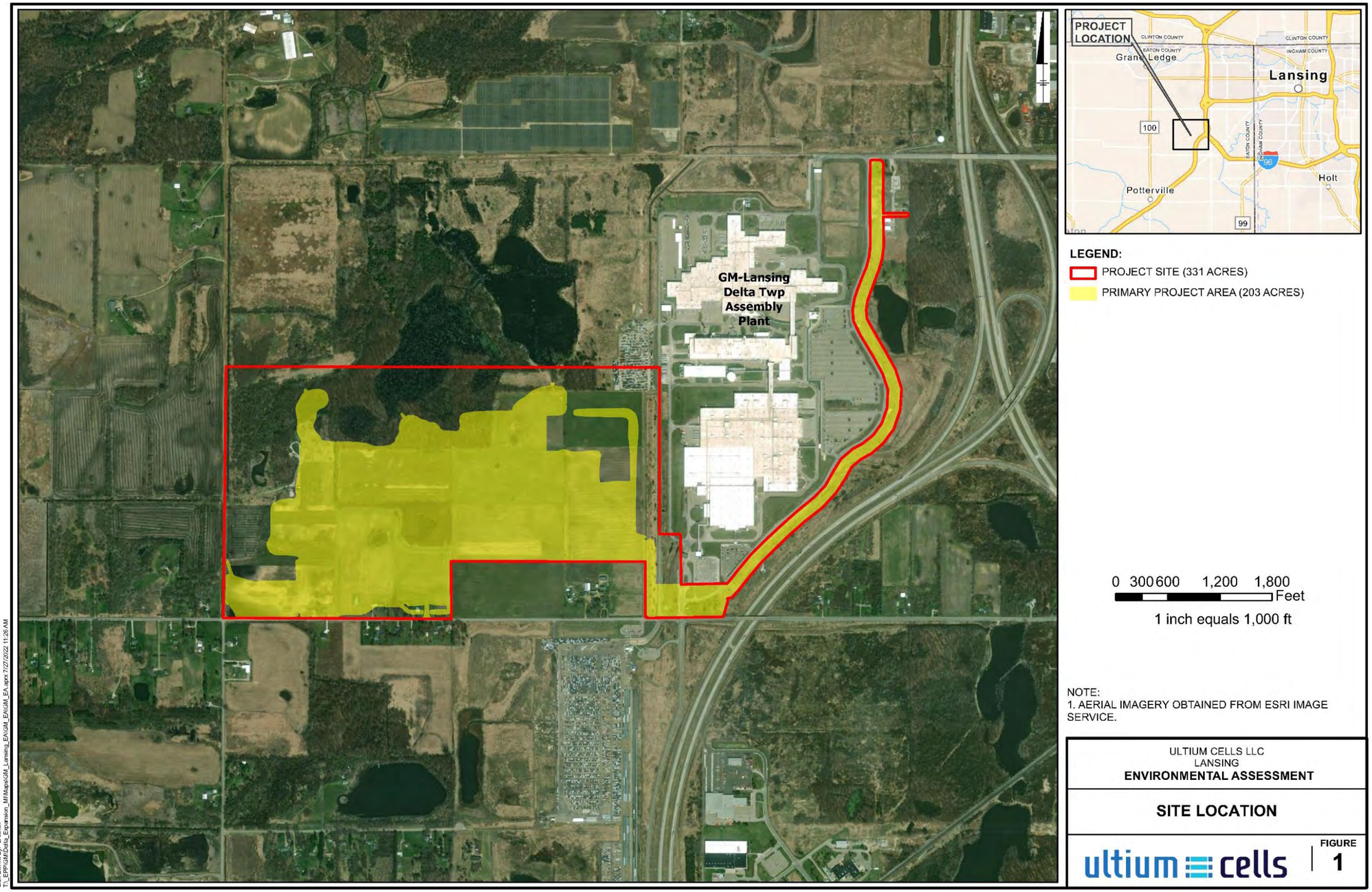
## Figure 1: Site Location Map



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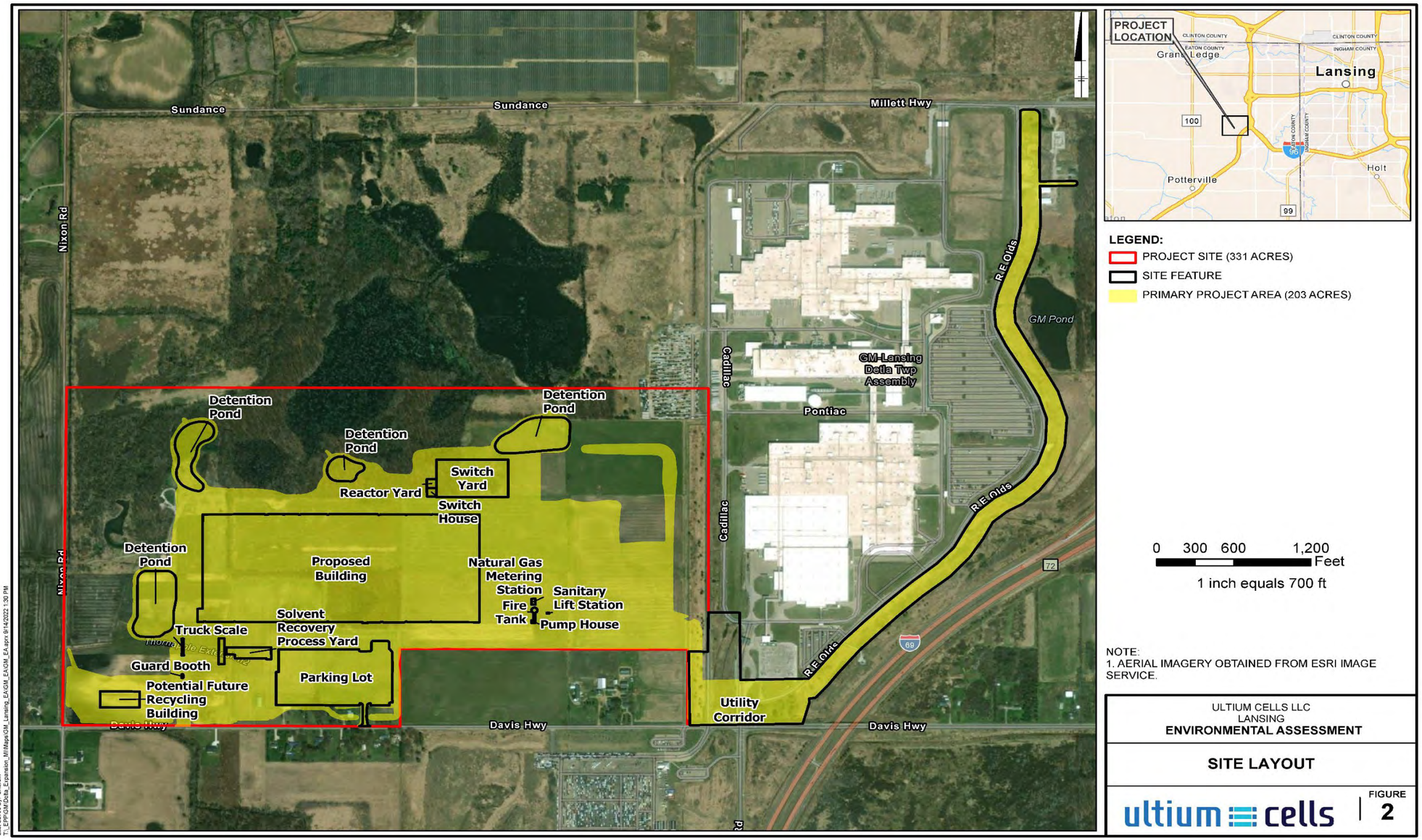
## Figure 2: Site Layout



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## 2.1 Project Construction

The Project construction encompasses approximately 203 acres of disturbance area within the 331-acre Project site, which includes the 188-acre area for new construction, and a 14.9-acre utility corridor. Within the 203-acre limits-of-disturbance area, 17.6 acres of forested land and 0.923 acre of regulated wetlands will be permanently disturbed. The limits-of-disturbance area avoids a 660-foot no-work buffer area around an identified bald eagle nest to the north of the Project site. Unforested areas within this buffer area will be cordoned off with construction fencing. The Project site includes the main building and attendant structures, paving for sidewalks and parking, stormwater-detention facilities, temporary construction zones, a gravel pad area for electric equipment, and lawn and landscaped areas. In order to account for the required space needed for Project construction, as part of the Project's scope, three residences within the confines of the Project site boundaries will be demolished under a permit issued by the Delta Township Building Department. The 14.9-acre utility corridor for water, sewer, natural gas, data fiber, and electrical power is approximately 5,900 feet long and approximately 150 feet wide. Public infrastructure to support the Project exists within the vicinity and will be connected to the Project site as part of separate projects being undertaken by local utility authorities. Specifically relating to water supply, Delta Township is supplying water and sanitary sewer connection on site through access easements provided by General Motors. An existing connection for water and sanitary sewer is near Millet Highway and Interstate (I-) 96/69, which will be used for tie-in. The entirety of the utility corridor is on GM-owned property.

### *2.1.1 Construction of Project Structures and Equipment Installation*

The main manufacturing building will encompass 2.8-million square feet (approximately 2,155 feet long by 925 feet wide), with a concrete floor, an internal, steel-frame structure to reduce interior posts, and an insulated metal exterior. The height of the primary structure will be approximately 75 feet. The building will contain five primary process areas for the cell-manufacturing process, Receiving/Mixing, Electrode, Assembly, Formation, and Shipping, with delivery and shipment truck docks on the western and eastern sides. In addition to the primary building, site structures and attendant features will include workforce parking, permanent stormwater management, waste storage, an electric transfer station, process support equipment, and a truck scale. Lighting along the northern side of the Project site will be installed with downward-facing, full cut-off lens lights.

The construction on the Project site will sequence through successive phases, starting with the establishment of best management practices (BMPs) for the construction activities. Specifically, temporary sedimentation and erosion-control measures will include placement of silt fencing along the perimeter of the work area and installation of erosion-control blankets, inlet protection, and a construction-access driveway. Permanent BMPs installed during construction will include sediment basins, vegetated swales, and vegetated buffers. Temporary lighting used during construction will be directed away from suitable bat habitat (further defined in Section 3.3.2, *Threatened and Endangered Species*) during the active season for listed bat species (i.e., April through September). Rough grading, clearing, and demolition of existing residential structures will then occur. General site clearing and grading will occur within the 203-acre limits of disturbance with some tree clearing in the interior of the site, along the northern site perimeter, and along the utility corridor. Tree clearing of affected bat roost trees will occur during the inactive season for listed bat species (i.e., October through March). Construction will then initiate with the contractor parking area with trailers and access roads, followed by the building of the foundation and pad preparation. The building-pad preparation will use stockpiled rock from previous GM plant-construction projects for base materials in slab/foundation construction. Following the slab/foundation construction, the skeletal steel structure will be assembled, followed by the building shell.

Final grading and site stabilization will then occur. The final phase of building construction includes the installation of the equipment to support the battery cell-manufacturing process, including boilers, ovens, stocker, and roll presses, and associated piping systems and controls, notching equipment, lamination, testing equipment, stacking, and packaging equipment and associated conveyors and controls.

After construction, the Project site will be landscaped with consideration for aesthetic views from surrounding land uses and facilities. Landscaping will include strategically placed mounds and berms

planted with native trees along Davis Highway to the south of the Project site to provide screening and enhance aesthetics, and managed turf grass would surround the facility.

Construction in the 14.9-acre utility corridor will occur concurrently with the construction on the Project site and include a 20-inch ductile iron or high-density polyethylene water line and a 12-inch polyvinyl chloride sanitary sewer line. The natural gas, electricity, and data-fiber utility lines will be installed by the local utility companies within the 14.9-acre utility corridor. The water and sanitary sewer utilities will be built using open-trench methods for most of the length within the utility corridor. Tie-in locations for the utilities will be approximately 75 feet east of the building. Delta Township will use an existing connection for water and sanitary sewer near Millet Highway and I-96/69 to connect the Ultium water main. Techniques such as horizontal directional drilling will be used for construction of the water and sewer utility lines to avoid wetlands, with boreholes maintaining no less than a 50-foot lateral buffer from a wetland boundary.

### *2.1.2 Schedule*

Land preparation, clearing, and grading began in May 2022, and the Project construction schedule is expected to be completed near the end of 2023. Equipment installation is planned to begin in the summer of 2023 and will be phased in over time. Startup for trial operations, debugging, and validation will occur sequentially as equipment is installed, beginning in the second half of 2023, with the facility becoming partially operational in 2024. Full operation production is expected in 2025.

Preparation of the utility corridor will begin in spring of 2023, and construction of the water and sanitary sewer utilities is planned for spring and summer of 2023. The construction of the natural gas, electricity, and data fiber utility lines is anticipated to begin in the spring of 2023 and conclude by late 2024.

The installation of the manufacturing equipment in the building will be completed in phases to support a ramp up of production and availability of skilled-trade resources, with initial equipment arriving on site in mid to late 2023 and continuing through 2024. Following the installation of the manufacturing equipment, trials and debugging will be performed in phases beginning in the first quarter of 2024, continuing through to 2025.

## 2.2 Operations

The operation of the battery cell-manufacturing facility includes raw-material receiving, the battery-manufacturing processes (i.e., mixing, electrode manufacturing, assembly, and formation), a final product storage and shipping area, and ancillary equipment and processes (e.g., heaters, generators, waste recovery systems). The building is organized into five sequential process areas of mixing, electrode, assembly, formation, and storage. Raw materials are received and prepared in the mixing area. Electrode production includes slurry mixing, coating, and drying. In assembly production, the cells are built, terminals are cut, cells are filled with electrolyte, and the cells are sealed. Formation includes initial charging/discharging of the cells. Cells are then stored and aged prior to shipping.

### *2.2.1 Manufacturing Process Summary*

Multiple parallel lines of manufacturing are used to create the battery cells. In the mixing-process area, the facility conducts metering and mixing of cathode activation and anode activation (i.e., electrode process) products, carbon, graphite, and other powder products mixed into a slurry, using n-methyl pyrrolidone (NMP) as the solvent ingredient for the cathode, and deionized water as a solvent for the anode. The electrode coating–process area includes applying the slurry from the mixing process onto aluminum and/or copper foil and drying the foil strip through a dryer using a heat exchanger. During this process, NMP is captured through a solvent-recovery system. In the assembly process area, the cathode and anode are then cut, laminated, and stacked on an aluminum sheet. An electrolyte liquid is injected into the product under vacuum pressure, and aluminum and/or copper tabs are laser-welded to the cell. In the formation process area and following application of the tabs, the cells are placed in storage for aging to stabilize the electrolyte into the cell, and formation is achieved by charging and discharging equipment.

Prior to final packaging and placement in the storage process area, degassing is conducted by piercing the cell, extracting residual gas under vacuum pressure, and resealing.

### 2.2.2 Staffing and Operational Timeframe

The projected production for battery cells is expected to be approximately 3 shifts per day, 6 days per week, and 24 hours per day, equating to a maximum of 103 million battery cells per year at full capacity in 2025. The estimated total number of employees is 1,522, with approximately 435 manufacturing employees per shift, with an additional 217 administrative/office employees during Shift #1, for a total of 652 employees during Shift #1. Anticipated staffing phasing is provided in Table 1, below.

**Table 1. Anticipated Site Staffing**

| Year | 2023 | | | | 2024 | | | | 2025 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Quarter | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Percentage of Employees | 7% | 17% | 24% | 35% | 48% | 61% | 74% | 86% | 98% | 99% | 99% | 100 % |

### 2.2.3 Shipping and Receiving

Raw materials for the Project will be trucked to the site and received in the mixing-process area. Approximately 124 total truck trips per day are required to provide raw materials to and ship final products from the facility. Approximately 16 trucks are expected to enter, and 11 trucks are expected to exit the site during each of the AM and PM peak times.

### 2.2.4 Waste Management

During operations, the facility will generate both solid and liquid hazardous and nonhazardous waste associated with the manufacturing processes employed, as well as general solid nonhazardous waste associated with routine building operations and maintenance. All the wastes generated at the facility will be collected, categorized, and disposed and/or recycled in accordance with all applicable federal, state, and local environmental regulations.

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# 3.0 ENVIRONMENTAL CONSEQUENCES

In each of the following sections, a specific resource area is addressed with both qualitative and, where applicable, quantitative information to concisely describe the nature and characteristics of the resource that may be affected by the Project, as well as the potential direct and indirect impacts on that resource from the Project given proposed controls. A conclusion regarding the significance of impacts is provided for each resource area. The Project only includes site preparation activities for the recycling facility; construction of the building, tooling, and operations would be performed by others. As such, evaluation of construction, tooling, and operational effects to resources are not included for the recycling facility.

Section 3.11, *Cumulative Impacts*, provides a review of the present and reasonably foreseeable federal and nonfederal actions that may contribute to a cumulative impact when added to the impacts of the Project. The impacts of past actions were reviewed and are included as part of the affected environment to establish the current condition of the resource (i.e., the baseline condition) that may be affected by the Project.

## 3.1 Aesthetics and Visual Resources

The Project site is located in the City of Lansing, approximately 1 mile west of the I-96/I-69 Interchange, in Eaton County, Michigan. The Project site is zoned Heavy Industrial by the City of Lansing[1]. The adjacent highway system is bound by industrial land use, commercial developments, and agricultural (active and inactive) land, which is also representative of the overall land use surrounding the Project site. The immediate surrounding area of the Project site is characterized by heavy industrial zoning (to the east and northeast), agricultural zoning (to the south, west, northwest, and north)[2]. Views to the east include the existing GM assembly plant and Davis electrical substation, with access roads surrounding a corporate and manufacturing campus. Views to the south include the Canadian National Railway Lansing yards, agricultural and natural vegetative landscapes, and rural residential properties. Views to the west and northwest include agricultural and natural vegetative landscapes and rural residential properties. Views to the north include vacant land and land occupied by a solar array along Millett Highway. Residential and agricultural properties are immediately adjacent to the south and west of the Project site. As part of the Project, screening landscaping would be installed along the Project site borders to minimize potential adverse aesthetic and visual impacts. Specifically, 10-foot-wide greenbelts would be established along Davis Highway and Nixon Road. The Davis Highway greenbelt would consist of approximately 65 trees and 260 shrubs, including 22 existing mature trees that will remain in place. The Nixon Road greenbelt would consist of approximately 13 trees and 52 shrubs. Additional plantings are also planned for the northern Project site perimeter.

Construction of the Project would result in permanent visual changes to the Project site, specifically, the existence of the proposed new buildings on what is currently vacant land. However, the siting of the industrial facility is consistent with the heavy industrial zoning of the area. Additionally, the new facility would have an appearance consistent with the existing assembly plant, which is currently the dominant visual element in the immediate landscape. Temporary onsite construction lighting would be located to face the interior of the site, and away from residential properties. Operations at the new facility would result in moderate increases in nighttime light in the vicinity. It is anticipated that, considering operations at the proposed facility would be 24/7, interior facility lighting would function full time. However, exterior lighting associated with facility operations would include both parking lot and exterior building façade lighting, which would operate during hours of darkness. Permanent exterior parking-lot lighting is anticipated to be of the type and specification such that no illumination spillage beyond the site property boundaries would occur. However, several residences are located across Davis Highway and Nixon Road to the south and west of the Project site, respectively, and it is anticipated that the nighttime viewshed

[1] City of Lansing Planning Office. No Date. City of Lansing Zoning Map. Available: https://lansing.maps.arcgis.com/apps/webappviewer/index.html?id=964880d378a04437a4a8309fca1ea1ac. Accessed: June 16, 2022.

[2] Delta Charter Township, Eaton County, Michigan, Effective September 3, 2017. Official Zoning Map. Available: Delta-Township-Zoning-Map.pdf (revize.com). Accessed: August 19, 2022.

from these properties would be moderately altered due to the change in overall site illumination once the proposed facility is constructed and operational.

Because the Project site is zoned as Heavy Industrial, because existing manufacturing facilities are located adjacent to the proposed facility, and due to the incorporation of landscaping to screen the Project from the surrounding landscape, impacts on aesthetics and visual resources as a result of the Project would not be significant.

## 3.2 Air Quality

### *3.2.1 Setting*

Pursuant to the Clean Air Act (CAA), EPA established National Ambient Air Quality Standards (NAAQS) to control a limited number of widely occurring Criteria Pollutants, including carbon monoxide (CO), nitrogen dioxide, ozone, Particulate Matter (PM) of a diameter of less than 2.5 micrometers ($PM_{2.5}$), PM of a diameter of less than 10 micrometers ($PM_{10}$), and sulfur dioxide. Primary air quality standards were developed for these pollutants to protect public health—including sensitive populations, such as children, the elderly, and asthmatics—and secondary standards were developed to protect the nation's welfare, including protection against decreased visibility and damage to animals, crops, and vegetation. EPA has concluded that the current NAAQS protect the public health, including the at-risk populations of older adults, children, and people with asthma, with an adequate margin of safety. The airshed that contains the Project site in Eaton County is in attainment for NAAQS, meaning that none of the ambient concentrations of criteria pollutants exceed the air quality standards.

To protect air quality, several permitting programs under the CAA regulate point-source air emissions, including New Source Review (NSR) permits and Title V permits. Specific to the Project, two types of NSR permits were reviewed, a Prevention of Significant Deterioration (PSD), and a minor source permit. PSD permits apply to 28 listed facility types that have the potential to emit 100 tons per year (tpy) or more of a regulated NSR pollutant or are unlisted facilities that have the potential to emit 250 tpy or more of a regulated NSR pollutant. A PSD permit is not required for the Project because the battery cell manufacturing facility is not considered a new major stationary source because it is not one of the 28 listed facility types, nor does it have the potential to emit 250 tpy of a regulated NSR pollutant. The Project is subject to a minor source state only permit, and Ultium submitted a permit application to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division on April 6, 2022. Ultium anticipates receiving the approved air permit to install for the new emission sources from EGLE in November 2022.

The CAA Title V Operating Permit program applies to emission sources that have the potential to emit 10 tpy of any single hazardous air pollutant, 25 tpy of any combination of hazardous air pollutants, or 100 tpy of any regulated air pollutant. Based on the emission profile of the new manufacturing facility (see Table 2), it has the potential to emit more than 100 tpy of two pollutants: nitrogen oxides ($NO_X$) and CO. In accordance with the Title V air permitting regulations, Ultium will apply for a Title V operating air permit within 12 months before starting regular production at the facility, and the Title V air permit will allow Ultium to operate the emission sources.

The air pollutant loads reflected in Table 2 represent the potential to emit air pollutants from all emission sources at the facility, reflecting both permitted and nonpermitted emission sources (including insignificant and exempt sources). All anticipated permit limits for permitted units have been accounted for in this total. Because the potential to emit from the facility exceeds 100 tpy, the facility will be subject to the CAA Title V Operating Permit.

**Table 2: Potential to Emit**

| Air Pollutant | Tons Per Year |
|---|---|
| Nitrogen Oxides ($NO_X$) | 127.37 |
| Carbon Monoxide (CO) | 140.63 |
| Volatile Organic Compounds (VOC) | 51.59 |
| $PM_{10}$ | 19.46 |
| $PM_{2.5}$ | 17 |
| Sulfur Oxides ($SO_X$) | 2.13 |
| Lead | 0. 210 |
| Ammonia ($NH_3$) | 6.4 |
| Hazardous Air Pollutants (HAPs) | 14.65 |
| Carbon Dioxide Equivalent ($CO_2e$) | 238,901 |

*$PM_{2.5}$ = particulate matter of a diameter of less than 2.5 micrometers; $PM_{10}$ = particulate matter of a diameter of less than 10 micrometers*

The totals in the table above represent the total potential to emit from the site (permitting and permit exempt units); actual emissions are expected to be under these totals. All regulated sources of emissions (e.g., facility boilers) would be subject to specific permitted emission levels.

### *3.2.2 Emissions Analysis*

Air emissions would result from the construction and operation of the Project. During construction, air emissions would be generated from mobile sources (e.g., trucks, automobiles) and dust. The emissions from the worker vehicles, construction equipment, and trucks would be temporary and transient in nature and various BMPs (e.g., watering soils and truck covers, washing) would be implemented to further reduce potential impacts.

Because the emissions during construction would not overlap with the emissions during operation, and due to the controls that would be implemented during construction, impacts on air quality as a result of the construction of the Project would not be significant.

The operation of the battery cell manufacturing facility would result in several sources of air pollutant emissions that would result in the total emissions presented in Table 2. The pending air permit to install will include various emission-control technologies required to be implemented specific to the emission source (e.g., dust collectors, activated-carbon treatment). Most of the $NO_X$, CO, and carbon dioxide equivalent ($CO_2e$) emissions are associated with the combustion of natural gas used in the air-handling units and boilers; the majority of the PM emissions ($PM_{2.5}$ and $PM_{10}$) are associated with the electrode mixing and the cutting and notching process steps, and the majority of volatile organic compound emissions are associated with the solvent-recovery plant and general solvent cleaning used in the overall manufacturing process. The other emissions (sulfur oxides [$SO_X$], lead, ammonia, and hazardous air pollutants [HAPs]) are associated with natural gas combustion and/or multiple manufacturing-process steps.

Due to the location of the Project site and existing air quality conditions, the amount of anticipated air emissions, and the controls that would be implemented during operation, and because the air permit to install would require that the overall air quality in the region meets the NAAQS, impacts on air quality as a result of the Project would not be significant.

## 3.3 Biological Resources

### 3.3.1 Wildlife and Vegetation

The land within the Project site comprises 11 habitat types, based on a detailed habitat assessment completed for the Project site on February 10, 2022[3], surface water delineations completed from November 16 through 19, 2020[4] and on June 21 and 28 and July 7, 2022[5], and a habitat assessment completed for the utility corridor on July 27, 2022[6]. The 11 habitat types consist of the following:

- Cultivated Crops: 177.49 acres
- Development, Low, Medium, and High Intensity: 13.8 acres
- Grassland/Herbaceous: 44.57 acres
- Forest, Deciduous, Evergreen, and Mixed: 61.49 acres
- Wetlands, Palustrine Emergent: 8.74 acres
- Wetlands, Palustrine Scrub-Shrub: 2.65 acres
- Wetlands, Palustrine Forested: 22.36 acres
- Open Water Area: 0.529 acre

The majority of the Project site has been previously disturbed by agricultural and industrial activities and represents limited biological habitat. The utility corridor is predominantly within a maintained roadway and right-of-way with overhead utilities present near the central and southern segments. Vegetative communities within the utility corridor consist largely of upland grassland and scrub-shrub species typically found in disturbed areas, with a few scattered trees. The boundary of the agricultural fields has a mix of grasses and herbaceous vegetation. Approximately 32.39 acres of the wetland habitat at the Project site are regulated by EGLE and approximately 1.884 acres of the wetland habitat are not regulated. The Project would permanently disturb 0.92 acre of the EGLE-regulated wetland habitat during construction of the main building and 0.003 acre of EGLE-regulated wetland habitat during work within the utility corridor.

The onsite natural areas have been isolated due to the roadway network surrounding the Project site, resulting in bifurcation of ecological connectivity and an “edge effect” along roadway corridors. The onsite agricultural land represents latent monocultural operations lacking biodiversity. Due to the current industrial land use adjacent to the Project site (i.e., an existing GM assembly plant), minimal natural habitat, isolated natural habitats, and resultant low potential for wildlife use, impacts on general biological resources (i.e., wildlife and vegetation) as a result of the Project would not be significant.

### 3.3.2 Threatened and Endangered Species

A desktop and field investigation were conducted to determine the potential effects of the Project on federally listed threatened or endangered species. A review of the U.S. Fish and Wildlife Service’s (USFWS) Environmental Conservation Online System (ECOS)–Information for Planning and Consultation (IPaC) database identified five threatened, endangered, or candidate species that may be found within the area of the Project site: Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis),* eastern massasauga (rattlesnake, *Sistrurus catenatus*), eastern prairie fringed orchid (*Platanthera leucophaea*), and monarch butterfly (*Danaus plexippus*). No critical habitats are within the Project site for any identified listed species.

[3] Environmental Solutions & Innovations, Inc. (ESI). 2022. *Detailed Habitat Studies for Listed Bats for Ultium Cells LLC – Lansing Delta Township Project in Eaton County, Michigan*. Prepared by ESI for Arcadis.

[4] Steckel, J., and V. Tremante. 2021. *Lansing Delta Township Site Surface Water Delineation Report*. Prepared by Arcadis for General Motors.

[5] Ladd, H., and S. Moore. 2022. *Lansing Delta Site Alternate Utility Corridor Option B Surface Water Delineation Report*. Prepared by Arcadis for General Motors.

[6] Ladd, H. 2022. *Lansing Delta Site Alternate Utility Corridor Bat Potential Roost Tree Survey*. Prepared by Arcadis for General Motors.

Based on the initial USFWS IPaC database results, bat habitat assessments were conducted at the Project site on February 10, 2022, that identified 26 unique patches of habitat, 10 of which are forested and total 85.8 acres. A total of 135 potential roost trees were identified within the 85.8 acres[7]. Of those, five potential primary roosts for Indiana bats and six potential primary roosts for northern long-eared bats were identified. Within the 17.6-acre tree-clearing area of the Project site, 55 of the potential roost trees, including four potential primary roosts for both bat species, were identified. The assessment concluded that, based on the availability of nearby habitats in combination with the lack of known Indiana and northern long-eared bat colonies in the area, the loss of the 17.6-acre tree area during the bat inactive season (i.e., October–March) would be unlikely to result in take[8] of federally listed bats via habitat loss. The USFWS concurred with this determination on March 4, 2022. In addition, USFWS stated that their lack of species records in the Project area suggests a no-effect determination for the eastern massasauga. On March 7, 2022, USFWS issued a consistency letter reiterating the above determinations and issued a no-effect determination for the eastern prairie fringed orchid.

Subsequent site assessments identified an additional 14 potential roost trees requiring removal within the tree-clearing area. On March 22, 2022, USFWS stated their previous determinations remained valid.

Based on this consultation, Ultium has incorporated the following conservation measures into the scope of the Project:

- Tree clearing identified or planned for future must be completed during the inactive season for bats (i.e., October–March).
- Lighting and replacement lighting on the northern side of the Project site that is in proximity to the Indiana bat habitat must utilize downward facing, full cut-off lens lights.
- Temporary lighting would be directed away from suitable habitat area during active bat season (i.e., April–September).

With incorporation of the protective measures, USFWS, on May 2, 2022, concurred that the Project would not affect designated critical habitat, would have no effect on the eastern prairie fringed orchid or eastern massasauga, and may affect, but is not likely to adversely affect, the Indiana bat and northern-long eared bat.

In December 2021, a potential bald eagle nest was identified approximately 270 feet north of the Project area. At the time the nest was observed, it was not clear if the nest was actively being used; however, two mature bald eagles were observed within the area at that time. On March 21, 2022, USFWS recommended avoiding disturbance within a 660-foot buffer of that nest throughout the lifetime of the Project and, on May 2, 2022, confirmed that an eagle take permit would not be necessary for the Project.

After consultation with the USFWS was initially completed in May 2022 for the Project, Ultium added the 14.9-acre utility corridor to the Project. DOE summarized effect determinations within this new utility corridor and requested that USFWS reinitiate Section 7[9] consultation for the expanded action area on August 8, 2022 (Appendix B, *Consultation with Agencies, Native American Tribes, and Interested Parties*). Specifically, DOE determined that the expanded utility corridor project may affect, but is not likely to adversely affect, the Indiana bat and the northern long-eared bat due to the absence of suitable habitat and one potential primary roost tree more than 1,000 feet from another location of suitable habitat. DOE based this determination on the *Lansing Delta Site Alternate Utility Corridor Bat Potential Roost Tree Survey*[10] conducted on July 27, 2022, which was shared with USFWS in the request to reinitiate consultation. In this letter, DOE also reiterated the previous determination of no effect for the eastern massasauga and eastern prairie fringed orchid, based on absence of species suitable habitat

[7] Environmental Solutions & Innovations, Inc. (ESI). 2022. *Detailed Habitat Studies for Listed Bats for Ultium Cells LLC – Lansing Delta Township Project in Eaton County, Michigan*. Prepared by ESI for Arcadis.

[8] *Take* as defined under the Endangered Species Act, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

[9] Under Section 7 of the Endangered Species Act, federal agencies must consult with National Oceanic and Atmospheric Administration (NOAA) Fisheries when any action the agency carries out, funds, or authorizes may affect either a species listed as threatened or endangered under the Act, or any critical habitat designated for it.

[10] Ladd, H., and S. Moore. 2022. *Lansing Delta Site Alternate Utility Corridor Bat Potential Roost Tree Survey.* Prepared by Arcadis for General Motors.

requirements and site-specific conditions. On August 24, 2022, the USFWS concurred with this no adverse effect determination (Appendix B).

Given the lack of critical habitat and the results of informal consultation with USFWS, impacts on threated and endangered species as a result of the Project would not be significant.

## 3.4 Water Resources

### *3.4.1 Wetlands and Streams*

Two surface-water delineations to identify federally and state-regulated wetlands and streams were completed for the Project site following procedures outlined in the U.S. Army Corps of Engineers' *1987 Wetland Delineation Manual* and its Northcentral and Northeast regional supplements (**Figure 3**)[11, 12]. A total of 34.277 acres of wetlands were delineated within the Project site, including 22.36 acres of palustrine forested wetlands, 8.74 acres of palustrine emergent wetlands, 2.65 acres of palustrine scrub-shrub wetlands, and 0.529 acre of open water. Of the 34.277 acres of wetlands, 32.393 acres of wetlands are regulated by EGLE under Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 303), and 1.884 acres of wetlands are not regulated under Part 303.

The footprint of the proposed main building would affect 0.92 acre of wetlands in two locations (see **Figure 3**). Wetlands affected by the main building consist of a larger wetland complex that extends to the north of the Project site, comprising palustrine emergent (0.40 acre) and palustrine forested (0.52 acre) vegetation communities. Construction in the utility corridor would also affect 0.003 acre of palustrine emergent wetlands. Ultium submitted a permit application to EGLE on June 3, 2022, to request authorization under Part 303 to affect 0.923 acre of state-regulated wetlands. EGLE requested additional information on June 13, 2022, and Ultium provided the additionally requested materials to EGLE on June 15, 2022. Disturbance to palustrine emergent wetlands requires mitigation at a replacement ratio of 1.5:1, and disturbances to palustrine forested wetlands requires mitigation at a replacement ratio of 2:1. Ultium proposes to offset impacts on 0.923 acre of regulated wetlands through purchase of 1.645 acres of palustrine forested wetland credits from Sanstone Wetland Mitigation Bank.

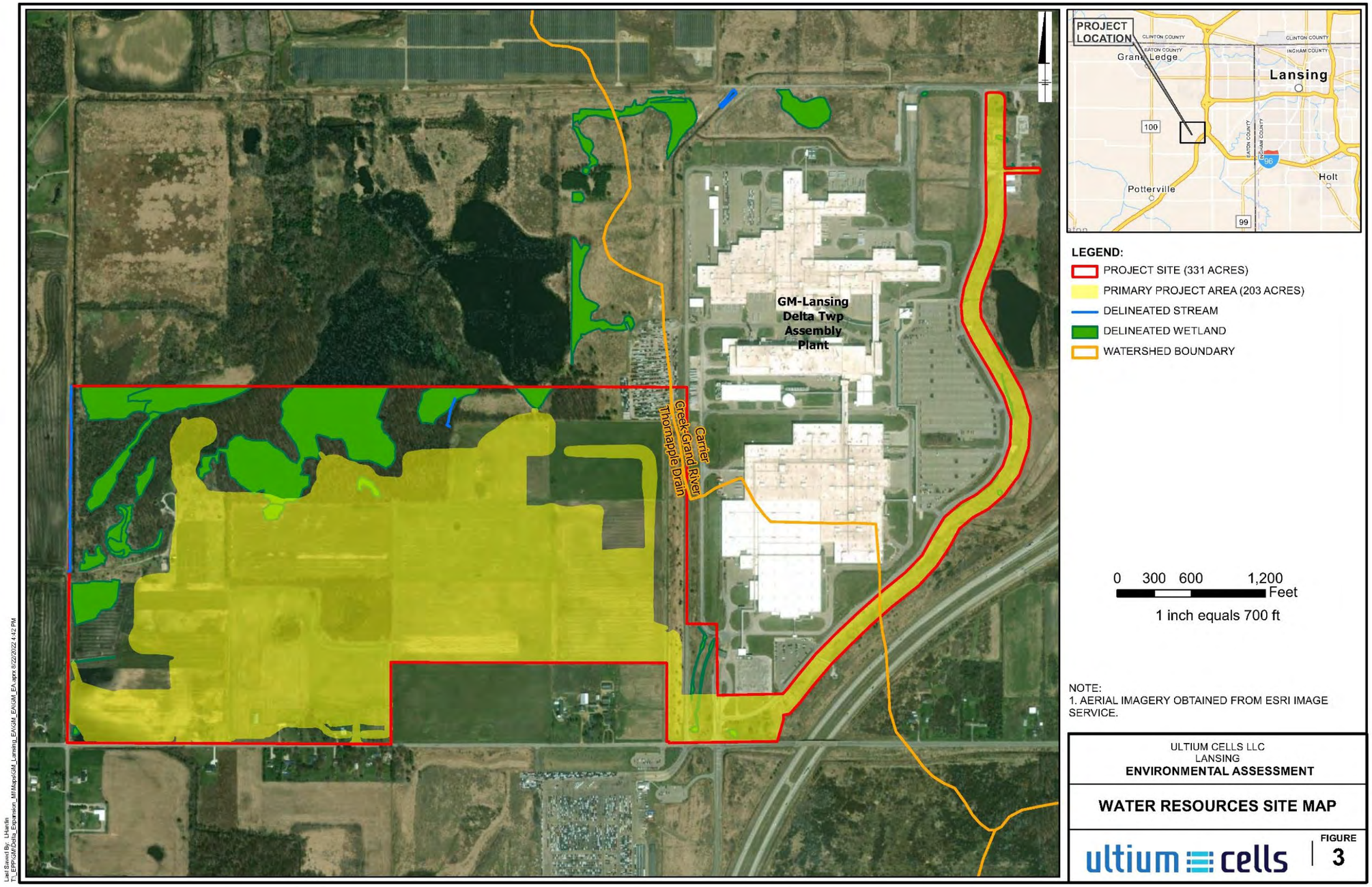
To minimize potential impacts on offsite wetlands and streams from construction, Ultium prepared a Soil Erosion and Sediment Control Plan for the Project site that was provided with the permit application to EGLE for review. Controls that would be implemented to minimize impacts include installing sedimentation ponds to intercept construction-site runoff and a silt fence around the perimeter of any area that would be disturbed by construction of the Project.

The Project would have no net loss of federally regulated wetland or stream functions and values. The minimal wetland impacts from construction of the main building to 0.92 acre of the larger wetland complex that would remain adjacent to the site would be offset through purchase of forested wetland mitigation bank credits. The impacts on 0.003 acre of palustrine emergent wetlands would also be offset through the purchase of wetland credits. The wetlands on the Project site would not be affected (i.e., filled) until the final permit issued by EGLE. Because EGLE must issue a final permit, and Ultium is purchasing wetland mitigation bank credits, impacts from the Project on wetlands and streams would not be significant.

[11] Steckel, J., and V. Tremante. 2021. *Lansing Delta Township Site Surface Water Delineation Report*. Prepared by Arcadis for General Motors.

[12] Ladd, H., and S. Moore. 2022. *Lansing Delta Site Alternate Utility Corridor Option B Surface Water Delineation Report*. Prepared by Arcadis for General Motors.

## Figure 3: Water Resources Site Map



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### 3.4.2 Surface Water, Floodplains, and Groundwater

The Project site is primarily within the Thornapple Drain sub watershed (Hydrologic Unit Code [HUC] 040500070103) of the larger Thornapple watershed (HUC 04050007). A small portion of the Project site is within the Carrier Creek–Grand River sub watershed (HUC 040500040704) of the larger Upper Grand watershed (HUC 04050004). The development of the Project on approximately 203 acres would alter the amount of impervious surface from approximately 5 acres (1.8 percent) of the total Project site to approximately 100 acres (35.2 percent). This increase in impervious surface would result in less pervious surface on the Project site. As such, Ultium has established a stormwater management system on site that includes the development of four stormwater ponds that would detain and treat stormwater. The stormwater ponds would function to provide treatment and filtering of pollutants prior to the stormwater runoff. Pond 1 would discharge to the Thornapple Extension #920 Drain, and Ponds 2, 3, and 4 would discharge and overflow into the northern wetlands. Additionally, Ultium has developed strategies to mimic groundwater recharge and provide for reduced stormwater runoff through low-impact development (LID) strategies based on guidance from Eaton County. These strategies include the use of permeable gravel pavement in non-travel areas and reduction of impervious surfaces to the maximum extent practicable. Ultium has redesigned proposed drainage swales and ditches and is now utilizing vegetated swales with check dams that function as bioswales to promote infiltration and provide a storage component. The vegetated swales would be augmented with check dams to provide additional volume to be stored within the swales and increase overall infiltration. This has been implemented specifically in areas where natural revegetation is being proposed.

The Project site is outside of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map study area for the Charter Township of Delta (FEMA zone #260066) and does not have an assigned FEMA flood zone. The Project site contributes to two sub-drainage areas, Thornapple Extension Drain and Thornapple Extension Drain – Branch 2. A review of the surrounding properties demonstrated the existence of a FEMA Special Flood Hazard Zone, designated as Zone A, located to the east of the Project, which includes areas subject to inundation by the 1-percent-annual-chance flood event. Ultium performed and submitted to EGLE a hydraulic analysis in March 2022 to determine the 100-year flood elevation at the Project site. EGLE responded via email on April 27, 2022, noting that the drainage areas of Thornapple Main 1 and the Thornapple Drain Branch 2 are less than 2 square miles and, therefore, do not require a permit from EGLE under the state's Floodplain Regulatory Authority[13]. EGLE recommended that the hydraulic study be extended and resubmitted to their office. The additional modeling requested was performed and submitted to EGLE on May 26, 2022. The study determined the 100-year flood elevation is approximately 853.7 feet above mean sea level, on average, and 854.4 feet at the highest location in the immediate vicinity of Thornapple Extension Drain – Branch 2. Based on the results of the hydraulic study, the Project is not located in and would therefore avoid the 100-year floodplain.

During operations, the Project would obtain its water from the Delta Township public water and sanitary sewer utility system. Delta Township is supplying water and sanitary sewer connection on site through access easements provided by Ultium. An existing connection for water and sanitary sewer near Millet Highway and I-96/69 would be used for tie-in. Ultium has collaborated with Delta Township since 2021 for the water supply and route for installation of water and sanitary sewer mains. Ultium is responsible for managing the onsite drainage and stormwater control to the Delta Township lift station, metering the sanitary sewer flow, and housing the sampling equipment. Delta Township is responsible for the construction of the water and sewer mains to be located on site within the utility corridor. Delta Township has been awarded money from the State of Michigan Strategic Fund to support the construction and installation of improvements directly related to the Ultium Project.

Delta Township purchases water from the Lansing Board of Water & Light through a wholesale agreement, and Ultium would be responsible for water cost used by its facility. The Lansing Board of Water & Light provides public water supply through 124 groundwater wells from the Saginaw Formation, which the Lansing Board of Water & Light carefully manages through the City of Lansing Wellhead Protection Program. The Ultium Project is projected to utilize 1.5- to 1.7-million gallons per day (MGD) and is projected to discharge 0.56 MGD to the sanitary sewer. The Lansing Board of Water & Light total

[13] Part 21 Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

capacity for pumping is annually 67.56 MGD which is distributed to two water treatment plants; however, the average annual water uses in 2021 was 18.6 MGD, in 2020 was 19.0 MGD and from 2019-2015 was 19.5 MGD. Despite the growing population in the Lansing area, the water supply has more capacity than is being used because of an increase in water-conservation strategies throughout the region. The Lansing Board of Water & Light utilizes a source-water protection plan to include continual groundwater wells based on a U.S. Geological Survey groundwater model for the Saginaw Formation developed for groundwater management. Based on an assessment of the current water supply provided by the Lansing Board of Water & Light, Delta Township would have adequate capacity to serve the Project's anticipated water needs.

Based on the current plans for municipal water use, the avoidance of identified floodplains, anticipated stormwater control and treatment during construction and operation, and the water supply–source management practices, impacts from the Project on surface water, floodplains, and groundwater would not be significant.

## 3.5 Cultural Resources

A *historic property*, as defined by the National Historic Preservation Act (NHPA; 54 United States Code § 300101 *et seq.*), is any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to consider the impact of their actions on historic properties. Regulations implementing the NHPA (36 CFR Part 800) provide clear steps for agencies to follow regarding consultation with state, local, or tribal government officials, in the identification of historic properties potentially affected by their undertaking, assessment of impacts on historic properties, and resolution of adverse effects through avoidance, minimization, or mitigation.

### *3.5.1 Architectural and Historical Resources*

NHPA Section 106 consultation for architectural resources was initiated in April 2022 with the Michigan State Historic Preservation Office (SHPO) and indicated that while no previously recorded architectural and historical resources were located within one mile of the Project, there were several properties with buildings aged 50 years or older in the vicinity of the Project footprint. During the field survey conducted in February 2022, 17 architectural resources were identified within one-half mile of the Project footprint. This area was defined as the architectural Area of Potential Effect (APE) (see Appendix B). The majority of these resources were located along Davis Highway, with four resources located along Nixon Road. All 17 of the identified aboveground resources were recommended not eligible for listing in the NRHP due to a lack of significance and/or loss of integrity.

In a response dated May 4, 2022, SHPO stated that they were withholding comment on the APE for indirect effects and identified the need for further investigation pending receipt of additional requested information regarding the evaluation of potential secondary and cumulative impacts associated with the Project. However, the response indicated that SHPO concurred with the recommendations of not eligible regarding the 17 architectural resources. Therefore, no architectural resources eligible for listing in the NRHP are located within the proximity of the Project site, and the Project would not affect historic-era architectural resources.

On June 6, 2022, additional information regarding the indirect APE (i.e., secondary, and cumulative impacts) was submitted to SHPO to supplement the initial Section 106 review application. As requested by SHPO, the potential for the Project to introduce secondary and/or cumulative impacts in the future was examined, including impacts associated with road widening, additional infrastructure, and any anticipated increase in development of the area that the Project might cause. Existing interstate highways and other traffic infrastructure are anticipated to adequately handle the increase in vehicular traffic, and no associated road widening, nor other road improvements, are anticipated in the vicinity of the Project site. In addition, no future utilities, land acquisitions, infrastructure, or development are planned outside the Project footprint or in the vicinity of the Project footprint, and no NRHP-eligible aboveground historic resources were identified within the indirect APE. Therefore, no significant indirect impacts on cultural resources are anticipated.

Subsequently, Ultium added to the Project the 14.9-acre utility corridor, which is located entirely within the previously defined architectural and historical resources APE and is subterranean in nature. Given that this corridor would not introduce any aboveground impacts or additional impacts outside of the APE, additional architectural resource review was not required.

On July 6, 2022, a consultation letter was sent to the SHPO for Section 106 consultation, requesting concurrence with the archaeological and architectural APEs, as well as the DOE review and finding of no historic properties affected. On August 11, 2022, SHPO concurred with DOE's finding that no historic properties are affected within the APE. As a result of the findings, the impacts on architectural and historical resources would not be significant.

### *3.5.2 Archaeological Resources*

Section 106 consultation for archaeological resources was also initiated in April 2022 via an Application for SHPO Section 106 Consultation Form that summarized the Project, along with a proposed scope of work for the Phase I archaeological survey. In addition to this submission, representatives from SHPO, EGLE, DOE, GM, and Arcadis had a conference call on April 21, 2022, to discuss the Project and scope of work. As a result of the SHPO application and meeting, SHPO approved the Phase I archaeological survey methodology on May 4, 2022.

For the archaeological survey, the entire Project site was defined as the archaeological APE (Appendix B). The Phase I archaeological survey was conducted in April and May 2022 and involved both pedestrian reconnaissance and shovel testing. The Phase I archaeological report summarizing the field results was submitted to SHPO in May 2022. As part of the field survey, a site revisit was conducted at the previously recorded Site 20EA77. The field survey did not identify any prehistoric materials associated with Site 20EA77 but did document three dumping locations within the site boundary that contained unassigned historic-era and present-day debris. Site 20EA77 was recommended as not eligible for listing in NRHP. Two new archaeological sites (20EA142 and 20EA143) and three isolated surface finds (SF-1 to SF-3) were identified within the archaeological APE. Sites 20EA142 and 20EA143 consist of historic era/modern-day dumping locations associated with nearby farms and residences. These sites were considered ineligible for listing in the NRHP. All three surface finds (SF-1 to SF-3) consisted of a single, nondiagnostic, historic-era isolate and were recommended as not eligible for NRHP listing. In an email correspondence dated June 10, 2022, SHPO concurred that no archaeological resources eligible for listing in the NRHP would be affected by the Project (Appendix B), and therefore, the Project is not anticipated to affect historic or cultural resources.

Subsequently, Ultium added the 14.9-acre utility corridor to the Project. An addendum letter summarizing this new land requirement was submitted to SHPO on July 21, 2022 (Appendix B). Within the addendum letter, it was recommended that the new utility corridor did not require an additional cultural resources survey, and it would have no adverse effect on historic properties. In an email correspondence dated July 22, 2022, SHPO concurred that additional archaeological work was not required in the new utility corridor because this area has been previously disturbed (Appendix B).

On July 06, 2022, a consultation letter was sent to the SHPO for Section 106 consultation, requesting concurrence with the archaeological and architectural APEs, as well as the DOE review and finding of no historic properties affected. On August 11, 2022, SHPO concurred with the recommendations in the Phase I survey that no archaeological resources in the APE are eligible for listing in the NRHP.

Should unexpected archeological resources be discovered during construction, activities would be halted in the immediate area of the discovery until the resources have been evaluated for NRHP eligibility criteria (36 CFR 60.4) in consultation with the SHPO, DOE, EGLE and interested tribal consulting parties in accordance with 36 CFR 800.13. Appropriate mitigation would be determined during this consultation.

Due to the absence of eligible architectural and archaeological resources within the APE, the controls that are in place in the event of an unanticipated discovery, and the SHPO's concurrence on the archaeological and architectural findings, impacts on cultural resources as a result of the Project would not be significant.

### 3.5.3 Tribal Consultations

Based on coordination with the SHPO in April 2022, DOE determined that both state-recognized tribal nations, as well as federally recognized tribes, would be provided the opportunity to review, comment, and consult on the Project. The SHPO provided a list of state-recognized tribes to integrate into the overall tribal-consultation process. DOE utilized the Tribal Directory Assessment Tool provided by the U.S. Department of Housing and Urban Development to obtain contact information for each federally and state-recognized tribe[14]. Subsequently, in May and June of 2022, DOE contacted the tribes via telephone to confirm the mailing and/or email address for distribution of consultation letters. On June 17, 2022, invitations to comment on the undertaking and to engage in government-to-government consultation with DOE regarding the NEPA and Section 106 processes were sent to the Grand River Band of Ottawa Indians, the Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin, the Mackinac Bands of Chippewa and Ottawa Indians, the Menominee Indian Tribe of Wisconsin, the Miami Tribe of Oklahoma, the Saginaw Chippewa Indian Tribe of Michigan, and the Sault Ste. Marie Tribe of Chippewa Indians. In addition, an invitation to comment on the undertaking was sent to Sawn Creek Black River Confederated Ojibwa Tribes on June 28, 2022 (Appendix B). DOE requested confirmation of receipt of consultation letter in the email distribution. In late June 2022, DOE followed-up with phone calls to the tribes that had not confirmed receipt of the consultation request via email. On July 11, 2022, the Tribal Historic Preservation Officer for the Saginaw Chippewa Indian Tribe of Michigan, Ms. Marcella Haden, provided a letter confirming that there were no recorded resources within the APE and that it was their opinion that the Project would have no adverse effect on cultural resources (Appendix B). DOE did not receive any further comments from either federally or state-recognized tribes.

## 3.6 Noise

*Noise* is any unwanted sound that penetrates the environment or interferes with normal communication or activities. The Project site is zoned Heavy Industrial by the City of Lansing[15]. The immediate surrounding area of the Project site is characterized by heavy-industrial zoning (to the east and northeast) and agricultural zoning (to the south, west, northwest, and north). Overall, the surrounding area to the south, west, and north remains mostly undeveloped. The surrounding area to the east is developed with the existing GM assembly plant and industrial and commercial development beyond that. The Project site directly abuts Davis Highway, within the Canadian National Railway Lansing yards to the south. Existing sources of noise at the Project site include vehicular traffic comprising commuter vehicles, large delivery trucks for the existing assembly plant, farm and maintenance equipment for the neighboring farm fields and maintained areas, and the rail line to the south.

The Project would generate temporary noise during construction from heavy machinery, such as bulldozers, graders, excavators, dump trucks, and cement trucks, as well as smaller tools, such as jack hammers and nail guns. Noise and sound levels would be typical of new construction activities and intermittent and temporary. Construction activities would be limited to daytime between the hours of 6:00 a.m. to 6:00 p.m., Monday through Saturday.

No schools or daycares are within 0.25 mile of the Project site. Six residences are located across Davis Highway, within 0.35 mile of the Project site. These residences could experience minor, short-term, adverse impacts from noise generated during construction of the proposed facility.

The industrial process/manufacturing operations at the facility operations would not add to the local ambient noise levels because the manufacturing processes would be conducted within an enclosed building and consistently with the current Heavy Industrial-zoned land use. The facility is adjacent to an existing manufacturing facility, so the vehicular traffic from commuting workers and trucks, both receiving and shipping materials, would not represent a new source of noise in the area.

[14] U.S. Department of Housing and Urban Development. No Date. Tribal Directory Assessment Tool. Available: https://egis.hud.gov/TDAT/. Accessed: April 19, 2022.

[15] City of Lansing Planning Office. No Date. City of Lansing Zoning Map. Available: https://lansing.maps.arcgis.com/apps/webappviewer/index.html?id=964880d378a04437a4a8309fca1ea1ac. Accessed: June 16, 2022.

Due to controls that would be implemented during construction (i.e., time limits) and the nature of the area surrounding the Project site (i.e., adjacent to existing manufacturing facility), impacts from noise as a result of the Project would not be significant.

## 3.7 Public and Occupational Health and Safety

The construction contractor would develop and implement a site-specific occupational health and safety plan for construction activities, and employee health and safety plans and emergency plans would be developed and implemented for operation of the Project. These plans would include regular required safety training for all employees, employee wellness programs, and monitoring programs to track work-related injuries and near-miss trends. It is anticipated that potential worker accidents would remain within or below the national averages for construction activities.

Various hazardous chemicals would be used throughout the battery cell manufacturing process. Currently, no regulated substances per Section 112(r) of the CAA (Risk Management Plan) would be used. However, the Project would use carbon nanotubes and other chemical substantives regulated by the Toxic Substance Control Act (TSCA) of 1976. Ultium is authorized to manufacture, process, distribute in commerce, use, or dispose of carbon nanotubes and other TSCA-regulated chemical substantives in accordance with the provisions of TSCA Section 5(e). Ultium would comply with TSCA regulations as required by EPA. Ultium would employ a chemical-control process that evaluates all new chemicals for environmental and safety-regulatory implications prior to that chemical being brought on site. In addition, Ultium would use a software program to track chemical purchases monthly that would be able to run reports to notify the site if any chemicals used trigger CAA Section 112(r) requirements.

Ultium would implement its safety management program, designated as the Workplace Safety System. This system provides precautionary, preventative, and emergency response information regarding the potential release of these hazardous chemicals. Ultium has prescriptive internal performance standards for respiratory protection, chemical control, chemical exposure assessment and management, and personal protective equipment. Ultium would develop and provide training for all workers who handle hazardous chemicals. All individuals working with hazardous chemicals would receive training in safe work practices to understand the potential risks, necessary safety precautions, and proper response in the event of an accidental contact/release. Workers would be required to wear any necessary personal protective equipment, have access to necessary response equipment and supplies in the event of accidental spill, and know how to properly respond in an emergency. Safe work practices are important for all individuals working with hazardous chemicals to understand the potential risks, necessary safety precautions, and proper response in the event of an accidental contact/release. Ultium would develop and maintain emergency response plans to address injuries, fires, spills, hazardous chemical leaks, and operational safety. The plans would be used by personnel to minimize both human health and safety concerns and environmental impacts, including in the neighboring community.

Additionally, Ultium would be involved with the Lansing, Michigan, Planning Board. Per the Emergency Planning and Community Right-to-Know Act rule (40 CFR Part 370), Ultium would produce and submit necessary chemical-threshold reports, site plans, and site emergency response plans and would participate in meetings and exercises. Ultium would also develop the necessary emergency response procedures applicable to transportation of dangerous goods and materials.

Safety Data Sheets for all chemicals would be followed and available on site. Electrolyte would be stored in tanks compatible with the substances stored in them, and the tanks would be located in secondary containment areas that meet all applicable regulations, which would protect the soil and water environment. Nitrogen would be used to transfer electrolyte between tanks and containers and throughout the facility, reducing ignition hazards. Leakage sensors would also be installed on important valves. The electrolyte-unloading area would be contained to capture spilled or leaked materials and equipped with a sump to facilitate their safe removal. The storage location would be protected against weather conditions and unauthorized access. Any transfer of materials, including tank filling or dispensing, on the exterior of plant buildings would be completed in hardscaped areas with secondary containment systems in place.

Used or expired chemicals and laboratory reagents would be properly stored in closed, labelled, and compatible containers in a separate location on the premises. Waste generated by the plant would be

sent to proper disposal facilities and transported by qualified companies per applicable federal and state regulations.

BMPs, requirements of applicable federal, state, and local regulations and standards for construction and the operation of the facility, would be implemented to ensure the safety of workers and the public. These standards would include compliance with federal Occupational Safety and Health Administration regulations and state rules under Michigan Occupational Safety and Health Administration regulations and the Michigan Occupational Safety and Health Act.

The Delta Township Fire Station is approximately a 5.8-mile drive from the Project site and would be called on to provide emergency medical services, as well as fire and rescue and responses to hazardous-materials emergencies. The Delta Township Fire Station would be informed of potential hazards associated with the facility, facility construction, and layout information for the Project site to ensure that first responders and the public are aware of potentially hazardous situations (e.g., toxic smoke or vapors) in the event of a fire or industrial accident. Additionally, the plant would be equipped with a fire-suppression system.

The safe production of lithium-ion batteries would not result in the discharge or emission of hazardous materials from the manufacturing plant directly or indirectly into Waters of the United States, either on site or off site. The Project would not affect the chemical profile of groundwater. Wastewater and waste management at the Project site would be conducted in a manner that does not pose a threat to the water or soil environment.

Impacts to health and safety from use of various products during construction and operation are not anticipated based on the implementation of measures that address health and safety, including: BMPs; compliance with federal, state, and local regulations and standards; plans for preventing chemical spills and responding to potential release of hazardous materials; and the facility's experience with handling and use of the same hazardous materials. As a result, impacts on public and occupational health and safety would not be significant.

## 3.8 Socioeconomics and Environmental Justice

### *3.8.1 Socioeconomics*

The Project site is in the City of Lansing in Eaton County, Michigan. The Bureau of Labor Statistics defines the *Lansing Area* to include Clinton, Eaton, and Ingham counties[16]. *Lansing Area* also defines the affected area of the Project for the purposes of this socioeconomics analysis.

Population growth in the affected area over the 2010–2020 period ranged from a negative 1.4 percent for the City of Lansing to a positive 4.5 percent for Clinton County; growth in each of Eaton and Ingham Counties was approximately 1.5 percent. Approximately 20,490 housing units in the affected area are vacant, with more than 5,700 housing units available for rent[17]. Unemployment rates in the affected area range from 3.4 to 4.1 percent, which is higher than the national rate (3.3 percent)[18]. Labor force participation rates in the affected area range from 63.4 to 64.5 percent, which is higher than for the state of Michigan as a whole and on par with the national participation rate (63.4 percent)[19].

General Motors owns three residences at the Project site that were formerly leased to local residents. During the planning phase of the Project, General Motors coordinated with the local tenants to vacate the residences and terminated the leases to support the development of the Project site. The three formerly leased residences within Project site would be demolished under a permit issued by the Delta Township

[16] Bureau of Labor Statistics. 2022. Lansing Area Economic Summary. Available: https://www.bls.gov/regions/midwest/summary/blssummary_lansing.pdf. Accessed: June 19, 2022.

[17] U.S. Census Bureau. 2022. 2020: ACS 5-Year Estimates Subject Tables, B25004: Vacancy Status.

[18] U.S. Bureau of Labor Statistics (BLS). 2022, Local Area Unemployment Statistics (LAUS): https://arcadis.maps.arcgis.com/home/item.html?id=993b8c64a67a4c6faa44a91846547786. Available: https://services.arcgis.com/P3ePLMYs2RVChkJx/arcgis/rest/services/BLS_Monthly_Unemployment_Current_14_Months/FeatureServer. Accessed: June 19, 2022.

[19] U.S. Census Bureau. 2022. 2020: ACS 5-Year Estimates Subject Tables; Table S2301 Employment Status.

Building Department. The demolition of the residences would align with the Heavy Industrial zoning of the area and the other existing manufacturing facilities adjacent and nearby to the Project site.

Due to the short duration of the construction phase, construction of the Project is not anticipated to trigger any permanent in-migration of workers; the construction-phase labor demand is expected to be met by the existing local or regional construction workforce. The Project is expected to generate approximately 1,500 new jobs during operations. Given the current unemployment and labor force–participation rates, it is anticipated that some migration would occur to the affected area to meet the labor demand of the Project. This in-migration would be realized over a 3-year period. Given the short commuting times in the affected area (approximately 20 minutes on average, which is approximately 5 minutes less than the statewide average[20]), and the well-developed transportation infrastructure in the affected area, it is not expected that these new employees would be disproportionally located in any single locale within the affected area. It is expected that the existing infrastructure and services (e.g., roads, schools, fire departments, police force) would accommodate this population migration to the affected area without impacts on service ratios or other performance metrics. Therefore, the impacts from the Project on socioeconomics would not be significant.

### *3.8.2 Environmental Justice*

LPO's review of environmental justice issues focuses on Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, the National-Scale Air Toxics Assessment (NATA) cancer risk and respiratory hazard index as defined in EPA's Environmental Justice screening tool, and on any site-specific review of population centers (e.g., schools, day-care centers) near the Project site.

EO 12898 directs federal agencies to address environmental and human health conditions in minority and low-income communities. The evaluation of environmental justice is dependent on determining whether high or adverse impacts from the Project would disproportionately affect minority or low-income populations in the affected community. The Bureau of Labor Statistics defines the *Lansing Area* to include Clinton, Eaton, and Ingham counties[21]. This area defines the affected area of the Project for the purposes of this environmental justice analysis. Table 3 provides a comparison of population and ethnicity for the affected area with the City of Lansing (in which the Project is located), the surrounding counties of Clinton, Eaton, and Ingham, and with the State of Michigan.

In accordance with EPA's Environmental Justice Guidelines, minority populations should be identified when either: 1) the minority population of the affected area exceeds 50 percent; or 2) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

The minority population of each geographic component of the affected area is less than 50 percent, and the minority population of the affected area as a whole is less than 50 percent. The minority population of the affected area is not meaningfully greater than the minority population percentage in the general population as a whole (as represented by the State of Michigan). The incidence of poverty based on the percentage of households with earnings below the poverty level for affected area is not meaningfully different than that of the general population as a whole (as represented by the State of Michigan). Therefore, no environmental justice community is present in the Project area, and, thus, there would be no anticipated impacts that could give rise to disproportionate impacts on minority or low-income populations in the affected area.

[20] U.S. Census Bureau. 2022. 2020: ACS 5-Year Estimates Subject Tables; Table S0801 Commuting Characteristics by Sex.

[21] Bureau of Labor Statistics. 2022. Lansing Area Economic Summary. Available: https://www.bls.gov/regions/midwest/summary/blssummary_lansing.pdf. Accessed: June 19, 2022.

## Table 3: Population, Ethnicity, and Poverty

| Population, Ethnicity, and Poverty | State of Michigan | Clinton County | Eaton County | Ingham County | City of Lansing | Affected Area |
|---|---|---|---|---|---|---|
| Total Population | 9,973,907 | 78,957 | 109,730 | 290,923 | 117,488 | 597,098 |
| **Ethnicity** | | | | | | |
| White | 74% | 89% | 82% | 69% | 54% | 89% |
| Black or African American | 13% | 2% | 7% | 11% | 22% | 14% |
| American Indian and Alaska Native | 0% | 0% | 0% | 0% | 1% | 0% |
| Asian | 3% | 1% | 2% | 7% | 5% | 6% |
| Native Hawaiian and other Pacific Islander | 0% | 0% | 0% | 0% | 0% | 0% |
| Hispanic or Latino | 5% | 5% | 6% | 8% | 13% | 8% |
| Poverty | 13% | 8% | 8% | 17% | 20% | 14% |

*Notes: All population and ethnicity data were gathered from the U.S. Census Bureau web page. Accessed June 17, 2022.*

The NATA Air Toxics Cancer Risk and Air Toxics Respiratory Hazard Index are tools for comparing the risks and hazards present in an affected area with the risks and hazards present across a state or the nation. The affected area displays a NATA Air Toxics Cancer Risk (in lifetime risk per million) of between 0 and 25[22]; this is the lowest range reported and equivalent to or less than the risk reported for the state and nation as a whole. The affected area is characterized in the Air Toxics Respiratory Hazard Index as being in the "less than 50$^{th}$ percentile"[23]; this is the lowest percentile reported and equivalent to or less than the risk reported for the state and nation as a whole. Ultium applied to EGLE on April 6, 2022, for a Permit to Install (APP-2022-0094) and will comply with the terms and conditions of the Permit. Permitted emission levels of criteria pollutants, hazardous air pollutants, and air toxics are considered to be protective of human health and the environment; therefore, the Project would not exacerbate cancer risks or respiratory hazards.

The site-specific region of influence for this analysis did not identify any population centers (e.g., schools, day-care centers) nearer than 2 miles to the Project site; residences are located adjacent and proximate to the Project site. Standard safety measures (e.g., fences, security, controlled building access) would be emplaced at the site to prevent unauthorized access (to include children) to the property and facility. The permitted emission levels of criteria pollutants and hazardous air pollutants are considered to be protective of human health.

As part of the Project, Ultium would contract with minority- and diversly owned business enterprises and supply vendors and create trade-based and manufacturing-based jobs, as well as workforce training opportunities.

For construction labor for the new facility, Ultium would utilize the National Maintenance Agreement, which is a system of tripartite governance and cooperation with Owner (Ultium), Contractors (Integrated Project Delivery Trade Partners), and building-trades craft workers of respective unions. All construction labor would be union labor; therefore, each employee would be a journeyperson or labor apprentice. Thus, as required by the National Maintenance Agreement, Lansing-area residents must apply for trade apprenticeships in order to work on the Project.

Ultium plans to partner with and provide opportunities to community organizations that support residents transitioning from rehabilitation or incarceration and individuals seeking their high school diplomas via nontraditional methods. Ultium plans to use these community-based organizations to create opportunities

[22] U.S. Environmental Protection Agency. 2022. 2017 AirToxScreen Mapping Tool. Available: https://epa.maps.arcgis.com/apps/dashboards/fb6e6b70c7e2480c8ef88cc8e9c061ac. Accessed: June 20, 2022.
[23] Ibid.

for local business to provide various services to the organization, such as catering services, office supply and printing services, uniforms and other apparel, and leased office/training space.

Ultium would also engage with local community colleges and universities to provide graduates with career opportunities in skilled trades (e.g., multi-craft maintenance, controls, heating/ventilation/air conditioning, boiler operation), engineering, finance, human resources, and supply chain processes. Ultium would provide competitive wages and benefits that would be at or above the prevailing rates. Ultium is committed to identifying, recruiting, and hiring local workers, with a focus on underserved communities, and would provide the necessary training and tools for those workers to be successful.

Because the minority populations and poverty rates in the affected area would not be meaningfully different than those of the state, disproportionately high and adverse effects on minority or low-income populations in the affected area are not anticipated. Based on the jobs that would be created during construction, the approximately 1,500 direct jobs associated with the proposed plant, and the community engagement and partnerships proposed as part of Ultium's workforce and employment plans, the Project is anticipated to benefit the economy of the affected area, as well as the larger regional economy. Therefore, Project impacts on environmental justice would not be significant.

## 3.9 Traffic and Transportation

Anticipated operational activities at the Project site would include a total of 1,522 employees split over three shifts, with approximately 652 personnel during Shift #1 and 435 personnel during Shift #2 and #3 commuting to the site each day, as well as an average of 124 truck trips per day.

Access to the Project site would be granted via Davis Highway. The Project site is adjacent to and would share roadway access with the existing GM assembly plant to the east. The Project site is planned to be served via one primary employee driveway and one entrance and exit driveway each for commercial vehicle traffic from Davis Highway. Local infrastructure is already in place to service the existing plant, including exits off of I-96 and I-69 to Lansing Road. The Project would primarily affect:

- Davis Highway, a two-lane rural highway running east–west
- Guinea Road, a two-lane, local-access roadway running north–south, primarily serving the existing GM assembly plant
- Canal Road, a four-lane minor arterial roadway running north–south
- Creyts Road, a five-lane minor arterial roadway running north–south; Mt. Hope Highway, a three-lane minor arterial roadway running east–west
- Lansing Road (Old US-27), a principal arterial boulevard roadway running northeast–southwest
- Relevant intersections of these roads and highways

A Traffic Impact Analysis (Traffic Study) commissioned by GM for the Project site[24] analyzed 14 intersections and determined that traffic counts at all intersections operated at a level of service (LOS)[25] D or better, except for the Northbound Guinea Road approach to Millett Highway during the PM peak time (LOS E). This approach primarily serves shift-change traffic at the existing GM assembly plant during the weekday afternoon period and is not expected to degrade in LOS as a result of new, Project-generated vehicle traffic.

The Traffic Study determined that all approaches/intersections would be expected to operate at LOS D or better with development of the Project, with the exception of the following intersections: Davis Highway and Easterly GM Access Drive/Guinea Road; Creyts Road and Mt. Hope Highway; Canal Road and Mt. Hope Highway; Canal Road and Millett Highway; Canal Road and Davis Highway; and Canal Road and Old US-27/Lansing Road. A LOS B or better is expected for each approach at the three proposed site-access intersections on Davis Highway.

[24] Ultium Cells, LLC. 2022. *Lansing Cell Manufacturing Traffic Study, Delta Township, Michigan*. May 23. Prepared by Wade Trim.

[25] Road performance is measured using level of service (LOS) ratings. LOS ratings range from A to F, with A as the best travel conditions and F the worst. Most planners aim for LOS C, defined as roads that are below, but close to, capacity, where traffic generally flows at the posted speed.

As a result of the traffic safety and operation analysis conducted, the Traffic Study included the following recommendations:

- Construct full-width right-turn-only and left-turn-only lanes on the Davis Highway approaches to the employee-access driveway and a traffic signal at this intersection.
- Construct an auxiliary left-turn-only lane with at least 50 feet of storage length on the southbound GM Access Drive approach to Davis Highway.
- Signal timing adjustments at the intersections/approaches with LOS E or worse, discussed above.

With the above recommendations implemented, the Traffic Study determined that all intersections and movements would be expected to continue to operate at an acceptable level of service with development of the Project.

The Traffic Study was submitted with the site plan application to Delta Township and the Eaton County Road Commission on May 23, 2022. Comments were received from the Eaton County Road Commission on June 3, 2022, and July 8, 2022. The Eaton County Road Commission requested the following modifications be added to the site plans for the public roadways adjacent to the Project site:

- An additional 50-foot road right-of-way along the northern side of Davis Highway and the eastern side of Nixon Road
- Improvements to Davis Highway to meet all-season road standards

Ultium would implement Maintenance of Traffic plans to ensure safety during various phases of construction. Pavement markings needed at internal intersections would be updated to avoid anticipated vehicle conflicts due to sight restrictions and turning envelopes of both passenger vehicles and large trucks. Additionally, Ultium would stagger shifts with the existing assembly plant during operations to mitigate traffic increases during shift changes.

As presented in Section 2.0, *Description of the Proposed Action*, the recommended measures from the Traffic Study and the modifications requested by the Eaton County Road Commission have been incorporated into the Project (i.e., constructing turn-only lanes, accounting for increases in traffic from construction and operation by installing appropriate signage and controls, managing traffic flows at intersections with pavement markings, implementing traffic safety plans, and staggering shifts with the existing assembly plant); therefore, the impacts from the Project on transportation are not anticipated to be significant.

## 3.10 Waste Management

All solid waste generated during the construction phase of the Project would be managed and transported in accordance with all federal, state, and local regulations. As explained in Section 2.0, *Description of the Proposed Action*, solid and liquid hazardous and nonhazardous waste generated during the operations phase will be collected, characterized, and disposed of and/or recycled in accordance with all applicable federal, state, and local environmental regulations. Due to the multiple generating sources associated with the manufacturing processes, this section provides an overview of the potentially hazardous waste that would be generated at the facility, the annual quantities, characterization and storage requirements, and disposal practices. In addition, Ultium would employ a strategic program that seeks to continually improve resource efficiency through enhanced source reduction, recycling, and recovery, while maintaining compliance with regulations. Table 4 presents a summary of the waste streams, annual volume, collection and transportation system, and the disposal plan for each stream.

**Table 4: Operational Waste Management**

| Waste Stream | Characterization | Estimated Annual Volume (Pounds) | Collection | Transportation | Anticipated Disposal Method [a] |
|---|---|---|---|---|---|
| Electrolyte | Hazardous | 60,000 | Aboveground storage tank | Via tanker truck | Incineration |
| Bag Filter Media | Nonhazardous | 189,450 | Drums and characterized for disposal | Drums by truck | Recovery |
| Off-Spec NMP | Nonhazardous | 161,500 | Aboveground storage tank | Via tanker truck | Recycling |
| Scrap Copper | Nonhazardous | 873,000 | Roll off boxes | Via truck | Recycling |
| Scrap Aluminum | Nonhazardous | 700,250 | Roll off boxes | Via truck | Recycling |
| Scrap Battery Cells | Nonhazardous | 6,775,000 | Drums | Via truck | Recycling |
| Cell Material | Hazardous | 5,500,000 | Gaylord boxes | Via truck | Recycling |
| Oils and Greases | Nonhazardous | 12,000 | Drums | Via truck | Recycling |
| Lab Chemicals | Hazardous | 12,500 | Drums and characterized for disposal | Drums by truck | Incineration |

*Notes:*
*[a] Information based on a sister plant and actual volumes will be evaluated once in production.*
*NMP = n-methyl-2-pyrrolidone.*

With planned waste-management practices, including recycling, and authorized solid- and liquid-waste disposal controls, impacts from waste management activities are not anticipated to be significant.

## 3.11 Cumulative Impacts

*Cumulative impacts* are potential effects on the environment from the incremental impact of the Project when added to other past, present, and reasonably foreseeable future actions undertaken by other agencies (federal or nonfederal) or persons (40 CFR Part 1508.1(g)). The Project would predominantly affect agricultural lands through transition to an industrial land use, which would not be precedent-setting within the Thornapple watershed or the Upper Grand watershed. The Project would not result in the loss of ecological resources functions and values that are especially vulnerable to incremental effects within this region. The geographic area was reviewed to consider potential other projects that, when in combination with the Project, have the potential to result in an incremental effect. Projects were identified through a review of active project lists and planning documents from the Greater Lansing Regional Committee, the Tri-County Regional Planning Commission, the Lansing Economic Area Partnership, and Michigan Department of Transportation (MDOT), with additional information provided by Ultium. The review identified the following current and reasonably foreseeable future projects:

- **Old US-27 N/Lansing Road at Millett Highway**: MDOT is planning for traffic safety improvements along 0.799 mile of Old US-27 N/Lansing Road near its intersection with Millett Highway during 2025.
- **Conversion of Agricultural Land to Solar Energy Farms**: Agricultural land north of Millett Highway, east of Nixon Road, south of Mt. Hope Highway, and west of Guinea Road (north of the Project site) is planned to be converted to solar energy farms. Solar energy farms already exist in a portion of this area.
- **Construction, Tooling, and Operation of a future Recycling Facility**: Construction, tooling, and operation of the recycling facility in the future by others. Site preparation for this facility is included under the Project. The future recycling facility would not be constructed until construction of the Project has been completed.

- **Amazon Delta Township Fulfillment Center**: Construction of a 1-million-square-foot Amazon fulfillment center on 120 acres on the corner of Mt. Hope Highway and Creyts Road, creating 500 full-time jobs. The facility is approximately 3 miles northeast of the Project site. The Amazon fulfillment center is scheduled to be open in Fall 2022.

LPO reviewed the identified projects in the region to determine the resources that may be subject to a cumulative impact. The review focused on the direct and indirect resources affected by the Project and identified resources that may be affected by both the Project and other projects in the region. Based on this review, the following resources were evaluated for cumulative impacts:

- Aesthetics and Visual Resources
- Air Quality and Climate Change
- GHG Emissions and Climate Change
- Socioeconomics and Environmental Justice
- Traffic and Transportation
- Surface Water, Floodplains and Groundwater

The Project, when considered together with the identified projects in the region, does not have the potential to result in significant cumulative impacts on other resources due to the geographic location and separation of the projects, the disturbed nature of the Project site, and/or the lack of construction or operational overlap, and the dissimilarity of projects that would result in an incremental impact on a particular resource.

### *3.11.1 Aesthetics and Visual Resources*

The Project site is zoned as Heavy Industrial, and construction of the Amazon fulfillment facility would also be located on a site zoned as Heavy Industrial. The existing GM assembly plant and several other industrial and commercial facilities are present between the Project site and the planned Amazon fulfillment facility. Thus, the Project would align with the current views from the Amazon fulfillment facility. Similarly, the aesthetics of the construction, tooling, and operation of a future recycling facility at the Project site would align with the aesthetics of the existing GM assembly plant and the Project.

Conversion of agricultural land to solar energy farms would result in similar land use to that which currently exists to the north of the Project site. The views of the Project site from the conversion of land are expected to be the same as before.

The traffic safety improvements along Old US-27 N/Lansing Road at Millett Highway are adjacent to several industrial uses, including a Meijer distribution center. Although traffic safety improvements may temporarily alter the aesthetics immediately surrounding the work area, the impacts would be short term in nature. Because the construction and operation of the Project would align with the existing industrial aesthetics of the surrounding area, and traffic safety improvements would be temporary, a cumulative impact to aesthetics and visual resources would not be significant.

Because the additional development is located within an industrial setting (zoned as Heavy Industrial), conversion of land outside of this zoning would result in similar views, along with the incorporation of landscaping to screen the Project from the surrounding properties, cumulative impacts on aesthetics and visual resources would not be significant.

### *3.11.2 Air Quality and Climate Change*

The Amazon fulfillment facility is scheduled to open in the fall of 2022 and overlap with construction of the Project during the summer months of 2022. However, air emissions resulting from construction would be temporary and minimized through the use of BMPs. Furthermore, the Project is estimated to reduce approximately 2,407,328 tons of $CO_2$ per year. Cumulatively, these activities may have temporary impacts during their overlapping construction phase, but that overlap would be short in duration and produce a long-term benefit to reduction in GHG emissions.

The traffic safety improvements on Old US-27 N/Lansing Road are scheduled to be completed during 2025, and the future construction, tooling, and operation of the recycling facility at the Project site would be completed after construction of the Project. The timeline for conversion of agricultural land to solar energy farms is unknown. However, it is not anticipated that the conversion activities would result in significant air emissions.

The potential emissions associated with operation of the Project and the future recycling facility have the potential to result in cumulative impacts on the regional air quality. As discussed in Section 3.2, *Air Quality*, Eaton County is in attainment for NAAQS; in accordance with the CAA, the state has developed a State Implementation Plan to maintain compliance with NAAQS. Any new emissions in the airshed, to include those of the identified projects in the region, that are subject to CAA permitting would have to comply with CAA regulations and would be reviewed to ensure the air quality in the region maintains compliance with NAAQS. Therefore, the cumulative impacts on air quality associated with the operation of the Project and the other projects in the region would not be significant.

### 3.11.3 Greenhouse Gas Emissions and Climate Change

The current science and study of the Earth's climate now shows with 95-percent certainty that human activity is the dominant cause of observed global warming since the mid-twentieth century.[26] Since the beginning of the industrial era, circa 1750, human activities have increased the concentration of GHGs (primarily $CO_2$, $NO_X$, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere. The rising global temperatures have been accompanied by changes in weather and climate (e.g., changes in rainfall that result in more floods, droughts, or intense rain, rising sea levels, Arctic Sea ice decline, more frequent and severe heat waves).[27] It is now well established that rising atmospheric GHG-emission concentrations are significantly affecting the Earth's climate.[28]

GHG emissions associated with the construction of the Project would be minimal compared to the savings resulting from use of the battery cells in EV automotive-battery applications. Project operations would generate average annual GHG emissions of 320,870 tpy from electric power delivered from the regional grid and 238,355 tpy from the combustion of natural gas. As discussed in Section 2.0, *Description of the Proposed Action*, the new battery-manufacturing facility would build battery cells designed for use in EV batteries.

The magnitude of potential annual reductions in gallons of petroleum would depend on the number of EVs using the manufactured battery cells. Based on a similar facility located in Spring Hill, Tennessee, at full capacity, the Project is expected to produce enough batteries to supply more than 350,000 vehicles annually, assuming a 125-kilowatt-hour battery pack is used for each vehicle. Therefore, it is expected that the petroleum displaced (i.e., saved) would be 144.8 million gallons per year (based on annual mileage of 12,000 miles and current 2021 average fuel economy of 29 miles per gallon for light-duty vehicles).

The annual avoided $CO_2$ is calculated from the Project annual fuel consumption savings (144.8 million gallons) multiplied by the U.S. Energy Information Administration's Fuel Emission factor of 19.54 pounds $CO_2$/gallon for gasoline[29]. Therefore, the use of battery cells produced by the Project and used in EVs would support a reduction of approximately 1,414,696 tons of $CO_2$ per year. In general, the potential benefits associated with reducing $CO_2$ emissions would support a reduction in GHG concentrations and

[26] Intergovernmental Panel on Climate Change (IPCC). 2013. Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T. F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P. M. Midgley (eds.)]. Cambridge, UK, and New York, NY, USA: Cambridge University Press. 1,535 pp.

[27] Ibid.

[28] U.S. Council on Environmental Quality (CEQ). 2016. *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews*. August 1. 33 pp.

[29] U.S. Energy Information Administration (EIA). 2022, Carbon Dioxide Emissions Coefficients. www.eia.gov/environment/emissions/co2_vol_mass.php. Accessed: September 27, 2022.

reduce the associated climate change impacts (e.g., increases in atmospheric temperature, changes in precipitation, increases in the frequency and intensity of extreme weather events, rising sea levels).

Because the Project would result in an overall benefit by reducing GHG concentrations, it is not anticipated that significant adverse cumulative effects to GHGs and climate change would occur.

### 3.11.4 Socioeconomics and Environmental Justice

Construction and operation of the Project, along with construction and operation of the Amazon fulfillment facility and the future recycling facility at the Project site, would result in an increase in temporary construction workers and long-term employment. Construction associated with traffic safety improvements along Old US-27 N and conversion of agricultural land to solar energy farms would lead to a temporary increase in construction workers for installation and maintenance work. The increase in both short-term and long-term jobs in the region would result in a beneficial socioeconomic impact. To help further determine cumulative impacts, the regional economic and transportation plans produced by the Tri-County Regional Planning Commission were reviewed as well for incorporation into the review process. Because the Project and the other projects in the region are subject to regional planning and coordination via MDOT, significant cumulative impacts on the existing infrastructure and services (e.g., roads, schools, fire departments, police force) resulting from any population migration to the area are not anticipated. The proportion of the population in Eaton County that is minority or low-income is not significantly greater than the neighboring communities or state overall, and according to EPA's Environmental Justice Guidelines, there are no minority populations within direct vicinity of the Project site; therefore, no cumulative impacts are expected and there would not be a disproportion impact from the Project site.

### 3.11.5 Traffic and Transportation

As discussed in Section 3.8, *Traffic and Transportation*, with implementation of recommendations from the GM Traffic Study, all intersections and movements potentially affected by the Project are expected to continue to operate at an acceptable LOS with development of the Project. The Amazon fulfillment facility is being constructed on the corner of Mt. Hope Highway and Creyts Road, approximately 3 miles from the Project site. The GM Traffic Study found that this intersection currently operates at LOS C or better and found only minor changes to the total delay times in the AM peak (1.0-second change in delay) and PM peak (0.2-second change in delay) times.

The locations of traffic safety improvements on Old US-27 N/Lansing Road at Millett Highway were not studied in the GM Traffic Study. However, it is anticipated that traffic safety improvements may temporarily affect the local road network during construction and potential lane closures, but would be temporary in nature and, once completed, presumably provide LOS improvements to that stretch of roadway, which may be utilized to travel to and from the new manufacturing facility. Similarly, initial conversion of agricultural land to solar-energy farms may cumulatively increase traffic on the local road network but is expected to be limited to installation of solar panels and short term in nature.

The future construction, tooling, and operation of the recycling facility would benefit from the recommendations made in the GM Traffic Study to improve the Davis Highway approaches to the Project site.

The Project, in conjunction with the identified projects in the region, would lead to an incremental increase in overall traffic; however, no significant adverse cumulative effects on the region's overall transportation network are anticipated.

### 3.11.6 Surface Water, Floodplains, and Groundwater

The Project site requires development and approval for stormwater management based on EGLE standards associated with the Clean Water Act. The Amazon fulfilment facility, future recycling facility, and potential future solar-energy development would be required to adhere to the same standards to include a legally required stormwater management plan. Given the predominant agricultural industry

within this geographic region, surface-water-quality data has demonstrated historical exceedance of pollutant loads because of phosphorus and nitrogen loading within surface waters. The Project, in conjunction with reasonably foreseeable and current actions, would not increase pollutant loadings downstream due to the requirement for onsite surface-water management and new stormwater systems.

A review of the Amazon facility site plan demonstrates the avoidance of floodplains based on FEMA Flood Insurance Rate Maps[30]. The conversion of agricultural land for solar energy would require citing the panels outside of flood zones for technical operation and installation. Furthermore, the MDOT traffic safety improvement would occur within a developed roadway and not impact floodplains.

The Amazon fulfillment facility would reduce surface area for natural groundwater infiltration. Similar to Ultium, the fulfillment facility is required to comply with Eaton County Drain Commission, EGLE Land and Water Management Division and Delta Township requirements for stormwater management. The fulfillment facility may be required to adopt a range of the Eaton County stormwater BMPs to improve onsite groundwater infiltration. The fulfillment facility would not likely adversely alter groundwater recharge because the project would be required to create a stormwater management system and offset regulated surface water impacts through compensatory mitigation which collectively would improve groundwater infiltration. The solar energy and MDOT traffic improvements would have negligible impacts to groundwater infiltration due to the overall lack of new impervious surface areas associated with the projects. Cumulatively, the impacts on surface water, floodplains, and groundwater because of Project implementation, as well as current and reasonably foreseeable projects, would not be significant.

[30] PEA Group. June 8, 2021. *Delta Township Preliminary Site Plan Submittal: Project Spartan.* Available: https://files4.1.revize.com/deltatwpmi/Document_Center/Committee%20Agendas%20and%20Minutes/PC/July%2012,%202021%20Planning%20Commision%20Agenda%20Packet.pdf. Accessed: August 31, 2022.

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## 4.0 FINDING

Based on this Supplemental EA, DOE has determined that providing a federal loan to Ultium to construct and tool a manufacturing facility in Lansing, Michigan, would not have a significant effect on the human environment. The preparation of an environmental impact statement is therefore not required, and the DOE is issuing this Finding of No Significant Impact.

This Finding of No Significant Impact should not be construed as a final decision about the issuance of a loan guarantee.

TODD STRIBLEY Digitally signed by TODD STRIBLEY Date: 2022.11.09 07:47:43 -07'00'

Date: November 9, 2022

Todd Stribley, Director LPO Environmental Compliance
DOE NEPA Compliance Officer

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# 5.0 LIST OF AGENCIES CONTACTED

- Michigan Department of Environment, Great Lakes, and Energy
- Michigan State Historic Preservation Office
- Tri-County Regional Planning Commission
- U.S. Fish and Wildlife Service

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# 6.0 LIST OF PREPARERS

## 6.1 U.S. Department of Energy

- Todd Stribley, M.S., Environmental Science and Public Policy, 28 years of experience
- Angela Ryan, M.S., Global Sustainability, 15 years of experience
- Rebecca Jablon, AICP, LEED AP, PMP, M.C.R.P., City and Regional Planning, ICF (DOE contractor), 19 years of experience
- Maureen McCoy, M.A., Humanities & M.S., Historic Preservation, ICF (DOE contractor), 4 years of experience
- Tamar Love Grande, Editor, M.A., English/Creative Writing, ICF (DOE contractor), 24 years of experience
- Jenelle Mountain-Castro, Publications Specialist, ICF (DOE contractor), 18 years of experience

## 6.2 General Motors LLC on behalf of Ultium Cells, LLC

- James Hartnett, Environmental Manager, 37 years of experience

## 6.3 Arcadis U.S. Inc. (contractor to Ultium Cells, LLC)

- Lauren Kelley, B.S., Environmental Science, 16 years of experience
- Tiffany Novak, ENV SP, M.S., Physical Geography & Climatology, 18 years of experience
- Tegan Baiocchi, M.S., Historic Preservation, 12 years of experience
- Crista Haag, M.A., Anthropology/Archaeology, 20 years of experience
- Sierra Tweedie, B.S., Geology, 4 years of experience
- Conrad Mulligan, M.Sc., Marine Policy, 27 years of experience

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# APPENDIX A PERMITS AND APPROVALS

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## Table A-1. Permits for the Project's Lansing, Michigan Site

| Agency | Type of Approval | Identification Number | Date Applied | Date Approved |
|---|---|---|---|---|
| Delta Township | Preliminary Site Plan Approval | Pending | 5/23/2022 | Condition Approval 6/27/2022 |
| Delta Township | Building Permit (Footings and Foundation) | PB220262 | 5/23/2022 | 7/27/2022 |
| Eaton County | Soil Erosion and Sediment Control Permit (Mass Grading) | C2022-015-040-32 | 5/16/2022 | 5/20/2022 |
| Eaton County | Soil Erosion and Sediment Control Permit (Footings and Foundation) | C2022-015-040-32 (Amended) | 7/27/2022 | 7/28/2022 |
| Eaton County Drain Commissioner | Work within County Drain Easement | 920-2022-01 | 5/11/2022 | 5/20/2022 |
| Michigan Environment, Great Lakes, and Energy (EGLE) Air Quality Division | Construction Waiver | Not Applicable | 4/6/2022 | 5/3/2022 |
| Michigan EGLE Air Quality Division | Air Permit to Install | APP-2022-0094 | 4/6/2022 | Pending |
| Michigan EGLE Water Resources Division | Permit for Inland Lakes and Streams, Great Lakes, Wetlands, Floodplains, Dams, Environmental Areas, High Risk Erosion Areas, and Critical Dune Areas | HPE-3ZTB-1ARF4 | 6/3/2022 | 10/13/2022 |
| Michigan EGLE Water Resources Division | Hydraulic Study Review | HPB-BQJW-5HMJC | 5/26/2022 | Not Required |
| Michigan EGLE Water Resources Division | National Pollutant Discharge Elimination System (NPDES) Permit General Construction Activity (Mass Grading) | MIR117132 | 5/20/2022 | 5/23/2022 |

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# APPENDIX B CONSULTATION WITH AGENCIES, NATIVE AMERICAN TRIBES, AND INTERESTED PARTIES

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Appendix B – Agency Coordination

Agencies

| Organization | Contact Date(s) | Summary of Contact |
|---|---|---|
| Tri-County Regional Planning Council | 06/17/2022 | Intent to Prepare an Environmental Assessment |
| Michigan Department of Environment, Great Lakes, and Energy (EGLE) | 05/31/2022<br>06/17/2022 | Notification of DOE NEPA Review<br>Copy of Intent to Prepare an Environmental Assessment |
| Michigan State Historic Preservation Officer (MISHPO) | 07/06/2022<br>07/21/2022<br>08/11/2022 | Section 106 Initiation Letter<br>Expansion of Area of Potential Effects<br>MISHPO Response |
| US Fish and Wildlife Service (USFWS) | 04/15/2022<br>05/02/2022<br>08/08/2022<br>08/24/2022 | Section 7 Informal Initiation Letter<br>USFWS Concurrence Response<br>Section 7 Reinitiating Letter<br>USFWS Concurrence Response |

**Department of Energy**
Washington, DC 20585

June 17, 2022

Amanda Hathaway Frattarelli
Environmental Sustainability Program Manager
Tri-County Regional Planning Commission
3135 Pine Tree Road, Suite 2C
Lansing, MI 48911

**SUBJECT:** Intent to Prepare an Environmental Assessment (EA) for a Proposed Federal Loan to Ultium Cells, LLC., for Lithium-Ion Battery Cell Manufacturing Facility near Lansing, Michigan

Dear Amanda Hathaway Frattarelli,

Under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, the U.S. Department of Energy (DOE) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to the construction and tooling of a manufacturing facility near Lansing, Michigan. The facility will be used to build lithium-ion battery cells designed for use in electric vehicles and other applications. The decision to prepare an EA was made in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

The purpose and need for DOE's action is to comply with our mandate under Section 136 of the Energy Independence and Security Act to select projects for financial assistance that are consistent with the goals of the Act. Pursuant to the Act, the ATVM program was established to provide loans to automobile and automobile parts manufacturers for the cost of re-equipping, expanding, or establishing manufacturing facilities in the United States to produce advanced technology vehicles or qualified components. DOE has determined that the tooling and construction of the lithium-ion battery cells manufacturing facilities as proposed by Ultium is consistent with the goals of the Act, and is using the NEPA process to assist in determining whether to issue a loan to Ultium to support the proposed project.

The proposed project would involve constructing and tooling a manufacturing facility on undeveloped land west of the City of Lansing, in Delta Township, Eaton Cunty, Michigan (see Attachment 1). The Project site encompasses approximately 297 acres and is located immediately west of an existing vehicle assembly plant. The battery manufacturing processes would be housed in an approximately 2.8-million-square-foot facility, with several attendant structures and features also developed on the Project site (see Attachment 2). Such structures and features include parking areas, shipping and receiving areas, utilities, access roads, stormwater management facilities, a substation, a guard house, hazardous materials storage, landscape areas, water supply tanks, and site preparation for future construction of a battery cell recycling facility.

The DOE NEPA regulations provide for the notification of host states of NEPA determinations and for the opportunity for host states to review EAs prior to DOE approval. This process is intended to improve coordination and to facilitate early and open communication. DOE will provide the draft EA to you for your review and comment.

If you or your staff would like to receive further information concerning this project or DOE's NEPA process for ATVM loans, please contact me in the DOE Loan Programs Office at (202) 220-4586, or email at LPO_Environmental@hq.doe.gov.

Respectfully,

Angela C. Ryan

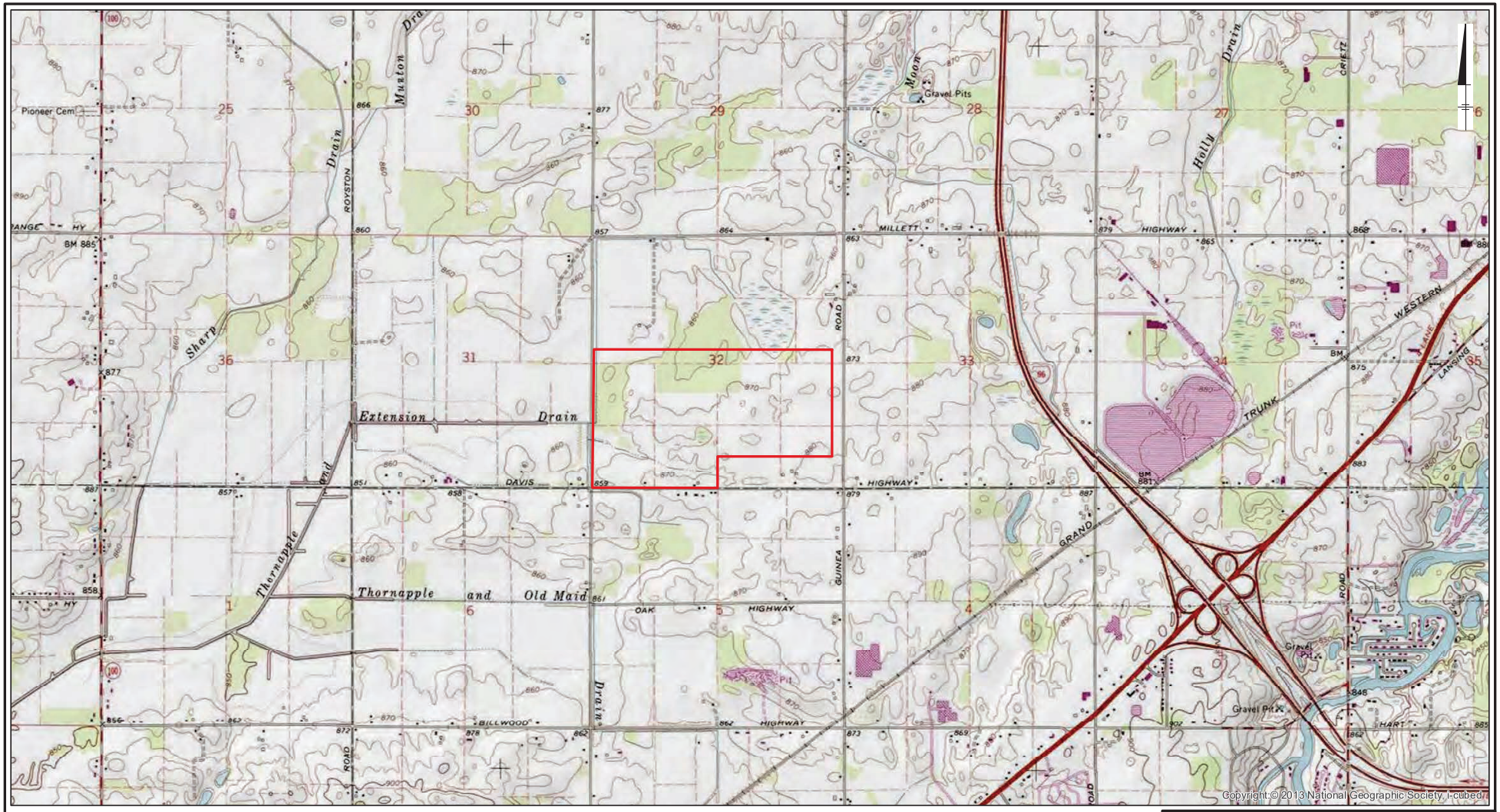
Angela Ryan
Environmental Protection Specialist
Loan Programs Office

Attachments:

Attachment 1: Lansing, MI Site Location Map
Attachment 2: Lansing, MI Site Concept Plan

cc: Lauren Schnoebelen

**Attachment 1**
**Lansing, MI Site Location Map**




## Legend

Area of Investigation (AOI)

NOTES:

1. Topographic mapping obtained from USGS Topo Maps online service.

0 2,000 4,000 Feet

GRAPHIC SCALE

GENERAL MOTORS
LANSING DELTA TOWNSHIP
**SURFACE WATER DELINEATION REPORT**

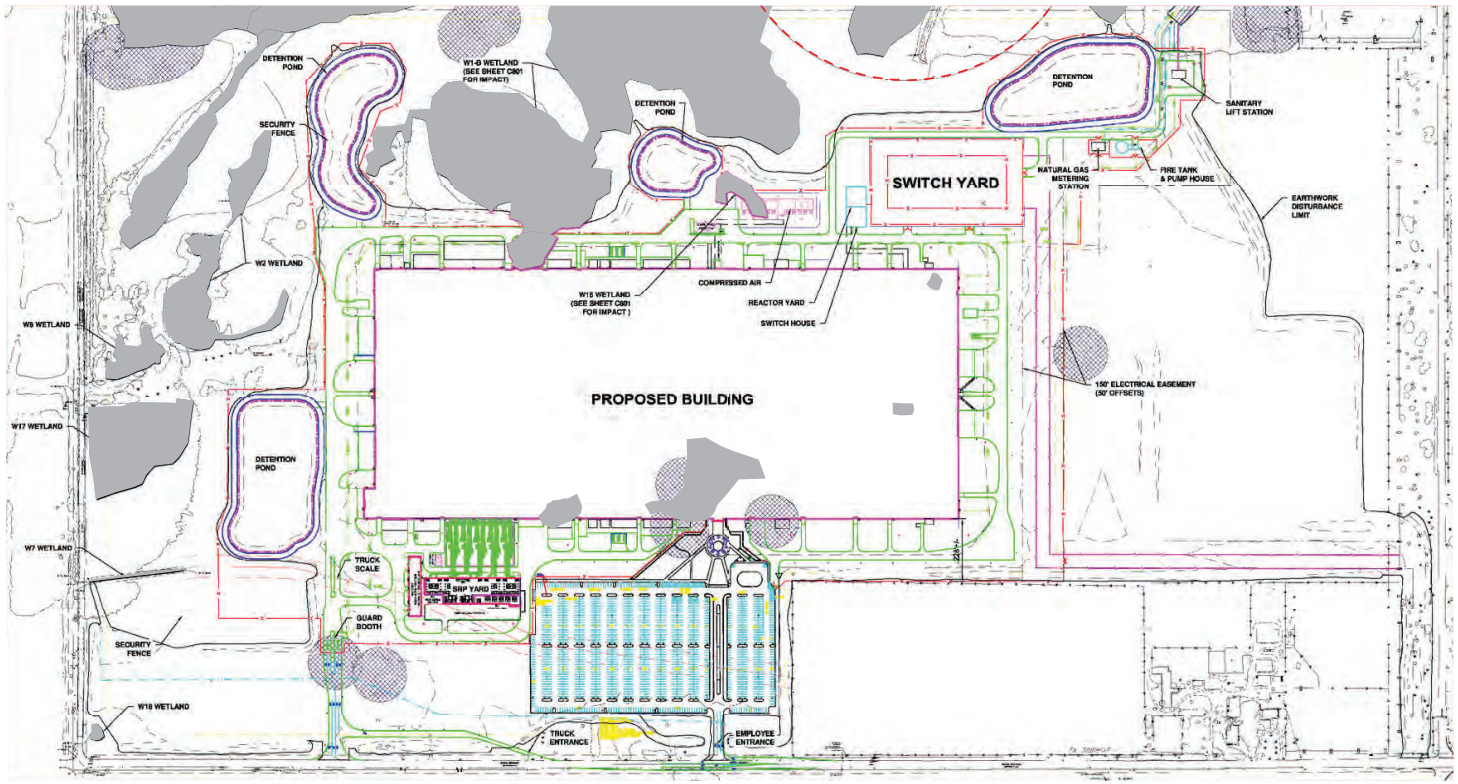
**USGS Topographic Mapping**
Dimondale, Michigan Quadrangle

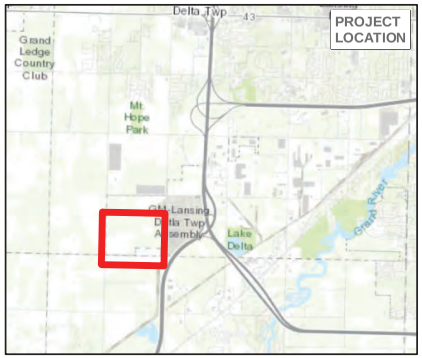
ARCADIS

FIGURE 1

City:Columbus Div/Group: ENV Created By: Last Saved By: JSteckel

**Attachment 2**
**Lansing, MI Preliminary Site Plan**




**LEGEND**

- 2022 WETLAND DELINEATION
- BALD EAGLE NEST 660 FT RADIUS BUFFER
- STATE REGULATED FLOODPLAIN

0 100200
Feet

NOTE:
1. AERIAL IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.

ULTIUM CELL, LLC
8175 MILLET HIGHWAY, LANSING, MICHIGAN

**PRELIMINARY SITE PLAN**

ARCADIS

FIGURE 1

Last Saved By: LHardin
T:_EPP\GM\Delta_Expansion_MI\Maps\Working\GM_Ultium_Layout\GM_Ultium_Layout.aprx 6/16/2022 3:44 PM

**From:** Ryan, Angela
**To:** GyekisK@Michigan.gov
**Cc:** Jablon, Rebecca
**Subject:** Coordination for Ultium Cell Project in Lansing
**Date:** Tuesday, May 31, 2022 4:16:00 PM

---

Hello, Keto.

I received your name and email from the applicant for the Ultium Cell project. My colleague, Rebecca, and I are reviewing this project for NEPA compliance as the applicant has pursued funding support from the Dept of Energy. We likely have many of the same comments and processes (e.g. SHPO coordination) for the project so instead of duplicating efforts, it would be wonderful to find ways to collaborate.

Do you have time in the next couple of weeks to meet via Teams to discuss the project? If so, would you please share some days/times?

Thank you in advance and look forward to working with you!

Very Respectfully,

Angela Ryan
Environmental Compliance Specialist
Loans Program Office
Department of Energy
240.220.4586
Angela.Ryan@hq.doe.gov

| | |
|---|---|
| **From:** | Ryan, Angela |
| **To:** | ahathawayfrattarelli@mitcrpc.org; lschnoebelen@mitcrpc.org |
| **Cc:** | LPO_Environmental; Jablon, Rebecca; McCoy, Maureen; Gyekis, Keto (EGLE); Garwood, Anne (EGLE); Saldivia, Luis (EGLE) |
| **Subject:** | NEPA Initiation Letter for Ultium Cells Lansing Project |
| **Date:** | Friday, June 17, 2022 11:05:00 AM |
| **Attachments:** | 20220617_Ultium MI NEPA Initiation Letter_Signed.pdf |

Good morning, Amanda and Lauren.

Please see the attached letter in support of the Department of Energy National Environmental Policy Act evaluation for project known as, “Ultium Cells” located in Lansing, MI. Please do not hesitate to contact me if you have any questions.

Very Respectfully,

Angela Ryan
Environmental Protection Specialist
Loans Program Office
Department of Energy
240.220.4586
Angela.Ryan@hq.doe.gov

**Department of Energy**
Washington, DC 20585

July 06, 2022

Mr. Brian G. Grennell
Michigan State Historic Preservation Office
300 North Washington Square
Lansing, Michigan 48913

**SUBJECT:** U.S. Department of Energy, Loan Programs Office, Ultium Cells, LLC, Battery Cell Manufacturing Facility in Lansing, Michigan; Section 106 Initiation and Finding of Effect

Dear Mr. Grennell:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, the U.S. Department of Energy (DOE), Loan Programs Office (LPO) is evaluating whether to provide financial assistance (a loan guarantee) to Ultium Cells, LLC (Ultium) to support the construction and tooling of a lithium-ion battery cell manufacturing facility in Lansing, Michigan (DOE's proposed action and undertaking).

The purpose of this letter is to initiate consultation with the Michigan State Historic Preservation Office (MISHPO) under Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800; present the DOE undertaking; present the archaeological and architectural areas of potential effect (APEs); and seek your concurrence on the archaeological and architectural APEs as well as DOE's finding of no historic properties affected.

**DOE Undertaking and APE**

The DOE undertaking (providing a loan to Ultium for the proposed project in Michigan) would involve constructing a new lithium-ion battery cell manufacturing facility on a project site located at 7111 Davis Highway, Ingman County, Lansing, Michigan (see Attachment 1). The project site encompasses approximately 297 acres and is located immediately west of an existing GM Lansing vehicle assembly plant. The battery manufacturing processes would be housed in an approximately 2.8 million square foot facility, with several attendant structures and features, such as parking areas, shipping and receiving areas, utilities, access roads, stormwater management facilities, a substation, a guard house, hazardous materials storage, recycling areas, landscape areas, and water supply tanks also developed on the project site (see Attachment 2).

The architectural APE includes the entire 297-acre project area, as well as a 0.5-mile radius around the project site (see Attachment 3). The archaeological APE includes a 325-acres comprised of the 297-acre project area and an 18-acre utility corridor (see Attachment 4). As of June 17, 2022, Ultium has indicated that the 18-acre utility corridor will no longer be required; however, this utility corridor has been subject to evaluation for archaeological resources and as such is still included in the archaeological APE.

**Section 106 Identification of Historic Properties**

In accordance with Section 106 Ultium's consultant (Arcadis) identified historic properties and assessed adverse effects. DOE has reviewed the data and reports resulting from these identification efforts: *Architectural and Historical Resources Investigation* (architectural survey dated June 2022), and the *Ultium Cells, LLC, Phase I Archaeological Survey Report for the Ultium Cells Battery Cell Manufacturing Plant, LDT Project, Delta Township, Eaton County, Michigan* (Phase I archaeological survey dated May 2022). The architectural survey considered indirect and cumulative effects. The report recommended that no properties 50-years or older within the architectural APE were eligible for the National Register of Historic Places (NRHP).

The Phase I archaeological survey consisted of background research and the identification of previously known archaeological sites within 1 mile of the project area. One previously identified site, known as Old Maid's Swamp (20EA77), is within the current project parcel and was identified as a prehistoric site from the Archaic period. During the survey, the site was subjected to systematic investigation using pedestrian survey and shovel testing; no prehistoric materials were identified. The survey also documented three dumping locations containing historic-era and present-day debris, and two isolated finds. The Phase I survey recommended these resources, including the Old Maid's Swamp, as not eligible for the NRHP.

**Section 106 Finding of Effect**

DOE has received copies of the MISHPO coordination with Ultium per MISHPO Tracking #ER22-620 for the Ultium Cells, LLC, Battery Cell Manufacturing Facility, and confirmation of transmittal of the aforementioned architectural survey and Phase I survey. Specifically, we are in receipt of the MISHPO concurrence with the architectural survey recommendations by letter dated May 4, 2022, and concurrence with the Phase I archaeological survey recommendations by email dated June 10, 2022.
Based on our review of this information and the architectural and archaeological reports, DOE concurs with the findings presented in the reports and requests your concurrence with DOE's finding of "No Historic Properties Affected" for architectural and archaeological resources for the Ultium facility in Lansing, Michigan.

We appreciate the MISHPO recommendation provided via conference call on April 7, 2022, regarding coordination with State recognized Native American tribes. Based on this recommendation, DOE has coordinated with seven Native American tribes, comprised of both Federally and State recognized tribes, to inquire if they would like to participate in the Section 106 process and/or the National Environmental Policy Act process. In addition to this request, DOE provided access to the architectural survey and Phase I archaeological survey reports, as well as the DOE's assessment of adverse effects. A copy of these letters will be sent upon request.

We look forward to consulting with your office through the Section 106 process. If you have any questions or would like to discuss this project further, please contact me via email Angela.Ryan@hq.doe.gov, or I can also be reached by telephone at 202-220-4586.

Respectfully,

Angela C. Ryan

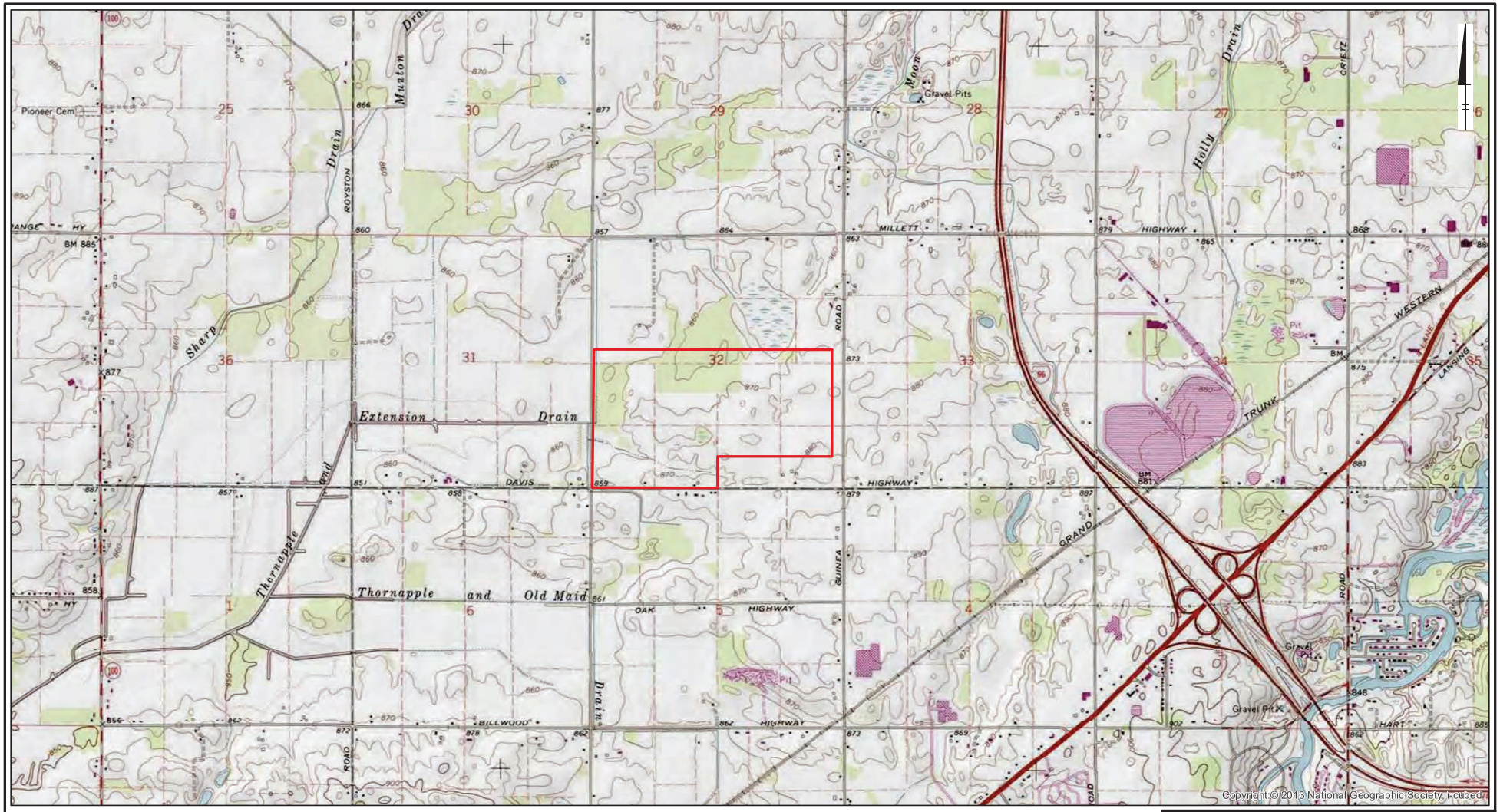
Angela Ryan
Environmental Protection Specialist
Loan Programs Office

Attachments:

Attachment 1: Lansing, MI Site Location Map
Attachment 2: Lansing, MI Preliminary Site Plan
Attachment 3: Lansing, MI Architectural APE
Attachment 4: Lansing, MI Archaeological APE

cc:
Sarah Thompson, THPO
Anne Garwood, EGLE

**Attachment 1**
**Lansing, MI Site Location Map**




## Legend

Area of Investigation (AOI)

NOTES:

1. Topographic mapping obtained from USGS Topo Maps online service.

0 2,000 4,000 Feet

GRAPHIC SCALE

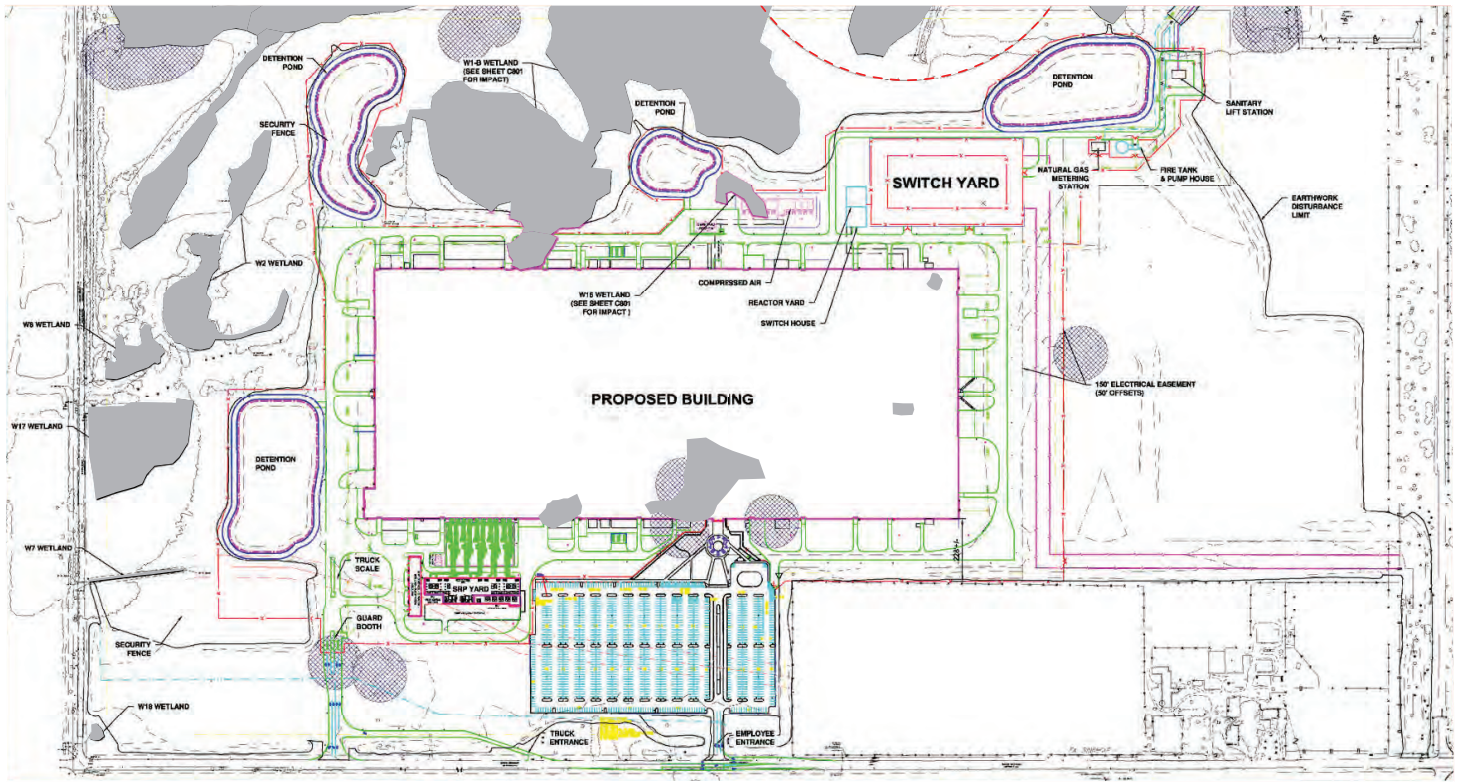
GENERAL MOTORS
LANSING DELTA TOWNSHIP
**SURFACE WATER DELINEATION REPORT**

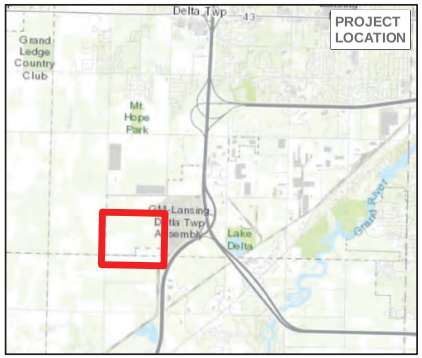
**USGS Topographic Mapping**
Dimondale, Michigan Quadrangle

ARCADIS | FIGURE 1

City:Columbus Div/Group: ENV Created By: Last Saved By: JSteckel

**Attachment 2**
**Lansing, MI Preliminary Site Plan**




**LEGEND**

- 2022 WETLAND DELINEATION
- BALD EAGLE NEST 660 FT RADIUS BUFFER
- STATE REGULATED FLOODPLAIN

0 100200
Feet

NOTE:
1. AERIAL IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.

ULTIUM CELL, LLC
8175 MILLET HIGHWAY, LANSING, MICHIGAN

**PRELIMINARY SITE PLAN**

ARCADIS

FIGURE 1

Last Saved By: LHardin
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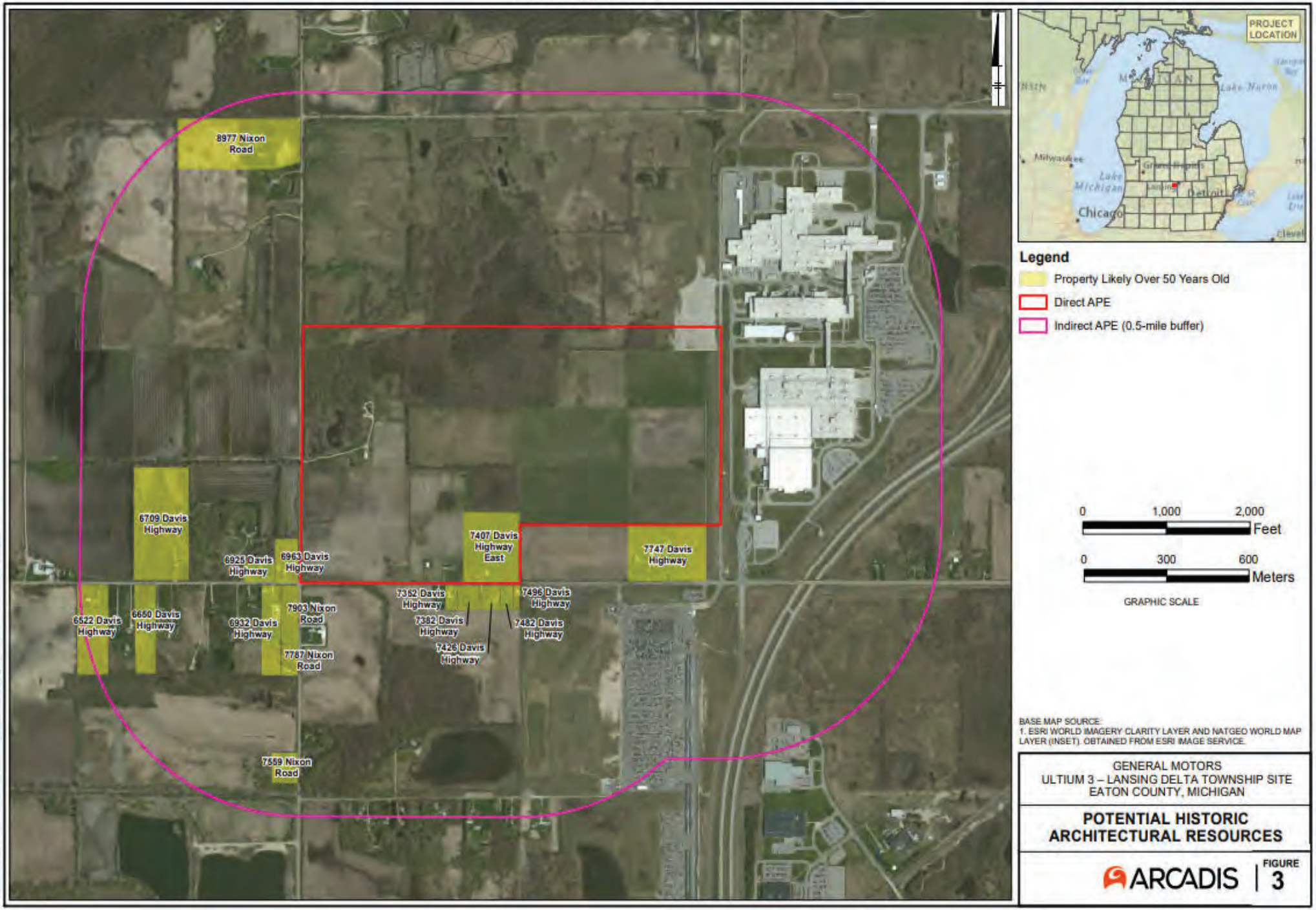
**Attachment 3**
**Lansing, MI Architectural APE**




BASE MAP SOURCE:
1. ESRI WORLD IMAGERY CLARITY LAYER AND NATGEO WORLD MAP LAYER (INSET). OBTAINED FROM ESRI IMAGE SERVICE.

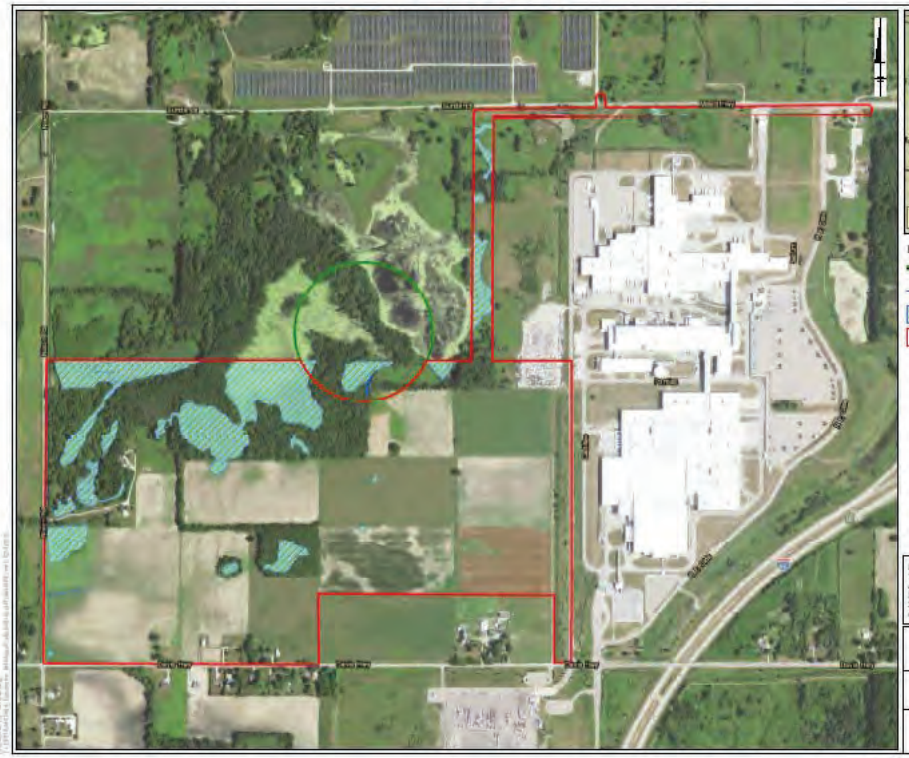
GENERAL MOTORS
ULTIUM 3 – LANSING DELTA TOWNSHIP SITE
EATON COUNTY, MICHIGAN

**POTENTIAL HISTORIC ARCHITECTURAL RESOURCES**

ARCADIS | FIGURE 3

**Attachment 4**
**Lansing, MI Archaeological APE**

NOT FOR PUBLIC DISCLOSURE




**Legend**

- Eagle Nest Buffer
- Stream
- Anticipated Jurisdictional Wetland
- APE

0 210 420 Meters

0 700 1,400 Feet

GRAPHIC SCALE

Data Sources:
1. Base Maps: USDA, Farm Service Agency (FSA), National Agriculture Imagery Program (NAIP), 2020 and NatGeo World Layer (inset). Obtained from Esri Imagery Service.
2. Wetlands: Michigan Department of Environment, Great Lakes, and Energy (EGLE), May 2022.

Utilum Cells, LLC
Utilum3 - Lansing Delta Township Site
Eaton County, Michigan

APE

ARCADIS

FIGURE 1.2

| | |
|---|---|
| **From:** | Ryan, Angela |
| **To:** | GrennellB@michigan.gov |
| **Cc:** | jim.f.hartnett@gm.com; Kelley, Lauren; Stribley, Todd; McCoy, Maureen; Haag, Crista; Jablon, Rebecca; Haag, Crista; Trexel, Jeremy |
| **Subject:** | MI SHPO consultation - Ultium Expanded APE |
| **Date:** | Thursday, July 21, 2022 5:50:00 PM |
| **Attachments:** | 20220706_MISHPO Consultation Letter_Ultium.pdf<br>GM Lansing Utility Corridor_07202022 (002).pdf |

Dear Brian,

Thank you for your time today to discuss the Ultium project. In the attached DOE request for Section 106 Consultation for the Ultium Project, we requested your review of the scope for the DOE undertaking, we presented the archaeological and architectural areas of potential effect (APEs), and requested your concurrence on the archaeological and architectural APEs as well as DOE's finding of no historic properties affected. Since this letter was distributed, Ultium has added a new utility corridor totaling 14.9 acres. Ultium's consultant has supplied additional information on this utility corridor in the attached report, "GM Lansing Utility Corridor" which is subject to Section 106 Consultation. Based on the information provided, we are revising our DOE undertaking and APEs to include the 14.9 acre utility corridor. Most of the utility corridor, except a small portion to the north was within the initial APE for the architectural and was subject to historical resources investigation. **We are now expanding the APE to be the entire utility corridor footprint totaling 14.9 acres for both architectural and archeological, as well as requesting your concurrence with a "no historic properties affected" determination for the expanded APEs.**

In addition to the literature review data, we agree with Ultium's consultant that the probability of identifying NRHP-eligible cultural resources within the addendum APE is low and no further cultural resources work is needed, based on the following: 1) there are no known cultural resources within the addendum APE, and 2) the addendum APE has been disturbed by past construction activities associated with Geneva Road and the existing GM plant.

Please advise if I may provide anything further.

Very Respectfully,

Angela Ryan
Environmental Protection Specialist
Loans Program Office
Department of Energy
240.220.4586
Angela.Ryan@hq.doe.gov

GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STRATEGIC FUND
STATE HISTORIC PRESERVATION OFFICE

QUENTIN L. MESSER, JR.
PRESIDENT

August 11, 2022

ANGELA RYAN
DEPARTMENT OF ENERGY
U S DEPARTMENT OF ENERGY
1000 INDEPENDENCE AVENUE SW
WASHINGTON DC 20585-1290

RE: ER22-620 Ultium Cells LLC Battery Cell Manufacturing Facility Lansing, 7111 Davis Highway, Sec. 32, T4N, R3W, Delta Township, Eaton County (DOE)

Dear Ms. Ryan:

Under the authority of Section 106 of the National Historic Preservation Act of 1966, as amended, we have reviewed the above-cited undertaking at the location noted above.

Based on your letter dated July 6, 2022, you are requesting comment regarding the identification of the archaeological and architectural areas of potential effect (APEs), as well as concurrence on the DOE's finding of no historic properties affected.

We have reviewed the data and reports resulting from the identification efforts, including the *Architectural and Historical Resources Investigation* (architectural survey dated June 2022), and the *Ultium Cells, LLC, Phase I Archaeological Survey Report for the Ultium Cells Battery Cell Manufacturing Plant, LDT Project, Delta Township, Eaton County, Michigan* (Phase I archaeological survey dated May 2022). In addition, we have considered the supplemental information regarding the addition of the 14.9-acre utility corridor as part of the project's APE.

The architectural survey considered indirect and cumulative effects. The report recommended that no properties 50-years or older within the architectural APE were eligible for the National Register of Historic Places (NRHP). We concur with the APE and the results of the survey.

The Phase I archaeological survey report, prepared by April Greenberg and Crista M. Haag (2022; Arcadis U.S., Inc.). The 310-acre Area of Potential Effect (APE) is located to the west of Lansing and consists of farm fields, wooded areas, and a utility corridor. A previously recorded site was revisited during the survey (20AE77) and two newly recorded sites were identified (20ER142 and 20ER143). No additional cultural material or features were encountered during the survey relating to 20AE77, which was initially recorded as an Archaic period site. Site 20AE77 is not eligible for the National Register of Historic Places (NRHP). Sites 20ER142 and 20ER143 can be characterized as accumulated concentrations of historic domestic debris with areas containing push piles and modern structural debris. Both 20ER142 and 20ER143 are recommended as not eligible for the NRHP. Additionally, three isolated finds representing historic period ceramic and glass were also encountered during the survey. SHPO concurs with the recommendations in the Phase I survey recommended these sites are not eligible for the listing in the NRHP.

Based on the information provided for our review, the State Historic Preservation Officer (SHPO) concurs with the determination of the DDE that **no historic properties are affected** within the area of potential effects of this undertaking.

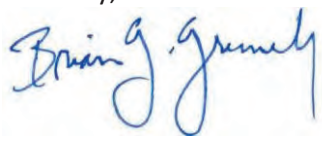
This letter evidences the DOE's compliance with 36 CFR § 800.4 "Identification of historic properties," and the fulfillment of the DOE's responsibility to notify the SHPO, as a consulting party in the Section 106 process, under 36 CFR § 800.4(d)(1) "No historic properties affected." **If the scope of work changes in any way, please notify this office immediately. In the unlikely event that human remains, or archaeological material are encountered during construction activities related to the above-cited undertaking, work must be halted, and the Michigan SHPO and other appropriate authorities must be contacted immediately.**

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 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.

If you have any 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.** Thank you for this opportunity to review and comment, and for your cooperation.

Sincerely,



Brian G. Grennell
Cultural Resource Management Coordinator

AK:BGG

Copy: Todd Stribley, DOE
Thomas Gallagher, Ultium Cells, LLC
Jim Hartnett, GM
Ann Garwood, EGLE
Tegan Baiocchi, Arcadis, Inc.
Crista Haag, Arcadis, Inc.

**Department of Energy**
Washington, DC 20585

April 15, 2022

Mr. Scott Hicks
Field Office Supervisor
U.S. Fish and Wildlife Service
Michigan Ecological Services Field Office
2651 Coolidge Road, Suite 101
East Lansing, MI 48823

**SUBJECT:** U.S. Department of Energy, Proposed Lithium-Ion Battery Cell Manufacturing Facility near Lansing, Michigan; Endangered Species Act Section 7 Consultation

Dear Mr. Hicks,

Under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, the U.S. Department of Energy (DOE) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the construction and tooling of a manufacturing facility near Lansing, Michigan (DOE's proposed action).

Currently, DOE is working with Ultium to collect additional information to complete an environmental review in accordance with the National Environmental Policy Act (NEPA). DOE is also responsible for compliance with applicable environmental statutes, including the Endangered Species Act (ESA) of 1973. The information and conclusions herein, support the determination of DOE. We seek your concurrence with our determinations of no effect on the eastern prairie fringed orchid and on the eastern massasauga, no effect on designated critical habitat, and may affect, not likely to adversely affect the Indiana bat and northern long-eared bat, as well as that a bald eagle incidental take permit is not required.

**Project and Site Description**

Ultium proposes to construct and tool a battery cell manufacturing facility on undeveloped land west of the City of Lansing, in Delta Township, Eaton County, Michigan (see Attachment 1). The Project site encompasses approximately 297 acres and is located immediately west of an existing vehicle assembly plant. The battery manufacturing processes would be housed in an approximately 2.8 million square foot

facility, with several attendant structures and features, such as parking areas, shipping and receiving areas, utilities, access roads, stormwater management facilities, a substation, a guard house, hazardous materials storage, recycling areas, landscape areas, and water supply tanks also developed on the Project site (see Attachment 2). The overall development of the 297-acre Project site would require clearing of approximately 17.6 acres of forested area.

**Consultation History**

In December 2021, Arcadis, on behalf of Ultium, consulted with the U.S. Fish and Wildlife Service (USFWS) and completed an information request via the Information for Planning and Consultation (IPaC) online tool and obtained a list of threatened, endangered, and candidate species that may occur within the Project area. Four threatened or endangered species were identified: Indiana bat, northern long-eared bat, eastern massasauga, and eastern prairie fringed orchid, and one candidate specie was identified: monarch butterfly. No critical habitats are located within the Project site.

Arcadis retained the firm Environmental Solutions & Innovations, Inc. (ESI) to conduct bat habitat assessments. These assessments were concluded in February 2022 and identified 26 unique patches of habitat, 10 of which are forested and total 85.8 acres. One hundred and thirty-five potential roost trees (PRTs) were identified, including five potential primary roosts for Indiana bats and six potential primary roosts for northern long-eared bats.

The 17.6-acre forest area slated for removal contains 55 PRTs, including four potential primary roosts for both species. However, three potential primary roosts and 80 secondary PRTs will be retained at the Project site. ESI determined that given the abundance of nearby suitable habitat and lack of a known Indiana bat colony, the loss of 17.6 acres of forest is unlikely to result in take of Indiana bats, and any potential take of the northern long-eared bat would be in accordance with the conditions of the 4(d) rule established for the species.

ESI sought concurrence with USFWS regarding the results of the detailed bat habitat assessment and concurrence from USFWS that clearing trees in winter is unlikely to result in take of Indiana bats.

In response to the ESI request, on March 4, 2022, USFWS provided that they support the report's conclusions that the Project is not reasonably certain to cause take of Federally listed bats via habitat loss. In addition, USFWS stated that their lack of species records in the project area suggests a **no effect** determination for the eastern massasauga. On March 7, 2022, USFWS issued a consistency letter, reiterating the above determinations and issued a **no effect** determination for the eastern prairie fringed orchid.

In December 2021, a potential bald eagle nest was identified approximately 270 feet north of the Project area. At the time the nest was observed, it was not clear if the nest was actively being used; however, two mature bald eagles were observed within the area

at that time. On March 21, 2022, USFWS provided that to avoid impacts a 660-foot buffer should be maintained throughout the lifetime of the Project.

**Conservation Measures**

Based on the previous consultations, Ultium has incorporated several conservation measures as part of the Project, including:

- When installing new or replacing existing permanent lights, downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting) will be used along the north side of the Project area that is in proximity to the Indiana bat habitat.
- Temporary lighting will be directed away from suitable habitat during the active season.
- All Project-related tree clearing in the forested area will occur during the cold season felling window.
- A 660-foot no work buffer will be maintained around the identified bald eagle nest, and areas of the buffer that are unforested will be cordoned off with construct fencing to prevent accidental encroachment into the buffer.

**Determinations**

Based on our review of the consultations, the conservation measures, and activities conducted to date and the information presented in this letter, DOE has made the following effect determinations on threatened and endangered species and on designated critical habitat resulting from the construction and operation of the Ultium facility near Lansing, Michigan:

- The Project would **not affect** designated critical habitat
- The Project would have **no effect** on the eastern prairie fringed orchid.
- The Project would have **no effect** on the eastern massasauga.

The construction of the Project will result in a loss of PRTs for the Indiana bat and northern long-eared bat. However, implementation of the conservation measures described above would minimize potential impacts. As a result, the Project **may affect, not likely to adversely affect** the Indiana bat and northern long-eared bat.

In addition, because a 660-foot no work buffer will be maintained around the identified bald eagle nest, the construction and operation activity are unlikely to bother bald eagles to the degree that causes nest abandonment; therefore, an incidental take permit is not required.

DOE seeks your concurrence on the **may affect, not likely to adversely affect** determination for the Indiana bat and northern long-eared bat, and that an incidental take permit is not required. If you or your staff would like to receive further information concerning this project or on DOE's ATVM Loan Program, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at Todd.Stribley@hq.doe.gov.

Sincerely,

Todd Stribley

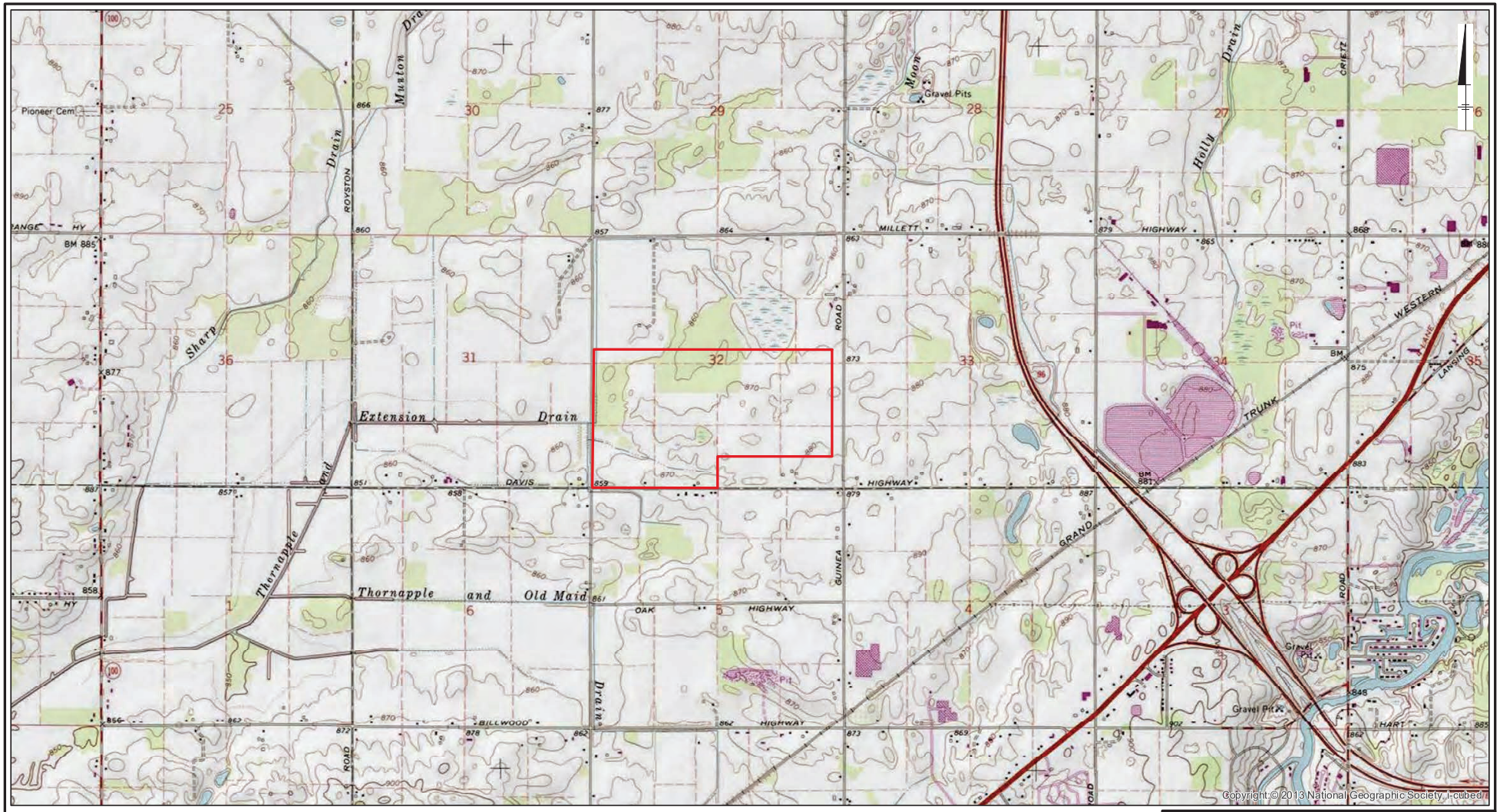
Todd Stribley
Director, Environmental Compliance
Loan Programs Office

cc:

Deanne Endrizzi, USFWS
Jillian Farkas, USFWS
Chris Mensing, USFWS
Carrie Tansy, USFWS
Jenny Wong, USFWS

Attachments:

Attachment 1: Lansing, MI Site Location Map
Attachment 2: Preliminary Site Layout Map






## Legend

Project Area Boundary

NOTES:

1. Topographic mapping obtained from USGS Topo Maps online service.

0 2,000 4,000 Feet

GRAPHIC SCALE

GENERAL MOTORS
LANSING DELTA TOWNSHIP
**ETR SPECIES CONSULTATION REQUEST**

**Project Location Map**
Dimondale, Michigan Quadrangle

ARCADIS

FIGURE 1

City:Columbus Div/Group: ENV Created By: Last Saved By: JSteckel

GM JOB NO. 89771 SHEET NO. SITE - 200a

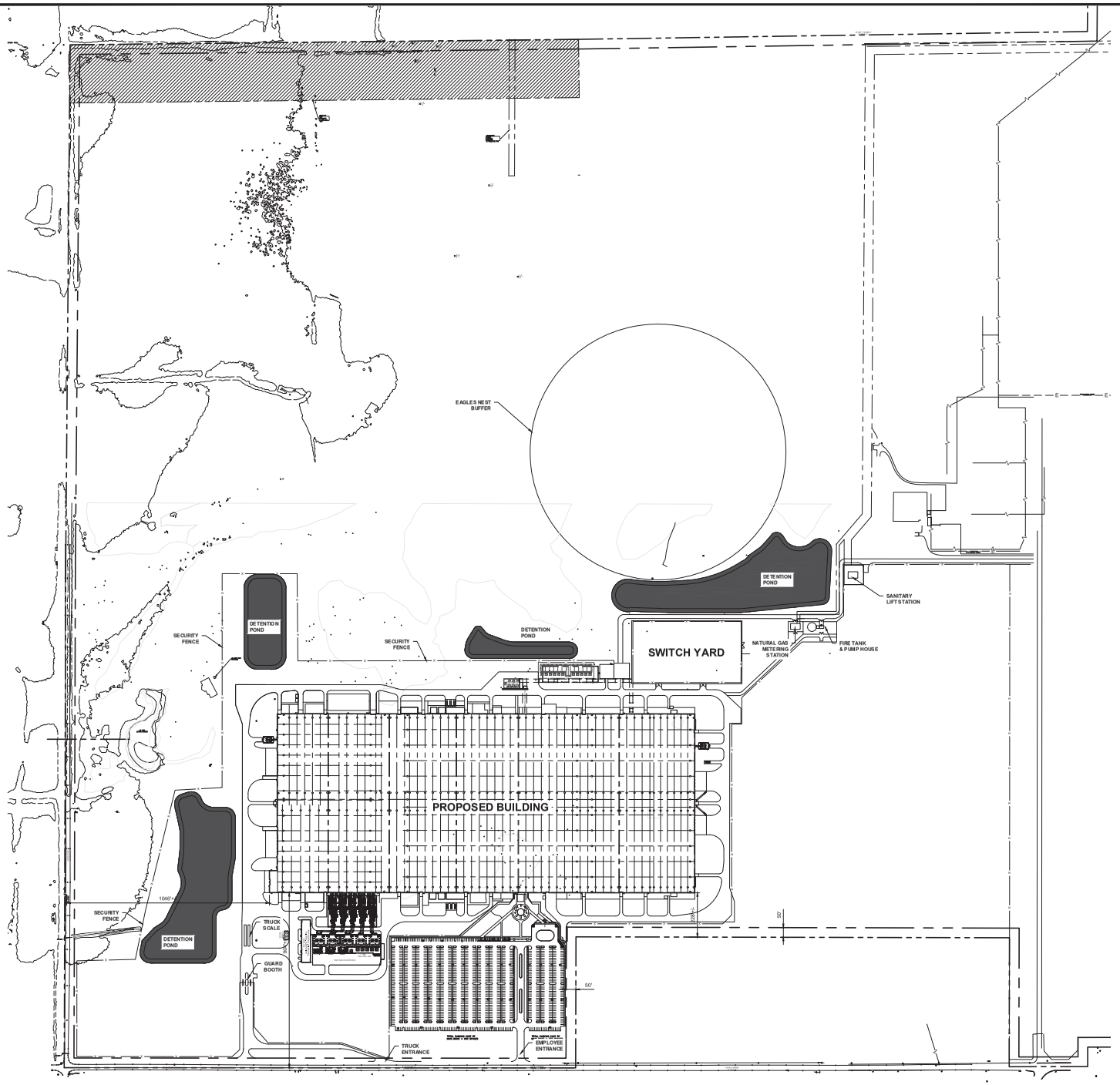



Figure 2
Proposed Site Layout

SITE PLAN
SCALE: 1"=200'-0"

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04/01/22 | DOC REL 06 - IFP - SWPP |

REVISIONS

SITE/BUILDING PLAN & NORTH ARROW

GM DISCLAIMER & TYPICAL NOTES

| | |
|---|---|
| SUPPLIER PROJECT NO. 2264020 | CERTIFIED BY |
| SUPPLIER DRAWN BY T. PITSCH | |
| SUPPLIER CHECKED BY D. PAMULA | |
| SUPPLIER PE/PM D. PAMULA | |

CONSULTANT A/E FIRM INFO & LOGO

GHAFARI
17101 MICHIGAN AVENUE
DEARBORN, MI 48126-2736 USA
TEL +1.313.441.3000
www.ghafari.com

Sustainable Workplaces
General Motors Company

7111 DAVIS HIGHWAY, LANSING, MI 48917

Site ID: 4945
MAIN CELL MANUFACTURING BUILDING

Structure ID: 00000
Level: 00

**ULTIUM CELLS LLC**
**LANSING CELL MANUFACTURING**

**SITE PLAN**
PLAN
CIVIL

| | |
|---|---|
| GM PE B. BRICKLES | GM JOB NO 89771 |
| GM PM P. SIROSKEY | SHEET NUMBER SITE - 200a |
| SCALE AS NOTED | |
| DATE | |

FILE PLOT DATE STAMP: Apr 08, 2022 - 8:20am

C:\Users\decallow\ACCDocs\Ghafari\22640020 Ultium 3 LDT1110 CAD Revit\01 Civil\22640020-001_SITE-C200_C22.dwg

United States Department of the Interior
FISH AND WILDLIFE SERVICE
2651 Coolidge Road, Suite 101
East Lansing, Michigan 48823-6360

May 2, 2022

Todd Stribley, Director, Environmental Compliance
Department of Energy
Loan Programs Office
Washington, D.C. 20585

RE: Proposed Lithium-Ion Battery Cell Manufacturing Facility near Lansing, Michigan; U.S. Department of Energy Endangered Species Act Section 7 Consultation

Dear Mr. Stribley,

Thank you for letter of April 15, 2022, requesting informal consultation on a proposed lithium-ion battery cell manufacturing facility near Lansing, Michigan, pursuant to section 7 of the Endangered Species Act, as amended (ESA) (16 U.S.C. § 1536), and the ESA's implementing regulations (50 CFR 402.13). As discussed in detail below, we concur with your determinations, and this concludes the ESA interagency consultation process. Additionally, we concur that this project would not warrant seeking a permit pursuant to the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668-668c).

The U.S. Department of Energy (DOE) is evaluating whether to provide a federal loan to Ultium Cells, LLC (Ultium) to support the construction and tooling of the proposed manufacturing facility and is working with Ultium to collect additional information to complete an environmental review in accordance with the National Environmental Policy Act (NEPA). Ultium proposes to construct and tool a battery cell manufacturing facility on undeveloped land west of the City of Lansing, in Delta Township, Eaton County, Michigan (Project). The Project site encompasses approximately 297 acres and is located immediately west of an existing vehicle assembly plant. The battery manufacturing processes will be housed in an approximately 2.8 million-square-foot facility, with several attendant structures and features, such as parking areas, shipping and receiving areas, utilities, access roads, stormwater management facilities, a substation, a guard house, hazardous materials storage, recycling areas, landscape areas, and water supply tanks also developed on the Project site. Development of the site will require clearing of approximately 17.6 acres of mature forest.

In December 2021, Arcadis, on behalf of Ultium, coordinated with the U.S. Fish and Wildlife Service (USFWS) and obtained a list of threatened, endangered, and candidate species that may occur within the Project area. Four federally listed and one candidate species were identified: the endangered Indiana bat (*Myotis sodalis*), the threatened northern long-eared bat (*M. septentrionalis;* NLEB), the threatened eastern massasauga rattlesnake (*Sistrurus catenatus*), the threatened eastern prairie fringed orchid (*Platanthera leucophaea*), and the monarch butterfly (*Danaus plexippus*). No critical habitats are located within the Project site. Subsequently,

Arcadis retained Environmental Solutions & Innovations, Inc. (ESI) to conduct a habitat assessment for federally listed bats. The assessment, completed in February 2022, extended beyond the tree-clearing area and evaluated a total of 85.8 acres. One hundred and thirty-five (135) potential roost trees (PRTs) were identified during the assessment, including five potential primary roosts for Indiana bats and six potential primary roosts for northern long-eared bats. Fifty-five (55) of the PRTs, including four potential primary roosts for both species, were identified within the 17.6-acre tree-clearing area, and three potential primary roosts and 80 secondary PRTs were identified outside of the tree-clearing areas. Based on the availability of nearby suitable habitat and lack of known Indiana or NLEB colonies, ESI concluded in their February 17, 2022 habitat assessment report that the loss of 17.6 acres of forest during the bat inactive season (October through March) would be unlikely to result in take of Indiana bats, and any potential take of NLEB would not be prohibited, per the NLEB final 4(d) rule. The report was provided to this office by the Michigan Department of the Environment, Great Lakes, and Energy (EGLE) on February 22, 2022 to confirm USFWS agreement with the report's conclusions.

During subsequent discussions between this office, EGLE, Arcadis, and ESI, ESI provided additional details on the available habitat within the Project area to support the conclusions in their report, including a March 2, 2022 meeting and follow-up email describing 500-1,000 additional PRTs estimated to be present on the Project site outside the boundary of the habitat assessment, which will be retained through the duration of the Project. On March 4, 2022, this office provided an email in support of ESI's conclusions that the Project, as proposed, was not reasonably certain to cause take of federally listed bats via habitat loss, recommended that an EGLE wetland permit application need not be red-filed for federal review on the basis of listed bats, and authorized the Project to clear all identified PRTs within the 17.6-acre tree-clearing area before April 1, 2022.

On March 7, 2022, Arcadis completed the all-species Michigan Determination Key, available through our Information for Planning and Conservation (IPaC) web site, and received an automated USFWS consistency letter. A follow-up email from this office confirmed the "not likely to adversely affect" (NLAA) consistency determinations for Indiana bat and NLEB and the "no effect" (NE) determination for Eastern prairie fringed orchid, and explained that although a "may affect" (MA) determination was auto-generated for the eastern massasauga rattlesnake, a lack of species records in the project vicinity support that a NE determination is more appropriate for that species.

On March 10 and March 22, 2022, this office responded to additional coordination requests regarding a total of 14 additional PRTs requiring removal within the tree-clearing area. In a March 22, 2022 email, we indicated that we did not oppose issuance of an EGLE wetland permit or recommend additional permit conditions based on the removal of additional PRTs prior to April 1, but emphasized our previous recommendation that future projects of this scale build in adequate time to conduct and evaluate the presence or probable absence of listed bats and/or consider options for mitigating unavoidable impacts.

On March 21, 2022, the USFWS Region 3 Migratory Bird Permit Office recommended avoiding disturbance within a 660-foot buffer around an occupied eagle nest located approximately 270 feet north of the Project area and maintaining this buffer throughout the lifetime of the Project.

Your April 15, 2022 letter summarized this previous coordination and addressed potential effects of the remaining proposed Project activities on the Indiana bat and NLEB. Additionally, you requested confirmation that an eagle take permit is not recommended. We concur with your determination of threatened and endangered species that may be present and affected within the action area. You have also determined that the Project will have *no effect* on the eastern prairie-fringed orchid and eastern massasauga rattlesnake. No further consultation is required for projects with no effects to listed species or critical habitat.

**Indiana Bat**

In Michigan, summering Indiana bats roost in trees in riparian, bottomland, and upland forests from approximately April through September. Indiana bats may summer in a wide range of habitats, from highly altered landscapes to intact forests. Roost trees vary considerably in size. Although trees used by Indiana bat maternity colonies are typically greater than 9 inches diameter at breast height (dbh), those used by males and non-reproductive females or as alternate roosts for maternity colonies may be as small as 5 inches dbh. Indiana bats typically roost beneath peeling bark but may also use cracks or crevices. As such, roost trees tend to be dead or dying trees with some bark remaining, or live trees with naturally exfoliating bark, such as shagbark hickory (*Carya ovata*). Rarely do Indiana bats roost in structures, such as barns, sheds, or bridges. During winter, Indiana bats hibernate in caves, abandoned mine portals or similar structures.

**NLEB**

During the summer, NLEB typically roost singly or in colonies underneath bark or in cavities, crevices, or hollows of both live and dead trees and/or snags (typically ≥3 inches dbh). On occasion, the species will roost in structures, such as barns and sheds, when suitable tree roosts are unavailable. These bats forage for insects in upland and lowland woodlots and tree-lined corridors. During the winter, NLEB hibernate predominantly in caves and abandoned mine portals.

On April 2, 2015, a final rule was published in the Federal Register listing the NLEB as threatened, along with an interim species-specific rule under section 4(d) of the Act, which lessens ESA restrictions that do not provide conservation benefit for the bat. On January 14, 2016, a final species-specific 4(d) rule was published in the Federal Register, further reducing restrictions that do not provide conservation benefit to the species. Federal agency actions that involve incidental take not prohibited under the final 4(d) rule may result in effects to individual NLEB. Per section 7 of the Act, if a federal agency's action may affect a listed species, consultation with the U.S. Fish and Wildlife Service (USFWS) is required. This requirement does not change when a 4(d) rule is implemented. For this 4(d) rule, however, the USFWS has established a framework to streamline formal section 7 consultations when federal actions may affect NLEB but will not result in prohibited take. Federal agencies have the option to rely upon the finding of the programmatic biological opinion for the final 4(d) rule and to fulfill their project-specific section 7 responsibilities by using the established framework. For projects that may affect, but are not likely to adversely affect the species, agencies may follow typical consultation procedures.

Although NLEB is currently federally listed as threatened, the Service published a proposal to reclassify the species as endangered on March 23, 2022. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the NLEB

by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species.

You determined that the Project is *not likely to adversely affect* Indiana bat or NLEB. We concur with these determinations for the following reasons:

- Based on prior coordination between Arcadis, ESI, EGLE, and this office, suitable habitat within the 17.6-acre tree-clearing area was fully assessed for potential roosting habitat, and all identified PRTs removed during the inactive season for listed bats (October through March). Removing suitable habitat when bats are not present on the landscape precludes the possibility of direct effects, and evidence that abundant roosting habitat will remain outside the tree-clearing areas supports that potential indirect effects via habitat loss will be insignificant. Likewise, any effects from cutting remaining, non-suitable roosting habitat within the tree-clearing areas are expected to be insignificant and/or discountable.
- The Project has agreed to implement the following recommended conservation measures to further minimize impacts to listed bats:
    - When installing new or replacing existing permanent lights, downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting) will be used along the north side of the Project area that is in proximity to the Indiana bat habitat.
    - Temporary lighting will be directed away from suitable habitat during the active season.
    - All remaining Project-related tree clearing will occur during the inactive season.

**Eagle Act**

In addition to your request for concurrence pursuant to ESA section 7, you have requested confirmation that an eagle take permit is not recommended. To support this recommendation, the Project will maintain a 660-foot no-work buffer around the identified bald eagle nest, and areas of the buffer that are unforested will be cordoned off with construct fencing to prevent accidental encroachment. This approach is consistent with the USFWS' National Bald Eagle Management Guidelines (2007) for avoiding disturbance of bald eagles and therefore, we do not recommend seeking a permit.

Conclusion

This concludes the consultation process required by section 7 of the ESA. When DOE maintains discretionary involvement or control over the project, reinitiation of consultation is required (50 CFR 402.16(a)) under certain conditions: (1) if new information reveals effects of the project that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) if the project is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the written concurrence; or (3) if a new species is listed or critical habitat designated that may be affected by the project.

We appreciate the opportunity to cooperate with the DOE in conserving endangered species. If you have any questions regarding these comments, please contact Jenny Wong, of this office, at 517-351-7261, or Jennifer_Wong@fws.gov.

Sincerely,

SCOTT HICKS
Digitally signed by SCOTT HICKS
Date: 2022.05.02 14:21:49 -04'00'

Scott Hicks
Field Supervisor

cc: Amy Bleisch, MDNR
Keto Gyekis, EGLE

**Department of Energy**
Washington, DC 20585

August 8, 2022

Mr. Scott Hicks
Field Office Supervisor
U.S. Fish and Wildlife Service
Michigan Ecological Services Field Office
2651 Coolidge Road, Suite 101
East Lansing, MI 48823

**SUBJECT:** U.S. Department of Energy, Request for Reinitiating of Section 7 Consultation for the Ultium Cells, LLC Lithium-Ion Battery Cell Manufacturing Facility near Lansing, Michigan

Dear Mr. Hicks,

On May 2, 2022, the U.S. Fish and Wildlife Service (FWS) concurred with the Department of Energy, Loan Programs Office determinations on a proposed lithium-ion battery cell manufacturing facility near Lansing, Michigan, and concluded the interagency consultation process under the Endangered Species Act (see Attachment 1). The purpose of this letter is to request FWS reinitiate consultation per 50 CFR 402.16(a) as the Project site now includes a new utility corridor that was not subject to the previous review. The new utility corridor encompasses 33.1-acres located east of the existing General Motor's Lansing Delta Assembly Plant, primarily within the right-of-way for Guinea Road and a public utility connection area north of Davis Highway (see Attachment 2).

**Proposed Action and Action Area**

The new action area includes 33.1-acres comprised of the 14.9-acre utility corridor area as well as abutting uplands and a network of roadside drainage swales which contain scattered wetland habitat. The new Project action area totals nearly 331 acres, comprised of the 33.1-acre utility corridor and the approximate 297-acre battery cell manufacturing facility. The utility corridor would contain a 20-inch ductile iron or high-density polyethylene water line, a 12-inch polyvinyl chloride sanitary sewer, and an 8-inch steel with plastic coating natural gas line (see Attachment 3). The gas, water and sanitary sewer utilities would be built using open-trench methods for most of the length within the utility corridor; however, nonintrusive techniques, such as horizontal direct drilling will be used to minimize wetland impact. Construction in the utility corridor will avoid the majority of wetland habitat but would impact 130 square feet of palustrine emergent wetlands considered to be non-jurisdictional.

The utility corridor is located within a managed corridor consisting of a maintained roadway and right-of-way with overhead utilities present near the central and southern segments. Vegetative communities within the 33.1- acre action area consist largely of upland grassland and scrub/shrub species typically found in disturbed areas with a few scattered trees. Approximately 0.76 acres of palustrine emergent wetland areas dominated by invasive and exotic flora species are present within the corridor and are specifically associated with the roadway ditches. Trees within the action area are confined to small sporadic clusters, some of which were ornamental plantings. According to data supplied by Ultium, the specific tree species observed in the utility corridor consist of silver maple (*Acer saccharinum*), weeping willow (*Salix babylonica*), eastern cottonwood (*Populus deltoides*), Norway spruce (*Picea abies*), blue spruce (*Picea pungens*), and white pine (*Pinus strobus*).

**Listed Species and Effects of Action**

In July 2022, Arcadis, on behalf of Ultium, completed an information request via the Information for Planning and Consultation (IPaC) online tool and obtained a list of threatened and endangered species that may occur within the utility corridor. On July 28, 2022, the FWS provided a response that four threatened or endangered species were identified: Indiana bat, northern long-eared bat (*M. septentrionalis;* NLEB), eastern massasauga rattlesnake (*Sistrurus catenatus*; EMR), and eastern prairie fringed orchid (*Platanthera leucophaea*). No critical habitats are located within the Project site (see Attachment 4).

Based on the results of the IPaC and subsequent FWS letter, the potential impacts on threatened and endangered species which may occur within the 33.1-acre utility corridor have been considered. Based on the site-specific conditions that include the presence of roadways, utility lines, and managed landscapes, which preclude suitable habitat in the action area, the "no effect" determination is concluded for the EMR and eastern prairie fringed orchid.

On July 27, 2022, Arcadis on behalf of Ultium, completed a bat roost tree survey (Survey) within the 33.1-acre utility corridor to determine the presence/absence of suitable habitat and summer roost habitat for the Indiana bat and the NLEB (see Attachment 5). Trees within the utility corridor were evaluated for potential roost tree (PRT) characteristics. The Survey demonstrates one potential PRT is located within the utility corridor action area; however, this tree is positioned greater than 1,000 feet from other suitable habitat and based on FWS guidance would not be considered suitable habitat. Based on a review of the utility corridor activities and the Survey results, the "may affect, not likely to adversely affect" is concluded for the Indiana bat and NLEB.

**Determinations**

DOE has made the following effect determinations on threatened and endangered species and on designated critical habitat resulting from the construction of the utility corridor associated with the Ultium battery manufacturing facility located near Lansing, MI:

- The Project would **not affect** designated critical habitat
- The Project would have **no effect** on the eastern prairie fringed orchid.
- The Project would have **no effect** on the eastern massasauga.

The Project **may affect, not likely to adversely affect** the Indiana bat and the northern long-eared bat due to the absence of suitable habitat and one potential PRT located over 1,000 feet from another location of suitable habitat.

DOE seeks your concurrence on the **may affect, not likely to adversely affect** determination for the Indiana bat and northern long-eared bat. If you or your staff would like to receive further information concerning this project or on DOE's ATVM Loan Program, please contact me in the DOE Loan Programs Office at (303) 275-4549, or email at LPO_Environmental@hq.doe.gov.

Respectfully,

Todd Stribley

Todd Stribley
Director, Environmental Compliance
Loan Programs Office

**Attachments:**

Attachment 1: FWS Concurrence Letter dated May 2, 2022
Attachment 2: Ultium Utility Line Corridor Location
Attachment 3: Ultium Utility Line Corridor Plan
Attachment 4: FWS Species List – Lansing Alt Utility Corridor
Attachment 5: Lansing Delta Site Alternate Utility Corridor Bat Potential Roost Tree Survey

Attachment 1:

FWS Concurrence Letter dated May 2, 2022

United States Department of the Interior
FISH AND WILDLIFE SERVICE
2651 Coolidge Road, Suite 101
East Lansing, Michigan 48823-6360

May 2, 2022

Todd Stribley, Director, Environmental Compliance
Department of Energy
Loan Programs Office
Washington, D.C. 20585

RE: Proposed Lithium-Ion Battery Cell Manufacturing Facility near Lansing, Michigan; U.S. Department of Energy Endangered Species Act Section 7 Consultation

Dear Mr. Stribley,

Thank you for letter of April 15, 2022, requesting informal consultation on a proposed lithium-ion battery cell manufacturing facility near Lansing, Michigan, pursuant to section 7 of the Endangered Species Act, as amended (ESA) (16 U.S.C. § 1536), and the ESA's implementing regulations (50 CFR 402.13). As discussed in detail below, we concur with your determinations, and this concludes the ESA interagency consultation process. Additionally, we concur that this project would not warrant seeking a permit pursuant to the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668-668c).

The U.S. Department of Energy (DOE) is evaluating whether to provide a federal loan to Ultium Cells, LLC (Ultium) to support the construction and tooling of the proposed manufacturing facility and is working with Ultium to collect additional information to complete an environmental review in accordance with the National Environmental Policy Act (NEPA). Ultium proposes to construct and tool a battery cell manufacturing facility on undeveloped land west of the City of Lansing, in Delta Township, Eaton County, Michigan (Project). The Project site encompasses approximately 297 acres and is located immediately west of an existing vehicle assembly plant. The battery manufacturing processes will be housed in an approximately 2.8 million-square-foot facility, with several attendant structures and features, such as parking areas, shipping and receiving areas, utilities, access roads, stormwater management facilities, a substation, a guard house, hazardous materials storage, recycling areas, landscape areas, and water supply tanks also developed on the Project site. Development of the site will require clearing of approximately 17.6 acres of mature forest.

In December 2021, Arcadis, on behalf of Ultium, coordinated with the U.S. Fish and Wildlife Service (USFWS) and obtained a list of threatened, endangered, and candidate species that may occur within the Project area. Four federally listed and one candidate species were identified: the endangered Indiana bat (*Myotis sodalis*), the threatened northern long-eared bat (*M. septentrionalis;* NLEB), the threatened eastern massasauga rattlesnake (*Sistrurus catenatus*), the threatened eastern prairie fringed orchid (*Platanthera leucophaea*), and the monarch butterfly (*Danaus plexippus*). No critical habitats are located within the Project site. Subsequently,

Arcadis retained Environmental Solutions & Innovations, Inc. (ESI) to conduct a habitat assessment for federally listed bats. The assessment, completed in February 2022, extended beyond the tree-clearing area and evaluated a total of 85.8 acres. One hundred and thirty-five (135) potential roost trees (PRTs) were identified during the assessment, including five potential primary roosts for Indiana bats and six potential primary roosts for northern long-eared bats. Fifty-five (55) of the PRTs, including four potential primary roosts for both species, were identified within the 17.6-acre tree-clearing area, and three potential primary roosts and 80 secondary PRTs were identified outside of the tree-clearing areas. Based on the availability of nearby suitable habitat and lack of known Indiana or NLEB colonies, ESI concluded in their February 17, 2022 habitat assessment report that the loss of 17.6 acres of forest during the bat inactive season (October through March) would be unlikely to result in take of Indiana bats, and any potential take of NLEB would not be prohibited, per the NLEB final 4(d) rule. The report was provided to this office by the Michigan Department of the Environment, Great Lakes, and Energy (EGLE) on February 22, 2022 to confirm USFWS agreement with the report's conclusions.

During subsequent discussions between this office, EGLE, Arcadis, and ESI, ESI provided additional details on the available habitat within the Project area to support the conclusions in their report, including a March 2, 2022 meeting and follow-up email describing 500-1,000 additional PRTs estimated to be present on the Project site outside the boundary of the habitat assessment, which will be retained through the duration of the Project. On March 4, 2022, this office provided an email in support of ESI's conclusions that the Project, as proposed, was not reasonably certain to cause take of federally listed bats via habitat loss, recommended that an EGLE wetland permit application need not be red-filed for federal review on the basis of listed bats, and authorized the Project to clear all identified PRTs within the 17.6-acre tree-clearing area before April 1, 2022.

On March 7, 2022, Arcadis completed the all-species Michigan Determination Key, available through our Information for Planning and Conservation (IPaC) web site, and received an automated USFWS consistency letter. A follow-up email from this office confirmed the "not likely to adversely affect" (NLAA) consistency determinations for Indiana bat and NLEB and the "no effect" (NE) determination for Eastern prairie fringed orchid, and explained that although a "may affect" (MA) determination was auto-generated for the eastern massasauga rattlesnake, a lack of species records in the project vicinity support that a NE determination is more appropriate for that species.

On March 10 and March 22, 2022, this office responded to additional coordination requests regarding a total of 14 additional PRTs requiring removal within the tree-clearing area. In a March 22, 2022 email, we indicated that we did not oppose issuance of an EGLE wetland permit or recommend additional permit conditions based on the removal of additional PRTs prior to April 1, but emphasized our previous recommendation that future projects of this scale build in adequate time to conduct and evaluate the presence or probable absence of listed bats and/or consider options for mitigating unavoidable impacts.

On March 21, 2022, the USFWS Region 3 Migratory Bird Permit Office recommended avoiding disturbance within a 660-foot buffer around an occupied eagle nest located approximately 270 feet north of the Project area and maintaining this buffer throughout the lifetime of the Project.

Your April 15, 2022 letter summarized this previous coordination and addressed potential effects of the remaining proposed Project activities on the Indiana bat and NLEB. Additionally, you requested confirmation that an eagle take permit is not recommended. We concur with your determination of threatened and endangered species that may be present and affected within the action area. You have also determined that the Project will have *no effect* on the eastern prairie-fringed orchid and eastern massasauga rattlesnake. No further consultation is required for projects with no effects to listed species or critical habitat.

**Indiana Bat**

In Michigan, summering Indiana bats roost in trees in riparian, bottomland, and upland forests from approximately April through September. Indiana bats may summer in a wide range of habitats, from highly altered landscapes to intact forests. Roost trees vary considerably in size. Although trees used by Indiana bat maternity colonies are typically greater than 9 inches diameter at breast height (dbh), those used by males and non-reproductive females or as alternate roosts for maternity colonies may be as small as 5 inches dbh. Indiana bats typically roost beneath peeling bark but may also use cracks or crevices. As such, roost trees tend to be dead or dying trees with some bark remaining, or live trees with naturally exfoliating bark, such as shagbark hickory (*Carya ovata*). Rarely do Indiana bats roost in structures, such as barns, sheds, or bridges. During winter, Indiana bats hibernate in caves, abandoned mine portals or similar structures.

**NLEB**

During the summer, NLEB typically roost singly or in colonies underneath bark or in cavities, crevices, or hollows of both live and dead trees and/or snags (typically ≥3 inches dbh). On occasion, the species will roost in structures, such as barns and sheds, when suitable tree roosts are unavailable. These bats forage for insects in upland and lowland woodlots and tree-lined corridors. During the winter, NLEB hibernate predominantly in caves and abandoned mine portals.

On April 2, 2015, a final rule was published in the Federal Register listing the NLEB as threatened, along with an interim species-specific rule under section 4(d) of the Act, which lessens ESA restrictions that do not provide conservation benefit for the bat. On January 14, 2016, a final species-specific 4(d) rule was published in the Federal Register, further reducing restrictions that do not provide conservation benefit to the species. Federal agency actions that involve incidental take not prohibited under the final 4(d) rule may result in effects to individual NLEB. Per section 7 of the Act, if a federal agency's action may affect a listed species, consultation with the U.S. Fish and Wildlife Service (USFWS) is required. This requirement does not change when a 4(d) rule is implemented. For this 4(d) rule, however, the USFWS has established a framework to streamline formal section 7 consultations when federal actions may affect NLEB but will not result in prohibited take. Federal agencies have the option to rely upon the finding of the programmatic biological opinion for the final 4(d) rule and to fulfill their project-specific section 7 responsibilities by using the established framework. For projects that may affect, but are not likely to adversely affect the species, agencies may follow typical consultation procedures.

Although NLEB is currently federally listed as threatened, the Service published a proposal to reclassify the species as endangered on March 23, 2022. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the NLEB

by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species.

You determined that the Project is *not likely to adversely affect* Indiana bat or NLEB. We concur with these determinations for the following reasons:

- Based on prior coordination between Arcadis, ESI, EGLE, and this office, suitable habitat within the 17.6-acre tree-clearing area was fully assessed for potential roosting habitat, and all identified PRTs removed during the inactive season for listed bats (October through March). Removing suitable habitat when bats are not present on the landscape precludes the possibility of direct effects, and evidence that abundant roosting habitat will remain outside the tree-clearing areas supports that potential indirect effects via habitat loss will be insignificant. Likewise, any effects from cutting remaining, non-suitable roosting habitat within the tree-clearing areas are expected to be insignificant and/or discountable.
- The Project has agreed to implement the following recommended conservation measures to further minimize impacts to listed bats:
    - When installing new or replacing existing permanent lights, downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting) will be used along the north side of the Project area that is in proximity to the Indiana bat habitat.
    - Temporary lighting will be directed away from suitable habitat during the active season.
    - All remaining Project-related tree clearing will occur during the inactive season.

**Eagle Act**

In addition to your request for concurrence pursuant to ESA section 7, you have requested confirmation that an eagle take permit is not recommended. To support this recommendation, the Project will maintain a 660-foot no-work buffer around the identified bald eagle nest, and areas of the buffer that are unforested will be cordoned off with construct fencing to prevent accidental encroachment. This approach is consistent with the USFWS' National Bald Eagle Management Guidelines (2007) for avoiding disturbance of bald eagles and therefore, we do not recommend seeking a permit.

Conclusion

This concludes the consultation process required by section 7 of the ESA. When DOE maintains discretionary involvement or control over the project, reinitiation of consultation is required (50 CFR 402.16(a)) under certain conditions: (1) if new information reveals effects of the project that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) if the project is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the written concurrence; or (3) if a new species is listed or critical habitat designated that may be affected by the project.

We appreciate the opportunity to cooperate with the DOE in conserving endangered species. If you have any questions regarding these comments, please contact Jenny Wong, of this office, at 517-351-7261, or Jennifer_Wong@fws.gov.

Sincerely,

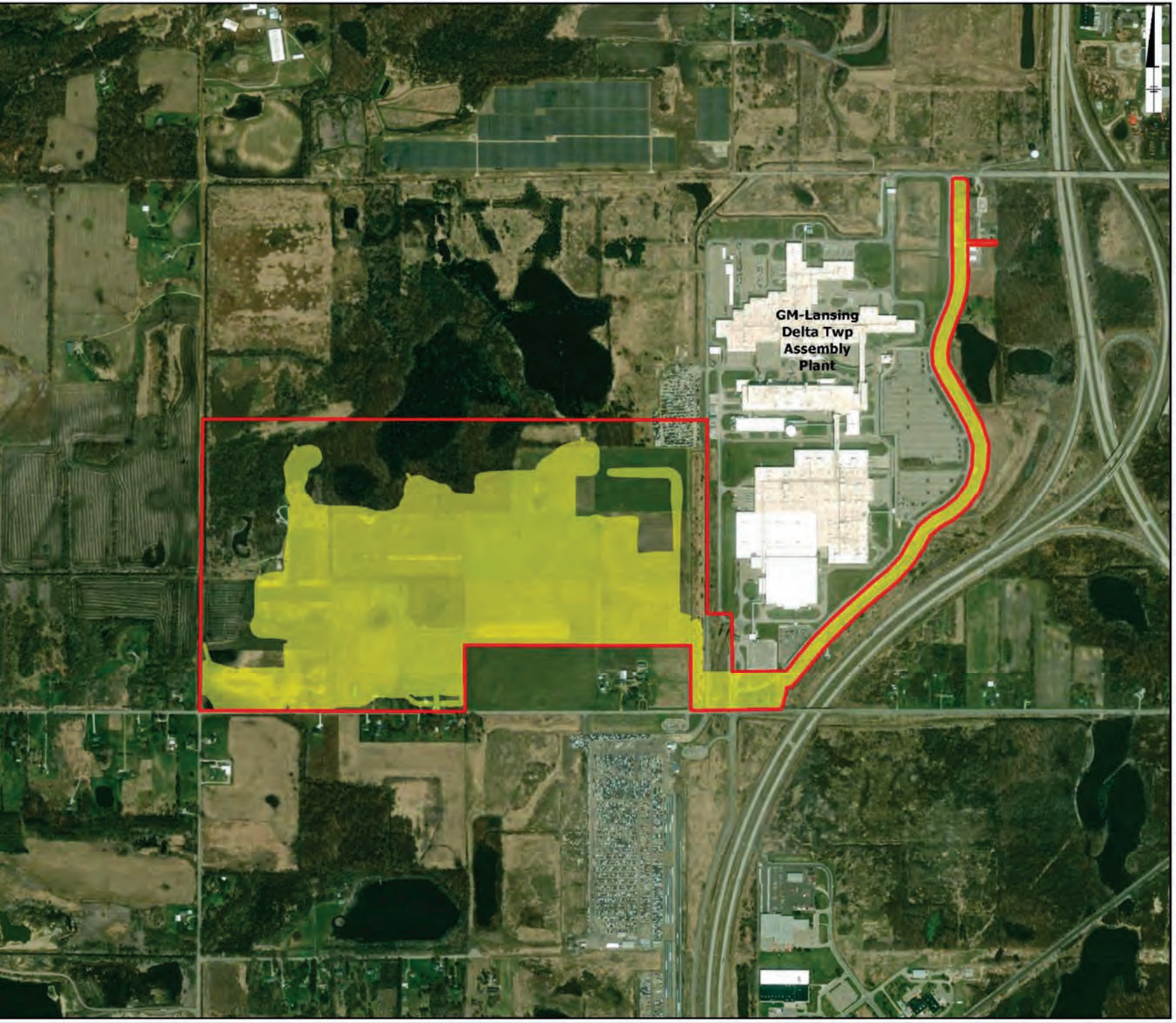
SCOTT HICKS
Digitally signed by SCOTT HICKS
Date: 2022.05.02 14:21:49 -04'00'

Scott Hicks
Field Supervisor

cc: Amy Bleisch, MDNR
Keto Gyekis, EGLE

Attachment 2:

Ultium Utility Line Corridor Location





**LEGEND:**

PROJECT SITE (331 ACRES)

PRIMARY PROJECT AREA (203 ACR

0 300 600 1,200 1,800

1 inch equals 1,000

NOTE:
1. AERIAL IMAGERY OBTAINED FROM ESR
SERVICE.

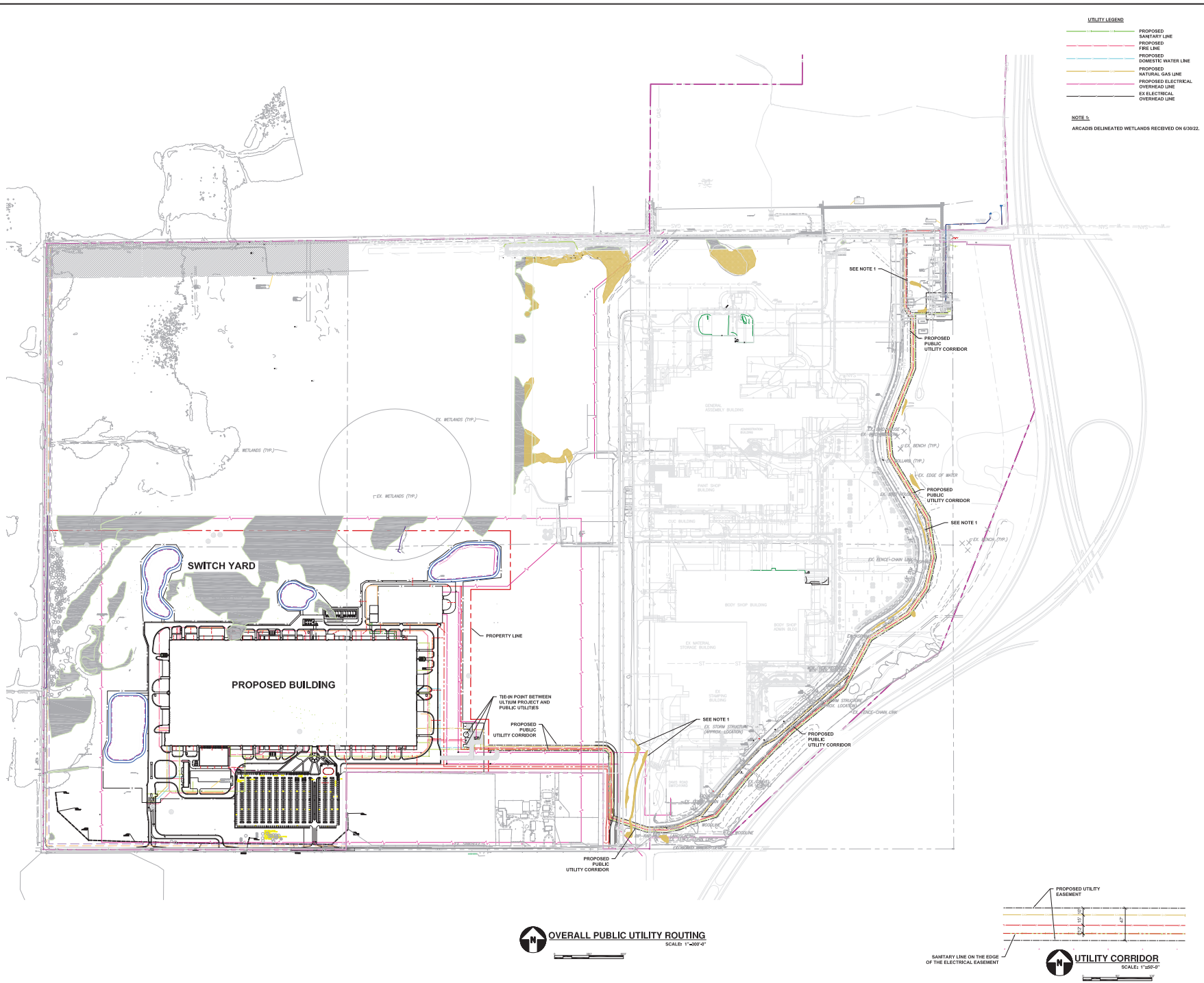
ULTIUM CELLS LLC
LANSING
**ENVIRONMENTAL ASSESSM**

**SITE LOCATION**

ultium cells

Attachment 3:

Ultium Utility Line Corridor Plan




| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 07/18/22 | WETLAND IMPACT PERMIT |
| | 07/01/22 | UTILITY REVIEW |

REVISIONS

RETRIEVE JOBS PLAN & NORTH ARROW

NOT FOR CONSTRUCTION

SEE DISCLAIMER & TYPICAL NOTES

| | |
|---|---|
| SUPPLIER PROJECT NO. 2264020 | CERTIFIED BY |
| SUPPLIER DRAWN BY T. PITSCH | |
| SUPPLIER CHECKED BY D. PAMULA | |
| SUPPLIER PE/PM D. PAMULA | |

CONSULTANT AE - FOR INFO & LOGO
GHAFARI
17101 MICHIGAN AVENUE
DEARBORN, MI 48126-2736 USA
TEL +1.313.441.3000
www.ghafari.com

ultium cells

Sustainable Workplaces "Creating places you want to be"

7111 DAVIS HIGHWAY, LANSING, MI 48917

Site ID: 2881
MAIN CELL MANUFACTURING BUILDING

Structure ID: 00000
Level: 00

**ULTIUM CELLS LLC LANSING CELL MANUFACTURING**

**OVERALL PUBLIC UTILITY ROUTING PLAN**
**CIVIL**

| | |
|---|---|
| GM PE B. BRICKLES | GM JOB NO 89771 |
| GM PM P. SIROSKEY | SHEET NUMBER SITE - U600 |
| SCALE AS NOTED | |
| DATE | |

FILE PLOT DATE STAMP: Jul 19, 2022 - 8:08am

Attachment 4:

FWS Species List – Lansing Alt. Utility Corridor

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Michigan Ecological Services Field Office
2651 Coolidge Road Suite 101
East Lansing, MI 48823-6360
Phone: (517) 351-2555 Fax: (517) 351-1443

In Reply Refer To: July 28, 2022
Project Code: 2022-0068732
Project Name: Lansing - Alt. Utility Corridor

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

**Official Species List**
The attached species list identifies any Federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Under 50 CFR 402.12(e) (the regulations that implement section 7 of the Endangered Species Act), the accuracy of this species list should be verified after 90 days. You may verify the list by visiting the IPaC website (https://ipac.ecosphere.fws.gov/) at regular intervals during project planning and implementation. To update an Official Species List in IPaC: from the My Projects page, find the project, expand the row, and click Project Home. In the What's Next box on the Project Home page, there is a Request Updated List button to update your species list. Be sure to select an "official" species list for all projects.

**Consultation requirements and next steps**
Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize Federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-Federal representative) must consult with the Fish and Wildlife Service if they determine their project may affect listed species or critical habitat.

There are two approaches to evaluating the effects of a project on listed species.

Approach 1. Use the All-species Michigan determination key in IPaC. This tool can assist you in making determinations for listed species for some projects. In many cases, the determination key

will provide an automated concurrence that completes all or significant parts of the consultation process. Therefore, we strongly recommend screening your project with the **All-Species Michigan Determination Key (Dkey)**. For additional information on using IPaC and available Determination Keys, visit https://www.fws.gov/midwest/EastLansing/te/pdf/MIFO_IPAC_instructions_v1_Jan2021.pdf. Please carefully review your Dkey output letter to determine whether additional steps are needed to complete the consultation process.

Approach 2. Evaluate the effects to listed species on your own without utilizing a determination key. Once you obtain your official species list, you are not required to continue in IPaC, although in most cases using a determination key should expedite your review. If the project is a Federal action, you should review our section 7 step-by-step instructions before making your determinations: http://www.fws.gov/midwest/endangered/section7/s7process/index.html. If you evaluate the details of your project and conclude "no effect," document your findings, and your listed species review is complete; you do not need our concurrence on "no effect" determinations. If you cannot conclude "no effect," you should coordinate/consult with the Michigan Ecological Services Field Office. The preferred method for submitting your project description and effects determination (if concurrence is needed) is electronically to EastLansing@fws.gov. Please include a copy of this official species list with your request.

For all **wind energy projects** and **projects that include installing communications towers that use guy wires**, please contact this field office directly for assistance, even if no Federally listed plants, animals or critical habitat are present within your proposed project area or may be affected by your proposed project.

**Migratory Birds**
Please see the "Migratory Birds" section below for important information regarding incorporating migratory birds into your project planning. Our Migratory Bird Program has developed recommendations, best practices, and other tools to help project proponents voluntarily reduce impacts to birds and their habitats. The Bald and Golden Eagle Protection Act prohibits the take and disturbance of eagles without a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at https://www.fws.gov/midwest/eagle/permits/index.html to help you avoid impacting eagles or determine if a permit may be necessary.

Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/administrative-orders/executive-orders.php.

We appreciate your consideration of threatened and endangered species during your project planning. Please include a copy of this letter with any request for consultation or correspondence

about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Michigan Ecological Services Field Office**
2651 Coolidge Road Suite 101
East Lansing, MI 48823-6360
(517) 351-2555

# Project Summary

Project Code: 2022-0068732
Project Name: Lansing - Alt. Utility Corridor
Project Type: Easement / Right-of-Way
Project Description: Utility Corridor
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.690258400000005,-84.67277249256759,14z

Counties: Eaton County, Michigan

## Endangered Species Act Species

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

| NAME | STATUS |
|---|---|
| Indiana Bat *Myotis sodalis*<br>There is **final** critical habitat for this species. The location of the critical habitat is not available.<br>Species profile: https://ecos.fws.gov/ecp/species/5949<br>General project design guidelines:<br>https://ipac.ecosphere.fws.gov/project/Z4XL4GOVI5DQHJGR6H4ALJTVYU/documents/generated/6982.pdf | Endangered |
| Northern Long-eared Bat *Myotis septentrionalis*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9045<br>General project design guidelines:<br>https://ipac.ecosphere.fws.gov/project/Z4XL4GOVI5DQHJGR6H4ALJTVYU/documents/generated/6983.pdf | Threatened |

## Reptiles

| NAME | STATUS |
|---|---|
| Eastern Massasauga (=rattlesnake) *Sistrurus catenatus* | Threatened |

No critical habitat has been designated for this species.

This species only needs to be considered under the following conditions:

- For all Projects: Project is within EMR Range

Species profile: https://ecos.fws.gov/ecp/species/2202

General project design guidelines:
https://ipac.ecosphere.fws.gov/project/Z4XL4GOVI5DQHJGR6H4ALJTVYU/documents/generated/5280.pdf

## Insects

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus* | Candidate |

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/9743

## Flowering Plants

| NAME | STATUS |
|---|---|
| Eastern Prairie Fringed Orchid *Platanthera leucophaea* | Threatened |

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/601

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

**The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|---|
| American Golden-plover *Pluvialis dominica*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Dec 1 to Aug 31 |

| NAME | BREEDING SEASON |
|---|---|
| Black Tern *Chlidonias niger*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/3093 | Breeds May 15 to Aug 20 |
| Black-billed Cuckoo *Coccyzus erythropthalmus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9399 | Breeds May 15 to Oct 10 |
| Bobolink *Dolichonyx oryzivorus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Jul 31 |
| Canada Warbler *Cardellina canadensis*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Aug 10 |
| Chimney Swift *Chaetura pelagica*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Mar 15 to Aug 25 |
| Golden Eagle *Aquila chrysaetos*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1680 | Breeds elsewhere |
| Golden-winged Warbler *Vermivora chrysoptera*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8745 | Breeds May 1 to Jul 20 |
| Lesser Yellowlegs *Tringa flavipes*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9679 | Breeds elsewhere |
| Red-headed Woodpecker *Melanerpes erythrocephalus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Ruddy Turnstone *Arenaria interpres morinella*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds elsewhere |
| Rusty Blackbird *Euphagus carolinus*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds elsewhere |

| NAME | BREEDING SEASON |
| --- | --- |
| Short-billed Dowitcher *Limnodromus griseus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9480 | Breeds elsewhere |
| Wood Thrush *Hylocichla mustelina*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 31 |

## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence (■)**

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

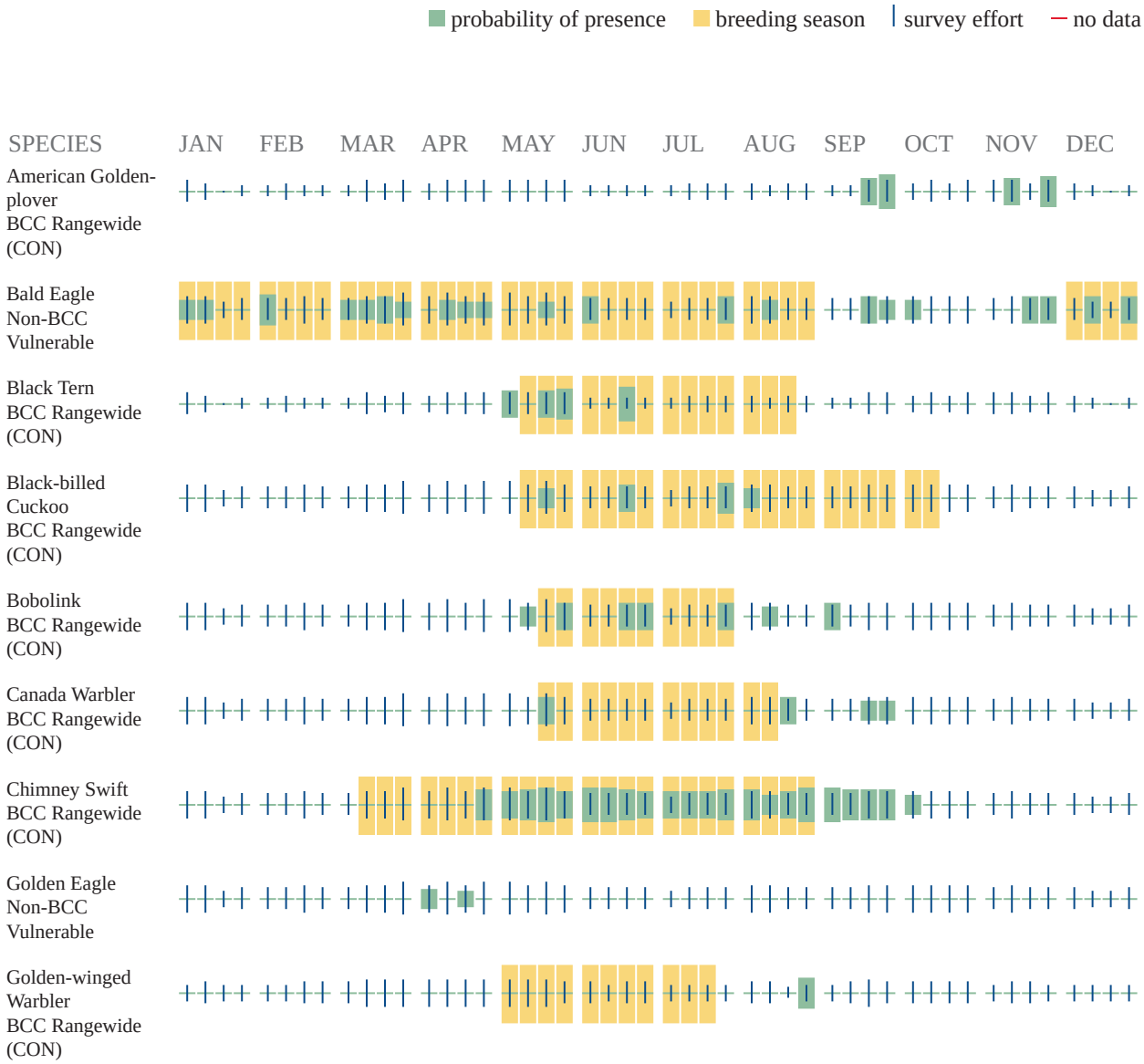
**Breeding Season (■)**

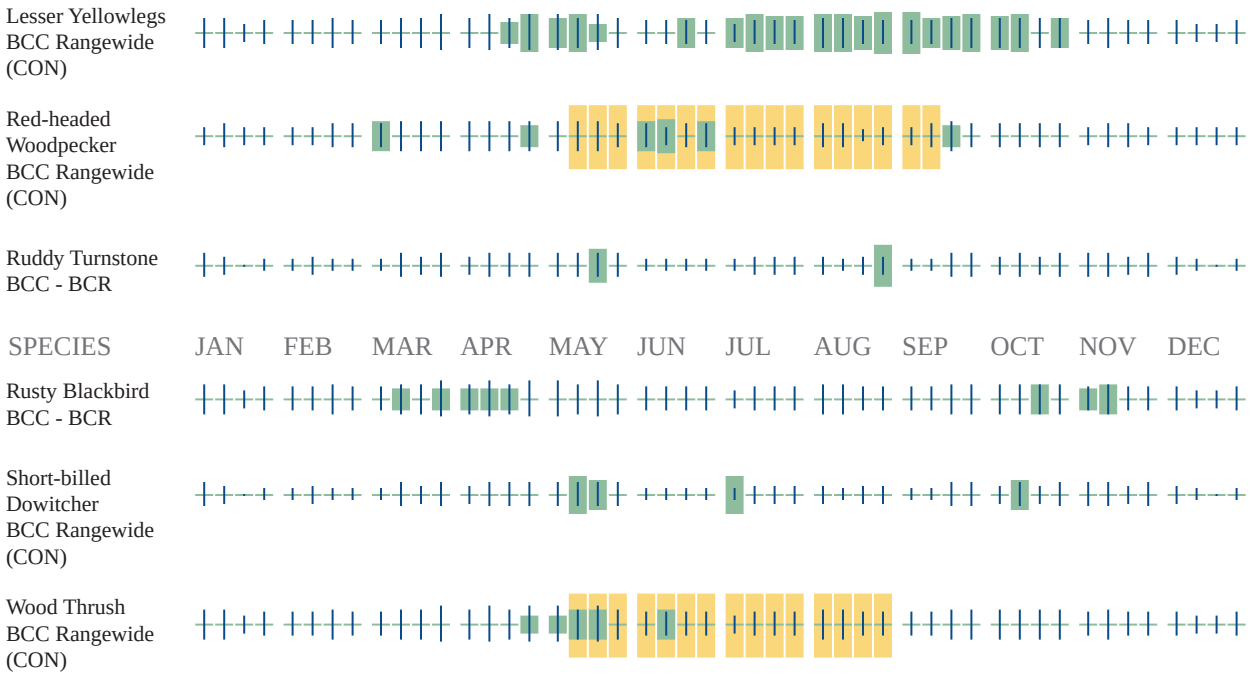
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.






Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

## Migratory Birds FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering or migrating in my area?**
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

**Details about birds that are potentially affected by offshore projects**
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

**What if I have eagles on my list?**
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

**Proper Interpretation and Use of Your Migratory Bird Report**
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

# Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

## IPaC User Contact Information

Agency: Arcadis
Name: Hayden Ladd
Address: 28550 Cabot Dr., Suite.500
City: Novi
State: MI
Zip: 48377
Email hayden.ladd@arcadis.com
Phone: 8102251976

Attachment 5:

Lansing Delta Site Alternative Utility Corridor

Bat Potential Roost Tree Survey

# Memo

**SUBJECT**
Lansing Delta Site Alternate Utility Corridor
Bat Potential Roost Tree Survey

**TO**
Jim Hartnett, GM
Matt Emery, GM

**DATE**
July 29, 2022

**DEPARTMENT**
Environmental

**PROJECT NUMBER**
30129815

**COPIES TO**
Jeremy Trexel, Arcadis
Sara Moore, Arcadis

**NAME**
Hayden Ladd, Arcadis

This memo provides a summary of the survey for federally protected bat species' potential roost trees (PRT) conducted at the Lansing Delta site's alternate utility corridor, on behalf of General Motors and Ultium Cells, LLC. The utility corridor's area of investigation (AOI) is approximately 33 acres at 8175 Millett Hwy, Lansing, Michigan, in Eaton County. The project is located on the southwest side of Lansing, Michigan, at approximately 42.689364° Latitude and -84.673048° Longitude (Figure 1). The AOI is located east of the existing GM Lansing Delta Township assembly facility east of Guinea/ R E Olds Road (Guinea Road) including the tie-in area to public utilities at the southwestern end of Guinea Road.

The utility corridor is predominantly located within the right-of-way (ROW) for Guinea Road and an existing overhead utility line corridor. The site is comprised of maintained herbaceous vegetation, gradually rolling hills, and maintained roadside drainage swales. Due to the location of the AOI in roadway and utility ROW, the corridor is routinely maintained (mowing, brush hogging, herbicide application, etc.) throughout most of the corridor.

## USFWS Coordination

The AOI was evaluated for potential federally protected species through a desktop evaluation and field survey. The United States Fish and Wildlife Service's (USFWS) ECOS-IPaC database was reviewed to determine potential impacts on federally threatened and endangered species (USFWS 2022a). The AOI was submitted into the USFWS ECOS-IpaC database for review, and the USFWS issued a letter on July 28, 2022, with an official list of federally protected species. The Indiana bat (*Myotis sodalist*) and northern long-eared bat (*Myotis septentrionalis*) (NLEB) species were listed as well as a few other species (USFWS 2022b).

Many bat species utilize PRTs in the summer months. These trees have specific characteristics, including exfoliating or peeling bark, cavities, and crevices that provide bats with a safe and thermally stable area to roost. PRTs may also be in areas that are desirable to bats, such as along clearings or near large bodies of water. Open areas, such as ROWs or forested edges, and water features are favorable hunting/foraging habitat for bat species due to a higher number of insects present. Roosting in these areas is beneficial for bat species because it reduces the time it takes for the species to reach optimal hunting habitat.

## Bat Potential Roost Tree Survey

A survey for the presence/absence of suitable Indiana bat and NLEB summer roost habitat was conducted on July 27, 2022, according to the USFWS guidance document "Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines" published March 2022 (USFWS 2022c). The surveyor searched the AOI for suitable trees with potential roosting characteristics as well as foraging habitat for the two protected bat species. Suitable roost

trees are typically found along forest edges, in canopy gaps, or are larger trees that protrude from the upper canopy located underneath the exfoliating bark or in cavities/crevices of dead, dying, or live trees. Representative photographs were taken throughout the AOI and are shown in Figure 2 of the attachments.

Vegetative communities within the AOI consist largely of upland grassland and scrub/shrub species typically found in disturbed areas with a few scattered trees. Some low depressional wetland areas are present within the corridor specifically associated with the roadway ditches. The majority of the AOI runs along a maintained roadway and ROW with overhead utilities present near the central and southern portions of the AOI.

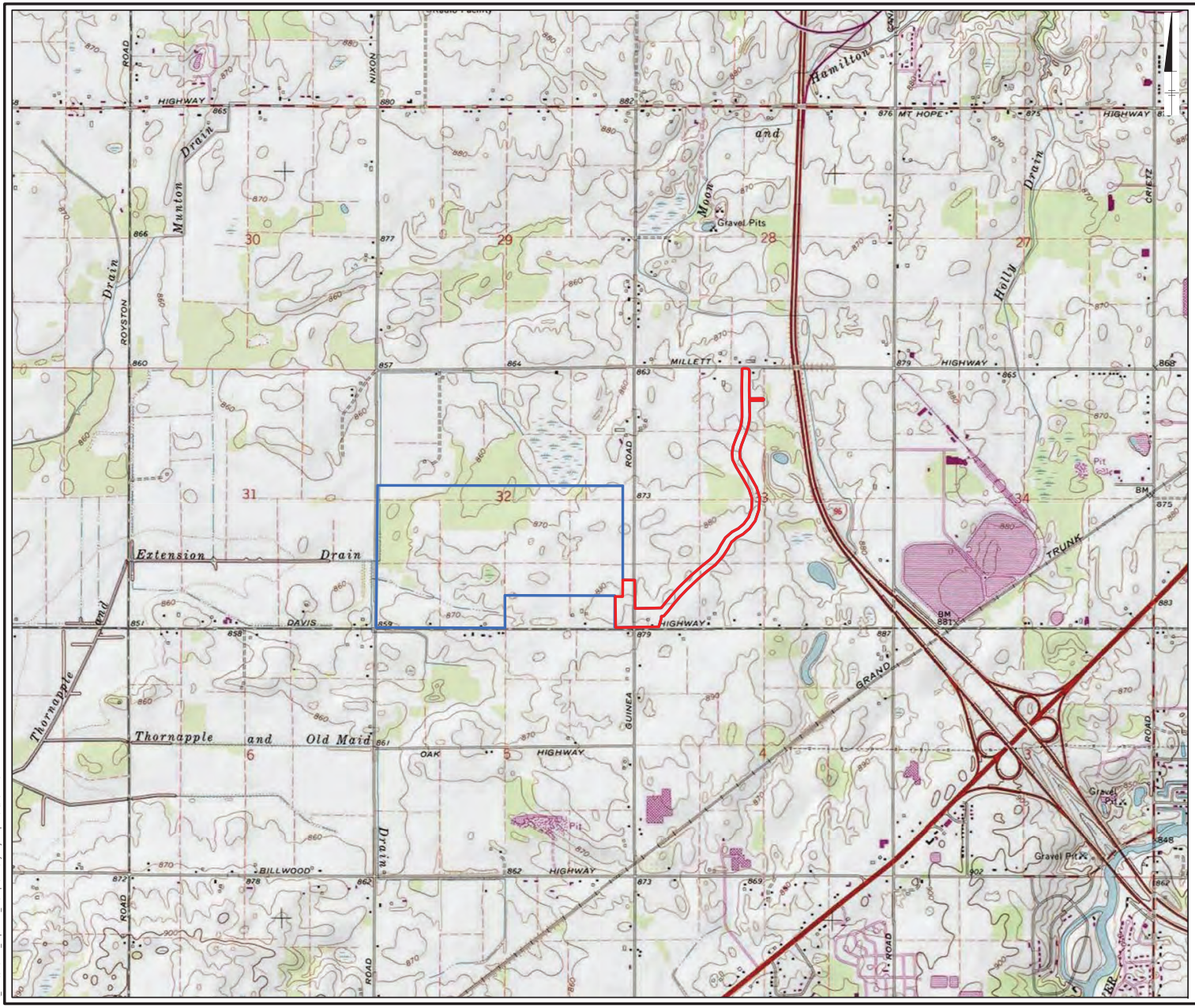
Trees within the AOI were confined to small sporadic clusters, some of which were ornamental plantings. The tree species observed were silver maple (*Acer saccharinum*), weeping willow (*Salix babylonica*), eastern cottonwood (*Populus deltoides*), Norway spruce (*Picea abies*), blue spruce (*Picea pungens*), and white pine (*Pinus strobus*). Deep cavities were observed in a dead limb of one isolated silver maple tree in the southern portion of the AOI (Photographic Log). According to USFWS guidance, individual trees may be considered suitable summer habitat when they exhibit characteristics of suitable roost trees and are less than 1,000 feet from other forested/wooded habitat, while trees greater than 1,000 feet from forested/wooded habitat are considered unsuitable habitat (USFWS 2022c). Since, this single tree is located at a distance greater than 1,000 feet from other suitable forested habitat, it is unsuitable habitat. No other potentially suitable PRTs were observed within the AOI at the time of the field survey.

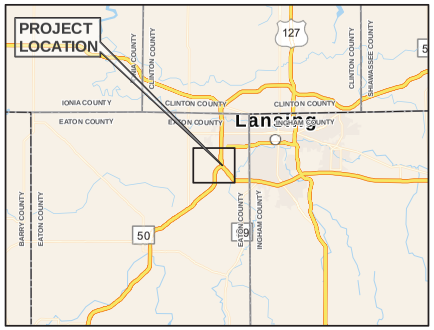
## Conclusions

The PRT survey of the Lansing Delta site's alternate utility corridor's AOI was conducted on July 27, 2022. No suitable bat summer roosting was observed in the AOI during the site visit. Due to a lack of suitable habitat within the AOI, any planned land disturbances may affect, but would not likely adversely affect either Indiana bat or NLEB.

## Attachments

1. Figure 1 – Site Location Map
2. Figure 2 – Photographic Location Map
3. Photographic Log




**LEGEND:**

- PREVIOUS PROJECT AREA
- ADDITIONAL UTILITY CORRIDOR PROJECT AREA

0 2,000 4,000 Feet

1 inch equals 2,000 ft

NOTE:
1. USGS TOPOGRAPHIC QUADRANGLE FOR DIMONDALE, MICHIGAN OBTAINED FROM ESRI IMAGE SERVICE.

LANSING DELTA SITE ULTIUM 3
UTILITY CORRIDOR OPTION B
EATON COUNTY, MICHIGAN

# SITE LOCATION MAP

ARCADIS

FIGURE 1

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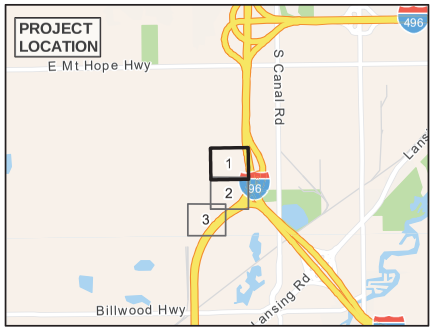


**LEGEND:**

PHOTOGRAPH LOCATION AND DIRECTION

UTILITY CORRIDOR OPTION B (AOI)

0 200 400 Feet

1 inch equals 200 ft

NOTE:
1. AERIAL IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.

LANSING DELTA SITE ULTIUM 3
UTILITY CORRIDOR OPTION B
EATON COUNTY, MICHIGAN

# PHOTOGRAPH LOCATION MAP

ARCADIS

FIGURE
2-1

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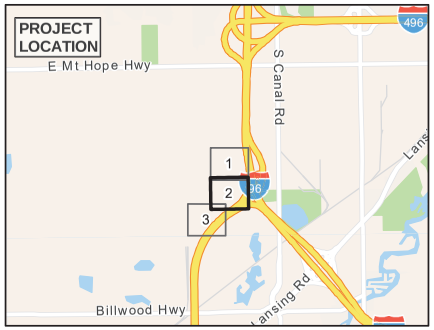
T:_EPP\GIS\Delta_Expansion_MIMaps\RTEMs\Project.aprx 7/28/2022 12:38 PM


**LEGEND:**

- PHOTOGRAPH LOCATION AND DIRECTION
- UTILITY CORRIDOR OPTION B (AOI)

0 200 400 Feet

1 inch equals 200 ft

NOTE:
1. AERIAL IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.

LANSING DELTA SITE ULTIUM 3
UTILITY CORRIDOR OPTION B
EATON COUNTY, MICHIGAN

# PHOTOGRAPH LOCATION MAP

ARCADIS

FIGURE
2-2

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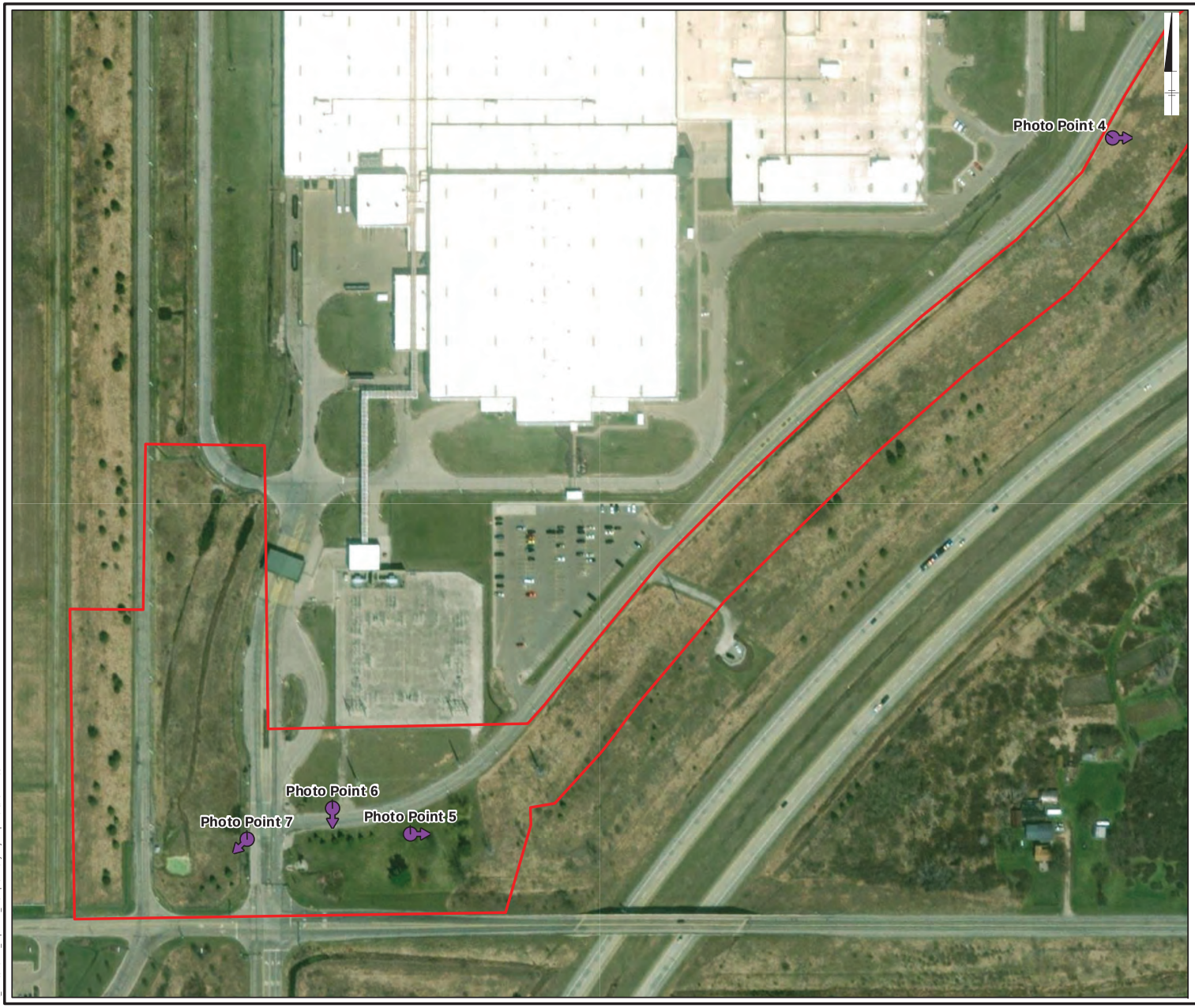


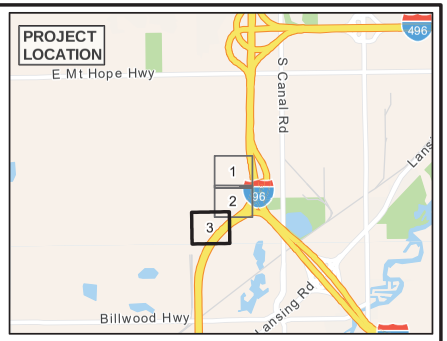


**LEGEND:**

- PHOTOGRAPH LOCATION AND DIRECTION
- UTILITY CORRIDOR OPTION B (AOI)

0 200 400 Feet

1 inch equals 200 ft

NOTE:
1. AERIAL IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.

LANSING DELTA SITE ULTIUM 3
UTILITY CORRIDOR OPTION B
EATON COUNTY, MICHIGAN

# PHOTOGRAPH LOCATION MAP

ARCADIS

FIGURE
2-3

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## Project Photographs

Lansing Delta Site  Expansion Utility Corridor Option B – PRT Survey
Lansing, Michigan

**Photo: 1**

**Date:**
July 27, 2022

**Description:**
Photo Point 1

**Direction:**
Southeast

**Photo: 2**

**Date:**
July 27, 2022

**Description:**
Photo Point 2

**Direction:**
East

## Project Photographs

Lansing Delta Site  Expansion Utility Corridor Option B – PRT Survey
Lansing, Michigan

**Photo: 3**

**Date:**
July 27, 2022

**Description:**
Photo Point 3

**Direction:**
North

**Photo: 4**

**Date:**
July 27, 2022

**Description:**
Photo Point 3

**Direction:**
East

## Project Photographs

Lansing Delta Site  Expansion Utility Corridor Option B – PRT Survey
Lansing, Michigan

**Photo: 5**

**Date:**
July 27, 2022

**Description:**
Photo Point 5

**Direction:**
East

**Photo: 6**

**Date:**
July 27, 2022

**Description:**
Photo Point 6

**Direction:**
South

## Project Photographs

Lansing Delta Site  Expansion Utility Corridor Option B – PRT Survey
Lansing, Michigan

**Photo: 7**

**Date:**
July 27, 2022

**Description:**
Photo Point 7

**Direction:**
Southwest

**Photo: 8**

**Date:**
July 27, 2022

**Description:**
Mature Silver Maple –with scrag (not on figure)

**Direction:**
South

United States Department of the Interior
FISH AND WILDLIFE SERVICE
2651 Coolidge Road, Suite 101
East Lansing, Michigan 48823-6360

August 24, 2022

Todd Stribley, Director, Environmental Compliance
Department of Energy
Loan Programs Office
Washington, D.C. 20585

RE: U.S. Department of Energy, Request for Reinitiating of Section 7 Consultation for the Ultium Cells, LLC Lithium-Ion Battery Cell Manufacturing Facility near Lansing, Michigan

Dear Mr. Stribley,

Thank you for letter of August 8, 2022, requesting reinitiation of informal consultation on the proposed Ultium Cells, LLC lithium-ion battery cell manufacturing facility near Lansing, Michigan (Project), pursuant to section 7 of the Endangered Species Act, as amended (ESA) (16 U.S.C. § 1536), and the ESA's implementing regulations (50 CFR 402.13). As discussed in detail below, we concur with your revised determinations, and this concludes the ESA interagency consultation process.

On May 2, 2022, this office concurred with the Department of Energy (DOE)'s determination of effects to ESA-listed species for the original proposed Project, which comprised the 297-acre battery cell manufacturing facility. According to your request for reinititation of informal consultation, the revised Project includes a 33.1-acre utility corridor not subject to previous consultation. The utility corridor is located east of the existing General Motors Lansing Delta Assembly Plant, primarily within the right-of-way for Guinea Road and a public utility connection area north of Davis Highway. The corridor will contain a 20-inch ductile iron or high-density polyethylene water line, a 12-inch polyvinyl chloride sanitary sewer, and an 8-inch steel natural gas line with plastic coating. The gas, water and sanitary sewer utilities will be built using open-trench methods for most of the length within the corridor; however, nonintrusive techniques such as horizontal direct drilling will be used to minimize wetland impacts.

The revised Project area, including the original battery cell manufacturing facility and newly added utility corridor, totals nearly 331 acres. The utility corridor is located within a managed corridor consisting of a maintained roadway and right-of-way with overhead utilities present near the central and southern segments. Vegetative communities within the corridor consist largely of upland grassland and scrub/shrub species typically found in disturbed areas, with a few scattered trees. Approximately 0.76 acres of palustrine emergent wetland dominated by invasive and exotic flora species are present within the corridor and are specifically associated with roadway ditches. Trees are confined to small sporadic clusters, some of which were ornamental plantings. Tree species observed in the utility corridor include silver maple (*Acer saccharinum*), weeping

willow (*Salix babylonica*), eastern cottonwood (*Populus deltoides*), Norway spruce (*Picea abies*), blue spruce (*Picea pungens*), and white pine (*Pinus strobus*). Construction in the utility corridor will mostly avoid wetland habitat but will impact 130 square feet of palustrine emergent wetlands, considered to be non-jurisdictional. During a July 29, 2022, bat habitat assessment conducted in the utility corridor, only a single potential roost tree (a silver maple with a dead limb) was observed. However, as the tree is isolated from other trees and forested areas by more than 1,000 feet, it was considered unsuitable for listed bats, in accordance with USFWS guidelines.

Your August 8, 2022, letter summarized previous ESA coordination and consultation on the Project and addressed potential effects of the revised Project activities on the endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*M. septentrionalis*; NLEB). We concur with your determination of threatened and endangered species that may be present and affected within the revised action area. You have also determined that the Project will have *no effect* on the eastern prairie-fringed orchid (*Platanthera leucophaea*), eastern massasauga rattlesnake (*Sistrurus catenatus*), or designated critical habitat. No further consultation is required for projects with no effects to listed species or critical habitat.

**Indiana Bat**

In Michigan, summering Indiana bats roost in trees in riparian, bottomland, and upland forests from approximately April through September. Indiana bats may summer in a wide range of habitats, from highly altered landscapes to intact forests. Roost trees vary considerably in size. Although trees used by Indiana bat maternity colonies are typically greater than 9 inches diameter at breast height (dbh), those used by males and non-reproductive females or as alternate roosts for maternity colonies may be as small as 5 inches dbh. Indiana bats typically roost beneath peeling bark but may also use cracks or crevices. As such, roost trees tend to be dead or dying trees with some bark remaining, or live trees with naturally exfoliating bark, such as shagbark hickory (*Carya ovata*). Rarely do Indiana bats roost in structures, such as barns, sheds, or bridges. During winter, Indiana bats hibernate in caves, abandoned mine portals or similar structures.

**NLEB**

During the summer, NLEB typically roost singly or in colonies underneath bark or in cavities, crevices, or hollows of both live and dead trees and/or snags (typically ≥3 inches dbh). On occasion, the species will roost in structures, such as barns and sheds, when suitable tree roosts are unavailable. These bats forage for insects in upland and lowland woodlots and tree-lined corridors. During the winter, NLEB hibernate predominantly in caves and abandoned mine portals.

On April 2, 2015, a final rule was published in the Federal Register listing the NLEB as threatened, along with an interim species-specific rule under section 4(d) of the Act, which lessens ESA restrictions that do not provide conservation benefit for the bat. On January 14, 2016, a final species-specific 4(d) rule was published in the Federal Register, further reducing restrictions that do not provide conservation benefit to the species. Federal agency actions that involve incidental take not prohibited under the final 4(d) rule may result in effects to individual NLEB. Per section 7 of the Act, if a federal agency's action may affect a listed species, consultation with the U.S. Fish and Wildlife Service (USFWS) is required. This requirement

does not change when a 4(d) rule is implemented. For this 4(d) rule, however, the USFWS has established a framework to streamline formal section 7 consultations when federal actions may affect NLEB but will not result in prohibited take. Federal agencies have the option to rely upon the finding of the programmatic biological opinion for the final 4(d) rule and to fulfill their project-specific section 7 responsibilities by using the established framework. For projects that may affect, but are not likely to adversely affect the species, agencies may follow typical consultation procedures.

Although NLEB is currently federally listed as threatened, the Service published a proposal to reclassify the species as endangered on March 23, 2022. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species.

You determined that the revised Project is *not likely to adversely affect* Indiana bat or NLEB. We concur with these determinations for the following reasons:

- Based on prior coordination between Arcadis, ESI, EGLE, and this office, suitable habitat within the original 17.6-acre tree-clearing area was fully assessed for potential roosting habitat, and all identified potential roost trees removed during the inactive season for listed bats (October through March). Removing suitable habitat when bats are not present on the landscape precludes the possibility of direct effects, and evidence that abundant roosting habitat will remain outside the tree-clearing areas supports that potential indirect effects via habitat loss will be insignificant. Likewise, any effects from cutting remaining, non-suitable roosting habitat within the tree-clearing areas are expected to be insignificant and/or discountable.
- The Project has agreed to implement the following recommended conservation measures to further minimize impacts to listed bats:
    - When installing new or replacing existing permanent lights, downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting) will be used along the north side of the Project area that is in proximity to the Indiana bat habitat.
    - Temporary lighting will be directed away from suitable habitat during the active season.
    - All remaining Project-related tree clearing within the original 297-acre Project area will occur during the inactive season.
- A habitat assessment for Indiana bat and NLEB was conducted for the newly added 33.1-acre utility corridor on July 27, 2022. The assessment followed current USFWS survey guidelines and documented no suitable summer roosting habitat for either species.

**Eagle Act**

Your original informal consultation letter included a request for confirmation that an eagle take permit is not recommended. To support this recommendation, the Project committed to maintaining a 660-foot no-work buffer around the identified bald eagle nest, and cordoning off

areas of the buffer that are unforested with construct fencing to prevent accidental encroachment. This approach is consistent with the USFWS' National Bald Eagle Management Guidelines (2007) for avoiding disturbance of bald eagles. As indicated in our previous (May 2, 2022) concurrence letter, we do not recommend seeking an eagle take permit.

Conclusion

This concludes the consultation process required by section 7 of the ESA. When DOE maintains discretionary involvement or control over the project, reinitiation of consultation is required (50 CFR 402.16(a)) under certain conditions: (1) if new information reveals effects of the project that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) if the project is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the written concurrence; or (3) if a new species is listed or critical habitat designated that may be affected by the project.

We appreciate the opportunity to cooperate with the DOE in conserving endangered species. If you have any questions regarding these comments, please contact Jenny Wong, of this office, at 517-351-7261, or Jennifer_Wong@fws.gov.

Sincerely,

*originally signed*

Scott Hicks
Field Supervisor

cc: Amy Bleisch, MDNR
Keto Gyekis, EGLE

Native American Tribes

| Organization | Contact Date(s) | Summary of Contact |
|---|---|---|
| Saginaw Chippewa Indian Tribe of Michigan | 05/11/2022<br>06/17/2022<br>06 /22/2022<br>07/11/2022 | Phone call to confirm contact information<br>Notification and Initiation letter<br>Call to confirm receipt of letter; confirmed via email.<br>Response letter indicating there are no known recorded resources within the APE, and that it is their opinion that the project would have no adverse effect on cultural resources. |
| Grand River Band of Ottawa Indians | 06/08/2022<br>06/17/2022<br>06/22/2022 | Phone call to confirm contact information; no response<br>Notification and Initiation letter<br>Call to confirm receipt of letter; no response |
| Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation | 05/11/2022<br>06/17/2022 | Phone call to confirm contact information<br>Notification and Initiation letter; confirmed receipt via email |
| Mackinac Bands of Chippewa and Ottawa Indians | 06/08/2022<br>06/17/2022 | Phone call to confirm contact information; no response<br>Notification and Initiation letter |
| Menominee Indian Tribe of Wisconsin | 05/11/2022<br>06/17/2022<br>06/22/2022 | Phone call to confirm contact information<br>Notification and Initiation letter<br>Call to confirm receipt of letter; no response |
| Miami Tribe of Oklahoma | 05/11/2022<br>06/17/2022<br>06/22/2022 | Phone call to confirm contact information<br>Notification and Initiation letter<br>Call to confirm receipt of letter; no response |
| Sault Ste. Marie Tribe of Chippewa Indians, Michigan | 05/11/2022<br>06/17/2022<br>06/22/2022 | Phone call to confirm contact information<br>Notification and Initiation letter<br>Call to confirm receipt of letter; no response |
| Swan Creek Black River Confederated Ojibwa Tribes of Michigan | 06/28/2022 | Notification and Initiation letter |
| Burt Lake Band of Ottawa and Chippewa Indians | 06/08/2022 | Indicated no interest in the project via phone |

Note: A single letter for Federally recognized Native American Tribes and a single letter for State recognized Native American Tribes has been included.

**Department of Energy**
Washington, DC 20585

June 17, 2022

Marcella Hadden
Tribal Historic Preservation Officer
Saginaw Chippewa Indian Tribe of Michigan
6650 E. Broadway
Mt. Pleasant, MI 48858

**SUBJECT:** Proposed Federal Loan to Ultium Cells, LLC., for Battery Cell Manufacturing Facility in Lansing, Michigan

Dear Ms. Hadden:

The U.S. Department of Energy (DOE) is preparing an Environmental Assessment (EA) pursuant to the National Environmental Policy Act (NEPA) to assist in determining whether to issue a Federal loan to Ultium Cells, LLC (Ultium) to support the construction and tooling of a battery cell manufacturing facility located within the Thornapple River Watershed positioned at 7111 Davis Highway, Lansing, Michigan. The facilities will be used to build automotive batteries designed for use in electric vehicles. As part of this environmental review process, DOE is also conducting a historic resource review in compliance with Section 106 of the National Historic Preservation Act (NHPA).

The proposed project would involve constructing and tooling a manufacturing facility on undeveloped land west of the City of Lansing, in Delta Township, Eaton Cunty, Michigan (see Attachment 1). The Project site encompasses approximately 297 acres and is located immediately west of an existing vehicle assembly plant. The battery manufacturing processes would be housed in an approximately 2.8-million-square-foot facility, with several attendant structures and features. These structures and features include parking areas, shipping and receiving areas, utilities, access roads, stormwater management facilities, a substation, a guard house, hazardous materials storage, recycling areas, landscape areas, water supply tanks, and site preparation for future construction of a battery cell recycling facility (see Attachment 2).

This letter is intended to notify you of the proposed Federal project (a potential loan to Ultium), identify if you have an interest in the proposed project site in Lansing, Michigan, and provide you with the opportunity to comment and engage DOE in

government-to-government consultation on the proposed project. Any comments or concerns you provide will help ensure that DOE considers Tribal interests and complies with its NEPA and NHPA Section 106 responsibilities. We want to give you the opportunity to raise any issues or concerns you may have regarding the site.

Ultium has conducted an architectural survey and a Phase I archaeological survey within the identified area of potential effects (APE). The architectural survey recommended that no properties 50-years or older within a 0.5-mile radius around the project area, or the architectural APE, were eligible for the National Register of Historic Places (NRHP). The Michigan State Historic Preservation Office (MI SHPO) concurred with the architectural survey recommendations by letter dated May 4, 2022. A copy of the architectural survey may be supplied upon request.

The Phase I archaeological survey consisted of background research and the identification of previously known archaeological sites within 1 mile of the project area. One previously identified site, known as Old Maid's Swamp (20EA77), is within the current project parcel and was previously identified as a prehistoric site from the Archaic period (see Figure 4.1 in the attached report). During the survey, the site was subjected to systematic investigation using pedestrian survey and shovel testing; no prehistoric materials were identified. The survey also documented three dumping locations containing historic-era and present-day debris, and two isolated finds. All these resources, including Old Maid's Swamp, are recommended as not eligible for the NRHP. The MI SHPO concurred with the archaeological survey recommendations in an email dated June 10, 2022. The report is attached for your review and comment (Attachment 3).

I would greatly appreciate notification regarding whether you have an interest in the project site, as well as any comments or concerns you may have on the project or the attached archaeological report within 30 days of receipt of this letter. Should you have an interest in the project site, I will provide you with additional information pursuant to NEPA and the NHPA as it becomes available. Please provide your notification of interest and any comments or concerns by email at LPO_Environmental@hq.doe.gov, or I can also be reached by telephone at 202-220-4586.

Respectfully,

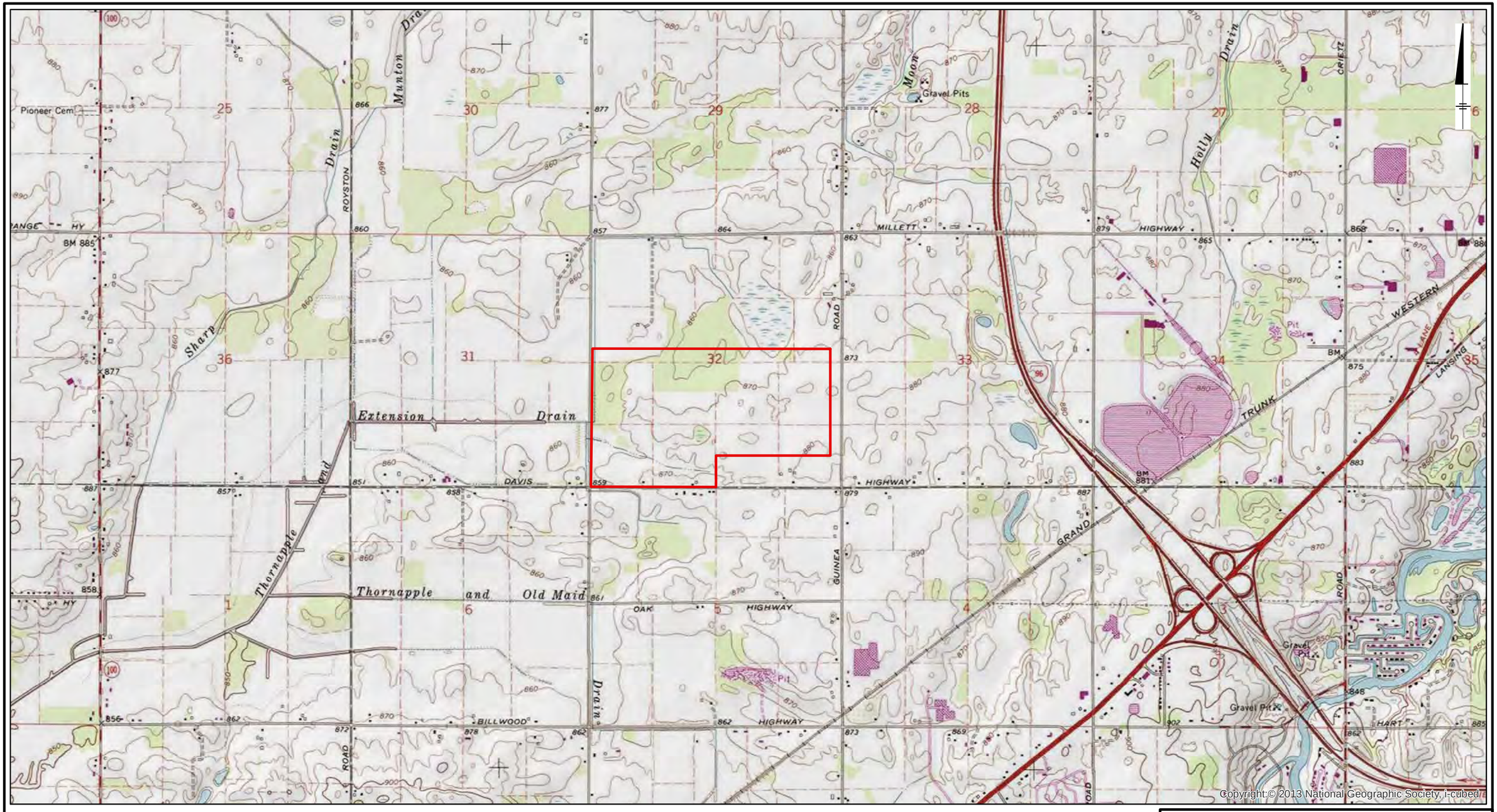
Angela C. Ryan

Angela Ryan
Environmental Protection Specialist
Loan Programs Office

Attachments:

Attachment 1: Lansing, MI Site Location Map
Attachment 2: Lansing, MI Preliminary Site Plan

**Attachment 1**
**Lansing, MI Site Location Map**




## Legend

Area of Investigation (AOI)

NOTES:

1. Topographic mapping obtained from USGS Topo Maps online service.

0 2,000 4,000 Feet

GRAPHIC SCALE

GENERAL MOTORS
LANSING DELTA TOWNSHIP

**SURFACE WATER DELINEATION REPORT**

**USGS Topographic Mapping**

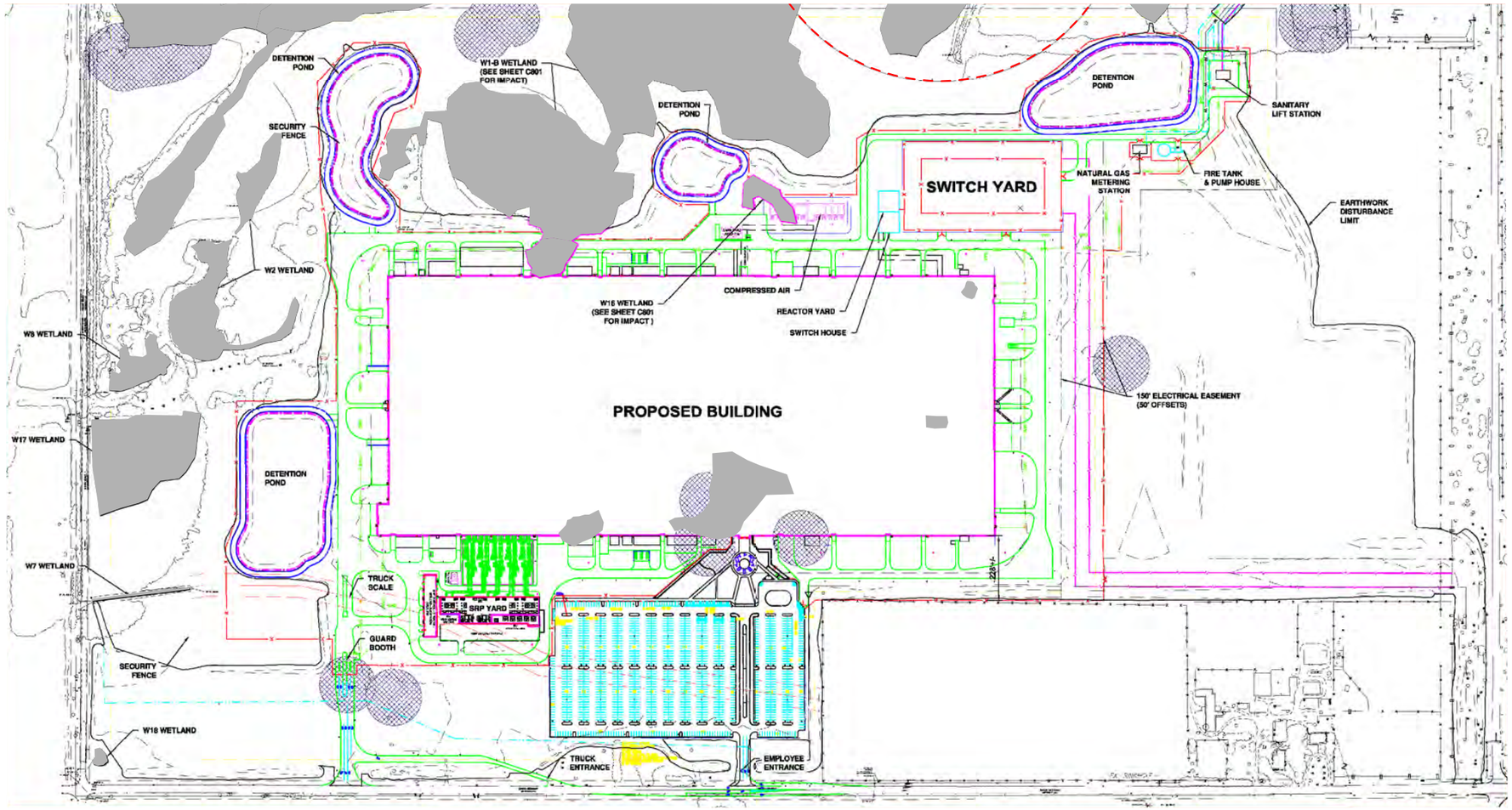
Dimondale, Michigan Quadrangle

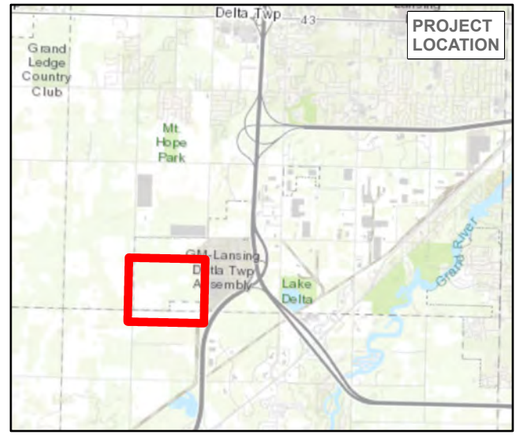
ARCADIS

**FIGURE 1**

City:Columbus Div/Group: ENV Created By: Last Saved By: JSteckel

**Attachment 2**
**Lansing, MI Preliminary Site Plan**




**LEGEND**

- 2022 WETLAND DELINEATION
- BALD EAGLE NEST 660 FT RADIUS BUFFER
- STATE REGULATED FLOODPLAIN

0 100200
Feet

NOTE:
1. AERIAL IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.

ULTIUM CELL, LLC
8175 MILLET HIGHWAY, LANSING, MICHIGAN

**PRELIMINARY SITE PLAN**

ARCADIS

FIGURE
**1**

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Saginaw Chippewa Indian Tribe of Michigan
Tribal Historic Preservation Office

6650 EAST BROADWAY, MT. PLEASANT, MI 48858
PHONE (989) 775-4751 • FAX (989) 775-4767

THPO

July 11, 2022

Angela Ryan,
Environmental Protection Specialist
Loans Programs Office
Department of Energy
Washington, DC 20585

RE: Proposed Federal Loan to Ultium Cells, LLC., for Battery Cell Manufacturing Facility in Lansing, Michigan

Dear Ms Ryan:

Under the authority of Section 106 of the National Historic Preservation Act of 1966, as amended, I have reviewed the above-cited undertakings at the locations noted above. Based on the information provided for our review, it is the opinion of the Saginaw Chippewa Indian Tribe of Michigan's Tribal Historic Preservation Office (SCIT THPO) that there are no recorded resources within the area of potential effect. It is also the opinion of the SCIT THPO that the projects will have no adverse effect on cultural resources.

This letter evidences that the Department of Energy is compliance with 36 CFR § 800.4 "Identification of historic properties," and the fulfillment of the Department of Energy's responsibility to notify the SCIT THPO, as a consulting party in the Section 106 process, under 36 CFR § 800.4 (d) (1) "No historic properties affected."

If the scope of the work changes in any way please notify this office immediately.

If you have any questions, please contact Marcella Hadden, Tribal Historic Preservation Officer, at 989-775-4751 or by email at mlhadden@sagchip.org.

Miigwetch (thank you) for this opportunity to review and comment and for your cooperation.

Sincerely,

Marcella Hadden

Marcella Hadden
Tribal Historic Preservation Officer
Saginaw Chippewa Indian Tribe of Michigan

**Department of Energy**
Washington, DC 20585

June 28, 2022

Representative
Swan Creek Black River Confederated Ojibwa Tribes

**SUBJECT:** Intent to Prepare an Environmental Assessment (EA) for a Proposed Federal Loan to Ultium Cells, LLC., for Battery Cell Manufacturing Facility in Lansing, Michigan

Dear Representative:

Under Section 136 of the Energy Independence and Security Act of 2007, which established the Advanced Technology Vehicles Manufacturing Loan (ATVM) program, the U.S. Department of Energy (DOE) is evaluating whether to provide a Federal loan to Ultium Cells, LLC (Ultium) to support the construction and tooling of a battery cell manufacturing facility located within the Thornapple River Watershed positioned at 7111 Davis Highway, Lansing, Michigan. The facility will be used to build automotive batteries designed for use in electric vehicles. The decision to prepare an EA was made in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021).

The purpose and need for DOE's action is to comply with our mandate under Section 136 of the Energy Independence and Security Act to select projects for financial assistance that are consistent with the goals of the Act. Pursuant to the Act, the ATVM program was established to provide loans to automobile and automobile parts manufacturers for the cost of re-equipping, expanding, or establishing manufacturing facilities in the United States to produce advanced technology vehicles or qualified components. DOE has determined that the construction and tooling of the lithium-ion battery cells manufacturing facility as proposed by Ultium is consistent with the goals of the Act and is using the NEPA process to assist in determining whether to issue a loan to Ultium to support the proposed project.

The proposed project would involve constructing and tooling a manufacturing facility on undeveloped land west of the City of Lansing, in Delta Township, Eaton Cunty, Michigan (see Attachment 1). The Project site encompasses approximately 297 acres and

is located immediately west of an existing vehicle assembly plant. The battery manufacturing processes would be housed in an approximately 2.8-million-square-foot facility, with several attendant structures and features. These structures and features include parking areas, shipping and receiving areas, utilities, access roads, stormwater management facilities, a substation, a guard house, hazardous materials storage, recycling areas, landscape areas, water supply tanks, and site preparation for future construction of a battery cell recycling facility (see Attachment 2).

As part of this environmental review process, DOE is also conducting a historic resource review in compliance with Section 106 of the National Historic Preservation Act (NHPA). Ultium's consultant, Arcadis, has conducted an architectural survey and a Phase I archaeological survey within the identified area of potential effects (APE). The architectural survey recommended that no properties 50-years or older within a 0.5-mile radius around the project area, or the architectural APE, were eligible for the National Register of Historic Places (NRHP). The Michigan State Historic Preservation Office (MI SHPO) concurred with the architectural survey recommendations in a letter dated May 4, 2022. A copy of the architectural survey may be supplied upon request.

The Phase I archaeological survey consisted of background research and the identification of previously known archaeological sites within 1 mile of the project area. One previously identified site, known as Old Maid's Swamp (20EA77), is within the current project parcel and was previously identified as a prehistoric site from the Archaic period. During the survey, the site was subjected to systematic investigation using pedestrian survey and shovel testing; no prehistoric materials were identified. The survey also documented three dumping locations containing historic-era and present-day debris, and two isolated finds. All these resources, including Old Maid's Swamp, are recommended as not eligible for the NRHP. The MI SHPO concurred with the archaeological survey recommendations in an email dated June 10, 2022. A copy of the Phase I archaeological survey may be sent upon request.

I would greatly appreciate notification regarding whether you have an interest in the project site, as well as any comments or concerns you may have on the project or the attached archaeological report within 30 days of receipt of this letter.

Should you have an interest in the project site, I will provide you with additional information pursuant to NEPA and the NHPA as it becomes available. Please provide your notification of interest and any comments or concerns by email at LPO_Environmental@hq.doe.gov, or I can also be reached by telephone at 303-275-4549.

Respectfully,

Todd Stribley

Todd Stribley
NEPA Document Manager
Loan Programs Office

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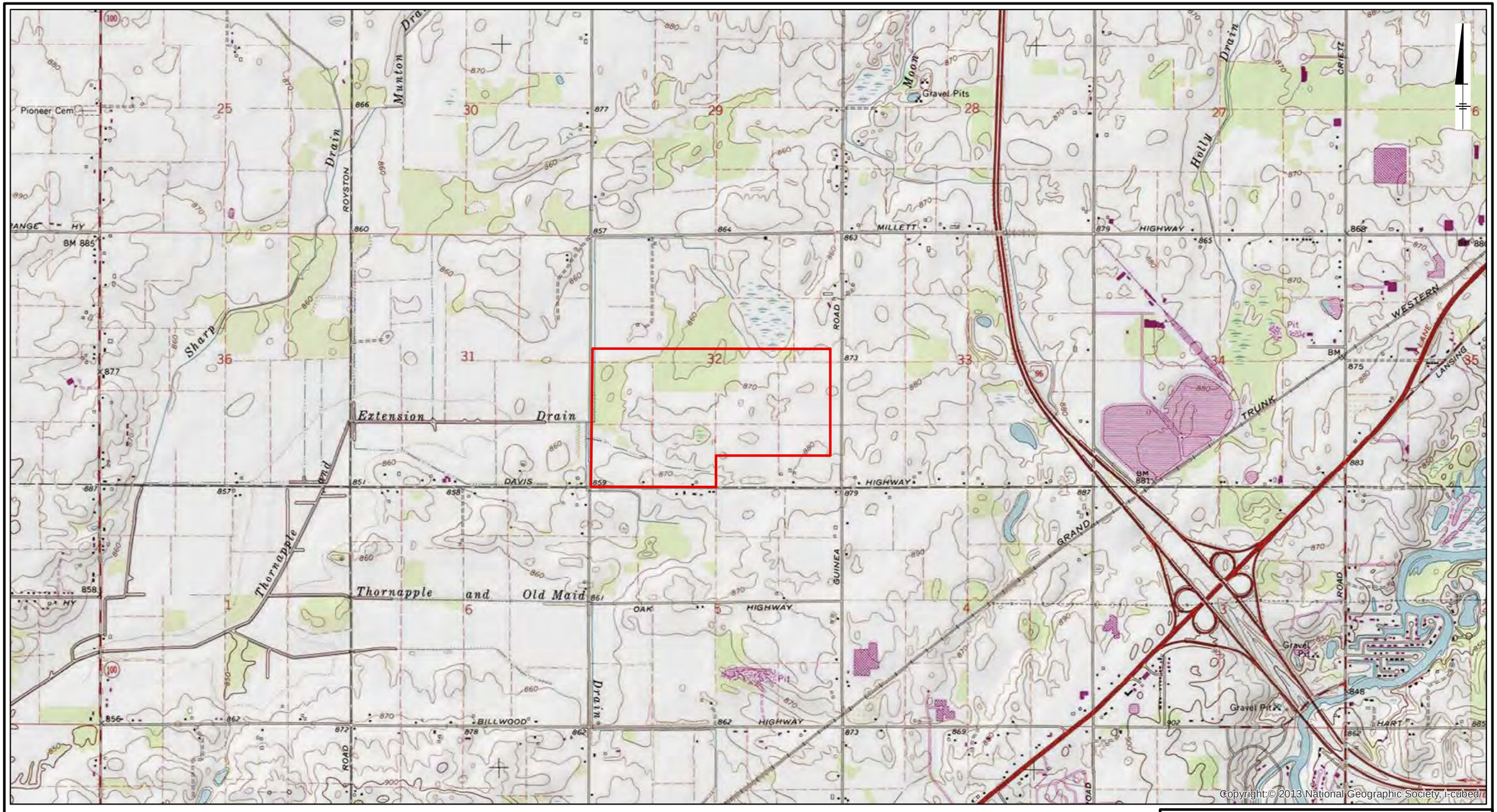


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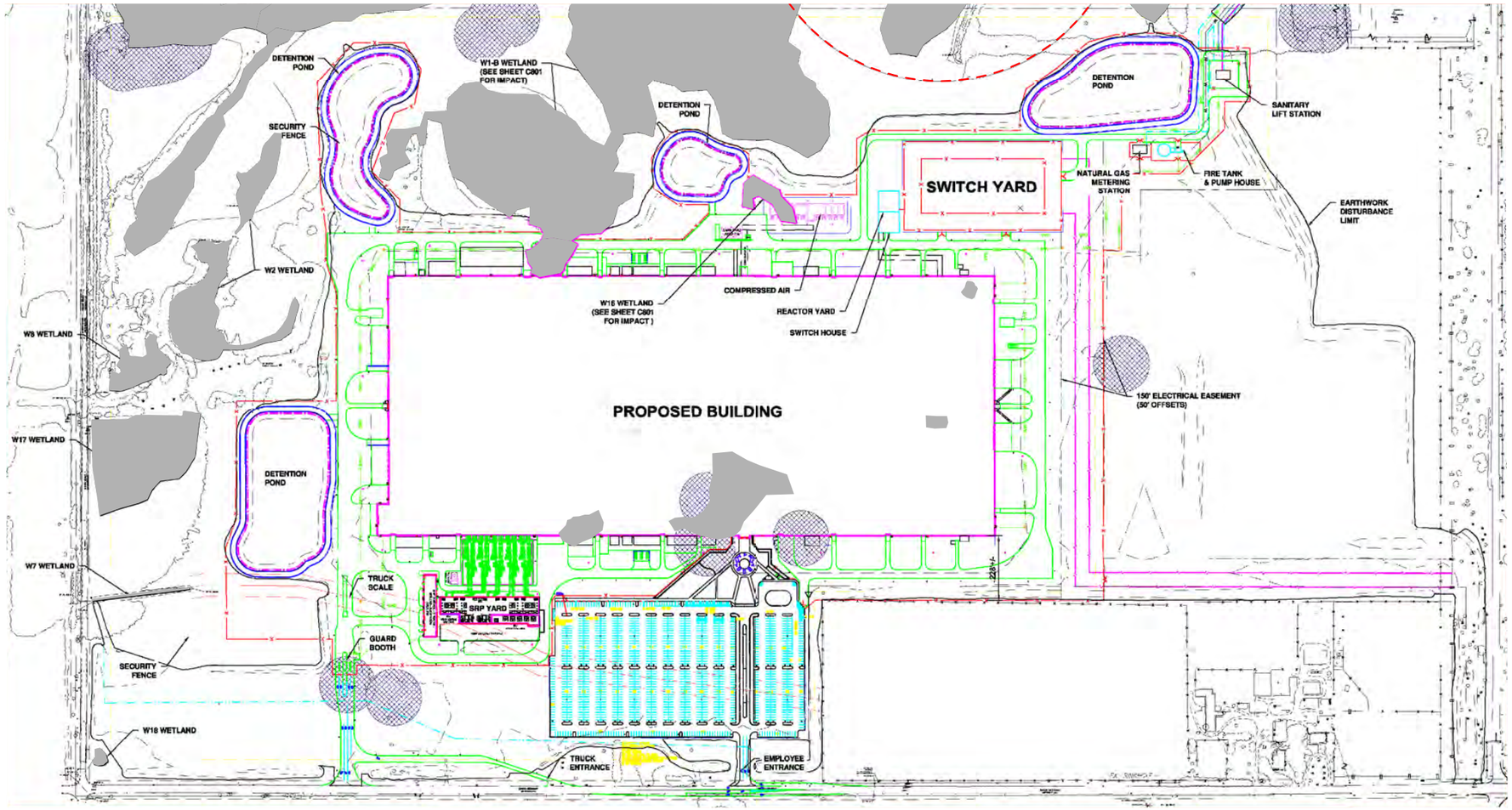


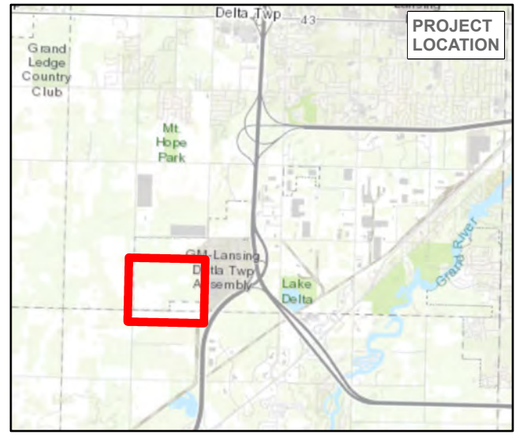


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