DRAFT
ENVIRONMENTAL ASSESSMENT

SK Siltron CSS, LLC – Bay City Facility Improvements (Bay County, Michigan)

Department of Energy Loan Programs Office – Advanced Technology Vehicles Manufacturing

December 2023

DOE/EA-2242

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Acronyms and Abbreviations

Acronym	Definition
AQD	Air Quality Division
ATVM Program	Advanced Technology Vehicle Manufacturing Loan Program
BCC	Birds of Conservation Concern
BMPs	best management practices
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CO2	carbon dioxide
DOE	Department of Energy
EA	Environmental Assessment
EGLE	Environment, Great Lakes, and Energy
EJ	Environmental Justice
ESA	Endangered Species Act of 1973
EV	electric vehicles
FPPA	Farmland Protection Policy Act
GHG	greenhouse gas
GPD	gallons per day
HVD	high voltage distribution
IPaC	Information for Planning and Consultation
LPO	Loan Programs Office
MDOT	Michigan Department of Transportation
MNFI	Michigan Natural Features Inventory
MSU	Michigan State University
NAAQS	National Ambient Air Quality Standards
NATA	National-Scale Air Toxics Assessment
NCCPI	National Crop and Commodity Production Index
NEPA	National Environmental Policy Act
NOx	nitrogen oxides
NRCS	Natural Resources Conservation Service
NREPA	Natural Resources and Environmental Protection Act, 1994 PA 451, as amended
NSR	New Source Review
O3	ozone
PM	particulate matter
PM2.5	PM less than or equal to 2.5 microns in diameter
Project site	Bay City Facility
SESC	Soil Erosion and Sedimentation Control
SK Siltron	SK Siltron CSS, LLC
SPCC	Spill Prevention Control and Countermeasure
SWPPP	Stormwater Pollution Prevention Plan
T&E	threatened and endangered
tpy	tons per year
U.S.	United States
US-10	U.S. Highway 10

Acronym	Definition
USDA	U.S. Department of Agriculture
USEIA	U.S. Energy Information Administration
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WWTP	Wastewater Treatment Plant

1. PURPOSE AND NEED

1.1 Purpose and Need for Agency Action

The purpose and need for agency action is to comply with the United States (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.

SK Siltron CSS, LLC (SK Siltron) is a manufacturer of silicon carbide semiconductor wafers. SK Siltron's wafers are used by other companies downstream to make microchips for power electronics – the parts of electric vehicles (EV) that help transfer electricity from the battery to the motor. The company's objective is to improve its Bay City facility to facilitate the expansion of its manufacturing capabilities and meet the growing demand for components/devices using silicon carbide chips as the media in automotive applications, specifically for EVs. The Project site is located at 1311 Straits Drive, Bay City, Michigan (see **Figure 1**).

SK Siltron 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 precursor emissions, greenhouse gas (GHG) emissions, and particulate matter (PM) emissions associated with vehicle operations. The ATVM Program is designed to stimulate the technology required to meet program objectives.

SK Siltron is proposing to tool the existing Bay City Facility and its recently constructed building addition, along with exterior improvements and interior renovations, to facilitate production of silicone carbide wafers for automotive applications that would reduce air emissions, such as ozone precursors, PM, and GHGs that contribute to global warming, consistent with the primary goal of the ATVM Program. Financially supporting SK Siltron's Project would help bring EVs to market and into greater use, 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 Project, SK Siltron has applied to the DOE ATVM loan program for financial assistance. Upon review of SK Siltron's initial application by the LPO, the application was determined as substantially complete per the rules governing the ATVM loan program in 10 Code of Federal Regulations (CFR) Part 611. SK Siltron was subsequently invited to enter into the LPO's due diligence process on August 26, 2022.

1.3 Scope of Environmental Assessment

In accordance with the National Environmental Policy Act (NEPA), LPO is preparing this Environmental Assessment (EA) to address the procurement and installation of silicon carbide semiconductor wafer equipment (tooling), interior building renovations (first floor manufacturing, mezzanine, second floor office space) to the existing 145,000-square-foot two-story Bay City Facility and the recently constructed

100,000-square-foot two-story building addition. Exterior finishing activities will include concrete pads, perimeter fence, final grading and landscaping. Exterior improvements will include parking lot expansion, construction of a new duct bank and underground powerline connection, sanitary sewer repairs and upgrades, and other minor activities that involve ground disturbance, in Bay City, Michigan.

This EA allows LPO to consider the environmental impact of its action (financial assistance/ATVM loan) to support the proposed activities at the Bay City Facility. Therefore, the scope of the Proposed Action (i.e., LPO providing a loan to SK Siltron) encompasses the tooling of the existing facility and recently constructed building addition, interior building renovations, exterior finishing activities, and facility operations.

DOE has prepared this EA to comply with NEPA, the Council on Environmental Quality regulations implementing NEPA (40 CFR Parts 1500−1508), and DOE NEPA Implementing Procedures (10 CFR Part 1021). If no significant impacts are identified during preparation of this EA, DOE would issue a Finding of No Significant Impact. If potentially significant impacts are identified, DOE would prepare an Environmental Impact Statement.

LPO reviewed the scope of the Proposed Action to identify any significant issues that warrant detailed review in this EA. In its review, LPO considered the scope of the Proposed Action, the location of the existing facility, the recently constructed building addition, and the fact that only minor land-disturbing construction activities are associated with LPO's financial assistance. In addition, LPO reviewed the construction and operating permits associated with the facility (see **Appendix A**) and considered the proposed workforce once the facility is fully operational.

Additionally, the only new permitting actions that will be required for the proposed activities and operation of the Bay City Facility are a wetlands fill permit for construction of the duct bank and underground powerline connection issued by the Michigan Department of Environment, Great Lakes, and Energy (EGLE), a modified Industrial Wastewater Discharge Permit issued by the Bay County Department of Water and Sewer, and a Soil Erosion and Sedimentation Control (SESC) permit for final grading and fencing activities issued by the Bay County Drain Commissioner. The Stormwater Pollution Prevention Plan (SWPPP), required as a condition of the Stormwater Permit for the Project, is required to be updated when the Stormwater Permit is renewed (see **Section 3** and **Appendix A**). No air permit is required as the project has de minimis air emissions.

Several factors were reviewed to determine the scope of issues and resources for analysis in this EA, and to identify non-significant issues and resources. The property and facility proposed for improvements was previously owned and operated by F.P. Horak, a print manufacturing company; thus, the Project site has previously been used for industrial and manufacturing purposes. In addition, all proposed improvements will occur within existing facility boundaries and most on land previously disturbed, graded, and/or paved during previous and historic activities.

Based on LPO's review of the scope of the Proposed Action, the existing site conditions, and permit status, the scope of issues analyzed in the EA includes:

- Cultural resources, including Native American interests
- Water resources, including wetlands, industrial water, groundwater, and surface water
- Air quality
- GHG emissions and climate change
- Biological resources
- Socioeconomic and environmental justice

- Traffic and transportation
- Health and safety
- Waste management
- Soils and prime farmlands
- Cumulative impacts

These resource areas were identified as potentially being impacted by the Proposed Action and each was assessed to determine the nature, extent, and significance of those impacts (see **Section 3**). The EA examines the direct, indirect, and cumulative effects of the project. The assessment combined desktop research and analysis of existing available information with select field studies, including previous site assessments related to the presence of wetlands.

Resources not included in this EA include noise and aesthetics and visual resources. Since the Proposed Action includes interior renovations to existing facilities, is located within an existing industrial park, and the exterior improvements will be congruent with the current built environment, impacts on these resources are not anticipated and therefore are not included in the scope of this EA.

Figure 1: Project Site Location Map

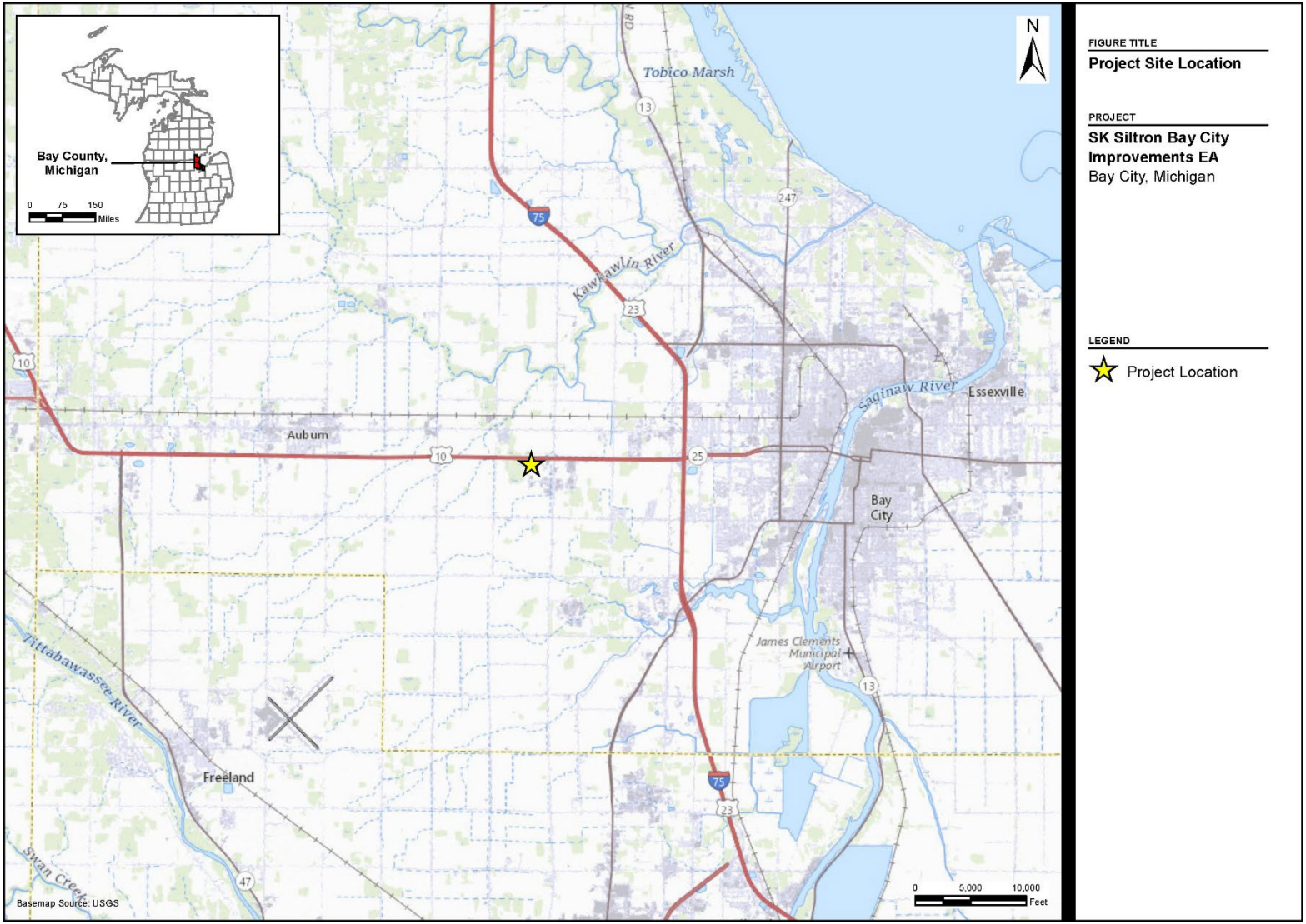
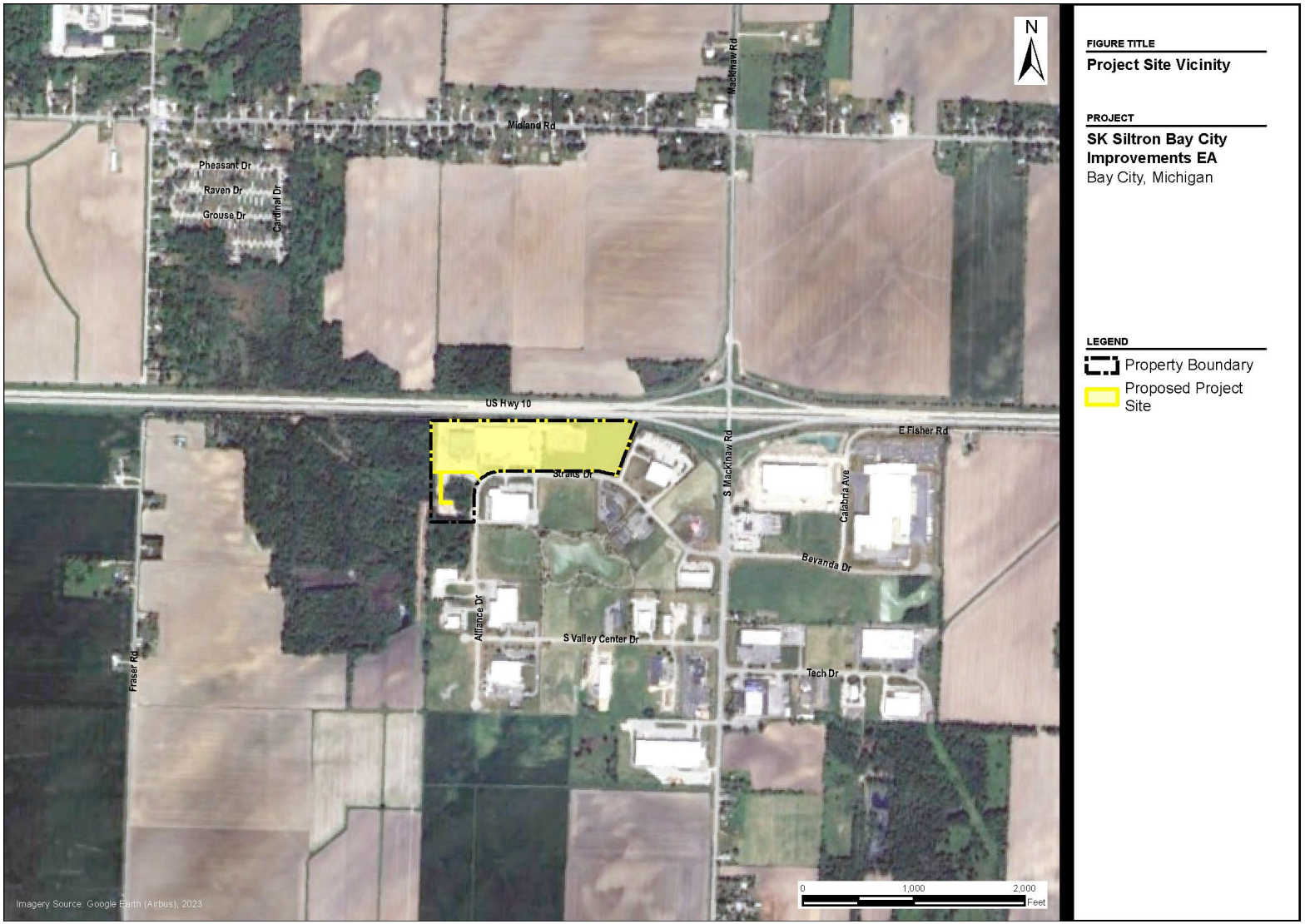


Figure 2: Project Site Vicinity Map



2. DESCRIPTION OF THE PROPOSED ACTION

SK Siltron currently manufactures silicon carbide semiconductor wafers at its facility in Auburn, Michigan. Under the Proposed Action, SK Siltron is looking to increase and expand its production output by conducting the same manufacturing process at the Bay City Facility (Project site). The Project site is situated south of U.S. Highway 10 (US-10) in Monitor Charter Township at 1311 Straits Drive (see **Figure 1**). In 2021, SK Siltron purchased the 20-acre plot of land with an existing 145,000-square-foot two-story manufacturing facility that was previously owned and operated by F.P. Horak, a printing company (see **Figure 2**). Improvements and renovations to the property and existing facility are required to facilitate the production of silicone carbide semiconductor wafers in the recently constructed building addition and existing property and facility.

2.1 Baseline Conditions at Project Site

Since acquisition of the Bay City property in 2021, SK Siltron has completed the following construction and renovation activities at the Project site (see **Figure 3**), which are not subject to LPO's Proposed Action (i.e., are not included within the scope of LPO's proposed financial support to SK Siltron). The activities completed by SK Siltron provide a baseline of conditions at the Project site:

Exterior Activities:

- Clearing, grubbing, excavation, and initial mass grading of approximately 5.83-acres
- Soil stabilization
- Installation of construction storm water management controls
- Construction of temporary parking area (1.75-acres)
- Establishing a topsoil stockpile storage area (0.12-acre)
- Construction of a new 100,000-square-foot two-story building addition
- Construction of exterior concrete pad and enclosed facility for the electrical switchgear room (approximately 1,820 SF)
- Construction of exterior concrete pads for transformer bays and cooling towers (approximately 4,820 SF)
- Construction of exterior concrete pads for nitrogen and argon tanks (approximately 2,485 SF)
- Construction and installation the exterior interceptor pit (approximately 520 SF)
- Construction of exterior concrete pad for pipe rack and MPS (approximately, 4,070 SF)
- Concrete finishing pads and walkways to facilitate movement between the buildings and exterior features (approximately 0.66 acres)
- Fill of a 0.2-acre wetland to facilitate the path for the municipal fire lane
- Creation of laydown area and construction parking (0.61 acre)
- Clearing/grading of path for the municipal fire lane around the new building (approximately 0.72 acre)

Interior Facility/Building Activities:

- Installation of silicon carbide crystal growth furnaces and semiconductor wafer equipment (tooling) on the first floor of the existing facility (manufacturing) and recently constructed building addition

- Interior building renovations including a mezzanine for additional equipment space, and second floor office space

SK Siltron received a Stormwater Permit from the EGLE; a SWPPP was filed with the EGLE as a condition of the Stormwater Permit, SK Siltron received a SESC permit from the Bay County Drain Commissioner for the temporary parking lot, and has been granted a Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) Part 303 Wetlands Protection permit from the EGLE to fill 0.2 acre of wetland within the Project site for the municipal fire lane. SK Siltron has secured the necessary state environmental permits for facility improvements work at the Project site. **Appendix A** provides a list of permits, approvals, and authorizations applied for and obtained for work at the Project site.

2.2 Proposed Action - Facility Construction and Improvements

Additional improvements to those described in **Section 2.1** are required to the existing Bay City Facility to facilitate the production of silicone carbide semiconductor wafers and begin operations. The following subsections describe the proposed facility improvements and operational activities associated with the Proposed Action (e.g. included within the scope of LPO's proposed financial support to SK Siltron).

The Proposed Action will include interior renovations to the existing two-story facility (formerly the F.P. Horak facility building) and recently constructed building addition, exterior finishing activities, and exterior construction improvements, within the Proposed Site, approximately 18.65 acres:

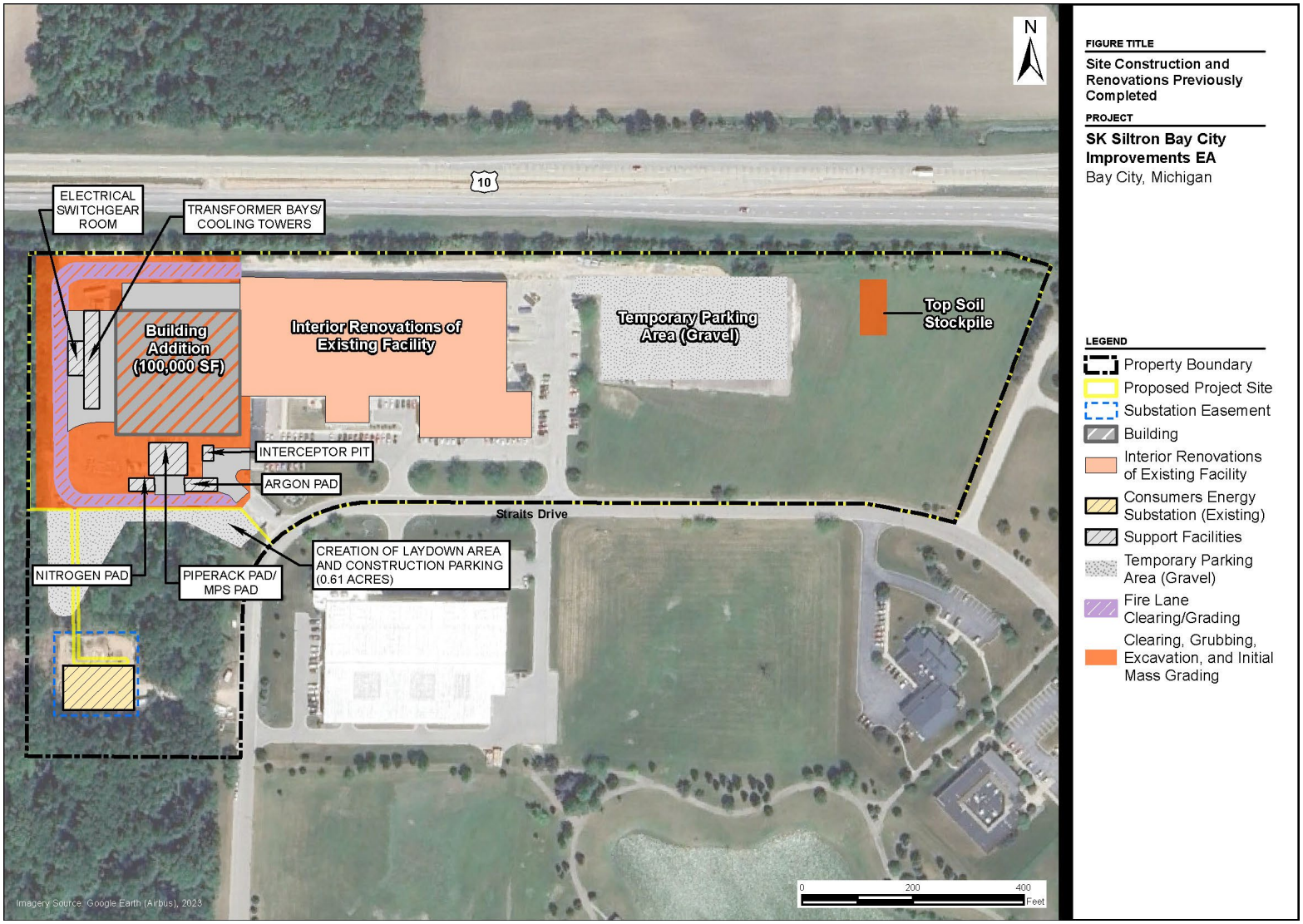
Proposed Interior Activities (see **Figure 4**):

- Continued installation of silicon carbide semiconductor wafer equipment (tooling) on the first floor (manufacturing) of the existing facility and recently constructed building addition
- Continued interior installation of manufacturing equipment required for operations
- Continued interior building renovations including a mezzanine for additional equipment space, and second floor office space

Proposed Exterior Finishing Activities Occurring on Previously Disturbed Land (see **Figure 4**):

- Final installation of steel facade on the exterior of the new building addition
- Installation of perimeter fencing around the new building addition, including concrete pads for gate access and turnstiles
- Final land grading around the new building addition to level dirt to final grade and landscaping
- Installation of gravel in the existing fire lane
- Continue concrete finishing pads and walkways to facilitate movement between the buildings and exterior features
- Electrical Room (approximately 1,690 SF)
- Concrete pad for hydrogen tank (approximately 2,072 SF)
- Concrete pad for new HVAC units (approximately 1,317 SF)

Figure 3: Site Construction and Renovations Previously Completed



- Duct Bank adjacent to the northern edge of the existing facility (4,992 SF)
- Dust Collector adjacent to the northern edge of the new building addition (1,317 SF)

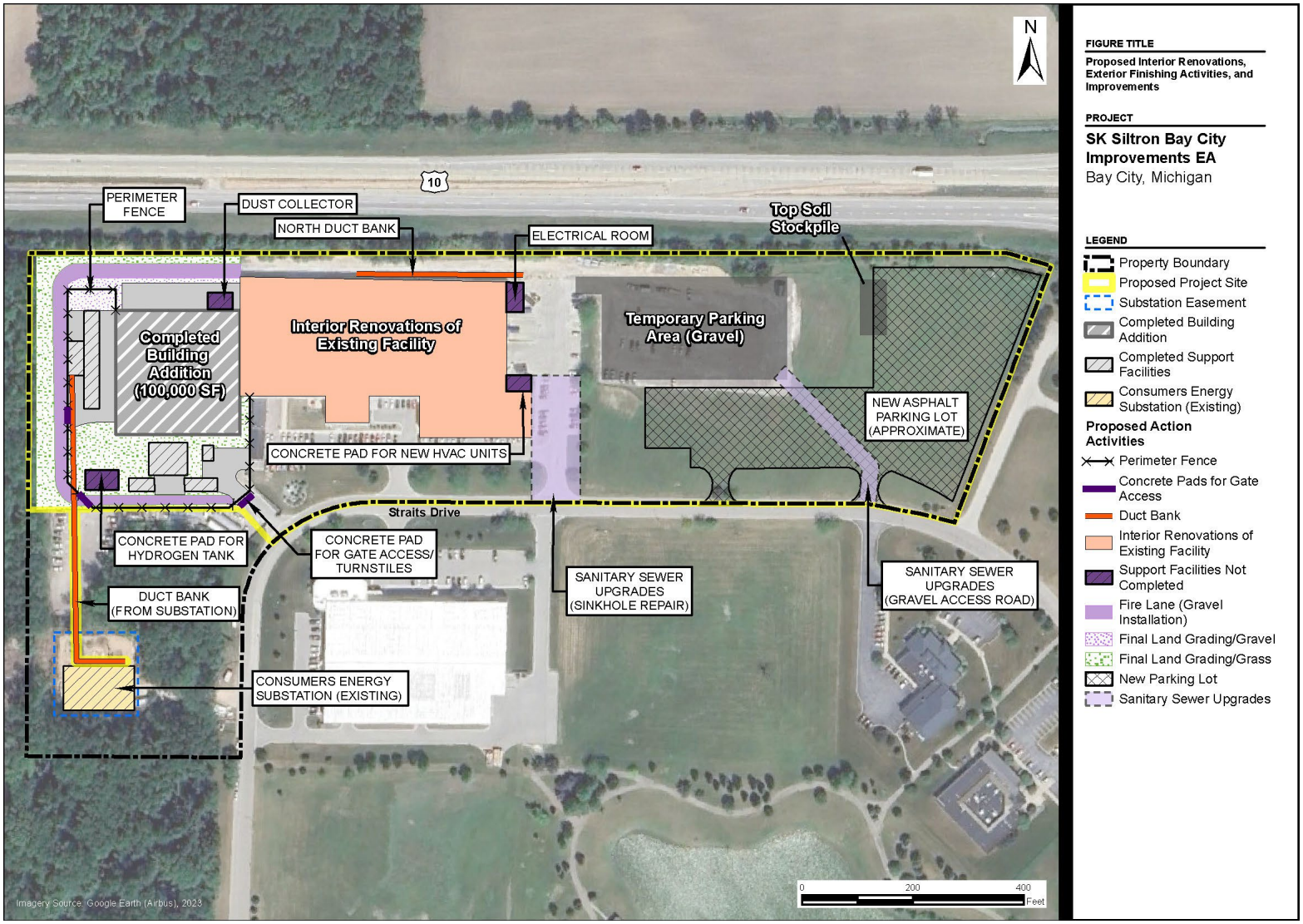
Proposed Exterior Construction Activities Occurring on Land Not Previously Disturbed (see **Figure 4**):

- New asphalt parking lot in area that is currently landscaped/mowed grass (approximately 152,460 SF [3.5 acres])
- Construction and installation of a duct bank (concrete vaults that hold conduit to run power lines to the facility) and underground powerline connection (approximately 0.09 acre) from the Consumers Energy owned substation to the Bay City Facility. Consumers Energy would be responsible for any modifications to the substation required to facilitate connection of the Bay City Facility.
- Sanitary sewer upgrades and emergency repairs due to a sinkhole in the existing parking lot and construction of a temporary road to circumnavigate around the sinkhole in an area that is currently landscaped/mowed grass (approximately 29,166 SF)

As presented in Section 2.1, infrastructure to support the Project within and surrounding the facility (natural gas, water, sewer, and power connections), as well as the new building addition already exist. Consumers Energy, the local power provider, recently installed a new substation and high voltage distribution (HVD) line (south of the Project Site) to accommodate regional demand (see **Section 3.11**). As part of the Proposed Action, SK Siltron will construct a new powerline connection from the substation to the Bay City Facility including a duct bank adjacent to the substation. This will include clearing 0.09 acres of previously undisturbed land and removal of one tree and three tree stumps. Land disturbance will occur within the confines of the Project Site and no additional tree clearance is proposed to implement the Proposed Action. During improvement activities, construction contractors will utilize an existing gravel area on the property for temporary parking and a small area for topsoil storage (see **Section 2.1**). Soil stabilization and stormwater management controls will be maintained during facility improvement activities and will be in accordance with all permits (see **Appendix A**). Once activities cease the temporary use areas will be restored and revegetated as appropriate. After the final installation of steel façade on the exterior of the building addition is complete, the project site will undergo final grading and will be landscaped with consideration for aesthetic views from surrounding land uses.

SK Siltron is pursuing a wetlands fill permit with the EGLE for construction of duct bank and underground power line connection. SK Siltron filed an application for the wetlands fill permit on October 2, 2023. SK Siltron has an Industrial Wastewater Discharge permit issued by Bay County Department of Water and Sewer and a Stormwater Permit (and associated SWPPP) issued by the EGLE which covers all activities associated with the Proposed Action. SK Siltron obtained a SESC permit for the temporary parking lot and obtained a SESC permit for final grading, fencing, and fire lane activities. The current SESC permit has been extended through October 2025. Construction of the proposed permanent parking lot and repairs to the sanitary sewer and construction of the temporary road are covered under existing permits (including electrical, building, plumbing, and mechanical permits). The site does not require an air emissions permit; its emissions are below regulatory thresholds. SK Siltron has secured the necessary state environmental permits to begin facility improvements work at the Project site, with the exception of the duct bank wetlands fill permit and modified Industrial Wastewater Discharge Permit (for future operations). **Appendix A** provides a list of permits, approvals, and authorizations applied for and obtained for the Project.

Figure 4: Proposed Interior Renovations, Exterior Finishing Activities, and Improvements



2.3 Schedule

Interior renovations (mezzanine and second floor office space) began in 2021 and are expected to be completed in fall 2027. General exterior finishing activities began in 2022 and are expected to be completed in fall 2025. Exterior construction activities (new permanent parking lot and duct bank) are expected to begin in late 2023 or early 2024 and completed in fall 2024.

Interior activities, equipment, and tooling installation began in 2021 and will be phased in over time until full scale operations are achieved in 2027. Operational activities, including interior equipment installation, will be initiated over a four-year period beginning in early 2023, reaching full operational capacity in 2027 (see **Table 1**).

Table 1: Interior Equipment Installation Schedule

Timeframe	Scheduled Interior Equipment/Tooling Installation
Q3 2023[1]	■ Growth furnaces ■ Grinders for ingot shaping ■ Single wire saws (SWS) for cutting ■ Multiwire saw (MWS) for slicing ■ X-ray machines for inspections ■ Oil cooling filtering systems for grinders ■ Growth prep, post growth, and fabrication rooms constructed in existing building ■ Installation of interior structural steel and mezzanine
Q3 2023 – Q4 2024	■ Additional growth furnaces ■ Additional grinders, SWS, MWS ■ Additional oil cooling filtering systems
2025 - 2026	■ Additional growth furnaces ■ Additional grinders, SWS, MWS, and x-ray equipment ■ Polishing equipment ■ Inspection and measuring tool installation ■ Polish room construction
2027	■ Additional growth furnaces ■ Additional units of all above-mentioned equipment

[1] Q3 2023/Q4 2023 equipment installation is anticipated to be completed by the end of calendar year 2023.

2.4 Operations

Operations will require approximately 150 employees at the Bay City Facility, which will result in approximately 300 employees at the combined at the Auburn and Bay City Facilities.

The operation of the silicon carbide wafer manufacturing facility includes raw-material receiving, the silicon carbide-manufacturing processes (see **Exhibit 1**) (i.e., growth, fabrication, seed production, grind, polish, and clean/package), a final product storage and shipping area, and ancillary equipment and processes (e.g., heaters, gas skids, cooling towers, waste recovery systems). The building is organized into six process areas: growth, seed fabrication, grind, polish, clean/package, and storage. Raw materials

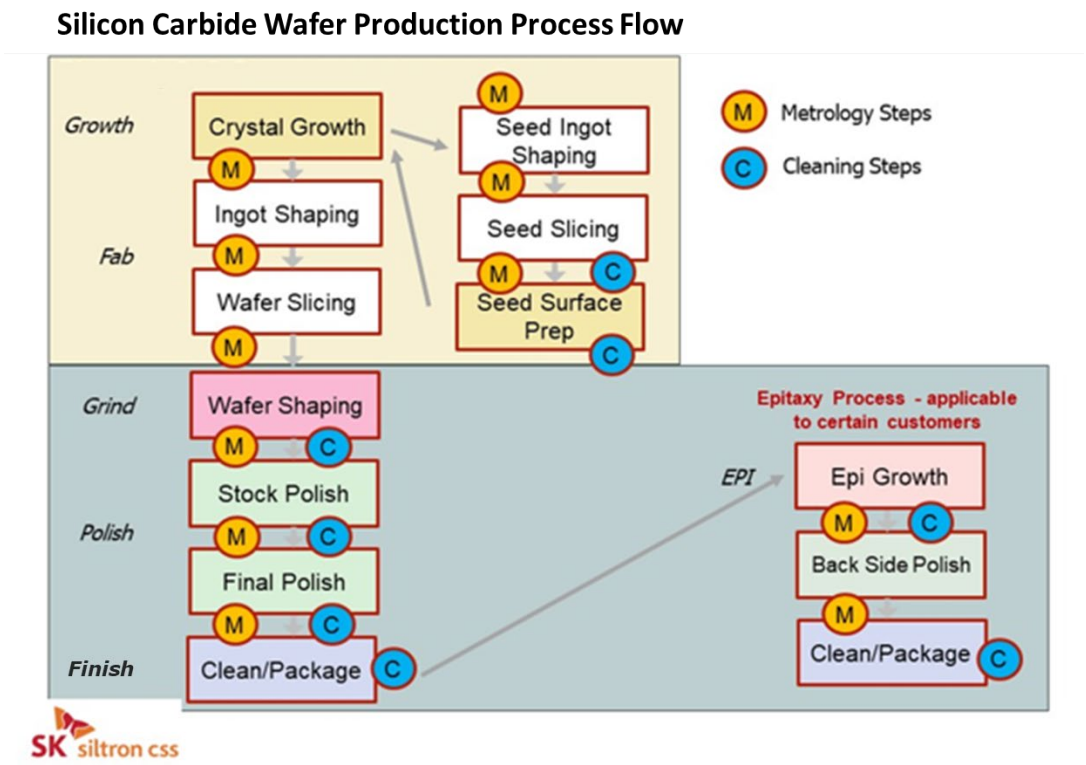
are received and prepared in the furnace and growth area for boule production (boules are a single-crystal ingot). Once boules are produced, fabrication includes ingot shaping and wafer slicing. In the grinding area, the wafers receive final shaping depending on size. During the polish process the wafers are stock and final polished. Clean/package area includes final cleaning, testing, and disposition of finished wafers. Wafers are then stored prior to shipping.

During operations, the Project will be operated and maintained in accordance with the individual equipment specifications and applicable regulations, codes, standards, and permit requirements.

2.4.1 Manufacturing Process Summary

A sequential line of manufacturing is used to create silicon carbide wafers (see **Exhibit 1**). In the growth-process area, the facility conducts weighing and mixing of raw materials, to create a growth package. The package is then loaded into a growth furnace for a boule growth run lasting for multiple days at very high temperatures. Once growth runs are completed, boules are removed from the packages and sent to fabrication where they are initially shaped (face and outside diameter) using wire saws and computerized shaping machines and then sliced into wafers. Once wafer slicing is completed, the rough-cut wafers are cleaned and then moved into the grind area. Grind completes the final sizing, facing, and edge shaping prior to moving into polish. There are two polish processes that are completed in this step, stock polish and final polish. These steps remove the face defects (i.e., scratches and blemishes) to create a smooth usable surface. This is completed with polish slurries and surfactants and the waste is collected post polish for disposal. Post polish, the wafers are sent to cleaning to remove all contaminants and check the wafers for any defects that may require additional processing to become a sellable final product. The wafers are then dispositioned for quality and sold to customers.

Exhibit 1: Manufacturing Process



Notes: *The Epitaxy Process will not be performed at the Bay City Facility.*

2.4.2 Staffing and Operational Timeframe

During the operational phase of the Project, once full production is reached, SK Siltron estimates that the Bay City facility will employ 150 employees. Full production and staffing are expected to be reached in 2027, following a gradual ramp-up beginning in 2023. The Bay City facility will have two shifts at full production; therefore, worker traffic will be split throughout the day and will not occur at one time. No overlapping traffic is anticipated between shifts because all incoming workers will be at the facility before the shift hour begins, and all outgoing workers will leave the facility after the shift hour ends.

2.4.3 Shipping and Receiving

Chemicals used in the manufacturing process will be delivered to the facility by truck utilizing a variety of packaging methods, including tanks, drums, supersacks, and pallets. During preparation for facility operations, an Integrated Contingency Plan, site emergency plans and Spill Prevention Control and Countermeasure (SPCC) will be developed that covers chemical management, routes of possible spills, and spill prevention measures. Finished wafers will be transferred to EV battery plants off-site. The maximum anticipated volume of truck traffic is 14 delivery trucks per day, which includes all shipping and receiving.

2.4.4 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 SK Siltron's Integrated Contingency Plan and all applicable federal, state, and local environmental regulations.

3. ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

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 impacts on that resource from the Project given proposed Project controls. A conclusion regarding the significance of impacts is provided for each resource area.

3.2 Cultural Resources

A desktop archival review of archaeological sites and survey data for the Project site and a cultural resources literature review for a 1-mile radius around the Project were conducted in August 2022 (see **Appendix B**). The following resources were examined for this review:

- National Register of Historic Places listed properties and districts
- Michigan archaeological sites recorded in the Michigan Archaeological Site File
- Historic resources recorded in the Michigan Architectural Resource Inventory
- Previous Cultural Resources Management-related reports and surveys (filed with the Michigan State Historic Preservation Office [SHPO])
- Historic-era mapping of the Project location

The results of the review found that the Project would have no adverse impacts on cultural resources within the Project site or direct physical or visual effects on historic properties within one mile of the Project. The review concluded that no inventoried historic architectural structures, historic areas, or archaeological sites are present within or near the project area, and the project location displays limited potential for the presence of any cultural resources within the proposed limits of disturbance; therefore, there are no concerns regarding the unanticipated discovery of cultural resources. DOE consulted with the Michigan SHPO on January 31, 2023, and again with project updates on October 13, 2023. Michigan SHPO concurred with the finding of “no historic properties affected” (assigned as ER #23-415), in correspondence dated February 23, 2023, and November 3, 2023 (see **Appendix B**). The Michigan SHPO requested if the scope of work changes in any way, or 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.

Because of the absence of adverse impact on cultural resources within and surrounding the Project site, impact on cultural resources as a result of the Project would not be significant.

3.2.1 Native American Interests

As part of its Section 106 review process, DOE sent a request on October 4, 2023 to 6 Federally Recognized Tribes for information on nearby cultural resources and for any comments or concerns they had on the potential for those resources to be affected by renovations and improvements of the existing facility at the Site.

The following tribes were contacted:

- Lac Vieux Desert Band of Lake Superior Chippewa Indians

- Little Traverse Bay Band of Odawa Indians
- Menominee Indian Tribe of Wisconsin
- Miami Tribe of Oklahoma
- Saginaw Chippewa Indian Tribe of Michigan
- Sault Ste. Marie Tribe of Chippewa Indians

Two responses (one from the Saginaw Chippewa Indian Tribe of Michigan and one from the Miami Tribe of Oklahoma) have been received, acknowledging no recorded resources in the area of potential effect. The Miami Tribe of Oklahoma requested to be contacted if any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act or archaeological evidence is discovered during any phase of this project. No other responses or comments have been received to date.

No adverse impacts on traditional cultural properties are anticipated due to the low likelihood of traditional cultural properties occurring within the Project site, as evidenced by DOE tribal correspondence and SHPO consultation (**Appendix B**), as well as the previously disturbed nature of the Project site. Therefore, impacts on cultural resources, including Native American interests, as a result of the Project would not be significant.

3.3 Water Resources

3.3.1 Wetlands

A wetland delineation was conducted within the SK Siltron Bay Facility property in September 2021 that identified three forested wetlands (0.21 acre, 0.62 acre, and 2.53 acres, see **Figure 5**) on the southwest side of the property (Niswander Environmental, 2021). Since this delineation, the 0.21-acre wetland, located in the northern portion of the forested area, was filled to facilitate the construction of a municipal fire lane. A NREPA Part 303 minor Wetlands Protection permit was obtained from the EGLE to fill the 0.21-acre wetland in 2021 (EGLE, 2021).

Another wetland delineation was conducted in April 2022 that identified two seasonally saturated emergent (wet meadow) wetlands (0.02 and 0.06 acres, see **Figure 5**) on the east side of the property, near the location of new parking lot (WSP Golder, 2022). The Project would have no direct impact on these wetlands as the permanent parking lot would be designed to avoid impacts. However, indirect impacts from erosion and sedimentation are possible. To minimize potential indirect impacts to offsite wetlands from Project activities, a SWPPP was developed as required by the Project Stormwater Permit, to minimize off-site erosion and sedimentation. Controls would be implemented to minimize impacts, such as installing a silt fence around the perimeter of the area that would be disturbed by Project activities (DEQ, 2022).

As part of the Proposed Action, SK Siltron will install an underground conduit from the electrical substation to two concrete lined vaults that will be utilized to turn the conduit 90 degrees to deliver electricity to the Bay City Facility. Consumers Energy will be responsible for any modifications to the Consumers Energy electrical substation to facilitate electrical connection to the Project. On October 2, 2023, SK Siltron submitted a Joint Permit Application with the EGLE/U.S. Army Corps of Engineers to obtain a Part 303 minor Wetlands Protection permit for construction of the duct bank and underground power line connection for disturbance of 0.04 acre of wetland. Clay plugs would be used along the edges of wetland disturbance during installation to prevent drainage of the remaining wetland areas. Construction mats and straw mats with vegetative seed would be used to prevent construction runoff into

wetlands and return soil stability to the area following installation, and all areas would be returned to pre-construction grade after the underground conduit installation is complete.

With the utilization of clay plugs, construction and straw mats, the SWPPP, and EGLE wetland permit conditions to minimize impacts on wetlands, and the Project would not have significant impacts to wetlands.

3.3.2 Industrial Water, Groundwater and Surface Water

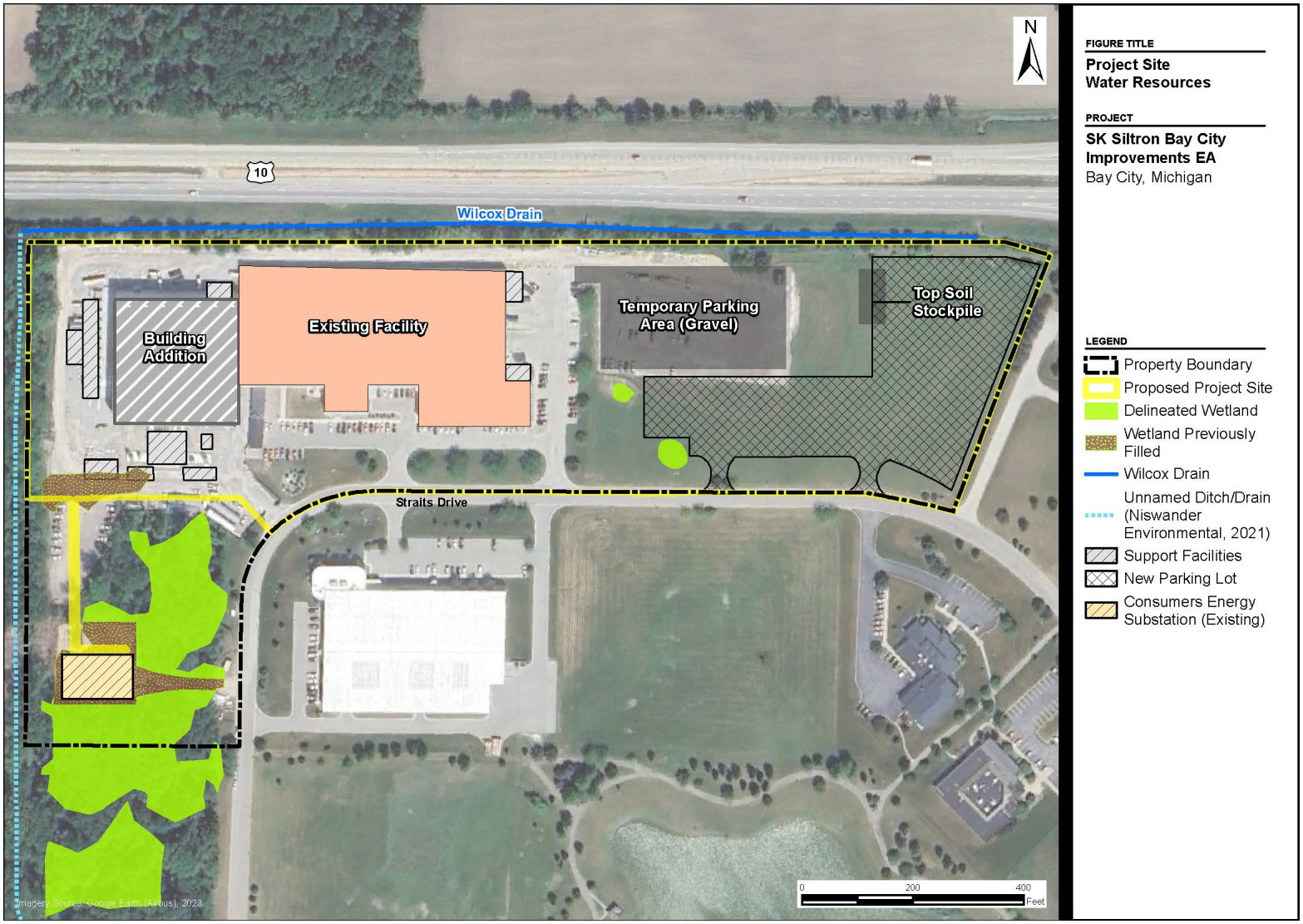
Water and sewer infrastructure is already in place at the site due to the previous industrial use. SK Siltron estimates that 17,200 gallons per day (GPD) of wastewater would be discharged from southwest side of the building, including 2,800 GPD of sanitary waste and 14,400 GPD of cooling tower blowdown water. Floor drains discharge to an interceptor pit which would be pumped to the sanitary sewer. Accidental spills would drain to the interceptor pit, which would be manually pumped out to tanker trucks for disposal (SK Siltron, 2022). The Project would also adhere to SK Siltron's SPCC to minimize spills. SK Siltron currently has an Industrial Wastewater Discharge permit. Therefore, the Bay County Wastewater Treatment Plant (WWTP) would accept discharge from the facility. However, the Project would develop the facility for additional semiconductor processes (e.g., water polishing/cleaning), which would increase wastewater discharge by up to 500 percent, estimated to be 16-17 million gallons per day. SK Siltron would evaluate other wastewater treatment and disposal options to reduce wastewater discharge to the sanitary sewer for future operations and would obtain a modified Wastewater Discharge Permit to cover the additional wastewater discharges resulting from the additional semiconductor processes (SK Siltron, 2022).

The closest named surface water to the Project site is Wilcox Drain, located to the north of the Project site, just south of US-10 (see **Figure 5**). In addition, an unnamed tributary to Wilcox Drain was identified outside the property boundary to the west (Niswander Environmental, 2021). Stormwater runoff from the new permanent parking lot would be directed to a storm sewer that leads to the Bay County WWTP. No water supply or monitoring wells were identified at the Project site. As Monitor Township obtains its drinking water from Lake Huron, groundwater is not the primary source of drinking water in the area (AKT Peerless, 2022).

The Project site is not located within a 100- or 500-year floodplain on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FEMA, 2022), or in a designated coastal zone subject to the Coastal Zone Management Act of 1972 (NOAA, 2018). Stormwater runoff from the Project site would be minimized by using best management practices (BMPs) and adhering to the Project SWPPP during construction. SK Siltron has also obtained SESC permit for the temporary parking lot and will obtain a SESC permit for final grading and fencing activities. The SESC permit has been extended through October 2025. Consistent with SESC BMPs, all needed filter fabric fencing would be in place and maintained before and during all construction phases. According to the SESC permit conditions, a 25-foot greenbelt area on level ground would be allowed to suffice for filter fence if noted on construction plans. All roadways would be scraped/swept clean after each occurrence of spoils entering the roadway (on a daily basis if needed). Finally, all temporary erosion measures would remain in place until permanent measures exist (Bay County, 2022).

Because there would be no direct impacts to groundwater or surface waters, and the SWPPP and SESC BMPs would be implemented to minimize indirect impacts, the Project would not have significant impacts to surface water or groundwater.

Figure 5: Project Site Water Resources Map



3.4 Air Quality

The National Ambient Air Quality Standards (NAAQS) are the allowable concentrations and exposure limits for criteria pollutants as established by the U.S. Environmental Protection Agency (USEPA). Criteria pollutants include carbon monoxide (CO), nitrogen oxides (NO_x), ozone (O_3), PM, sulfur oxides, and lead. The Project is in Bay County, Michigan, which is designated as in attainment for all NAAQS pollutants (USEPA, 2023). The Air Quality Division (AQD) of the EGLE supports efforts to maintain clean air and minimize adverse impacts on public health and the environment in Michigan. AQD maintains a network of air quality monitors to measure ambient concentrations of criteria pollutants to assess and demonstrate compliance with the NAAQS. Two monitoring stations are located within 35 miles of the project site. Monitor 26-017-0014 is located 5.5 miles to the southeast and monitors for PM less than or equal to 2.5 microns in diameter ($PM_{2.5}$); Monitor 26-157-9991 is located 32 miles to the east and monitors for O_3. No violations or exceedances of the applicable NAAQS have been recorded in the current reporting period at either location.

During construction, the Project would generate fugitive dust emissions due to clearing ground, vehicles traveling on unimproved roads, and ground-disturbing activities such as grading and infrastructure construction. The operation of construction vehicles and equipment would generate limited air emissions during the construction period because construction vehicles and equipment utilize diesel fuel or gasoline. Watering and any other dust suppression measures will be conducted in accordance with the BMPs. These BMPs include watering exposed surfaces two times daily, enforcing speed limits of 15 miles per hour on unpaved roads, and minimizing vehicle idling. The air quality effects of emissions from fugitive dust, construction vehicles, and equipment would be temporary and minimal because the effects would only occur during construction and would be reduced through implementing the appropriate BMPs.

The Project's operations would generate limited emissions of volatile organic compounds, PM, and hazardous air pollutants. **Table 2** contains anticipated air emissions from Project-related operations. To protect air quality, several permitting programs under the Clean Air Act (CAA) regulate point-source air emissions. Under the New Source Review (NSR) permitting program, a major stationary source is one of 28 listed facility types that has the potential to emit 100 tons per year (tpy) or more of a regulated NSR pollutant or is an unlisted facility that has the potential to emit 250 tpy or more of a regulated NSR pollutants. A Prevention of Significant Deterioration permit is required for new major sources or a major source making a major modification in areas that are in attainment for all the NAAQS. Because the facility is not one of the 28 listed facility types, and does not have the potential to emit 250 tpy of a regulated NSR pollutant, it is not considered a major stationary source under CAA permitting regulations. Anticipated emissions do not exceed the significance level for any regulated pollutant. Therefore, the Project and all its emission units qualify for exemption from the requirement to obtain a permit to install, according to Michigan Administrative Code Rule 336.1278. DOE personnel discussed this exemption with MI EGLE Air Quality Division, Bay City District Office staff on April 20, 2023.

Table 2: Estimated Emissions from Bay City Facility

	Quantity (tpy)	
Pollutant	**Significance Level**	**Proposed Emissions**
SO_2	40	-
NOx	40	-
CO	100	-
PM	25	2.11
PM_{10}	15	2.11

Pollutant	Quantity (tpy)	
	Significance Level	Proposed Emissions
$PM_{2.5}$	10	2.11
VOCs	40	1.43
Lead	0.6	-
Fluorides	3	0.86
Sulfuric Acid Mist	7	-
Hydrogen Sulfide	10	-
Hazardous Air Pollutants	10/25 (1)	2.15

Notes: *SO_2 = sulfur dioxide; PM_{10} = particulate matter with diameters 10 microns and smaller; $PM_{2.5}$ = particulate matter with diameters 2.5 microns and smaller; tpy = tons per year; VOC = volatile organic compound*

Source: (SK Siltron, 2022; Mich. Admin. Code R. 336.1119)

Since Bay County is in attainment for all pollutants and the Project would not exceed the significance level for any regulated pollutant, the impacts to air quality resulting from the Project would not be significant.

3.5 Biological Resources

3.5.1 Vegetation and Wildlife

The Project site contains an existing manufacturing facility, temporary and permanent parking lots, and mowed grass areas. The Project site is surrounded by woods to the west, a highway and agricultural fields to the north, and development to the south and east. Little vegetation exists within the Project site; thus, wildlife habitat is also limited. Suitable habitat for some wildlife is present in the vicinity of the Project site (i.e., wooded areas).

The Project primarily includes interior building renovations with the exception of the installation of a partial perimeter fence and some minor grading around the buildings and construction of a new permanent parking lot. While the Project would involve clearing one tree, it would not result in the clearing of substantial vegetation, such that wildlife habitat would be affected. Impacts from the construction of the new parking lot would be minimal, as this area is landscaped/mowed grass. Thus, impacts to vegetation and wildlife would not be significant.

3.5.2 Birds of Conservation Concern

DOE queried the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database, which identified two Birds of Conservation Concern (BCC), the bald eagle (*Haliaeetus leucocephalus*) and the rusty blackbird (*Euphagus carolinus*). IPaC noted that while the bald eagle is not a BCC in this area, it warrants attention due to the Bald and Golden Eagle Protection Act. The bald eagle prefers forested habitat near large bodies of water (USFWS, 2023). Since the Project site is not located near any large bodies of water, the species is unlikely to be present on-site. The rusty blackbird is a BCC only in particular Bird Conservation Regions in the continental U.S. However, the species does not breed in the region, and its probability of presence at the Project site is extremely low, as the area is not in a region where migration is common (USFWS, 2021a; Audubon, 2022). Additionally, the Project primarily includes renovations to the interior of the existing building. While the Project would involve clearing one tree, SK Siltron would comply with time-of-year tree clearing restrictions between October 1 and March 31; therefore, there is little potential for habitat loss, and impacts to BCCs would not be significant.

3.5.3 Threatened and Endangered Species

An investigation was conducted to determine the potential effects of the Project on federally listed threatened and endangered (T&E) species by reviewing the USFWS IPaC database. T&E species relevant to this EA are those protected under the federal Endangered Species Act of 1973 (ESA), Bald and Golden Eagle Protection Act of 1940, Migratory Bird Treaty Act of 1918, or under applicable state laws or regulations.

The USFWS IPaC tool identified six federally listed T&E species, one candidate species, one species proposed for listing as federally endangered, and no designated critical habitat with the potential to occur within the Project site (the most recent IPaC list update was November 2, 2023).

- Indiana bat (*Myotis sodalis*), endangered
- Northern long-eared bat (*Myotis septentrionalis*), endangered
- Piping plover (*Charadrius melodus*), endangered
- Red knot (*Calidris canutus rufa*), threatened
- Eastern massasauga (*Sistrurus catenatus*; rattlesnake), threatened
- Eastern prairie fringed orchid (*Platanthera leucophaea*), threatened
- Monarch butterfly (*Danaus plexippus*),candidate species
- Tricolored bat (*Perimyotis subflavus*), Proposed Federally Endangered (USFWS, 2021a)

For the Indiana bat, the Northern long-eared bat, and the Tri-colored bat, there are no known hibernacula or roost trees in the area and the Project will involve the removal of only one tree. While it is unlikely the tree provides habitat for these bat species, SK Siltron would comply with time-of-year tree clearing restrictions, which limit tree clearing to the period between October 1 and March 31. Therefore, this species is unlikely to occur in the Project area. Based on correspondence with the USFWS Michigan Ecological Services Field Office in July 2023, there is not suitable habitat for piping plover, red knot, eastern massasauga, or eastern prairie fringed orchid in the project area.

Information was requested regarding special status species with potential to occur near the Project site from the Michigan Natural Features Inventory (MNFI) database through Michigan State University (MSU) on September 26, 2022. The MNFI database is an ongoing and continuously updated information database. It is the only comprehensive, single source of current information on Michigan's endangered, threatened, or otherwise significant plant and animal species, natural plant communities, and other natural features. Based on the MNFI information request report, dated October 7, 2022, the only species with the potential to occur in the vicinity of the Project site is the bald eagle. Per the report, the bald eagle was last identified in Bay County in 2021 (MSU, 2022). Additionally, as previously stated in **Section 3.6.2**, the bald eagle is unlikely to be present on-site, and the Project is unlikely to have a significant impact on the species.

DOE determined that implementation of the Project would have “no effect” on federally listed species or designated critical habitat. A "no effect" determination is appropriate because the entire project (with the exception of the duct bank work) is within an already developed area (an area that is already paved or supports structures and the only vegetation is limited to frequently mowed grass or conventional landscaping); and, the duct bank work only involves removing one tree, which will comply with time-of-year tree clearing restrictions, limited to the period between October 1 and March 31.

DOE discussed the “no effect determination” on federally listed species or designated critical habitat with USFWS Michigan Ecological Services Field Office in July 2023 and again in October 2023 to discuss the time-of-year tree clearing restrictions. USFWS agreed with this approach for the project.

Since the Project primarily includes interior building renovations, very limited land disturbance, and a lack of suitable habitat for potential T&E species, impacts to T&E species would not be significant.

3.6 Socioeconomics and Environmental Justice

3.6.1 Socioeconomics

The Project is located in Bay City, Bay County, Michigan. The Project lies within a zoned industrial area with industrial development to the south; agricultural fields and scattered residences to the north, east, and south; and a zoned commercial area to the east. The nearest school and hospital are located approximately 2.9 and 5.3 miles east of the Project site, respectively.

Data was extracted from labor market research software *JobsEQ* to determine the annual impact of the SK Siltron Bay City Facility on the Michigan economy (JobsEQ, 2021). When the Bay City Facility is operational, the estimated annual economic impact of SK Siltron, as of the second quarter of 2021, would be $69 million in business activity, including an annual labor income impact of $20 million spread over an estimated 300 jobs at the Auburn and Bay City Facilities. Part of that economic activity and employment would occur at the SK Siltron facility, and part is due to the multiplier impact supporting activity at other Michigan businesses. The 150 permanent manufacturing employees at the Bay City Facility would largely be recruited from various communities near the Project site, either from the Bay City area, or neighboring rural areas.

Because of the economic growth and employment opportunities during renovations and improvement activities, as well as the 150 permanent jobs added to the labor market during operation, no significant adverse socioeconomic impacts from the Project are expected..

3.6.2 Environmental Justice

DOE's review of Environmental Justice (EJ) issues focuses on Executive Order 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 USEPA's EJ screening tool, and on any site-specific population centers (e.g., schools, day-care centers) near the Project site.

Executive Order 12898 directs federal agencies to address environmental and human health conditions in minority and low-income communities. The evaluation of EJ is dependent on determining if high and adverse impacts from the Project would disproportionately affect minority or low-income populations in the affected community.

In accordance with USEPA's EJ 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 ethnic and racial composition of Bay County and Michigan is presented in **Table 3**. The minority population of Bay County is less than 10 percent, and the minority population of the state is less than 25 percent. At the Census block group level where the Project is located, the minority population is approximately 8 percent (see **Table 3**).

The percentage of persons in poverty is 1 percent higher in Bay County (16 percent) than in the rest of the state (15 percent), and significantly lower in the Block Group (<0.1%; see **Table 3**). In the USEPA's EJ screening tool (USEPA, 2023), the low-income population is 17 percent, which is lower than the state average of 31 percent (30th percentile) and 14 points lower than the U.S. average of 31 percent (31st percentile). **Table 4** shows EJ indexes for the Project site's Census Block Group.

Table 3: Population, Ethnicity, and Poverty

	Block Group	County	State
Total population	1,638	104,786	9,957,488
Race/Ethnicity			
White	100%	94.72%	78.52%
Black or African American	0%	1.70%	13.81%
American Indian and Alaska Native	0%	0.39%	0.53%
Asian	0%	0.60%	3.06%
Native Hawaiian and other Pacific Islander	0%	0%	<0.1%
Hispanic or Latino	7.51%	5.25%	5%
Poverty	<0.1%	16%	15%

Note: *All population and ethnicity data were gathered from the U.S. Census Bureau web page. Accessed November 8, 2023.*

Table 4: USEPA's EJ Screen Report

	Value	State Average	Percentile in State	U.S. Average	Percentile in U.S.
NATA* cancer risk (lifetime risk per million)	20	19	14	25	5
NATA* respiratory hazard quotient**	0.2	0.2	11	0.31	4
People of color population	5%	26%	21	39%	13
Low-income population	17%	31%	30	31%	31

Notes: *Selected Variables – Block group 260172855002, Michigan, USEPA Region 5. Approximate Population: 977. Accessed November 6, 2023.*
** More information on the NATA can be found at: https://www.epa.gov/national-air-toxics-assessment*

*** The NATA respiratory hazard quotient is the ratio of ambient air concentration to the health-based reference concentration for air toxics with respiratory effects. No adverse health effects are expected from exposure if the hazard quotient is less than one.*

Because of the low percentage of minority and low-income population in Bay County, and the economic benefits the Project is expected to bring to County residents, impacts on environmental justice communities from construction and operation of the Project would not be expected to be significant.

3.7 Traffic and Transportation

SK Siltron's Bay City Facility is located on Straits Drive, which intersects Mackinaw Road south of US-10. US-10 borders the Project site to the north and provides access to the site from Bay City and Auburn via the Mackinaw Road interchange. All roadways within the vicinity of the Project site are paved two-lane roadways suitable for construction traffic; no modification to local roads would be necessary for Project construction.

The Bay City Facility is in an existing industrial park where businesses routinely ship and receive products. F.P. Horak, which occupied the Bay City property prior to SK Siltron, was a print manufacturing company that sent and received a large volume of deliveries. The current volume of shipments and pickups at SK Siltron's Bay City Facility is consistent with the volume of shipments and pickups that previously occurred at the site. Each day, there are approximately 8 to 10 deliveries to the Facility and 1 shipment out of the Facility. A box truck carries deliveries between the Bay City and Auburn Facilities once each day, and a US Ecology slurry waste pick up and Veolia waste removal occur once and week and once a month, respectively.

Approximately 130 employees are currently working out of the Bay City Facility with new employees being phased in overtime. After site improvements are complete, operations will require approximately 150 total employees at the Bay City Facility. Construction of the new asphalt parking lot will accommodate the number of staff working at the facility. The Michigan Department of Transportation (MDOT) is also undertaking a separate project at the Mackinaw Road interchange which will reduce congestion and

manage traffic flow between Mackinaw Road and US-10 for the industrial park as a whole. The project is discussed further in **Section 3.12**.

Because of the suitability of existing roadways for traffic construction and the planned additional parking lot and US-10 improvements, impacts on traffic and transportation from construction and operation of the Project would not be significant.

3.8 Health and Safety

SK Siltron's safe operating practices for the existing facility in Auburn, Michigan would be adapted for the Bay City facility. Applicable federal, state, and local regulations, as well as standards for construction and operation of the facility would be implemented to ensure the safety of workers and the public. During renovations, Project contractors would be required to develop and implement site-specific occupational health and safety plans that would meet applicable regulations, standards, and requirements and Project permits and industry BMPs. During operations, the Bay City facility would maintain compliance with federal Occupational Safety and Health Administration regulations, USEPA Risk Management Plan rules, and the state rules under the Michigan Occupational Safety and Health Act.

SK Siltron would develop a SPCC Plan, which covers petroleum products management, routes of possible spills, spill prevention, and spill handling measures, for the Bay City facility. During the operation of the Project, chemicals and materials would be delivered to the facility by truck. Hazardous chemicals would only be used in small, diluted quantities at the facility. **Table 5** outlines the expected annual chemical and materials usage for the project. **Section 3.9** includes information on waste management.

Table 5: Project Annual Chemical/Materials Usage

Chemical/Material	Usage
Cleaning Acid A (pounds)	384
Polish Slurry A (pounds)	881,496
Polish Slurry B (pounds)	214,800
Polish Slurry C (pounds)	202,472
Solvent for wafer cleaning (gallons)	2,176
Raw material powder A (pounds)	61,980
Cleaning Acid B (pounds)	2,656
Fabrication oil A (pounds)	12,320
Wafer testing chemical (pounds)	2,144
Wafer cleaning chemical A (pounds)	9,600
Wafer cleaning chemical B (pounds)	6,944
Fabrication Oil B (gallons)	11,488
Sulfuric Acid (water neutralization)	10,344
Cleaning Acid C	3,520
Cleaning Acid D	1,568
Transformer Oil	33,600
Raw material powder B (pounds)	9,980
Cleaning Acid E	7,968

Chemical/Material	Usage
Solvent	5,760
Raw material powder C	13,640

The Project would also develop and maintain emergency response and site security plans to address injuries, fires, spills, hazardous material leaks, and operational safety. The plans would be used by personnel to minimize both human health and safety concerns, and environmental impacts.

Emergency services for the Project would generally be provided from Bay City, Michigan, which is located approximately 4 miles east of the Project site. First response would come from Monitor Township Fire Department, which is located 3.4 miles from the Project site. The fire department has the capabilities to triage injuries until emergency personally from Bay City arrive to provide transportation to the most appropriate medical services location.

Because of the measures to address health and safety, including BMPs; compliance with federal, state, and local regulations and standards; and plans for preventing chemical spills, the impact on the health and safety of workers and the public from the Project would not be significant.

3.9 Waste Management

The Project is not expected to generate notable amounts of waste during renovation and improvement activities. However, the Project would involve the management of multiple waste streams during operation. SK Siltron has estimated the annual waste volumes from the Project, as shown in **Table 6**.

Table 6: Project Waste Management

Waste Type	Total Annual Quantity (pounds)	Disposal Method
Non-hazardous waste	86,596	Incinerated/Landfilled Offsite
Hazardous waste (cathode and anode slurries, acetone, etc.)	64,472	Disposed of at a certified hazardous waste disposal facility
Breached and scrapped batteries	50	Recycled Offsite
Metal	50,244	Recycled Offsite
Other recyclable materials	48,768	Recycled Offsite

Republic Services handles non-hazardous waste/trash pickup from the Bay City facility every week, while non-hazardous slurry waste is handled weekly by U.S. Ecology. Hazardous waste would be disposed of monthly at various Veolia ES Technical Solutions, LLC facilities in Wisconsin, Texas, and Illinois. SK Siltron maintains a Waste Minimization Plan that outlines intentions to implement waste reduction and pollution prevention measures, including waste audits, waste assessments, and employee training (SK Siltron, n.d.). SK Siltron, as required by the Resource Conservation and Recovery Act (RCRA), completed appropriate registration to obtain a USEPA identification number. Based on the regulatory status determination, an Integrated Contingency Plan has been developed that covers the various hazardous streams, including storage, waste labeling, and inspections (AECOM, 2022).

Because planned waste management practices for the Project are aligned with those of the existing SK Siltron facility in Auburn, including the handling of process wastewater and off-site recycling and disposal, the impacts from waste management activities would not be significant.

3.10 Soils and Prime Farmlands

The entire Project site is currently owned by SK Siltron and is zoned for industrial uses. SK Siltron purchased the property in 2021 from F.P. Horak, which had developed and occupied the site since 1999 for printing and publishing operations. The site contained an approximately 145,000 SF industrial building and asphalt parking lot/drives that occupied the majority of the premises in 2021. Due to prior industrial activities on this property, infrastructure to support the Project within and surrounding the facility and new building addition already exists, including natural gas, water, sewer, and power connections, therefore minimal ground disturbance is required to implement the Proposed Action.

Prime Farmland, as defined by the U.S. Department of Agriculture (USDA), is land that has the best combination of characteristics for producing food, feed, forage, fiber, and oilseed crops. Portions of the Project site are classified as Prime Farmland even though the entire site (approximately 20 acres) is situated in an industrial park and zoned for industrial use (see **Table 7**). According to the Natural Resources Conservation Service (NRCS), the exterior improvements for the SK Siltron project would convert roughly 5.9 acres of land from being available for farming. Of this acreage, 5.6 acres are considered Prime and Unique Farmland, as defined by NRCS Land Evaluation submitted to DOE from NRCS on October 13, 2023. Bay County has more than 227,400 acres of farmland. Therefore, the Project represents a negligible reduction (< 0.003 percent) in total farmland for the county.

Table 7: Soil Associations

Soil Unit Symbol	Current Use	Acres	Percent of Total Acres	Farmland Classification
23	Tappan loam, 0 to 1 percent slopes	15.8	76.6%	Prime farmland if drained
17A	Selfridge loamy sand, 0 to 3 percent slopes	2.9	14.2%	All areas are prime farmland
25A	Pipestone fine sand, loamy substratum, 0 to 3 percent slopes	0.5	2.5%	Farmland of local importance
43A	Londo loam, 0 to 3 percent slopes	1.4	6.7%	Prime farmland if drained
TOTAL		**20.6**	**100%**	

The Farmland Protection Policy Act (FPPA) regulations state that project sites receiving a total score of 160 or greater need further consideration for protection (CFR Title 7, Chapter VI, Part 658.4[c][2]). In determining a project site's score, the FPPA requires the use of a site's relative value (National Crop and Commodity Production Index [NCCPI] rating) [Section 658.5[a]] and the site assessment criteria, which are set forth in Section 658.5 (b) and (c). In response to the Michigan NRCS, DOE submitted the Farmland Conversion Impact Rating form (USDA Form AD-1006) on October 13, 2023 (**Appendix B**.)

A combined score of up to 260 points, made from up to 100 points for relative value (NCCPI rating) and up to 160 points for the site assessment (Title 7, Chapter VI, Part 658.1–7 [Site Assessment Criteria]), is used to assess the suitability of each proposed site or design alternative for protection. The site assessment for the SK Siltron site is 39 points, and when combined with the NCCPI rating of 96, the site has a score of 135, which is below the threshold for further protection considerations.

During construction, soils on the Project site's 20 acres would be affected over the long term due to the Project's permanent facilities (e.g., plant, roads, parking, infrastructure connections, and other support facilities). Short-term impacts would include soil loss through erosion, compaction, and loss of structure in soils that are disturbed or driven on during site improvements. After site improvement completion, disturbed or compacted areas not needed for operation would be regraded, loosened, and revegetated.

Impacts on soils during the operational phase of the Project would be associated largely with the limited soil erosion induced by vehicle traffic on small portions of unpaved surfaces; soil erosion from this source is expected to be negligible. SK Siltron would monitor and repair any areas of erosion or soil instability.

Given the limited amount of Prime Farmland affected by the Project, the FPPA assessment scoring for the Project land, and the extensive additional farmland resources within Bay County, the overall impacts on soils and Prime Farmland by the Project would not 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)). Projects were identified through a review of active project lists and planning documents from the Monitor Township, Bay County, the Bay Area Chamber of Commerce and MDOT, with additional information provided by the Applicant. The review identified the following current and reasonably foreseeable future projects.

- Michigan Sugar Company Manufacturing Facility Expansion: Expansion of an existing manufacturing facility of sugar by 22,000 square feet. The expansion is expected to be completed in 2023. The existing facility is roughly 4.5 miles southeast of the Project site.
- Rev LNG, LLC: Proposal to renovate an existing natural gas production and processing facility located roughly 3 miles northeast of the Project site.
- Consumers Energy: Consumers Energy constructed a new a 30 megawatt facility (electrical substation) near the Bay City Facility. Consumers Energy entered into a lease agreement with SK Siltron for approximately 25 acres of land, south of the Bay City Facility, outside the proposed perimeter fence, but within the SK Siltron property boundary (see **Figure 4**), to construct the substation. Construction of the substation began in April 2023 and was completed October 2023. In addition, outside the SK Siltron property boundary, Consumers Energy constructed new power lines and poles (HVD line) from an existing substation on Salzburg Road. Construction activities included land and tree clearing of approximately 2.80 acres and permanent conversion of 1.59 acres of wetland. Consumers Energy was responsible for acquiring all required permits to perform the construction activities.
- US-10 Rebuilding: In April 2023, MDOT began rebuilding westbound US-10 from Bay City to 7 Mile Road in Bay County. The project includes significant bridge improvements at Mackinaw Road; In 2024 the Mackinaw Road Bridge over US-10 will be widened and roundabouts will be added at the US-10/Mackinaw Road interchange. The improvements aim to reduce congestion and manage the flow of traffic at the interchange, which is the closest interchange to the SK Siltron facility. Traffic detours will be required during the project.

DOE reviewed the identified projects in the region to determine the resources that may be subject to a cumulative impact. The reviewed focused on the 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.

- Wetlands
- Air Quality
- GHG Emissions and Climate Change
- Waste Management

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 sites, and the lack of construction or operational overlap that would result in an incremental impact on a particular resource.

3.11.1 Wetlands

The Project includes the filling of 0.2 acres of wetland for the construction of a municipal fire lane and the partial fill of 0.04 acres of wetland for construction of a duct bank and underground power line connection. Consumers Energy acquired applicable permits, including a Part 303 Wetlands Protection permit from EGLE for impacts to 1.59 acres of wetland for construction of the substation and HVD line and implemented appropriate wetland mitigation BMPs. The 0.04-acre wetland impact from the Project duct bank construction would be a minor increase to the cumulative acreage of filled wetlands. With the implementation of wetland permit conditions for the 0.04-acre wetland impact associated with the Project duct bank construction, coupled with BMPs and the SWPPP, the Project and reasonably foreseeable actions are not anticipated to result in significant cumulative impacts to wetlands.

3.11.2 Air Quality

The Project is expected to generate minor temporary emissions of criteria pollutants during construction and minor ongoing emissions of criteria pollutants during operations (e.g., facility process emissions and employee commute emissions). These minor temporary and ongoing emissions increases are not expected to be significant. Each of the reasonably foreseeable actions would also produce temporary construction related emissions and several are likely to produce ongoing operational emissions. However, the scale and temporary nature of construction related emissions are unlikely to cause significant regional cumulative impacts to air quality. Ongoing operational emissions would be required to comply with all applicable air quality permitting designed to prevent exceedances of the NAAQS. The region is currently in attainment with all NAAQS and no exceedances of standards have been recorded for measured pollutants at either of the ambient air quality monitors within 35 miles of the Project. Therefore, the Project, when considered together with the identified projects in the region, would not cause significant cumulative impacts to air quality.

3.11.3 Greenhouse Gas Emissions and Climate Change

The current science and study of the earth's climate now confirm with 95 percent certainty that human activity is the leading cause of observed global warming since the mid-20th century (IPCC, 2023). Since the start of the industrial era circa 1750, human activities have increased the concentration of GHGs, primarily carbon dioxide (CO2), methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride in the atmosphere. The rising global temperatures have been accompanied by changes in climate (e.g., changes in rainfall, resulting in more floods, droughts, or intense rain; rising sea levels; Arctic Sea ice decline, as well as more frequent and severe heat waves (IPCC, 2023). It is now well established that rising atmospheric GHG emission concentrations are significantly affecting the earth's climate.

In general, rising GHG concentrations result in increases in atmospheric temperature, changes in precipitation, increases in the frequency and intensity of some extreme weather events, and rising sea levels. Most of the state of Michigan has warmed two to three degrees Fahrenheit in the last century. Heavy rainstorms are becoming more frequent and ice on the Great Lakes is forming later or melting sooner in the year. More frequent extremely hot days are anticipated in the coming years (USEPA, 2016). An increase in extremely hot days would require appropriate sizing and capacity for temperature control equipment at the facility.

The Project is expected to generate minor temporary emissions of GHGs during construction and ongoing emissions of GHGs during operations (e.g., facility process emissions and employee commute emissions). Up to 423 tons (384 metric tons) per year of CO_2 would be emitted from the Bay City facility processes once the Project is fully operational. Facility GHG emissions include emissions from natural gas fuel combustion, refrigerant leakage, and the company vehicle fleet. Emissions are summarized in **Table 8**.

Table 8: Facility Scope 1 GHG Emissions

Scope I CO_2 Emissions [1]	Metric Tons CO_2		Notes
Direct emissions from company facilities	373.4		
Heat (self-generated)		*217.9*	Natural Gas Combustion
Refrigerant leakage		*155.5*	Refrigerants R-22; R-410a; R-514a [2]
Direct emissions from company vehicles	10.5		Gasoline/Diesel Vehicles
Vehicle fleet		*10.5*	
TOTAL	383.8		

[1] Estimated methane emissions from natural gas combustion are approx. 1 metric ton per year CH_4, corresponding to approx. 30 metric tons/year CO_2 equivalent.

[2] CO_2 equivalent emissions from refrigerant leakage are based on the global warming potential (GWP) of each refrigerant. R-22 GWP – 1,810; R-410a GWP – 2,088; R-514a GWP – < 2

These facility GHG emissions are expected to be offset by replacing internal combustion vehicles with the EVs that use the wafers produced at the Project facility and two other SK Siltron facilities. Each of the reasonably foreseeable actions considered in the cumulative effects analysis would also produce temporary construction related GHG emissions and several are likely to produce ongoing operational emissions. However, the change in climate conditions caused by GHGs is a global effect and the Project, when considered together with the identified projects in the region, are unlikely to cause significant cumulative impacts to GHG emissions and climate change.

The magnitude of potential annual reductions in gallons of petroleum will depend on the number of EVs using the manufactured wafers. In total, SK Siltron's facilities would produce up to 660,000 wafers per year, which could support up to 700,000 EVs per year once fully operational. This number of EVs yields an annual fuel consumption savings of approximately 250 million gallons of petroleum per year as compared to conventional internal combustion engine vehicles.

The annual avoided CO_2 is calculated from the Project's annual fuel consumption savings (250 million gallons) multiplied by the U.S. Energy Information Administration (USEIA) CO_2 emission coefficient of 19.54 pounds of CO_2/gallon for gasoline (USEIA, 2022). Therefore, the use of wafers produced across SK Siltron's facilities and used in EVs would support a reduction of approximately 2.443 million tons (2.216 million metric 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 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). Since the Project would support GHG emissions reductions, impacts to GHG emissions and climate change would be beneficial in the long-term.

3.11.4 Waste Management

The Project is not expected to generate significant waste during renovation and improvement activities. However, the Project would involve the management of multiple waste streams during operation and

result in a net increase in non-hazardous waste and hazardous waste and wastewater discharge from the Project site. Therefore, when taken in consideration with reasonably foreseeable actions, no significant cumulative impacts to waste management would occur.

4. DRAFT FINDING

Based on this EA, DOE has determined that providing a federal loan to SK Siltron CSS, LLC to improve the existing facility would not have a significant effect on the human environment. The preparation of an Environmental Impact Statement is therefore not required, and DOE is issuing this Finding of No Significant Impact.

_____ _____

Todd Stribley Date

LPO NEPA Compliance Officer

Director, Environmental Compliance

DOE Loan Programs Office

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

5. LIST OF PREPARERS

Name	Project Role	Company	Qualifications	Years' Experience
Anna Eskridge, Ph.D.	Loan Programs Office	U.S. DOE	PhD, Policy Studies; MA, Geography; BS, Environmental & Natural Resources	16
Robert Lanza, P.E.	Technical Reviewer	ICF	M.Eng. Chemical Engineering; BS Chemical Engineering	40
Dean Dittenber	EH&S Manager	SK Siltron CSS	BS, Industrial Management; COSS; AS, Nuclear Medicine Technology	11
Jennifer E. Warf	Project Manager	AECOM	MS, Environmental Studies; BA, Zoology	20
Carrie Kyzar	Deputy Project Manager	AECOM	MS, Environmental Management; BS Environmental Science	21
Allison Carr	NEPA Planner	AECOM	Master of City Planning (MCP); BA, Geography	3
Tara Boyd	NEPA Planner	AECOM	BA, Environmental Science and Global Sustainability	2
Tammy Seiter, MA, RPA	Cultural Resources Specialist	AECOM	MA, Anthropology (emphasis in Archaeology); BA, Anthropology	27
Sam Hartsfield	Air Quality Subject Matter Expert (SME)	AECOM	MS, Environmental Science and Management; BS Biology	15

6. REFERENCES

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APPENDIX A ENVIRONMENTAL PERMITS AND APPROVAL

Action	Applicable Permit	Permitting Agency	Status	Issue/Approval Date
Industrial Stormwater	National Pollutant Discharge Elimination System Permit Storm Water Permit (Authorization to Discharge)	EGLE	Completed	8/30/2021
HAZWOPER Emergency Plan & EPCRA	HAZWOPER Emergency Plan & EPCRA	US EPA	Competed	10/19/2021
Hazardous Waste Generation and Disposal	RCRA, US EPA Identification (ID)Number	EGLE and US EPA	Completed	10/20/2021
Wetland Fill for Municipal Fire lane	MI EGLE, NREPA Part 303 Wetlands Protection permit	EGLE	Completed	11/24/2021
Final grading, fencing, and fire lane activities	SESC Permit, 1317 Straits Drive	Bay County Drain Commissioner	Competed	Applicable through 10/18/2025
Industrial Wastewater Discharge	Industrial Wastewater Discharge Permit	Bay County Department of Water and Sewer	Completed	9/15/2022 – 9/15/2025
Stormwater Pollution Prevention Plan (SWPPP)	SWPP	EGLE	Completed	12/19/2022
Spill Prevention, Control, and Countermeasure Plan (SPCC)	SPCC	EGLE	Completed	5/3/2022
Wetland Fill for duct bank and underground powerline	Joint Permit Application, EGLE, NREPA part 303 minor Wetlands Protection Permit	EGLE	Completed	12/6/23
Wetlands Delineation	Not Applicable	Not Applicable	Completed	September 2021 and August 2022
Air Permit Minor Source	Not Applicable (Exempt)	EGLE	Not Applicable	Not Applicable
Solid Waste Permit	Not Applicable (3rd Party Collection and Disposal Off-Site)	Not Applicable	Not Applicable	Not Applicable
Phase I Environmental Site Assessment (ESA)	Not Applicable	Not Applicable	Completed	7/6/2021
Phase I ESA	Not Applicable	Not Applicable	Completed	5/2/2022

Note: *Additional activities associated with the Proposed Action are permitted under existing non-environmental permits such as, electrical, building, plumbing and mechanical permits.*

APPENDIX B AGENCY AND TRIBAL CORRESPONDENCE

Agency Coordination

Organization	Contact Date	Summary of Contact
MI EGLE Air Quality Division, Bay City District Office	4/20/23	Phone call regarding respective project and air permitting
Michigan State Historic Preservation Office	2/1/23 2/23/23 10/4/23 10/13/23 11/2/23	Section 106 Consultation submission Section 106 Consultation response Notice of Intent to Prepare an Environmental Assessment Section 106 Consultation updated submission Section 106 Consultation response
State Soil Scientist, U.S. Department of Agriculture Natural Resources Conservation Service (USDA NRCS)	10/10/23 10/13/23 10/13/23 10/30/23	NRCS Prime Farmland inquiry by DOE NRCS Response Returning NRCS finalized form Email on NRSC finalized form
U.S. Fish & Wildlife Service Michigan Ecological Services Field Office	7/14/23 7/20/23 10/4/23 10/10/23	Email on Section 7 “No Effect” Determination Phone call on Section 7 “No Effect” Determination and Project Scope Notice of Intent to Prepare an Environmental Assessment Phone call on Section 7 “No Effect” Determination and updated Project Scope
East Michigan Council of Governments	10/4/23	Notice of Intent to Prepare an Environmental Assessment
Water Resources Division, Bay City District Office, Department of Environment, Great Lakes, and Energy (EGLE)	10/4/23	Notice of Intent to Prepare an Environmental Assessment
Southeast Michigan Council of Governments	10/4/23	Notice of Intent to Prepare an Environmental Assessment
U.S. Environmental Protection Agency, Region 5	10/4/23	Notice of Intent to Prepare an Environmental Assessment
U.S. Department of Agriculture, Natural Resources Conservation Service	10/4/23	Notice of Intent to Prepare an Environmental Assessment
Michigan Department of Environment, Great Lakes, and Energy - Bay City District Office	10/4/23	Notice of Intent to Prepare an Environmental Assessment
Michigan Department of Natural Resources	10/4/23	Notice of Intent to Prepare an Environmental Assessment
Bay City Planning Commission	10/4/23	Notice of Intent to Prepare an Environmental Assessment
Bay County Environmental Affairs and Community Development	10/4/23	Notice of Intent to Prepare an Environmental Assessment
Saginaw Bay Watershed Initiative Network	10/4/23	Notice of Intent to Prepare an Environmental Assessment

Bay City Service Center, Natural Resources Conservation Service	10/4/23	Notice of Intent to Prepare an Environmental Assessment

Department of Energy
Washington, DC 20585

January 31, 2023

Mr. Scott Slagor
Section 106/Cultural Resource Protection Manager
State Historic Preservation Office
300 North Washington Square
Lansing, Michigan 48913

SUBJECT: U.S. Department of Energy, SK Siltron Bay City Facility Improvements Project, Monitor Township, Michigan; Section 106 Consultation

Dear Mr. Slagor:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007 (EISA), 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 a Federal loan to SK Siltron CSS, LLC (SK Siltron) to support improvements to their facility in Bay City, Michigan (the Project). The purpose of this letter is to initiate consultation with the Michigan State Historic Preservation Office (SHPO) under Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, present the DOE undertaking and the associated area of potential effect (APE), submit the *Cultural Resources Desktop Review for the SK Siltron Bay City Facility Improvements Project* for your review, and present DOE's finding pursuant to its Section 106 responsibilities.

DOE Undertaking and APE

SK Siltron is a manufacturer of silicon carbide semiconductor wafers. SK Siltron's wafers are used by other companies downstream to make microchips for power electronics – the parts of electric vehicles (EV) that help transfer electricity from the battery to the motor. The company's objective is to improve its Bay City facility (Project Site) to facilitate the expansion of its manufacturing capabilities and meet the growing demand for components/devices using silicon carbide chips as the media in automotive applications, specifically for EVs. DOE has determined that the improvements to the facility are consistent with the goals of the EISA, as SK Siltron's operations help to reduce air emissions that contribute to global warming. DOE's Loan Programs Office (LPO) is using the National Environmental Policy Act (NEPA) process to assist in determining whether to issue a loan to SK Siltron (undertaking) to support the improvements.

SK Siltron's manufacturing facility is located at 1311 Straits Drive, which is approximately 5 miles west of the downtown area of Bay City and adjacent to U.S. Highway 10 (see **Figure 1**). The scope of the Proposed Action encompasses the tooling of the existing facility and recently constructed building addition, interior building renovations, exterior finishing activities (concrete pads, perimeter fence, final grading, landscaping, etc.) and operations (see **Figure 2**). No land or tree clearing is proposed to implement the above listed facility improvements. Due to prior industrial activities on this property, the infrastructure to support the Project within and surrounding the facility already exists, including natural gas, water, sewer, and power connections. During this Project, construction activities include utilization of an existing gravel area within the existing property boundaries for temporary parking and a small area to be used for storage of topsoil. Once construction is complete, these temporary use areas would be restored and revegetated as appropriate. Representative photographs of current ground conditions are provided as **Attachment 1**.

Figure 1: Project Site Location Map

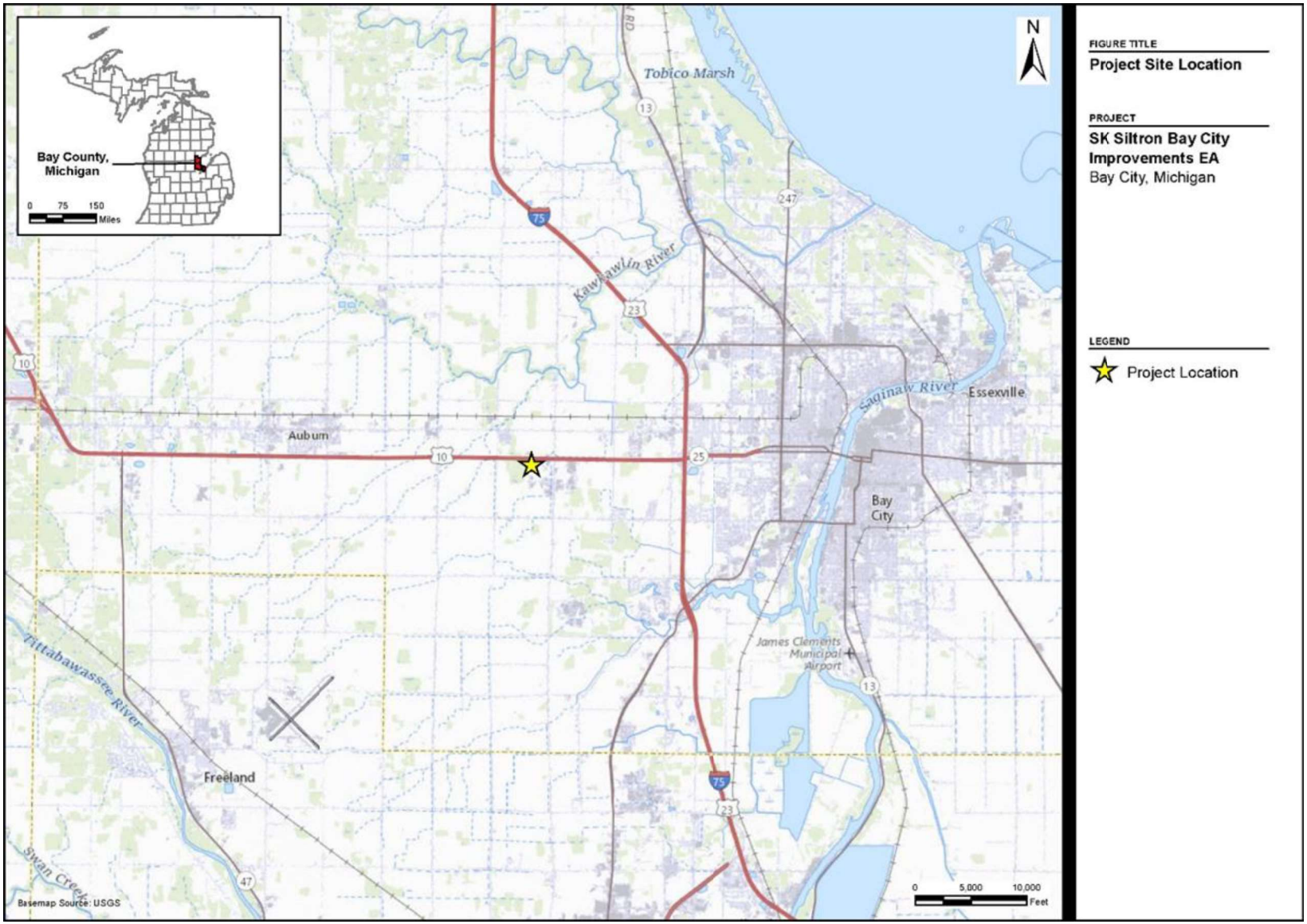
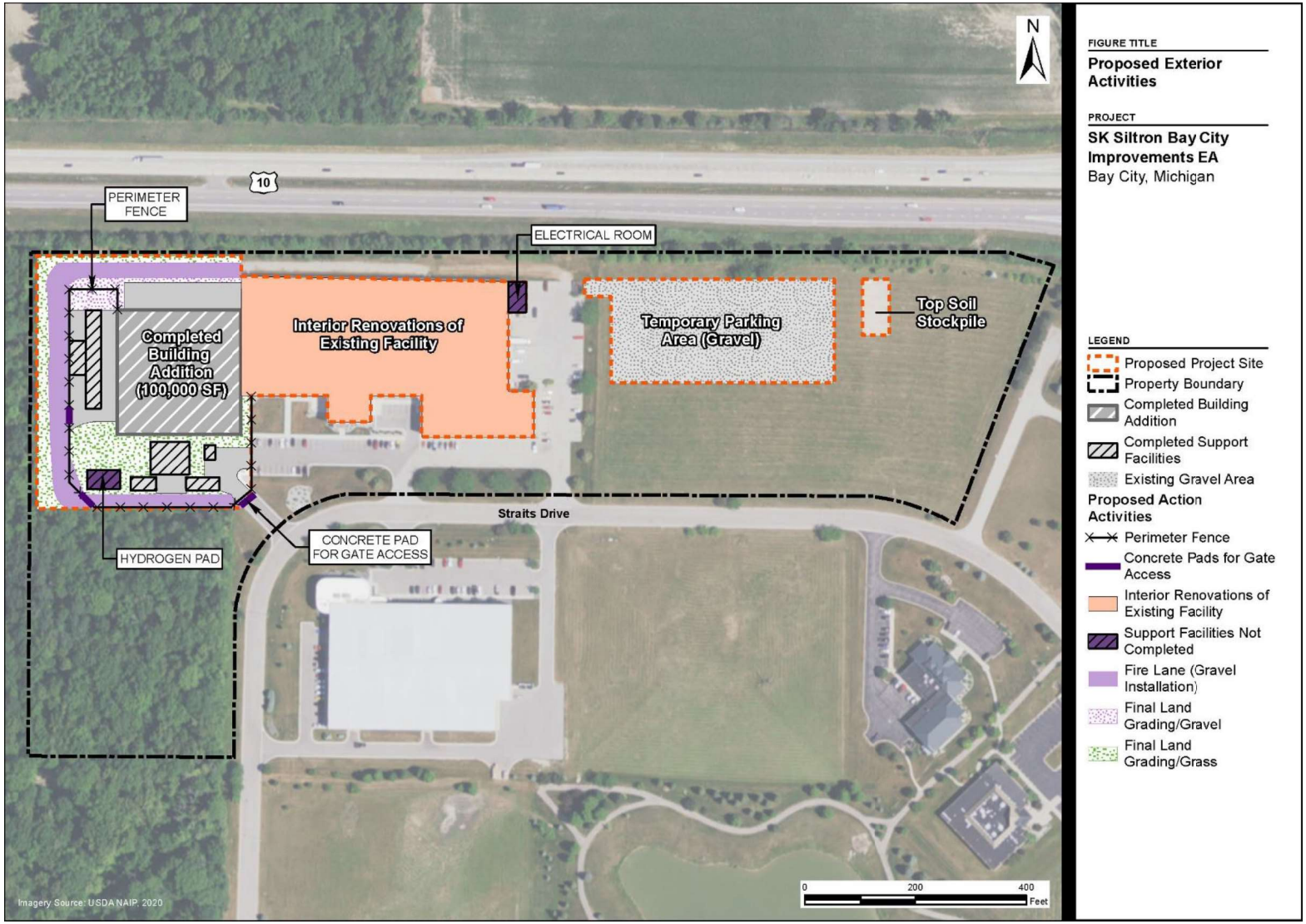


Figure 2: Proposed Exterior Finishing Activities and Interior Renovations



APE and DOE Finding

In accordance with Section 106 to identify historic properties and assess effects, DOE has reviewed the *Cultural Resources Desktop Review for the SK Siltron Bay City Facility Improvements Project* (see **Attachment 2**). This report provides a discussion of the proposed APE and results of identification and assessment of the potential of the undertaking to adversely affect historic properties. The report concluded that no inventoried historic architectural structures, historic areas, or archaeological sites are present within or near the project area, and the project location displays limited potential for the presence of any cultural resources within the proposed limits of disturbance. Further, given the extent of modern infrastructure present in the vicinity of the project and characteristics of the proposed action (involving modifications to existing facilities), the project does not appear to pose any potential for indirect (visual) impacts to historic resources.

Based on the information presented, DOE is requesting the SHPO's concurrence on the proposed APE and a proposed determination of "no historic properties affected" determination as described in 36 CFR § 800.4(d)(1). We look forward to SHPO's concurrence on the APE and on DOE's "no historic properties affected" determination. If you have any questions or would like to discuss this project further, please contact me in the DOE Loan Programs Office at 803-791-6113 or email at LPO_Environmental@hq.doe.gov.

Sincerely,

TODD STRIBLEY

Digitally signed by TODD STRIBLEY
Date: 2023.01.31 13:57:35 -07'00'

Todd Stribley
NEPA Document Manager
Loan Programs Office

Attachments

Attachment 1: Proposed Action Photo Log

Attachment 2: Cultural Resources Desktop Review for the SK Siltron Bay City Facility Improvements Project

GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STRATEGIC FUND
STATE HISTORIC PRESERVATION OFFICE

QUENTIN L. MESSER, JR.
PRESIDENT

February 23, 2023

TODD STRIBLEY
DEPARTMENT OF ENERGY
1000 INDEPENDENCE AVE, SW.
WASHINGTON D.C. 20585

RE: ER23-415 SK Siltron Bay City Facility Improvements Project, T14N, R04E, Sec. 28, Monitor Township, Bay County (DOE)

Dear Mr. Stribley:

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 the information provided for our review, it is the opinion of the State Historic Preservation Officer (SHPO) that **no historic properties are affected** within the area of potential effects of this undertaking.

This letter evidences DOE's compliance with 36 CFR § 800.4 "Identification of historic properties," and the fulfillment of 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, or 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.**

To aid future reviews, please note that we require the Township/Range/Section or Private Claim of the project location to be completed on the application. 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 Native American Tribes and/or Tribal Historic Preservation Officers (THPO) who may attribute 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 Scott Slagor, Cultural Resource Protection Manager, at (517) 285-5120 or by email at slagors2@michigan.gov. For questions regarding archaeological concerns, please contact Senior Archaeologist, Sarah Surface-Evans, surfaceevanss1@michigan.gov, (517) 282-7959. **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,

Sarah Surface-Evans
Senior Archaeologist

KMBY:SSE

Copy: Tammy Seiter, AECOM

Department of Energy
Washington, DC 20585

October 13, 2023

Scott Slagor
Section 106/Cultural Resource Protection Manager
State Historic Preservation Office
300 North Washington Square
Lansing, Michigan 48913

SUBJECT: U.S. Department of Energy, SK Siltron Bay City Facility Improvements Project, Monitor Township, Michigan; Section 106 Consultation (MI SHPO ER #23-415)

Dear Mr. Slagor:

Pursuant to its authority under Section 136 of the Energy Independence and Security Act of 2007 (EISA), 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 SK Siltron CSS, LLC (SK Siltron) to support improvements to their facility in Bay City, Michigan (the Project). DOE is preparing an Environmental Assessment to comply with the National Environmental Policy Act of 1969 (NEPA), Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500−1508), and DOE NEPA Implementing Procedures (10 CFR Part 1021). The purpose of this letter is to continue consultation with the Michigan State Historic Preservation Office (SHPO) under Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, for the Project, which was initiated through the submittal of Project documentation in January 31, 2023. Subsequent to Michigan SHPO concurrence with the findings presented in that prior documentation (assigned as ER #23-415), in correspondence dated February 23, 2023 (see **Attachment 1**), additional changes to the proposed activities have occurred, necessitating this supplemental consultation for the Project. This submittal therefore presents the updated DOE undertaking and presents DOE's finding, encompassing the previously-coordinated and additional Project elements, of no historic properties affected for this undertaking, pursuant to its Section 106 responsibilities.

DOE Undertaking

The scope of the Project, as initially presented in January 2023, encompassed the tooling of the existing facility and recently constructed building addition, interior building renovations, exterior finishing activities (concrete pads, perimeter fence, final grading, landscaping, etc.), and operation, all located within the 20-acre (8.8-hectare) property (see **Figures 1** and **2**). The Client has since made additions to the Proposed Action, including the expansion of the surface parking lot (see **Plate 1**), construction of new duct bank and underground powerline connection (**Plate 2**), sanitary sewer repairs and upgrades and other minor activities that involve ground disturbance. The Project will now involve the removal of one tree but no land clearing is proposed to implement the new facility improvements outlined above. No land or tree clearing, apart from the single tree referenced above, is proposed to implement the above listed facility improvements.

Figure 1: Project Site Location Map

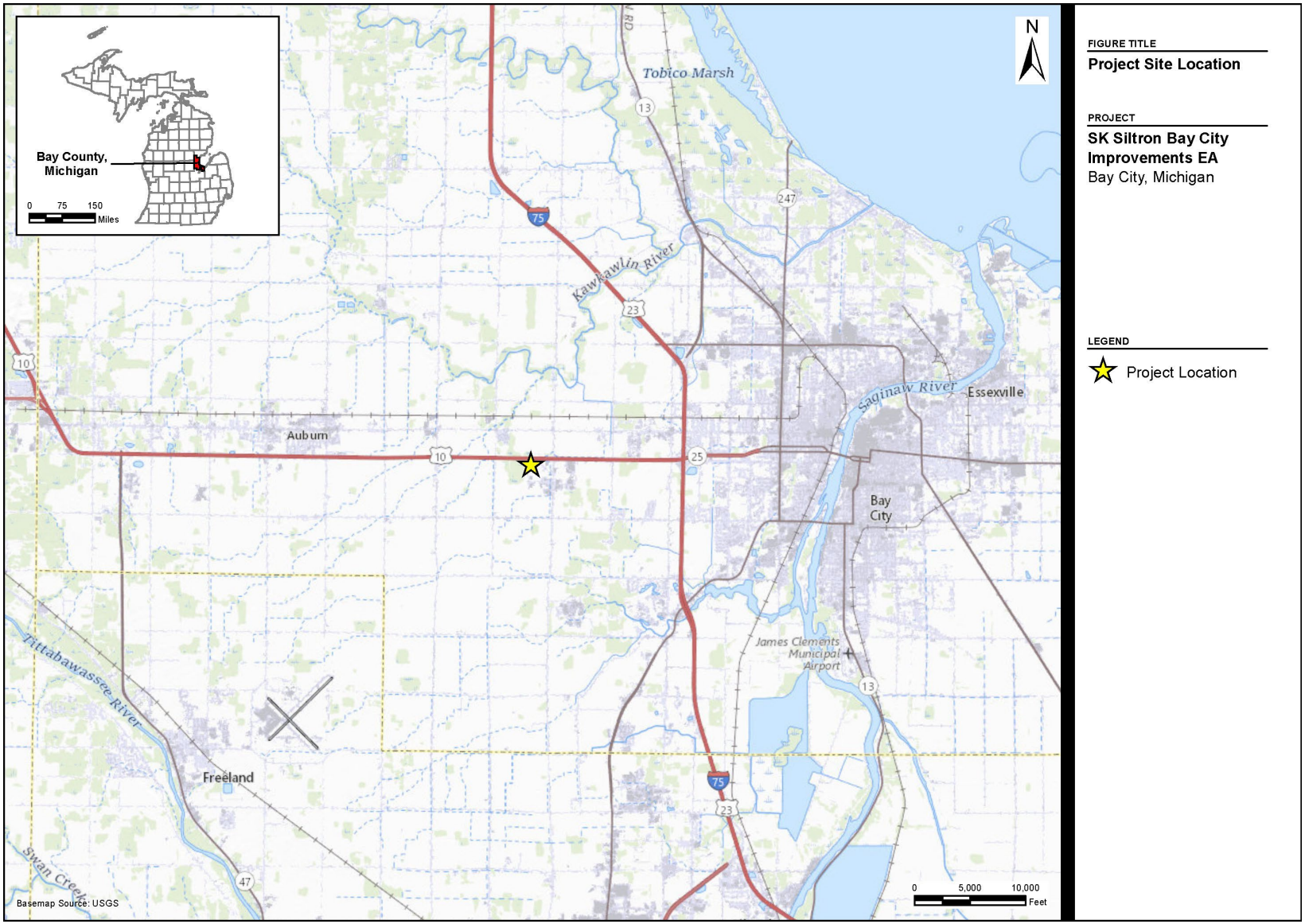


Figure 2: Proposed Exterior Finishing Activities and Interior Renovations

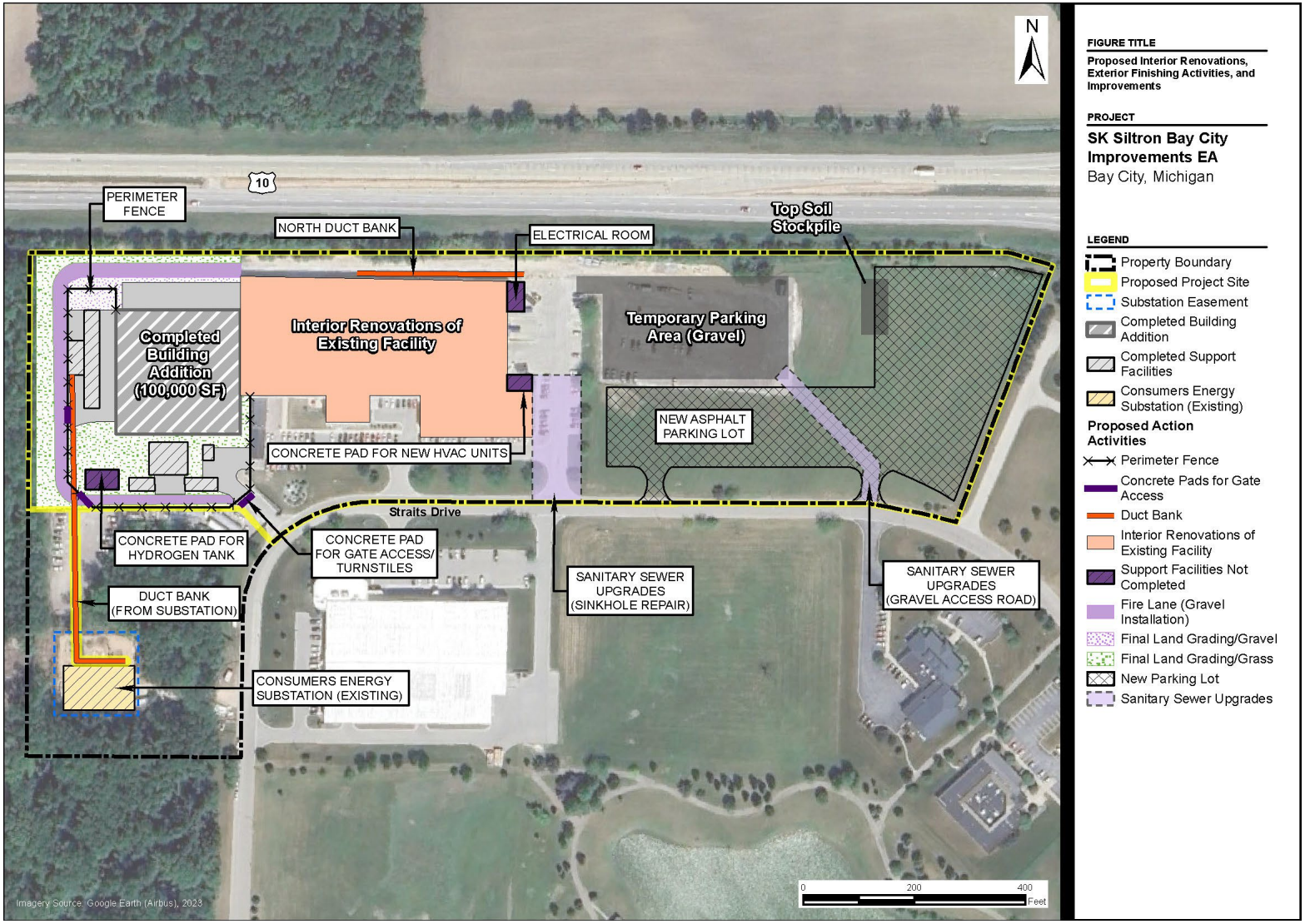


Plate 1. Location of Proposed Surface Parking Lot

Plate 2. Location of Proposed Duct Bank, Facing South

Area of Potential Effects

As originally defined in the January 2023 submittal package, the Area of Potential Effects (APE) for the Project encompasses the 20-acres (8.8-hectares) of previously disturbed land and an existing manufacturing facility. The "Property Boundary" depicted on **Figure 2**, above, is consistent with the limits of the Project APE detailed in the January 31,2023 submittal package. All of the newly-proposed Project additions and associated limits of ground disturbances will be located entirely within the previously-consulted APE; no new ground disturbing activities is proposed outside of the January 2023 APE. With regard to the visual

(indirect) element of the APE, the additional infrastructure now proposed will be similar in scale to the existing facilities, and generally congruent with the current built modern landscape within and surrounding the property. As referenced in the January 2023 submittal, the Project is situated within an area with surrounding modern development of commercial areas adjacent to an Interstate Highway 10. As the Project involves improvements to the existing facility and addition of a new surface parking lot, installation of a new duct bank and other minor activities, visual impacts to the viewshed of the surrounding modern commercial landscape are anticipated to be negligible, consistent with the January 2023 desktop review.

Archival Data Review

As the newly-identified activities described in this letter will be situated within the previously-consulted APE, the detailed discussion of the desktop archival review is not provided in full here. In summary, there are no inventoried cultural resources located within 1,000 feet (300 meters) of the Project. Examination of historic maps and aerials indicated that the Project location and surrounding topography suggests that this portion of Bay County has been composed of wooded lots and agricultural fields throughout the historic period and into the modern era, prior to the development of industrial and commercial infrastructure over the past 40 years.

DOE Finding of Effects

In accordance with Section 106 to identify historic properties and assess effects, DOE has reviewed the newly-added elements of the Project, which occur within the property boundaries of the existing SK Siltron Bay City facility, as well as the limits of the previously-consulted APE. The January 2023 report concluded that no inventoried historic architectural structures, historic areas, or archaeological sites are present within or near the project area, and the project location displays limited potential for the presence of any cultural resources within the proposed limits of disturbance. The Michigan SHPO concurred with this finding, in correspondence dated February 23, 2023. Based on review of the additional Project elements, DOE's assessment remains the same for this undertaking. Further, given the extent of modern infrastructure present in the vicinity of the project and characteristics of the proposed action (involving modifications to existing facilities), the project does not appear to pose any potential for indirect (visual) impacts to historic resources.

Based on the information presented, DOE is requesting the SHPO's concurrence on the new proposed activities within the previously-consulted APE and a proposed determination of "no historic properties affected" determination as described in 36 CFR § 800.4(d)(1). We look forward to SHPO's response on the APE and on DOE's "no historic properties affected" determination. If you have any questions or would like to discuss this project further, please contact me by email at LPO_Environmental@hq.doe.gov, or I can also be reached by telephone at 240-743-1304.

Sincerely,

ANNA ESKRIDGE Digitally signed by ANNA ESKRIDGE Date: 2023.10.13 15:45:28 -04'00'

Anna Eskridge, Ph.D.
NEPA Document Manager
Loan Programs Office

Attachments

Attachment 1: Prior Agency Correspondence

GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STRATEGIC FUND
STATE HISTORIC PRESERVATION OFFICE

QUENTIN L. MESSER, JR.
PRESIDENT

November 2, 2023

ANNA ESKRIDGE
DEPARTMENT OF ENERGY
1000 INDEPENDENCE AVE, SW.
WASHINGTON D.C. 20585

RE: ER23-415 Scope Change, SK Siltron Bay City Facility Improvements Project, T14N, R04E, Sec. 28, Monitor Township, Bay County (DOE)

Dear Ms. Eskridge:

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 the information provided for our review, it is the opinion of the State Historic Preservation Officer (SHPO) that **no historic properties are affected** within the area of potential effects of this undertaking.

This letter evidences DOE's compliance with 36 CFR § 800.4 "Identification of historic properties," and the fulfillment of 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, or 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.**

To aid future reviews, please note that we require the Township/Range/Section or Private Claim of the project location to be completed on the application. 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 Native American Tribes and/or Tribal Historic Preservation Officers (THPO) who may attribute 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 Scott Slagor, Cultural Resource Protection Manager, at (517) 285-5120 or by email at slagors2@michigan.gov. For questions regarding archaeological concerns, please contact Senior Archaeologist, Sarah Surface-Evans, surfaceevanss1@michigan.gov, (517) 282-7959. **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,

Sarah Surface-Evans
Senior Archaeologist

KMBY:SSE

Copy: Tammy Seiter, AECOM

From: Rosek, Martin - FPAC-NRCS, MI
To: Eskridge, Anna
Cc: Holowka, Paul - FPAC-NRCS, MI; Smith, Stacey - FPAC-NRCS, MI
Subject: [EXTERNAL] RE: DOE LPO - Project in Bay City, MI
Date: Monday, October 30, 2023 9:53:34 AM

Anna,

The total points in part VII of the AD-1006 is135 which is less than 160. No further action is required.

Thanks for sending me back the completed AD-1006.

Marty

Martin J. Rosek, Ph.D.
State Soil Scientist
USDA NRCS
3001 Coolidge Road
East Lansing, MI 48823

517-324-5241

From: Eskridge, Anna <anna.eskridge@hq.doe.gov>
Sent: Monday, October 30, 2023 9:44 AM
To: Rosek, Martin - FPAC-NRCS, MI <martin.rosek@usda.gov>
Cc: Holowka, Paul - FPAC-NRCS, MI <paul.holowka@usda.gov>; Smith, Stacey - FPAC-NRCS, MI <Stacey.Smith@usda.gov>
Subject: RE: DOE LPO - Project in Bay City, MI

Dr. Rosek,

Good morning! I just wanted to follow up and see if you had any comments/questions on the form we submitted.

Thanks,

Anna Eskridge, Ph.D.
Deputy, Environmental Compliance
Loan Programs Office (LPO)
U.S. Department of Energy
Office: 240-743-1304
Email: anna.eskridge@hq.doe.gov

From: Eskridge, Anna
Sent: Friday, October 13, 2023 2:15 PM
To: Rosek, Martin - FPAC-NRCS, MI <martin.rosek@usda.gov>
Cc: Holowka, Paul - FPAC-NRCS, MI <paul.holowka@usda.gov>; Smith, Stacey - FPAC-NRCS, MI <Stacey.Smith@usda.gov>
Subject: RE: DOE LPO - Project in Bay City, MI

Dr. Rosek,

Thanks for the information and the form. Please see the completed form attached and let me know if you have any questions.

Best,

Anna Eskridge, Ph.D.
Deputy, Environmental Compliance
Loan Programs Office (LPO)
U.S. Department of Energy
Office: 240-743-1304
Email: anna.eskridge@hq.doe.gov

From: Rosek, Martin - FPAC-NRCS, MI <martin.rosek@usda.gov>
Sent: Friday, October 13, 2023 10:55 AM
To: Eskridge, Anna <anna.eskridge@hq.doe.gov>
Cc: Holowka, Paul - FPAC-NRCS, MI <paul.holowka@usda.gov>; Smith, Stacey - FPAC-NRCS, MI <Stacey.Smith@usda.gov>
Subject: [EXTERNAL] FW: DOE LPO - Project in Bay City, MI

Anna,

The Natural Resources Conservation Service (NRCS) under Part 523 of the Farmland Protection Policy Act has reviewed the proposed Cassopolis SK Siltron Improvements, Bay County, MI. This review was conducted with respect to the effect(s) that the proposal may have on prime and/or unique farmland. Since there are prime and/or unique farmed lands in the proposed project extent the enclosed Farmland Conversion Impact Rating Form (AD-1006) needs to be completed to rate the land being converted. If the Total Site Assessment Points in part 7 is greater than or equal to 160, please propose an alternative site and fill out the AD-1006 again until the proposed site yields less than 160 points. If no alternative for the SK Siltron Improvements Project is practical, please state this in the **Reason for Selection** block at the bottom of the form. Please complete Parts VI and VII and send a copy back to me.

Thanks,

Marty

Martin J. Rosek, Ph.D.
State Soil Scientist
USDA NRCS
3001 Coolidge Road
East Lansing, MI 48823

517-324-5241

From: Smith, Stacey - FPAC-NRCS, MI <Stacey.Smith@usda.gov>
Sent: Thursday, October 12, 2023 10:49 AM
To: Rosek, Martin - FPAC-NRCS, MI <martin.rosek@usda.gov>
Subject: Fwd: DOE LPO - Project in Bay City, MI

Marty,

We have a question concerning Prime Farmland in Bay County. Can you advise if they need our approval? See below.

Thank you,
Stacey

Sent from my Verizon, Samsung Galaxy smartphone
Get Outlook for Android

From: Holowka, Paul - FPAC-NRCS, MI <paul.holowka@usda.gov>
Sent: Thursday, October 12, 2023 9:13:27 AM
To: Smith, Stacey - FPAC-NRCS, MI <Stacey.Smith@usda.gov>
Subject: FW: DOE LPO - Project in Bay City, MI

Hello Stacey,

So she's wondering if it needs to be submitted as prime farmland since it is already in an industrial park.

Thanks for your help!

PAUL HOLOWKA
District Conservationist for Bay County
Natural Resources Conservation Service

United States Department of Agriculture
4044 South 3 Mile Road
Bay City, MI 48706-9206
Office: (989) 686-0430 x3

"That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics."
— **Aldo Leopold**

From: Eskridge, Anna <anna.eskridge@hq.doe.gov>
Sent: Tuesday, October 10, 2023 10:04 AM
To: Holowka, Paul - FPAC-NRCS, MI <paul.holowka@usda.gov>
Subject: DOE LPO - Project in Bay City, MI

Paul,

Thanks so much for chatting earlier. The project address is 1311 Straits Dr, Bay City, MI 48706, which has previously been used as an industrial site; SK Siltron is proposing to continue the site's use as an industrial facility (see Facility layout and Soil map attached). The site is part of a larger industrial park.

The DOE Loan Programs Office scope is the following:

> 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 SK Siltron to tool the existing Bay City, Michigan facility and its recently constructed building addition and to make interior renovations and exterior facility improvements.
>
> The proposed project would involve installation of silicon carbide semiconductor wafer equipment (tooling) and interior building renovations (first floor manufacturing, mezzanine, second floor office space) to the existing 145,000-square-foot two-story Bay City Facility and recently constructed 100,000-square-foot two-story building addition. Exterior finishing activities would include, concrete pads, perimeter fence, final grading and landscaping. Exterior improvements would include parking lot expansion, construction of a new duct bank and underground powerline connection, sanitary sewer repairs and upgrades, and other minor activities (see Attachments 1-3). The facilities will be located at 1311 Straits Drive, Bay City, Michigan. Key end-product materials produced at SK Siltron will be used to increase the efficiency of electricity transfer from battery to motor for EVs.

Please let me know next steps (if applicable) for a Prime Farmland submittal to your office.

Thanks,

Anna Eskridge, Ph.D.
Deputy, Environmental Compliance
Loan Programs Office (LPO)
U.S. Department of Energy
Office: 240-743-1304
Email: anna.eskridge@hq.doe.gov

This message does not originate from a known Department of Energy email system.
Use caution if this message contains attachments, links or requests for information.

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*		Date Of Land Evaluation Request October 10, 2023	
Name of Project SK Siltron Improvements		Federal Agency Involved Department of Energy	
Proposed Land Use		County and State Bay County, Michigan	
PART II *(To be completed by NRCS)*		Date Request Received By NRCS October 10, 2023	Person Completing Form: Martin Rosek
Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)*	YES ☑ NO ☐	Acres Irrigated 6319	Average Farm Size 253
Major Crop(s) Corn	Farmable Land In Govt. Jurisdiction Acres: 227400 % 78	Amount of Farmland As Defined in FPPA Acres: 149900 % 52	
Name of Land Evaluation System Used LESA	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS October 13, 2023	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	5.9			
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	5.9			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	5.6			
B. Total Acres Statewide Important or Local Important Farmland	0.3			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0.0037			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	31			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	96			

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	**Maximum Points**	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	11			
2. Perimeter In Non-urban Use	(10)	3			
3. Percent Of Site Being Farmed	(20)	0			
4. Protection Provided By State and Local Government	(20)	0			
5. Distance From Urban Built-up Area	(15)	15			
6. Distance To Urban Support Services	(15)	0			
7. Size Of Present Farm Unit Compared To Average	(10)	0			
8. Creation Of Non-farmable Farmland	(10)	0			
9. Availability Of Farm Support Services	(5)	0			
10. On-Farm Investments	(20)	0			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	10			
TOTAL SITE ASSESSMENT POINTS	160	39	0	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland *(From Part V)*	100	96	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	39	0	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	135	0	0	0

Site Selected: Site A	Date Of Selection 10/13/2023	Was A Local Site Assessment Used? YES ☐ NO ☑

Reason For Selection:

SK Siltron purchased the property in 2021 from F.P. Horak, which had developed and occupied the site since 1999 for printing and publishing operations. This is an existing industrial site located in an industrial park.

Name of Federal agency representative completing this form: Department of Energy	Date: 10/13/2023

(See Instructions on reverse side) **Form AD-1006 (03-02)**

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, http://fppa.nrcs.usda.gov/lesa/.

Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s)of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map**,** or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)

Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.

Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.

Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.

Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.

Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

(For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.

2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.
Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \text{ X } 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.

From: Kane, Michelle E <michelle_kane@fws.gov>
Sent: Friday, July 14, 2023 4:29 PM
To: Eskridge, Anna <anna.eskridge@hq.doe.gov>
Subject: Re: [EXTERNAL] "No Effect" Determination - Section 7

Hi Anna,

Thanks for sending over your project information. No effect determinations are made at the project proponent's discretion, and FWS does not provide written concurrence for no effect determinations. That being said, based on satellite imagery I can confirm that there is not suitable habitat for piping plover, red knot, eastern massasauga, or eastern prairie fringed orchid in the project area. While your project is adjacent to a forested area which may support habitat for listed bats, you have indicated your project will not be removing native vegetation, and therefore is unlikely to impact listed bat habitat. A no effect determination is appropriate when species or critical habitat will not be exposed to any consequences of a federal action. When you make a no effect determination, you should document your finding and rationale for your records. No further consultation is required for projects with no effects to listed species or critical habitat.

Please let me know if you have any other questions about this project! I'm also happy to help if you have any questions about the All-Species Michigan Dkey, either for this or other projects!

Have a great day,

Michelle

Michelle Kane
U.S. Fish & Wildlife Service
Michigan Ecological Services Field Office
2651 Coolidge Road, Suite 101
East Lansing, MI 48823
she/her/hers
517-351-3460
michelle_kane@fws.gov

Interested in our collaboration with Michigan's transportation agencies?
Check out the Wildlife Crossing newsletter!

Department of Energy
Washington, DC 20585

October 4, 2023

Sue Fortune
Executive Director
East Michigan Council of Governments
3144 Davenport Avenue
Suite 200
Saginaw, MI 48602

SUBJECT: Intent to Prepare an Environmental Assessment (EA) for a Proposed Federal Loan to SK Siltron in Bay City, Michigan

Dear Ms. Fortune,

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 SK Siltron to tool the existing Bay City, Michigan facility and its recently constructed building addition and to make interior renovations and exterior facility improvements. The facility will manufacture silicone carbide semiconductor wafers that are more efficient at handling high powers and conducting heat. These wafers, when used in electric vehicle (EV) system components, allow for more efficient transfer of electricity from the battery to the motor. The results are increased driving range of an EV by 5-10%. 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 equipping as well as renovation of an existing facility for the production of silicone carbide semiconductor wafers is consistent with the goals of the Act and is issuing the NEPA process to assist in determining whether to issue a loan to SK Siltron to support the proposed project.

The proposed project would involve installation of silicon carbide semiconductor wafer equipment (tooling) and interior building renovations (first floor manufacturing, mezzanine, second floor office space) to the existing 145,000-square-foot two-story Bay City Facility and recently constructed 100,000-square-foot two-story building addition. Exterior finishing activities would include, concrete pads, perimeter fence, final grading and landscaping. Exterior improvements would include parking lot expansion, construction of a new duct bank and underground powerline connection, sanitary sewer repairs and upgrades, and other minor activities (see Attachments 1-3). The facilities will be located at 1311 Straits Drive, Bay City, Michigan. Key end-product materials produced at SK Siltron will be used to increase the efficiency of electricity transfer from battery to motor for EVs. The project is expected to produce 150 new jobs.

The DOE NEPA regulations provide for the notification of host states of NEPA determinations and for the opportunity for host states to review an EA 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 240-743-1304, or email at LPO_Environmental@hq.doe.gov.

Sincerely,

ANNA ESKRIDGE

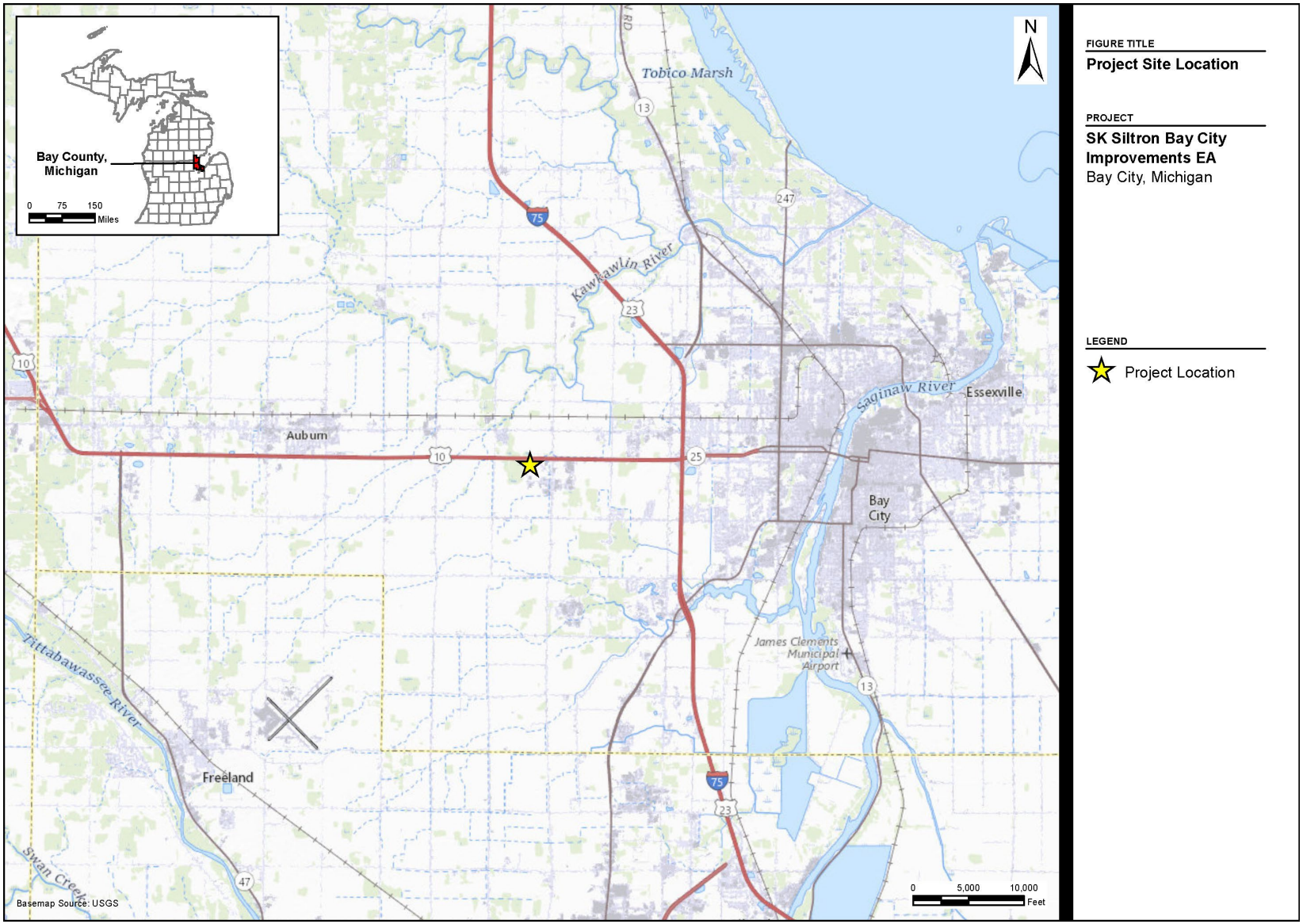
Digitally signed by ANNA ESKRIDGE
Date: 2023.10.04 14:31:19 -04'00'

Anna Eskridge, Ph.D.
NEPA Document Manager
Loan Programs Office

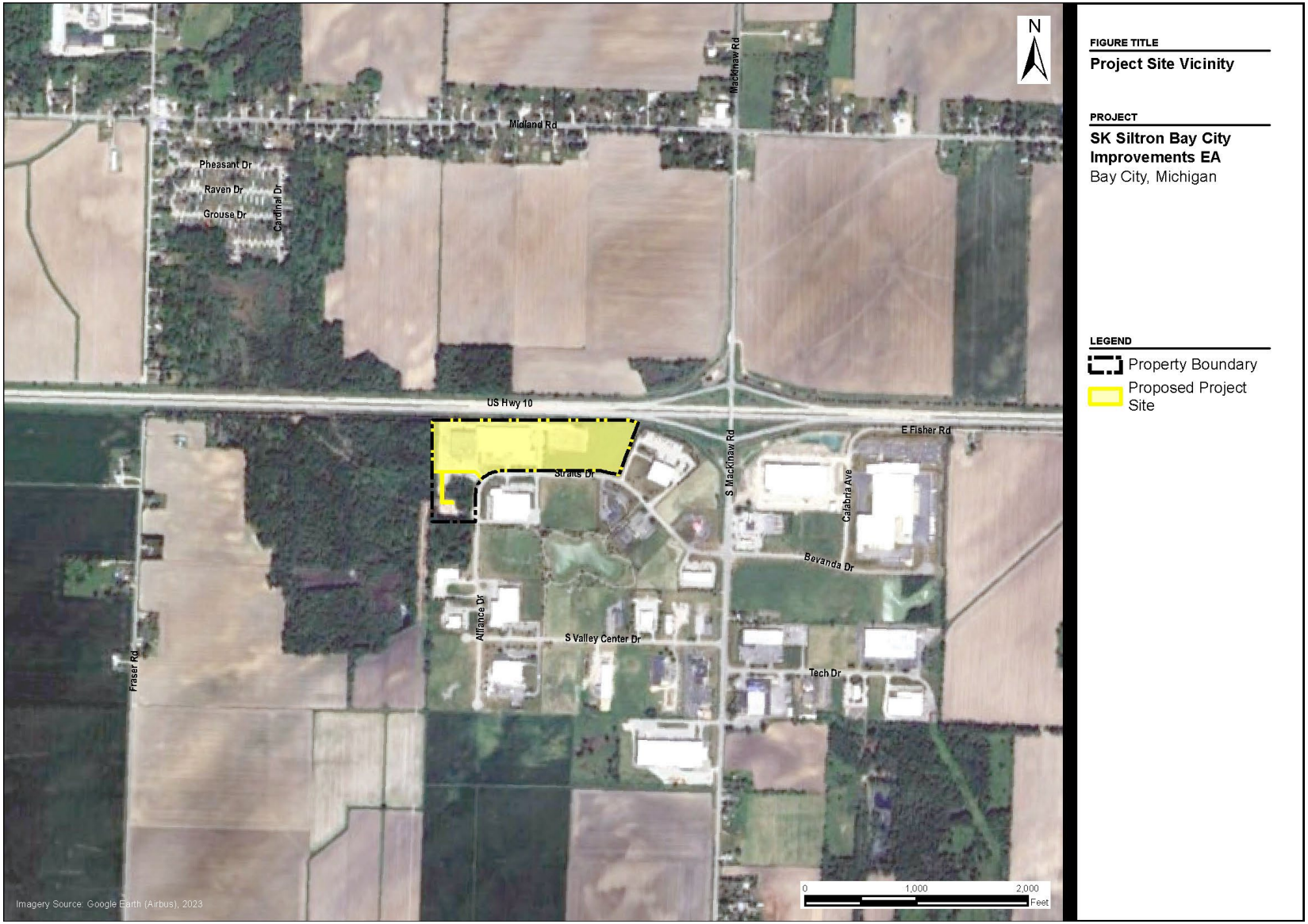
Attachments:

Attachment 1: Project Site Location Map
Attachment 2: Project Site Vicinity Map
Attachment 3: Proposed Interior Renovations, Exterior Finishing Activities and Improvements

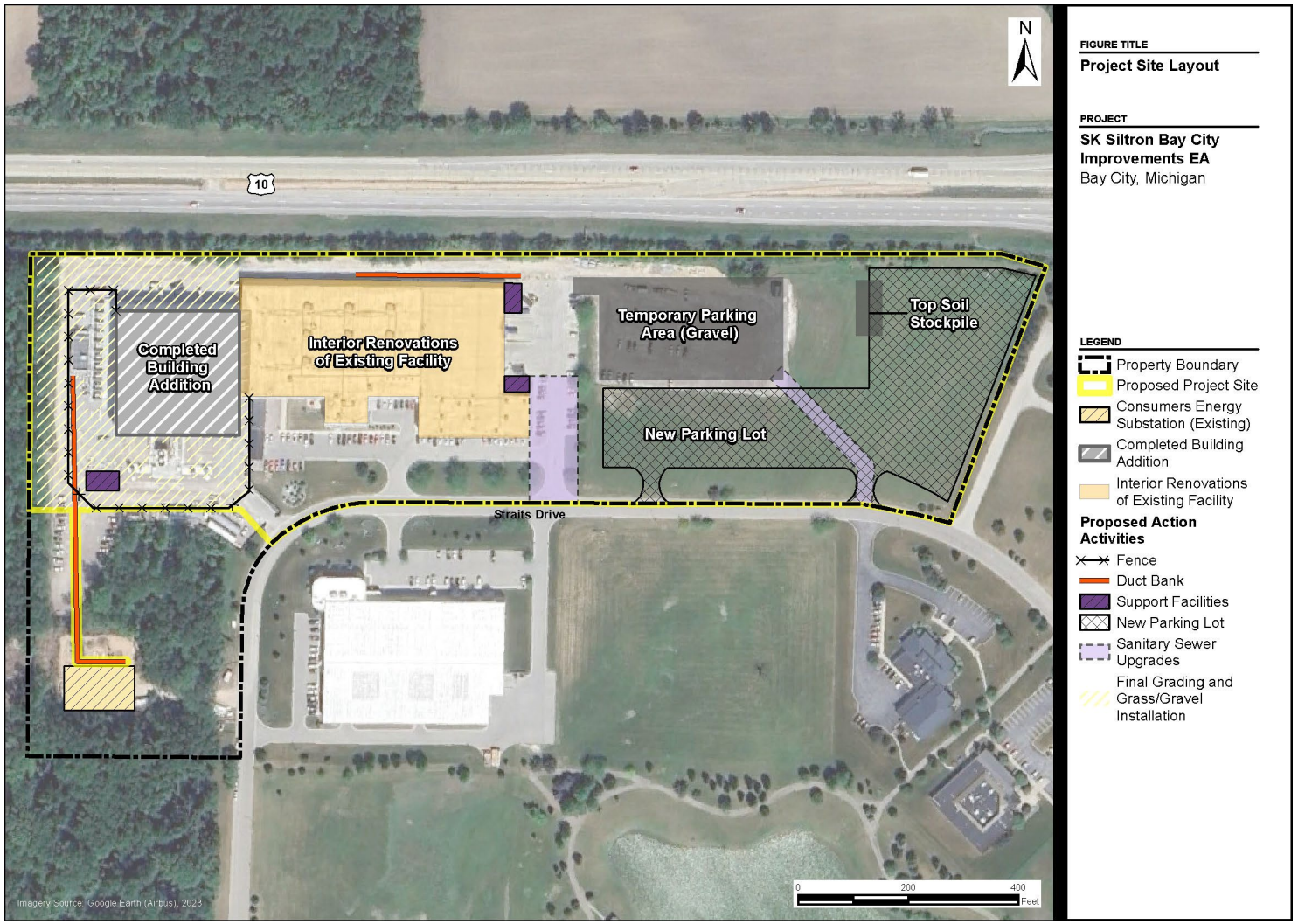
Attachment 1: Project Site Location Map



Attachment 2: Project Site Vicinity Map



Attachment 3: Proposed Interior Renovations, Exterior Finishing Activities and Improvements



Tribal Coordination

Organization	Contact Date	Summary of Contact
Lac Vieux Desert Band of Lake Superior Chippewa Indians	10/4/23 11/3/23	Notice of Intent to Prepare an Environmental Assessment Follow-up email on NOI to Prepare EA
Little Traverse Bay Band of Odawa Indians	10/4/23 11/3/23	Notice of Intent to Prepare an Environmental Assessment Follow-up email on NOI to Prepare EA
Menominee Indian Tribe of Wisconsin	10/4/23 11/3/23	Notice of Intent to Prepare an Environmental Assessment Follow-up email on NOI to Prepare EA
Miami Tribe of Oklahoma	10/4/23 11/3/23 11/6/23	Notice of Intent to Prepare an Environmental Assessment Follow-up email on NOI to Prepare EA Response letter to DOE
Saginaw Chippewa Indian Tribe of Michigan	10/4/23 10/18/23	Notice of Intent to Prepare an Environmental Assessment Response letter to DOE
Sault Ste. Marie Tribe of Chippewa Indians	10/4/23 11/3/23	Notice of Intent to Prepare an Environmental Assessment Follow-up email on NOI to Prepare EA

Note: An individual letter was submitted to each Tribe via email regarding the Notice of Intent to Prepare an Environmental Assessment. To reduce the file size and the overall number of pages, one letter is included as an example, and all responses are included.

Department of Energy
Washington, DC 20585

October 4, 2023

Marcella Hadden, THPO
Saginaw Chippewa Indian Tribe of Michigan
6650 E. Broadway
Mt. Pleasant, MI 48858

SUBJECT: U.S. Department of Energy Proposed Federal Loan to SK Siltron Manufacturing Facilities in Bay City, 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 SK Siltron CSS LLC (SK Siltron) to tool the existing Bay City, Michigan facility and its recently constructed building addition and to make interior renovations and exterior facility improvements. The facility will be used to manufacture silicon carbide semiconductor wafers. DOE has determined that issuance of this loan constitutes an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA). Therefore, as a part of this environmental review process, DOE is also conducting a historic resource review in compliance with Section 106 of the NHPA.

The proposed project would involve installation of silicon carbide semiconductor wafer equipment (tooling) and interior building renovations (first floor manufacturing, mezzanine, second floor office space) to the existing 145,000-square-foot two-story Bay City Facility and recently constructed 100,000-square-foot two-story building addition. Exterior finishing activities would include, concrete pads, perimeter fence, final grading and landscaping. Exterior improvements would include parking lot expansion, construction of a new duct bank and underground powerline connection, sanitary sewer repairs and upgrades, and other minor activities (see Attachments 1-3). The facilities will be located at 1311 Straits Drive, Bay City, Michigan. Key end-product materials produced at SK Siltron will be used to increase the efficiency of electricity transfer from battery to motor for EVs. The project is expected to produce 150 new jobs.

This letter is intended to notify you of the proposed Federal project (a potential loan to SK Siltron), identify if you have an interest in the proposed project site in Bay City, 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 sites.

I would greatly appreciate notification if you do or do not have an interest in the project sites, as well as any comments or concerns you may have, within thirty (30) days of receipt of this letter. Should you have an interest in the project sites, 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 240-743-1304.

Respectfully,

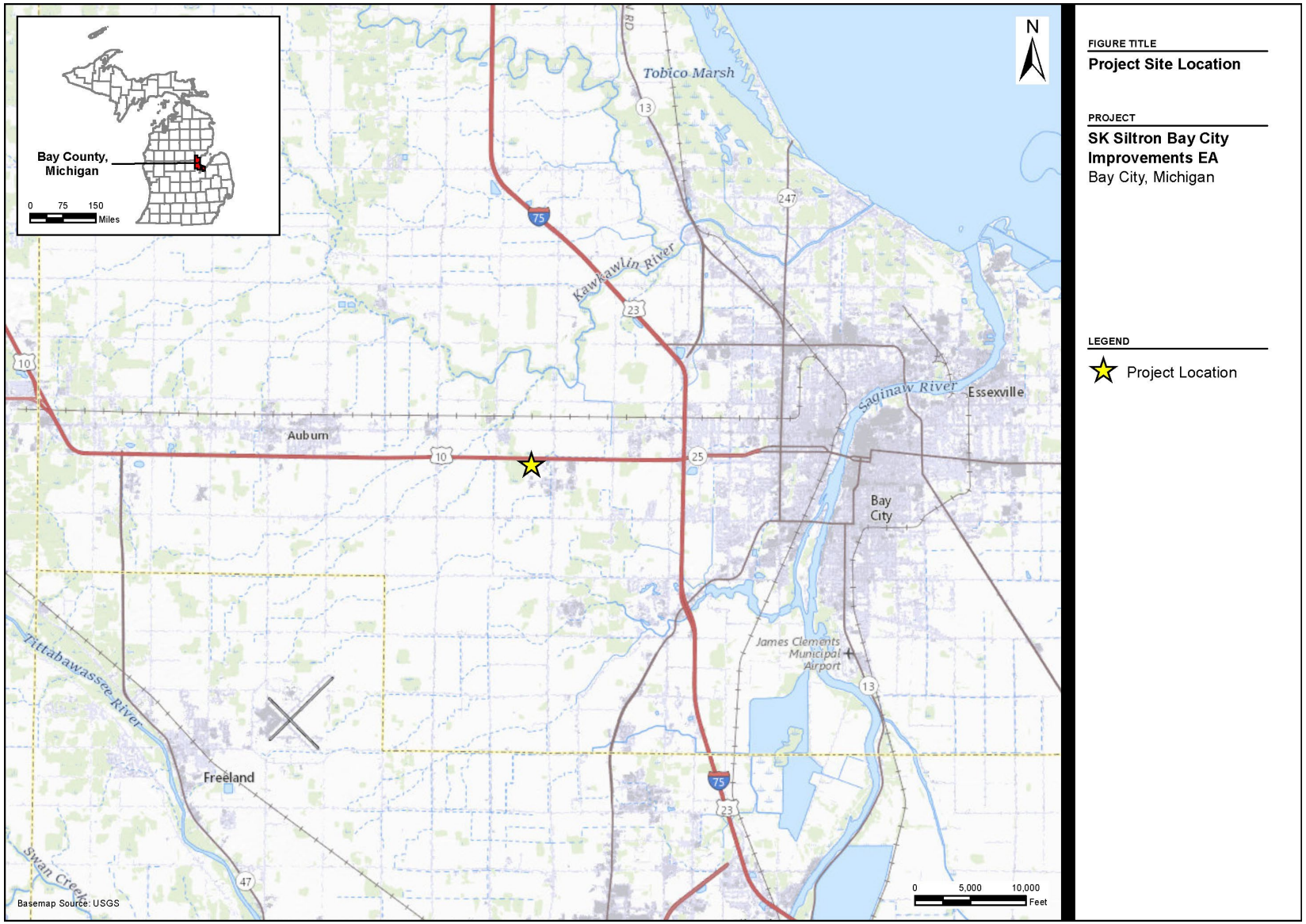
ANNA ESKRIDGE Digitally signed by ANNA ESKRIDGE
Date: 2023.10.04 15:30:48 -04'00'

Anna Eskridge, Ph.D.
NEPA Document Manager
Loan Programs Office

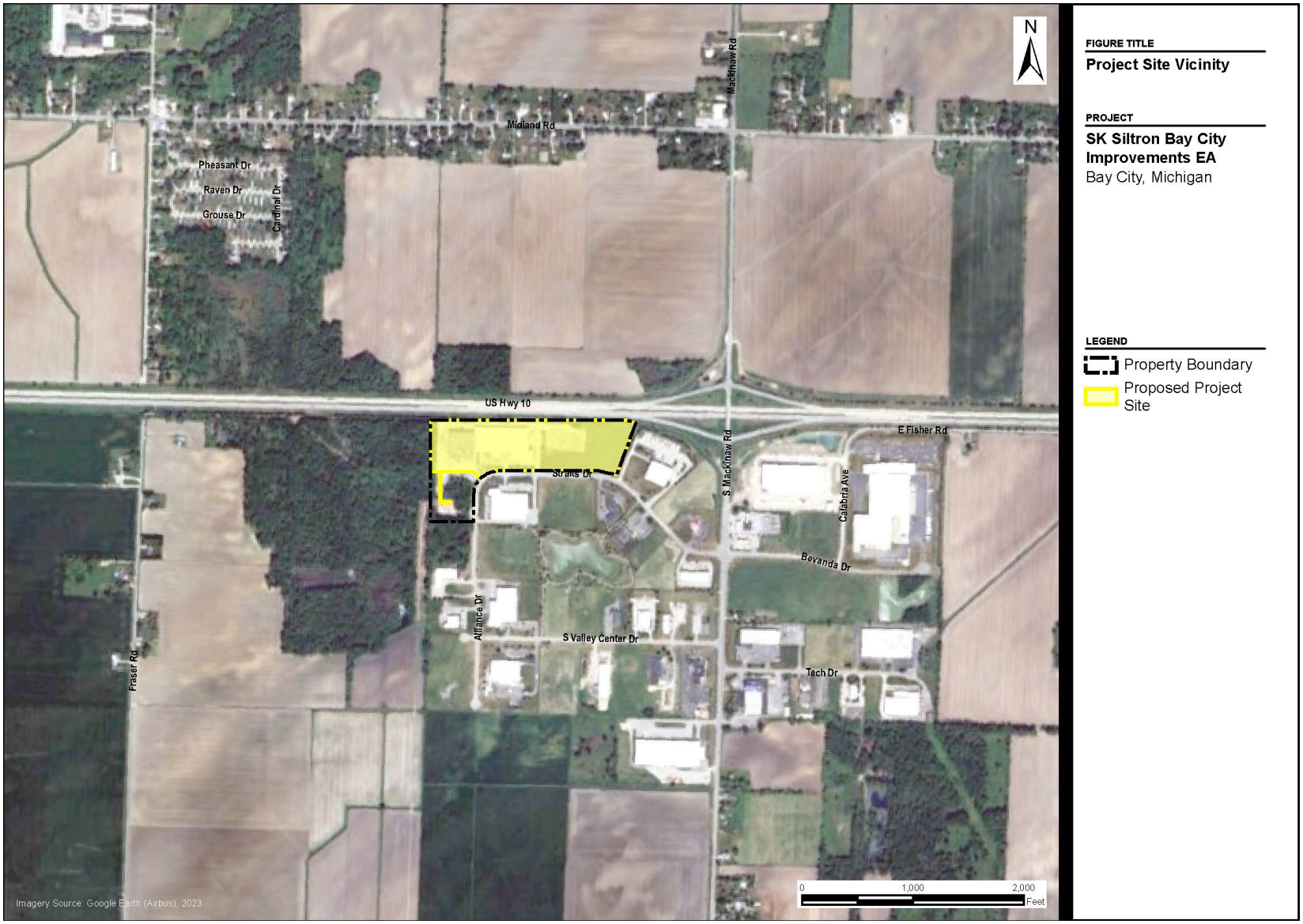
Attachments:

Attachment 1: Project Site Location Map
Attachment 2: Project Site Vicinity Map
Attachment 3: Proposed Interior Renovations, Exterior Finishing Activities and Improvements

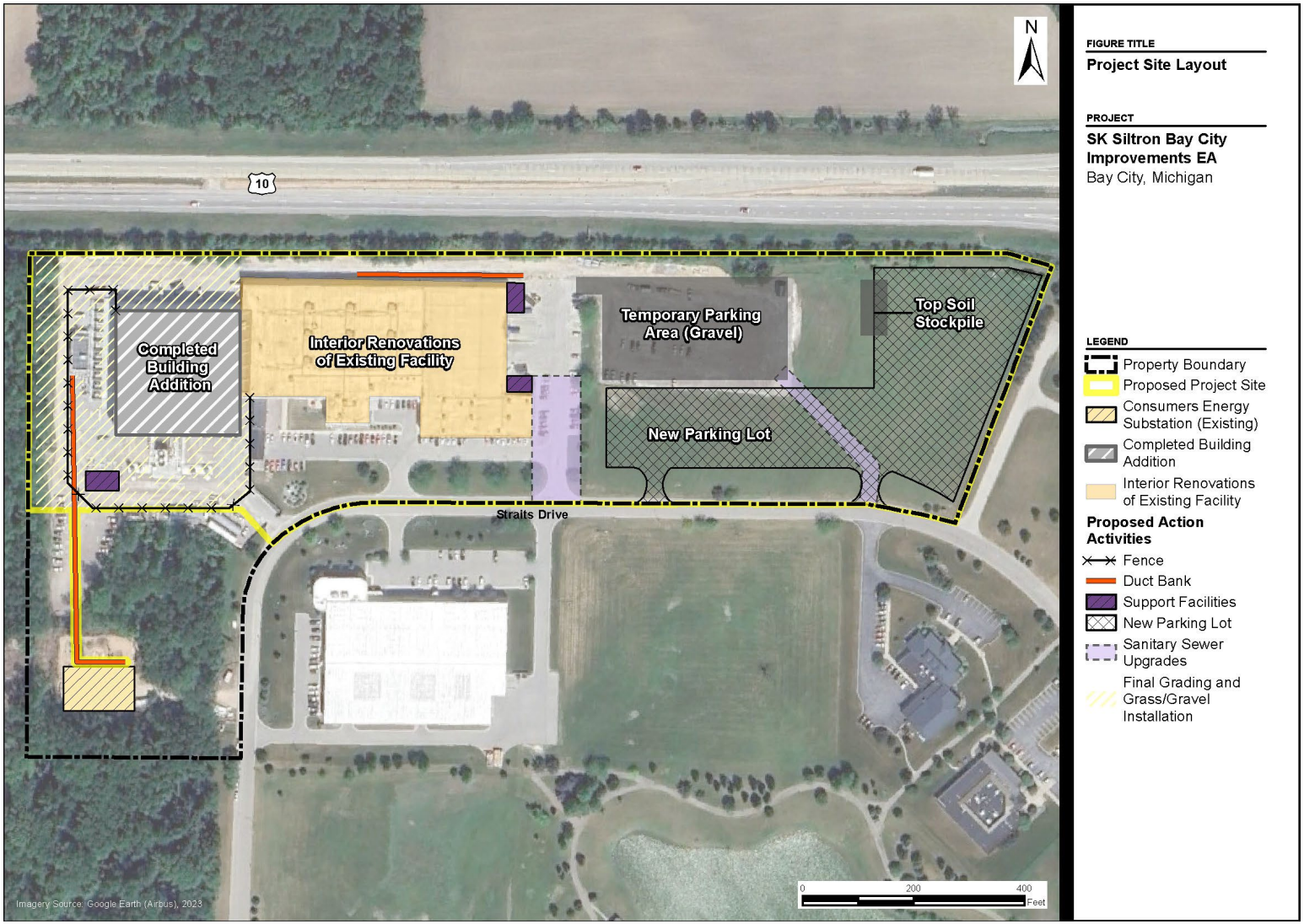
Attachment 1: Project Site Location Map



Attachment 2: Project Site Vicinity Map



Attachment 3: Proposed Interior Renovations, Exterior Finishing Activities and Improvements



From: LPO_Environmental
To: thpo@miamination.com; dlankford@miamination.com
Subject: RE: Intent to Prepare an Environmental Assessment for a Proposed Federal Loan to SK Siltron
Date: Friday, November 3, 2023 8:52:32 AM

Good morning!

I wanted to reach out and follow-up on this email. Please let me know if you have any questions or comments.

We will be sending you the draft Environmental Assessment (EA) in the coming weeks.

Thanks and we will be in touch.

Best,

Anna Eskridge, Ph.D.
NEPA Document Manager
Loan Programs Office

From: LPO_Environmental <lpo_environmental@hq.doe.gov>
Sent: Wednesday, October 4, 2023 3:23 PM
To: thpo@miamination.com; dlankford@miamination.com
Subject: Intent to Prepare an Environmental Assessment for a Proposed Federal Loan to SK Siltron

Dear Mr. York:

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 SK Siltron CSS LLC (SK Siltron) to tool the existing Bay City, Michigan facility and its recently constructed building addition and to make interior renovations and exterior facility improvements. The facility will be used to manufacture silicon carbide semiconductor wafers. DOE has determined that issuance of this loan constitutes an undertaking subject to Section 106 of the National Historic Preservation Act (NHPA). Therefore, as a part of this environmental review process, DOE is also conducting a historic resource review in compliance with Section 106 of the NHPA.

The proposed project would involve installation of silicon carbide semiconductor wafer equipment (tooling) and interior building renovations (first floor manufacturing, mezzanine, second floor office space) to the existing 145,000-square-foot two-story Bay City Facility and recently constructed 100,000-square-foot two-story building addition. Exterior finishing activities would include, concrete pads, perimeter fence, final grading and landscaping. Exterior improvements would include parking lot expansion, construction of a new duct bank and underground powerline connection, sanitary sewer repairs and upgrades, and other minor activities (see Attachments 1-3). The facilities will be located at 1311 Straits Drive, Bay City, Michigan. Key end-product materials produced at SK Siltron

will be used to increase the efficiency of electricity transfer from battery to motor for EVs. The project is expected to produce 150 new jobs.

This letter is intended to notify you of the proposed Federal project (a potential loan to SK Siltron), identify if you have an interest in the proposed project site in Bay City, 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 sites.

I would greatly appreciate notification if you do or do not have an interest in the project sites, as well as any comments or concerns you may have, within thirty (30) days of receipt of this letter. Should you have an interest in the project sites, 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 240-743-1304.

Respectfully,

Anna Eskridge, Ph.D.
NEPA Document Manager
Loan Programs Office

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

October 13, 2023

Anna Eskridge
U.S. Department of Energy Loan Programs Office
1000 Independence Ave. SW
Washington D.C. 20585

Re: Proposed Federal Loan to SK Siltron Manufacturing Facilities in Bay City, Michigan

Dear Ms. Eskridge:

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 effect on cultural resources.

This letter evidences that the U.S. Department of Energy is in compliance with 36 CFR § 800.4 "Identification of historic properties," and the fulfillment of its 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
Tribal Historic Preservation Officer
Saginaw Chippewa Indian Tribe of Michigan

Miami Tribe of Oklahoma
3410 P St. NW, Miami, OK 74354 ● P.O. Box 1326, Miami, OK 74355
Ph: (918) 541-1300 ● Fax: (918) 542-7260
www.miamination.com

Via email: LPO_Environmental@hq.doe.gov

November 4, 2023

Anna Eskridge
NEPA Document Manager
Loan Programs Office

Re: Intent to Prepare an Environmental Assessment for a Proposed Federal Loan to SK Siltron – Comments of the Miami Tribe of Oklahoma

Dear Dr. Eskridge:

Aya, kweehsitoolaanki – I show you respect. The Miami Tribe of Oklahoma, a federally recognized Indian tribe with a Constitution ratified in 1939 under the Oklahoma Indian Welfare Act of 1936, respectfully submits the following comments regarding the SK Siltron renovations.

The Miami Tribe offers no objection to the above-referenced project at this time, as we are not currently aware of existing documentation directly linking a specific Miami cultural or historic site to the project site. However, given the Miami Tribe's deep and enduring relationship to its historic lands and cultural property within present-day Michigan, if any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of this project, the Miami Tribe requests immediate consultation with the entity of jurisdiction for the location of discovery. In such a case please contact me at 918-541-7885 or by email at THPO@miamination.com to initiate consultation.

The Miami Tribe requests to serve as a consulting party to the proposed project. In my capacity as Tribal Historic Preservation Officer, I am the point of contact for all Section 106 consultation.

Respectfully,

Logan York

Logan York
Tribal Historic Preservation Officer