U.S. Department of Housing and Urban Development
451 Seventh Street, SW
Washington, DC 20410
www.hud.gov
espanol.hud.gov

Environmental Assessment
Determinations and Compliance Findings
for HUD-assisted Projects
24 CFR Part 58

Project Information

Project Name: The-Anchor-at-Mariners-Inn

HEROS Number: 900000010276457

Responsible Entity (RE): DETROIT, PLANNING AND DEVELOPMENT DEPARTMENT
DETROIT MI, 48226

RE Preparer: Kim Siegel

State / Local Identifier: Detroit, Michigan

Certifying Officer: Julie Schneider

Grant Recipient (if different than Responsible Entity):

Point of Contact:

Consultant (if applicable): PM Environmental

Point of Contact: Carey Kratz

Project Location: 445-447 Ledyard Street, Detroit, MI 48201

Additional Location Information:
Condominium Unit Nos. 1 and 2 and General Common Elements, Eastern and Southern Portions of 445 Ledyard Street, Detroit, Michigan

Direct Comments to:

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:

The approximately 1.5-acre Property is generally located at the southwest corner of Ledyard Street and Cass Avenue, Detroit, Michigan. The Property consists of two proposed condominium units 1 and 2 as well as general common elements located in the eastern and southern portions of 445 Ledyard Street. A Property Vicinity Map is provided as Attachment 1 and a Survey for Mariners Inn Condominium is provided in Attachment 2. The proposed Project will consist of the construction of a six-story apartment building containing 44 one-bedroom units for individuals experiencing homelessness or are chronically homeless and 40 short-term single-room occupancy Recovery Housing units. The development will also include a white-boxed commercial space on the first floor and parking lot. Site Development Plans are provided in Attachment 2. The Anchor at Mariners Inn project is a joint venture between Cinnaire Solutions Corporation and Mariners Inn. This partnership was formed for the sole purpose of developing 445-447 Ledyard Street parcel into a new construction, permanent supportive housing, mixed-use project in the Cass Park Historic District of Detroit. Each partner entity is headquartered in the City of Detroit. Mariners Inn has been serving the homeless population and people with substance use disorders in Detroit since 1925. Cinnaire Solutions Corporation, and its parent organization Cinnaire, have acted as developer or financier for numerous developments in Detroit. The project funding is for $1,500,000.00 in HOME 2021 and $1, 657,694.00 in CDBG-CV.

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:

The Property is located near downtown Detroit in a mixed-use area, with new development underway and planned near the site, including the recently constructed Little Caesars Arena. Household growth in the Primary Market Area (PMA) was negative between 2000 and 2010 but forecasted to increase through 2024. Strong demand is evident for comparable rental housing offering similarly positioned units. Moderate renter household growth, as well as ongoing demolition and obsolescence of existing rental housing in the area will fuel demand for the Project in the long term. Employment has increased in all submarkets in each of the last seven years. Based on the Project's maximum income, approximately the bottom third of occupations will be income-eligible for the proposal. Long-term growth forecasts for the economy are difficult but continued stability is anticipated. The Project will offer permanent supportive housing units with all units operating with a project-based subsidy. Strong demand is evident for subsidized units within the market area supporting the potential demand for these units. The Project includes construction of a six-story apartment building and will provide 44 one-bedroom 600 square foot Permanent Supportive Housing (PSH) units in total. The proposed 44 units will be targeted to chronically homeless individuals. All units will be reserved for those earning less than 30% of area median income (AMI) and be supported fully by project-based housing vouchers provided by MSHDA. The Project will also have an additional floor of 40 studio units (260 SF) that will be dedicated to short-term Recovery Housing. To preserve operating efficiency the building will be National Green Building Standard Silver certified.

Existing Conditions and Trends [24 CFR 58.40(a)]:

The Property currently consists of green space, a paved parking lot, three storage sheds, and a basketball court with no business operations. The Project is located within Detroit, with the downtown and immediately surrounding area representing a high concentration of employment opportunities within the immediate area. The overall occupancy rate for the area was 98.4 percent with thirteen nearby LIHTC reporting 96.5 percent occupancy. The average build year for the surveyed facilities is 1953, but with a number of recently rehabilitated and newly constructed projects located in the market area. Approximately 39 percent of workers find employment within a less than 15-minute travel time, the highest among all areas, while an additional 34 percent of workers find employment within a 30-minute radius Given the high occupancy evident among comparable properties, the Project will have no negative impact on existing housing in the area.

Maps, photographs, and other documentation of project location and description:

2C Mariners Inn Condo.pdf
2A -Figure 2 Existing Site Plan.pdf
1 Figure 1 Property Vicinity Map.pdf

Determination:

✓	Finding of No Significant Impact [24 CFR 58.40(g)(1); 40 CFR 1508.13] The project will not result in a significant impact on the quality of human environment
	Finding of Significant Impact

Approval Documents:

7015.15 certified by Certifying Officer on:

7015.16 certified by Authorizing Officer on:

Funding Information

Grant / Project Identification Number	HUD Program	Program Name
B20MW260006	Community Planning and Development (CPD)	Community Development Block Grant CARES Act (CDBG-CV)

M21MC260202	Community Planning and Development (CPD)	HOME Program

Estimated Total HUD Funded, Assisted or Insured Amount: $3,157,694.00

This project anticipates the use of funds or assistance from another federal agency in addition to HUD in the form of:

Estimated Total Project Cost [24 CFR 58.2 (a)(5)]: $25,254,185.00

Compliance with 24 CFR §50.4, §58.5 and §58.6 Laws and Authorities

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §50.4, §58.5, and §58.6	Are formal compliance steps or mitigation required?	Compliance determination (See Appendix A for source determinations)
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR §50.4 & § 58.6		
Airport Hazards Clear Zones and Accident Potential Zones; 24 CFR Part 51 Subpart D	☐ Yes ☑ No	Coleman A. Young is located approximately 4.80 miles northeast of the Property. Windsor International Airport is located approximately 6.32 miles southeast. No military airfields are in Wayne County/and or the nearby vicinity. The Project site is not within an Airport Runway Clear Zone. The Project site is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport and is incompliance with Airport Hazards requirements. Attachment 3
Coastal Barrier Resources Act Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	☐ Yes ☑ No	Review of the U.S. Fish and Wildlife Service online Coastal Barrier Resources System Mapper and the John H. Chafee Coastal Barrier Resource System Michigan Map indicates that the Property is not located within a designated coastal zone boundary. Therefore, this Project has no potential to impact a CBRS Unit and is in

		compliance with the Coastal Barrier Resources Act. Attachment 4
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	☐ Yes ☑ No	The Property is located in FEMA Flood Map 26163C0285E dated 10/21/2021 and is within Zone X (unshaded), defined as an area of minimal risk outside the 100-year (1% annual chance) and 500-year (0.2% annual chance) floodplain. The Project is in compliance with the Flood Disaster Protection Act. Attachment 5
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR §50.4 & § 58.5		
Air Quality Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	☐ Yes ☑ No	The entire State of Michigan is designated as ''attainment for carbon monoxide, lead, nitrogen dioxide, and particulate matter (PM10). Wayne County is within a larger area in southeast Michigan for ozone nonattainment and the southwestern portion of the City of Detroit, including the Property, is within a sulfur dioxide nonattainment area. The Project was reviewed by Michigan Environment, Great Lakes, and Energy (EGLE) for conformance with the State Implementation Plan (SIP). EGLE determined the Project should not exceed the de minimis levels included in the federal general conformity requirements and therefore, does not require a detailed conformity analysis. Measures to control fugitive dust will be utilized to ensure that construction projects do not result in erosion and formation of dust. The Best Management Practices (BMPs) employed will comply with the City's site plan approval process and will be effective in controlling construction related fugitive dust. Attachment 6
Coastal Zone Management Act Coastal Zone Management Act, sections 307(c) & (d)	☐ Yes ☑ No	Review of the Wayne County Coastal Zone Management Boundary and Coastal Zone Management Area map and EGLE Coastal Zone Map documents the Property is not located within a

		designated Coastal Zone Management area. The Project is in compliance with the Coastal Zone Management Act. Attachment 7
Contamination and Toxic Substances 24 CFR 50.3(i) & 58.5(i)(2)]	☑ Yes ☐ No	A Phase I was completed in May 2022. The REC identified is concentrations of benzo(a)pyrene, benzo(b)fluoranthene, naphthalene, phenanthrene, and mercury were identified during PM's 2021 Phase II subsurface investigation in soil samples collected from the central portion of the proposed condominium Unit #1 on the Property exceeding Residential Part 201 Generic Cleanup Criteria (GCC). The concentrations of naphthalene and mercury detected also exceed EGLE Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels. The impacted area appears to be associated with backfill associated with former dwellings. Based on the results of the 2021 subsurface investigation, the area of contamination exceeding the Part 201 GCC and Residential VIAP Screening Levels was delineated both vertically and horizontally. Based on these analytical results, the Property would be classified as a ''facility,'' as defined by Part 201 of P.A. 451 of the Michigan NREPA, as amended. Based on the results of the 2021 subsurface investigations, PM completed a Baseline Environmental Assessment on behalf of The Anchor at Mariners Inn LDHA LP. The BEA was submitted to EGLE on June 17, 2022. June/July 2022 Response Activity Plan - Remedial Action Plan (ResAP-RAP) PM compared the laboratory analytical results for all soil samples collected from the portion of the property that is demonstrated to be a facility and determined the following: * There are no hazardous substances present that exceed the applicable generic residential criteria for the volatile soil inhalation (ambient air) or

		particulate soil inhalation pathways. There are no identified risks through these exposure pathways. No remedial actions are necessary. * Hazardous substances are present at the facility at concentrations that present a risk through the direct contact and soil volatilization to indoor air pathways. Remedial actions are necessary to allow for unrestricted residential use of the portion of the property that is a facility. The planned remedial actions at the portion of the Property demonstrated to be a facility include the excavation of contaminated soils with proper landfill disposal. The extent of soil concentrations representative of a soil volatilization to indoor air and direct contact risk have been identified in soils that have been delineated in all directions. Following soil removal activities, verification of soil remediation (VSR) samples will consist of using biased sampling strategies and field screening the floors and sidewalls prior to sample collection (to the extent possible) to document the removal of contaminated soils to concentrations below applicable residential generic and or site-specific cleanup criteria, and that the identified portion of the property is no longer a facility. VSR soil samples will be analyzed for VOCs, PNAs, and mercury. A ResAP-RAP was submitted to EGLE on July 7, 2022 and the EGLE approved the ResAP-RAP with a letter issued on July 21, 2022 with assigned Site ID 82008730. A No Further Action concurrence with EGLE will be submitted following completion of all remedial activities. The adverse environmental impacts can be mitigated by complete removal and obtain a No Further Action status from EGLE. No high pressure buried gas lines (4'' diameter or greater and 400 psi or

		higher) are located within 1,000 feet of the Property. The Property is located within Wayne County, which is within Zone 3 of the EPA Radon Map with low potential risk of indoor radon levels. The Property is not located within one of the 24 counties designated by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) as a county where 25% or more homes tested equal to or above 4 picocuries/liter (pCi/L) of radon exposure. Therefore, no additional investigation is necessary. (Attachment 8 & 9).
Endangered Species Act Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	☐ Yes ☑ No	The U.S. Fish and Wildlife Service provided information on locations of threatened and endangered species for the Project. Species listed for Wayne County include Indiana Bat, Northern Long-eared Bat, Piping Plover, Red Knot, Eastern Massasauga, Northern Riffleshell, and Eastern Prairie Fringed Orchid. None of the state-listed threatened or endangered species were observed at the Property. No federally listed threatened or endangered species or unique features are present at the Project and no Critical Habitats are present. The properties and/or general area have been developed since at least the 1900s. Given this, this Project will have No Effect on listed species due to the nature of the activities involved in the Project. This Project is in compliance with the Endangered Species Act. Attachment 10
Explosive and Flammable Hazards Above-Ground Tanks)[24 CFR Part 51 Subpart C	☐ Yes ☑ No	Review of reasonably ascertainable standard and other historical sources, and site observations, have not identified the current and historical presence of ASTs/55-gallon drum storage on the property. Based on the Project description, the Project includes no activities that would require further evaluation under this section. However, in accordance with HUD's Guidebook

		entitled ''Siting of HUD-Assisted Projects Near Hazardous Facilities'' (hereafter ''Guidebook''), PM searched a one-mile radius around the Property for ASTs containing flammable materials. PM did not identify any sites within a one-mile radius of the property. The Project is in compliance with explosive and flammable hazard requirements. Attachment 11
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	☐ Yes ☑ No	Review of the USDA Web Soil Survey indicates this Project does not affect any prime or unique farmland. The Property is located within an ''urbanized'' area. Therefore, the Project is not subject to the statutory or regulatory requirements. This Project does not include any activities that could potentially convert agricultural land to a non-agricultural use. The project is in compliance with the Farmland Protection Policy Act. Attachment 12
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	☐ Yes ☑ No	According to the Federal Emergency Management Agency (FEMA) floodplain map, dated October 21, 2021 (Panel Number 26163C0285E), the Property is not located within the 100-year flood zone. Furthermore, topographical features present in the Property area are not representative of a flood plain. Furthermore, topographical features present in the Property area are not representative of a flood plain. The proposed Project is not located in a FEMA-designated Special Flood Hazard Area. The Project is in compliance with flood insurance requirements. The Project is in compliance with Executive Order 11988. Attachment 5
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	☐ Yes ☑ No	Review of the National Park Service (NPS) National Register of Historic Places, the Michigan State Historic Preservation Office (SHPO), and locally designated resources located in the City of Detroit and Wayne County,

		documents the Property is not listed in the National Register of Historic Places, however, the Property is located within the local Cass Park Historic District. A Section 106 application was submitted to the SHPO to determine if the Project would adversely impact the Property area or area of potential effect (APE). In a letter dated March 29, 2022, the City's Preservation Specialist determined that no historic properties would be affected by the proposed undertaking. A Concurrence Letter dated April 11, 2022, indicated the proposed Project will have no adverse effect on historic properties within the APE but confirmed that the historical background review indicated the Project area likely contained archaeological resources associated with 19th century residential development in the Cass Park Neighborhood. An archeological Phase I and Phase II survey conducted by a State-approved archeologist was recommended. A Certified Archeologist with Mannik & Smith completed trenching activities in early May 2022. What appeared to be a former privy was observed along the southwestern boundary near the alley. Additional excavation of this area revealed three adjoining coal ash dumps. Several artifacts were recovered from the ash dumps for analysis. The Project received a No Adverse Effect concurrence from the State Historic Preservation Office in a letter dated August 19, 2022. Based on Section 106 consultation the project will have No Adverse Effect on historic properties. Attachment 13
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	☑ Yes ☐ No	The Property is located within the applicable distance of Coleman A. Young International Airport, Windsor Airport, and nine busy roadways. PM conducted a Desktop Noise Assessment in general accordance with the US Department of

		Housing and Urban Development (HUD) Noise Abatement and Control standards contained in 24 CFR 51B. Two NALs (NAL #1 and NAL #2) were used at the northwestern and southeastern corners of the proposed building on the Property for this analysis, based on proximity to noise sources. Using the HUD DNL calculator, the combined DNL for NAL #1 and NAL #2 was 67 and 72 dB, respectively. These results are considered ''normally unacceptable'', which includes noise levels from above 65 dB to 75 dB. The HUD Sound Transmission Classification Assessment Tool (STraCAT) was used to determine the noise attenuation for the building walls to bring the noise levels within acceptable levels for interiors. The noise attenuation necessary to bring the levels to below 45 dB was found to be between 22 and 27 dB while the actual combined attenuation for the wall components was found to be 35.43 dB (East Facade - NAL #1) and 33.28 dB (Southeast Corner - NAL #2). The wall components attenuate noise levels to acceptable interior standards. The Project is in compliance with HUD's Noise regulation without mitigation. Attachment 14
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	☐ Yes ☑ No	There are no sole source aquifers in the City of Detroit or Wayne County. The Project is in compliance with Sole Source Aquifer requirements. Attachment 15
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	☐ Yes ☑ No	Areas potentially associated with wetlands were not observed on the Property during the site reconnaissance. In addition, review of the National Wetlands Inventory (NWI) Map from the U.S. Fish and Wildlife Service and the EGLE Wetlands Map Viewer did not identify any wetlands on the Property. The Project is in compliance with Executive Order 11990. Attachment 16

Wild and Scenic Rivers Act Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	☐ Yes ☑ No	The National Wild and Scenic Rivers System map (maintained and managed by the Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, and U.S. Forest Service) were reviewed to determine if the Property is within a designated wild and scenic river area. There are no wild and scenic rivers located within the City of Detroit or Wayne County. This Project is not within proximity of a NWSRS river. The project is in compliance with the Wild and Scenic Rivers Act. Attachment 17
HUD HOUSING ENVIRONMENTAL STANDARDS		
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	☐ Yes ☑ No	This Project will not have a disproportionately high adverse effect on human health or environment of minority populations and/or low-income populations. The buildings will serve low-income and homeless residents. The development is in the City of Detroit, which is made up of 87% ethnic minorities. New facilities and residences are intended to enhance the quality of life for new and existing residents and the community. No persons will be displaced due to this Project. No adverse environmental impacts were identified in the project's total environmental review. The project is in compliance with Executive Order 12898. Attachment 18

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]

Impact Codes: An impact code from the following list has been used to make the determination of impact for each factor.

(1) Minor beneficial impact
(2) No impact anticipated
(3) Minor Adverse Impact – May require mitigation

(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement.

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
LAND DEVELOPMENT			
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	The existing Mariners Inn facility provides shelter and treatment services to the homeless. The Project is an extension of the already available services. The Property is zoned B-4: General Business District. The proposed Project and buildings are in conformance with comprehensive plans and zoning. The existing Mariners Inn facility provides shelter and treatment services to the homeless. The Project is an extension of the already available services. Additional surrounding properties include commercial buildings, apartment buildings, parking lot, and a parking garage. The proposed Project and building are compatible with the surrounding land uses. The mass and scale of the Project will be in keeping with the surrounding developments and residential neighborhood. Attachment 2	
Soil Suitability / Slope/ Erosion / Drainage and Storm Water Runoff	2	According to the NRCS website, there is one soil type mapped for the site - Urban land-Riverfront complex, dense substratum 0 to 4 percent slopes. The soil is suitable for new construction based on the Wayne County Soil Survey. (Attachment 12) According to the Detroit Quadrangle 7.5-minute Topographic map, the site falls into the 610 feet contour. The Property is relatively flat and no drainage or slope issues are anticipated. There was no visual evidence of slides or slumps on the Property. Grading work will be done to ensure there are no awkward changes in grade. A Site Grading Plan and a Sediment Control and Erosion Plan are provided in Attachment 2. The Project is not located near an erosion sensitive area and will not create slopes. The proposed grading work at the site will allow for very little erosion. A Site Grading Plan	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
LAND DEVELOPMENT			
		and a Sediment Control and Erosion Plan are provided in Attachment 2. The Project will be connected to the municipal storm water service. Service already exists for the parent parcel. The sanitary and storm sewers in the Project area are combined. No significant increase in storm water flow is expected. A Site Drainage Plan along with details of the storm water drainage proposed are provided in Attachment 2.	
Hazards and Nuisances including Site Safety and Site-Generated Noise	2	The Project will not be adversely affected by onsite or offsite hazards or nuisances. There will be adequate onsite parking for residents, and lighting. According to the U.S. EPA Map of Radon Zones, Genesee County is in Zone 3 and outside of the eight counties EGLE considers high risk areas for radon exposure. Attachments 2 and 8	
Energy Efficiency	2	The area is already served by electrical and gas utilities provided by DTE. There is adequate capacity to serve the new building. The Project will meet current state and local codes concerning energy consumption and will be National Green Building Standard Silver certified.	
SOCIOECONOMIC			
Employment and Income Patterns	2	The area is already served by electrical and gas utilities provided by DTE. There is adequate capacity to serve the new building. The Project will incorporate energy efficient appliances, building/construction materials, and lighting/fixtures. The Project will meet current state and local codes concerning energy consumption and will be National Green Building Standard Silver certified.	
Demographic Character Changes / Displacement	2	There will be a temporary increase in jobs related to the construction of the Project. Other than construction related changes, the Project will not result in a change to employment and income patterns in the area. The Project could be beneficial to local businesses though because there will be an	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
LAND DEVELOPMENT			
		increase in households requiring goods and services.	
COMMUNITY FACILITIES AND SERVICES			
Educational and Cultural Facilities (Access and Capacity)	2	The area is served by the City of Detroit Public Schools Community District, Charter schools, and private schools. Several preschools, elementary, middle, and high schools are located within several miles of the Property. The Project will have no adverse effect to any educational facilities. The Midtown neighborhood is located just north of the Project and this area is home to Wayne State University, the Detroit Institute of Arts, the Detroit Science Center, the Detroit Symphony Orchestra. Several cultural facilities including the Fox Theater, The Fillmore Detroit, Y-Arts Detroit, Detroit Opera House, Detroit Main Public Library, the Detroit Institute of Art, Michigan Science Center, Museum of Contemporary Art Detroit, Charles H Wright Museum and Detroit Historical Museum are located within five miles of the Project. The Project is not expected to have any impact on cultural facilities in the area. Attachments 19 and 20	
Commercial Facilities (Access and Proximity)	2	This Project could potentially increase retail expenditures from new residents in the community resulting in increased commercial sales. Numerous commercial facilities are located along Cass Avenue and Woodward Avenue. No commercial facilities will be negatively affected because of the Project activities. Attachment 21	
Health Care / Social Services (Access and Capacity)	1	There are a sufficient number of hospitals in and around Detroit to accommodate new residents of the Property. Detroit Receiving Hospital, St. John Hospital and Medical Center, DMC Harper Hospital, DMC Sinai Grace Hospital, Children's Hospital of Michigan, Hutzel Women's Hospital, are all located within two miles of the Project. A	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
LAND DEVELOPMENT			
		large DMC campus is located 3/4 mile to the northeast and contains the closest hospital to the Project. Other medical professionals including general physicians, dental, optometrists and medical specialists are in Downtown Detroit and surrounding neighborhoods. No health care facilities will be negatively affected. Attachments 22 and 23	
Solid Waste Disposal and Recycling (Feasibility and Capacity)	2	The Project will not significantly impact solid waste management facilities and services. Solid wastes generated during construction activities will be removed by a private contractor. Solid wastes generated by occupants of the development will be removed by the municipal waste hauler. No contracts for waste removal are currently in place.	
Waste Water and Sanitary Sewers (Feasibility and Capacity)	2	The Project will be connected to the municipal sanitary sewer service. Service already exists for the parent parcel. The sanitary and storm sewers in the Project area are combined. A minor increase in wastewater flow is expected. The existing municipal wastewater system will meet the increased demand.	
Water Supply (Feasibility and Capacity)	2	The Project will be connected to the municipal water system which is currently supplying the existing buildings. The connections were likely installed sometime in the 1940s and water is supplied via a 12-inch water main under the east side of South Bridge Street. There is sufficient water capacity for the Project, as well as additional development in the area. The Project will not adversely impact the current capacity of the city water system.	
Public Safety - Police, Fire and Emergency Medical	2	The Detroit Police Department covers the city limits of Detroit and has 2,200 officers. The Detroit Police Department at 1301 3rd Avenue is the closest station (One mile to southwest). Wayne County covers areas	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
LAND DEVELOPMENT			
		outside of the city limits and has a full staff capable of handling a large region. The Project will have no adverse effect in the need for police services due to the additional inhabitants. The Project will have no adverse effect in the need for fire department services due to the additional inhabitants. The DFD operates 47 fire companies out of 36 fire stations located throughout the city, with a total sworn personnel complement of 1000 members with 821 firefighters in all ranks. The Detroit Fire Department Engine Company 1 is just south of the Property. & City of Detroit Fire Department, 313.596.2920 The City of Detroit has over 900 licensed individuals in the Detroit Fire Department providing care at the MFR, EMT, and Paramedic level, staffing over sixty medically licensed Fire and EMS vehicles, responding to over 120,000 calls for service annually. The Project will have no adverse effect in the need for emergency medical services due to the additional inhabitants. City of Detroit Emergency Medical Services, 313.596.5180 Attachments 24 and 25	
Parks, Open Space and Recreation (Access and Capacity)	2	A small park, known as Cass Park, is located northwest of the Property. The Project is not located on currently open or recreation space. This Project is not expected to have any impact on open space. A small park, known as Cass Park, is located northwest of the Property. Several recreational areas and facilities including the Detroit Riverwalk and riverfront area, Ford Field, Comerica Park, TCF Center and Little Caesars Arena are located within a few blocks to a few miles of the Project and are accessible by foot and the available transportation services. The Project is not expected to negatively affect recreational facilities. Attachment 26 and	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
LAND DEVELOPMENT			
		City of Detroit Parks & Recreation, 313-224-1100	
Transportation and Accessibility (Access and Capacity)	2	There are likely to be short-term impacts to traffic in the area of the Project due to the construction at the Project. Temporary lane closures may occur during construction. The Detroit Department of Transportation (DDOT) and the F.A.S.T Smart Bus Routes provide bus service throughout the Detroit area and the QLine serves Woodward Avenue. DDOT/F.A.S.T. has an extensive transportation network that links its residents and businesses to each other. A F.A.S.T. bus stop is located at Woodward and I-75 Service Drive a few blocks southeast of the Project. A DDOT stop is located just over one block east along Woodward. The additional residents are not expected to have any adverse effect on transportation. Attachment 27	
NATURAL FEATURES			
Unique Natural Features /Water Resources	2	The City of Detroit is a highly urbanized area. Construction activities will be limited to the Property and none of the surrounding properties will be affected. Additionally, there are no unique natural features on the Property. The Project will not have an adverse effect on any unique natural features within Detroit.	
Vegetation / Wildlife (Introduction, Modification, Removal, Disruption, etc.)	1	The Project is not anticipated to impact unique natural habitats, ecosystems, or any threatened and endangered wildlife. The location of the Project does not support any critical habitats and is within a highly urbanized location. Attachment 10	
Other Factors 2	2	N/A	

Supporting documentation

10 Threatened and Endangered Species.pdf
8B EGLE Radon Map(1).pdf
8A EPA Radon Map(1).pdf
12 SS Farmland Protection(1).pdf

The-Anchor-at-Mariners-Inn	Detroit, MI	900000010276457

2B Development Plans.pdf
27B SMART Map Extended Area.pdf
27A DOTT MapNotProtected.pdf
27A DOTT Map.pdf
26 Recreational Areas Map.pdf
25 Fire Station Location Map.pdf
24 Police Department Location Map.pdf
23 Social Services Map.pdf
22 Hospital Location Map.pdf
21 Area Amenities Map.pdf
20 Cultural Facilities Map.pdf
19 School Location Map.pdf

Additional Studies Performed:

Market Feasibility Analysis-Mariners Inn, Market Analyst Professionals, dated September 6, 2019.

Field Inspection [Optional]: Date and completed by:

Devon Nagengast 4/14/2022 12:00:00 AM

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]:

1. Federal Emergency Management Agency-Map Service for Flood Rate Insurance Maps https://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1 2. U.S. Fish & Wildlife Service, National Wetlands Inventory, Wetlands Mapper. 3. http://www.fws.gov/wetlands/data/mapper.html 4. U.S. Fish & Wildlife Service, Endangered Species, Michigan County Distribution of Federally Listed Threatened, Endangered, Proposed, and Candidate Species, 5. http://www.fws.gov/midwest/endangered/lists/michigan-cty.html 6. Michigan Department of Environmental Quality, Michigan Coastal Zone Boundary Maps, http://www.michigan.gov/deq/0,4561,7-135-3313_3677_3696-90802--,00.html 7. Michigan Department of Environmental Quality, Air Quality Division, http://www.michigan.gov/deq/0,1607,7-135-3310_30151_31129---,00.html 8. US EPA Map of Radon Zones, Wayne County, Michigan, http://www.epa.gov/radon/states/michigan.html 9. Detroit Public Schools Community District, https://www.detroitk12.org/domain/167. 10. Detroit Police Department, Precincts and Neighborhood Police Officers, https://detroitmi.gov/departments/police-department/precincts-and-neighborhood-police-officers. 11. Detroit Fire Department, https://detroitmi.gov/departments/detroit-fire-department. 12. Detroit EMS,

https://detroitmi.gov/departments/detroit-fire-department/emergency-medical-services. 13. Detroit Parks & Recreation, https://detroitmi.gov/departments/parks-recreation. 14. Detroit Social Services, https://detroitmi.gov/government/mayors-office/office-immigrant-affairs/social-services. 15. Michigan Department of Environment, Great Lakes, and Energy

List of Permits Obtained:

Public Outreach [24 CFR 58.43]:

Green Design Charrette for staff and residents at Mariners Inn - May 2019 Stakeholder Meeting - Community Stakeholders - June 2019 Neighborhood Meeting - Neighborhood Advisory Council and Midtown Inc. - July 2019 City of Detroit and Detroit District 6 Council Member Meeting - July 2019 Special Land Use Hearing - Detroit Zoning Division - May 2022 Publication in the Newspaper

Cumulative Impact Analysis [24 CFR 58.32]:

The Anchor at Mariners Inn project is a joint venture between Cinnaire Solutions Corporation and Mariners Inn. This partnership was formed for the sole purpose of developing 445 Ledyard Street parcel into a new construction, permanent supportive housing, mixed-use project in the Cass Park Historic District of Detroit. Mariners Inn has been serving the homeless population and people with substance use disorders in Detroit since 1925. The Project will provide 44 one-bedroom 600 square foot Permanent Supportive Housing (PSH) units in total. The proposed 44 units will be targeted to chronically homeless individuals. The Project will also have an additional floor of 40 studio units that will be dedicated to short-term Recovery Housing. The EA process determined that there are no adverse effects to human health or the environment once proposed mitigation measures are complete. The Project will have an overall positive impact in reducing the homeless population in the City of Detroit.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]

The Project is an addition to an existing homeless shelter and support services operation that will be a partner with the LDHA LP. Other sites were not identified as the sponsor seeks to expand upon the same site. The only alternative to the proposed Project would be not building the additional units of housing and thus not being able to further support the homeless population in the area.

No Action Alternative [24 CFR 58.40(e)]

The No Action Alternative is to not construct The Anchor at Mariners Inn. This alternative is not preferred as it fails to provide additional housing to meet the need for the homeless population.

Summary of Findings and Conclusions:

The Project will not adversely impact the City of Detroit or neighborhoods surrounding the site. The activity is compatible with the existing uses of the area and will have minimal impact on existing resources or services in the area.

Mitigation Measures and Conditions [CFR 1505.2(c)]:

Summarized below are all mitigation measures adopted by the Responsible Entity to reduce, avoid or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure or Condition	Comments on Completed Measures	Mitigation Plan	Complete
Contamination and Toxic Substances	The planned remedial actions at the portion of the Property demonstrated to be a facility include the excavation of contaminated soils with proper landfill disposal. The extent of soil concentrations representative of a soil volatilization to indoor air and direct contact risk have been identified in soils that have been delineated in all directions. Following soil removal activities, verification of soil remediation (VSR) samples will consist of using biased sampling strategies and field screening the floors and sidewalls prior to sample collection (to the extent possible) to document the removal of contaminated soils to concentrations below applicable residential generic and or site-specific cleanup criteria, and that	N/A	See Mitigation Plan	

	the identified portion of the property is no longer a facility. VSR soil samples will be analyzed for VOCs, PNAs, and mercury. A ResAP-RAP was submitted to EGLE on July 7, 2022 and the EGLE approved the ResAP-RAP with a letter issued on July 21, 2022 with assigned Site ID 82008730. A No Further Action concurrence with EGLE will be submitted following completion of all remedial activities.			
Historic Preservation	Condition - Unanticipated Discoveries Plan - Once construction has started, if the scope of work changes in any way, SHPO will be notified immediately. Also, 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 will be contacted immediately.	N/A	See Mitigation Plan	
Noise Abatement and Control	Condition - Appropriate construction materials will be incorporated in the building to mitigate noise levels within the acceptable range. Materials to be utilized include two-inch by two-inch and two-inch by four-inch wood studs, five and one-half inch glass fiber insulation, five-eighths inch fire-shield gypsum board, four-inch face brick, and vinyl windows with aluminum storefronts and curtain walls.	N/A	See Mitigation Plan	

The-Anchor-at-Mariners-Inn	Detroit, MI	900000010276457

Project Mitigation Plan

The oversight of the planned remedial actions will be provided by PM Environmental. The proposed activities are will begin once the funding has been release and all closing preceding's have occurred. The remedial action is anticipated to wrap up within four to six weeks. PM will submit the summary and results of the response activities performed to EGLE in order to received the regulatory-approved No Further Action.

Mariners Inn Mitigation Plan.pdf

Supporting documentation on completed measures

APPENDIX A: Related Federal Laws and Authorities

Airport Hazards

General policy	Legislation	Regulation
It is HUD's policy to apply standards to prevent incompatible development around civil airports and military airfields.		24 CFR Part 51 Subpart D

1. To ensure compatible land use development, you must determine your site's proximity to civil and military airports. Is your project within 15,000 feet of a military airport or 2,500 feet of a civilian airport?

✓ **No**

Based on the response, the review is in compliance with this section. Document and upload the map showing that the site is not within the applicable distances to a military or civilian airport below

Yes

Screen Summary

Compliance Determination

Coleman A. Young is located approximately 4.80 miles northeast of the Property. Windsor International Airport is located approximately 6.32 miles southeast. No military airfields are in Wayne County/and or the nearby vicinity. The Project site is not within an Airport Runway Clear Zone. The Project site is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport and is incompliance with Airport Hazards requirements. Attachment 3

Supporting documentation

3 Airport Map.pdf

Are formal compliance steps or mitigation required?

Yes

✓ No

Coastal Barrier Resources

General requirements	Legislation	Regulation
HUD financial assistance may not be used for most activities in units of the Coastal Barrier Resources System (CBRS). See 16 USC 3504 for limitations on federal expenditures affecting the CBRS.	Coastal Barrier Resources Act (CBRA) of 1982, as amended by the Coastal Barrier Improvement Act of 1990 (16 USC 3501)	

1. Is the project located in a CBRS Unit?

✓ No

Document and upload map and documentation below.

Yes

Compliance Determination

Review of the U.S. Fish and Wildlife Service online Coastal Barrier Resources System Mapper and the John H. Chafee Coastal Barrier Resource System Michigan Map indicates that the Property is not located within a designated coastal zone boundary. Therefore, this Project has no potential to impact a CBRS Unit and is in compliance with the Coastal Barrier Resources Act. Attachment 4

Supporting documentation

4B John H Chafee CB Map.pdf
4A Coastal Barrier.pdf

Are formal compliance steps or mitigation required?

Yes

✓ No

Flood Insurance

General requirements	Legislation	Regulation
Certain types of federal financial assistance may not be used in floodplains unless the community participates in National Flood Insurance Program and flood insurance is both obtained and maintained.	Flood Disaster Protection Act of 1973 as amended (42 USC 4001-4128)	24 CFR 50.4(b)(1) and 24 CFR 58.6(a) and (b); 24 CFR 55.1(b).

1. Does this project involve financial assistance for construction, rehabilitation, or acquisition of a mobile home, building, or insurable personal property?

No. This project does not require flood insurance or is excepted from flood insurance.

✓ Yes

2. Upload a FEMA/FIRM map showing the site here:

5 FIRMETTE(2).pdf

The Federal Emergency Management Agency (FEMA) designates floodplains. The FEMA Map Service Center provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs). For projects in areas not mapped by FEMA, use the best available information to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site. Provide FEMA/FIRM floodplain zone designation, panel number, and date within your documentation.

Is the structure, part of the structure, or insurable property located in a FEMA-designated Special Flood Hazard Area?

✓ No

Based on the response, the review is in compliance with this section.

Yes

4. While flood insurance is not mandatory for this project, HUD strongly recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). Will flood insurance be required as a mitigation measure or condition?

Yes

No

Screen Summary

Compliance Determination

The Property is located in FEMA Flood Map 26163C0285E dated 10/21/2021 and is within Zone X (unshaded), defined as an area of minimal risk outside the 100-year (1% annual chance) and 500-year (0.2% annual chance) floodplain. The Project is in compliance with the Flood Disaster Protection Act. Attachment 5

Supporting documentation

5 FIRMETTE(2).pdf

Are formal compliance steps or mitigation required?

Yes

✓ No

Air Quality

General requirements	Legislation	Regulation
The Clean Air Act is administered by the U.S. Environmental Protection Agency (EPA), which sets national standards on ambient pollutants. In addition, the Clean Air Act is administered by States, which must develop State Implementation Plans (SIPs) to regulate their state air quality. Projects funded by HUD must demonstrate that they conform to the appropriate SIP.	Clean Air Act (42 USC 7401 et seq.) as amended particularly Section 176(c) and (d) (42 USC 7506(c) and (d))	40 CFR Parts 6, 51 and 93

1. Does your project include new construction or conversion of land use facilitating the development of public, commercial, or industrial facilities OR five or more dwelling units?

✓ Yes

No

Air Quality Attainment Status of Project's County or Air Quality Management District

2. Is your project's air quality management district or county in non-attainment or maintenance status for any criteria pollutants?

No, project's county or air quality management district is in attainment status for all criteria pollutants.

✓ Yes, project's management district or county is in non-attainment or maintenance status for the following criteria pollutants (check all that apply):

Carbon Monoxide

Lead

Nitrogen dioxide

✓ Sulfur dioxide

✓ Ozone

Particulate Matter, <2.5 microns

Particulate Matter, <10 microns

3. What are the *de minimis* emissions levels (40 CFR 93.153) or screening levels for the non-attainment or maintenance level pollutants indicated above

Sulfur dioxide	75.00	ppb (parts per billion)
Ozone	0.01	ppb (parts per million)

Provide your source used to determine levels here:

The entire State of Michigan is designated as ''attainment for carbon monoxide, lead, nitrogen dioxide, and particulate matter (PM10). Wayne County is within a larger area in southeast Michigan for ozone nonattainment and the southwestern portion of the City of Detroit, including the Property, is within a sulfur dioxide nonattainment area. The Project was reviewed by Michigan Environment, Great Lakes, and Energy (EGLE) for conformance with the State Implementation Plan (SIP). EGLE determined the Project should not exceed the de minimis levels included in the federal general conformity requirements and therefore, does not require a detailed conformity analysis.

4. **Determine the estimated emissions levels of your project. Will your project exceed any of the de minimis or threshold emissions levels of non-attainment and maintenance level pollutants or exceed the screening levels established by the state or air quality management district?**

✓ No, the project will not exceed *de minimis* or threshold emissions levels or screening levels.

Enter the estimate emission levels:

Sulfur dioxide	0.00	ppb (parts per billion)
Ozone	0.00	ppb (parts per million)

Based on the response, the review is in compliance with this section.

Yes, the project exceeds *de minimis* emissions levels or screening levels.

The-Anchor-at-Mariners-Inn	Detroit, MI	900000010276457

Screen Summary

Compliance Determination

The entire State of Michigan is designated as ''attainment for carbon monoxide, lead, nitrogen dioxide, and particulate matter (PM10). Wayne County is within a larger area in southeast Michigan for ozone nonattainment and the southwestern portion of the City of Detroit, including the Property, is within a sulfur dioxide nonattainment area. The Project was reviewed by Michigan Environment, Great Lakes, and Energy (EGLE) for conformance with the State Implementation Plan (SIP). EGLE determined the Project should not exceed the de minimis levels included in the federal general conformity requirements and therefore, does not require a detailed conformity analysis. Measures to control fugitive dust will be utilized to ensure that construction projects do not result in erosion and formation of dust. The Best Management Practices (BMPs) employed will comply with the City's site plan approval process and will be effective in controlling construction related fugitive dust. Attachment 6

Supporting documentation

6B Anchors Inn_general conformity0622.pdf
6A Air Quality.pdf

Are formal compliance steps or mitigation required?

Yes

✓ No

Coastal Zone Management Act

General requirements	Legislation	Regulation
Federal assistance to applicant agencies for activities affecting any coastal use or resource is granted only when such activities are consistent with federally approved State Coastal Zone Management Act Plans.	Coastal Zone Management Act (16 USC 1451-1464), particularly section 307(c) and (d) (16 USC 1456(c) and (d))	15 CFR Part 930

1. Is the project located in, or does it affect, a Coastal Zone as defined in your state Coastal Management Plan?

Yes

✓ No

Based on the response, the review is in compliance with this section. Document and upload all documents used to make your determination below.

Screen Summary

Compliance Determination

Review of the Wayne County Coastal Zone Management Boundary and Coastal Zone Management Area map and EGLE Coastal Zone Map documents the Property is not located within a designated Coastal Zone Management area. The Project is in compliance with the Coastal Zone Management Act. Attachment 7

Supporting documentation

7B Coastal Zone Management - EGLE.pdf
7A Coastal Zone Management - Boundary Maps.pdf

Are formal compliance steps or mitigation required?

Yes

✓ No

Contamination and Toxic Substances

General requirements	Legislation	Regulations
It is HUD policy that all properties that are being proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of the occupants or conflict with the intended utilization of the property.		24 CFR 58.5(i)(2) 24 CFR 50.3(i)

1. How was site contamination evaluated? Select all that apply. Document and upload documentation and reports and evaluation explanation of site contamination below.

- ✓ American Society for Testing and Materials (ASTM) Phase I Environmental Site Assessment (ESA)
- ✓ ASTM Phase II ESA
- ✓ Remediation or clean-up plan
- ✓ ASTM Vapor Encroachment Screening

None of the Above

2. Were any on-site or nearby toxic, hazardous, or radioactive substances found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)

No

✓ Yes

3. Mitigation

Document and upload the mitigation needed according to the requirements of the appropriate federal, state, tribal, or local oversight agency. If the adverse environmental effects cannot be mitigated, then HUD assistance may not be used for the project at this site.

Can adverse environmental impacts be mitigated?

Adverse environmental impacts cannot feasibly be mitigated.

✓ Yes, adverse environmental impacts can be eliminated through mitigation. Document and upload all mitigation requirements below.

4. Describe how compliance was achieved in the text box below. Include any of the following that apply: State Voluntary Clean-up Program, a No Further Action letter, use of engineering controls, or use of institutional controls.

The planned remedial actions at the portion of the Property demonstrated to be a facility include the excavation of contaminated soils with proper landfill disposal. The extent of soil concentrations representative of a soil volatilization to indoor air and direct contact risk have been identified in soils that have been delineated in all directions. Following soil removal activities, verification of soil remediation (VSR) samples will consist of using biased sampling strategies and field screening the floors and sidewalls prior to sample collection (to the extent possible) to document the removal of contaminated soils to concentrations below applicable residential generic and or site-specific cleanup criteria, and that the identified portion of the property is no longer a facility. VSR soil samples will be analyzed for VOCs, PNAs, and mercury. A ResAP-RAP was submitted to EGLE on July 7, 2022 and the EGLE approved the ResAP-RAP with a letter issued on July 21, 2022 with assigned Site ID 82008730. A No Further Action concurrence with EGLE will be submitted following completion of all remedial activities.

If a remediation plan or clean-up program was necessary, which standard does it follow?

✓ Complete removal

Risk-based corrective action (RBCA)

Screen Summary

Compliance Determination

A Phase I was completed in May 2022. The REC identified is concentrations of benzo(a)pyrene, benzo(b)fluoranthene, naphthalene, phenanthrene, and mercury were identified during PM's 2021 Phase II subsurface investigation in soil samples collected from the central portion of the proposed condominium Unit #1 on the

Property exceeding Residential Part 201 Generic Cleanup Criteria (GCC). The concentrations of naphthalene and mercury detected also exceed EGLE Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels. The impacted area appears to be associated with backfill associated with former dwellings. Based on the results of the 2021 subsurface investigation, the area of contamination exceeding the Part 201 GCC and Residential VIAP Screening Levels was delineated both vertically and horizontally. Based on these analytical results, the Property would be classified as a ''facility,'' as defined by Part 201 of P.A. 451 of the Michigan NREPA, as amended. Based on the results of the 2021 subsurface investigations, PM completed a Baseline Environmental Assessment on behalf of The Anchor at Mariners Inn LDHA LP. The BEA was submitted to EGLE on June 17, 2022. June/July 2022 Response Activity Plan - Remedial Action Plan (ResAP-RAP) PM compared the laboratory analytical results for all soil samples collected from the portion of the property that is demonstrated to be a facility and determined the following: * There are no hazardous substances present that exceed the applicable generic residential criteria for the volatile soil inhalation (ambient air) or particulate soil inhalation pathways. There are no identified risks through these exposure pathways. No remedial actions are necessary. * Hazardous substances are present at the facility at concentrations that present a risk through the direct contact and soil volatilization to indoor air pathways. Remedial actions are necessary to allow for unrestricted residential use of the portion of the property that is a facility. The planned remedial actions at the portion of the Property demonstrated to be a facility include the excavation of contaminated soils with proper landfill disposal. The extent of soil concentrations representative of a soil volatilization to indoor air and direct contact risk have been identified in soils that have been delineated in all directions. Following soil removal activities, verification of soil remediation (VSR) samples will consist of using biased sampling strategies and field screening the floors and sidewalls prior to sample collection (to the extent possible) to document the removal of contaminated soils to concentrations below applicable residential generic and or site-specific cleanup criteria, and that the identified portion of the property is no longer a facility. VSR soil samples will be analyzed for VOCs, PNAs, and mercury. A ResAP-RAP was submitted to EGLE on July 7, 2022 and the EGLE approved the ResAP-RAP with a letter issued on July 21, 2022 with assigned Site ID 82008730. A No Further Action concurrence with EGLE will be submitted following completion of all remedial activities. The adverse environmental impacts can be mitigated by complete removal and obtain a No Further Action status from EGLE. No high pressure buried gas lines (4'' diameter or greater and 400 psi or higher) are located within 1,000 feet of the Property. The Property is located within Wayne County, which is within Zone 3 of the EPA Radon Map with low potential risk of indoor radon levels. The Property is not located within one of the 24 counties designated by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) as a county where 25% or more homes tested equal to or above 4 picocuries/liter (pCi/L) of radon exposure. Therefore, no additional investigation is necessary. (Attachment 8 & 9).

The-Anchor-at-Mariners-Inn	Detroit, MI	900000010276457

Supporting documentation

9B PSI 2 BEA June2022.pdf
9A PSI 1 MSHDA Phase I ESA EReportMay2022.pdf
9D Notice of Approval ResAP-RAP.pdf
9C PSI_ResAP - RAP_EGLE.pdf
8B EGLE Radon Map.pdf
8A EPA Radon Map.pdf

Are formal compliance steps or mitigation required?

✓ Yes

No

Endangered Species

General requirements	ESA Legislation	Regulations
Section 7 of the Endangered Species Act (ESA) mandates that federal agencies ensure that actions that they authorize, fund, or carry out shall not jeopardize the continued existence of federally listed plants and animals or result in the adverse modification or destruction of designated critical habitat. Where their actions may affect resources protected by the ESA, agencies must consult with the Fish and Wildlife Service and/or the National Marine Fisheries Service ("FWS" and "NMFS" or "the Services").	The Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq*.); particularly section 7 (16 USC 1536).	50 CFR Part 402

1. Does the project involve any activities that have the potential to affect specifies or habitats?

✓ No, the project will have No Effect due to the nature of the activities involved in the project.

This selection is only appropriate if none of the activities involved in the project have potential to affect species or habitats. Examples of actions without potential to affect listed species may include: purchasing existing buildings, completing interior renovations to existing buildings, and replacing exterior paint or siding on existing buildings.
Based on the response, the review is in compliance with this section.

No, the project will have No Effect based on a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office

Yes, the activities involved in the project have the potential to affect species and/or habitats.

Screen Summary

Compliance Determination

The U.S. Fish and Wildlife Service provided information on locations of threatened and endangered species for the Project. Species listed for Wayne County include Indiana Bat, Northern Long-eared Bat, Piping Plover, Red Knot, Eastern Massasauga, Northern Riffleshell, and Eastern Prairie Fringed Orchid. None of the state-listed

threatened or endangered species were observed at the Property. No federally listed threatened or endangered species or unique features are present at the Project and no Critical Habitats are present. The properties and/or general area have been developed since at least the 1900s. Given this, this Project will have No Effect on listed species due to the nature of the activities involved in the Project. This Project is in compliance with the Endangered Species Act. Attachment 10

Supporting documentation

10 Threatened and Endangered Species(1).pdf

Are formal compliance steps or mitigation required?

Yes

✓ No

Explosive and Flammable Hazards

General requirements	Legislation	Regulation
HUD-assisted projects must meet Acceptable Separation Distance (ASD) requirements to protect them from explosive and flammable hazards.	N/A	24 CFR Part 51 Subpart C

1. Is the proposed HUD-assisted project itself the development of a hazardous facility (a facility that mainly stores, handles or processes flammable or combustible chemicals such as bulk fuel storage facilities and refineries)?

✓ No

Yes

2. Does this project include any of the following activities: development, construction, rehabilitation that will increase residential densities, or conversion?

No

✓ Yes

3. Within 1 mile of the project site, are there any current or planned stationary aboveground storage containers that are covered by 24 CFR 51C? Containers that are NOT covered under the regulation include:

- **Containers 100 gallons or less in capacity, containing common liquid industrial fuels OR**
- **Containers of liquified petroleum gas (LPG) or propane with a water volume capacity of 1,000 gallons or less that meet the requirements of the 2017 or later version of National Fire Protection Association (NFPA) Code 58.**

If all containers within the search area fit the above criteria, answer "No." For any other type of aboveground storage container within the search area that holds one of the flammable or explosive materials listed in Appendix I of 24 CFR part 51 subpart C, answer "Yes."

✓ No

Based on the response, the review is in compliance with this section. Document and upload all documents used to make your determination below.

The-Anchor-at-Mariners-Inn	Detroit, MI	900000010276457

Yes

Screen Summary

Compliance Determination

Review of reasonably ascertainable standard and other historical sources, and site observations, have not identified the current and historical presence of ASTs/55-gallon drum storage on the property. Based on the Project description, the Project includes no activities that would require further evaluation under this section. However, in accordance with HUD's Guidebook entitled ''Siting of HUD-Assisted Projects Near Hazardous Facilities'' (hereafter ''Guidebook''), PM searched a one-mile radius around the Property for ASTs containing flammable materials. PM did not identify any sites within a one-mile radius of the property. The Project is in compliance with explosive and flammable hazard requirements. Attachment 11

Supporting documentation

11 AST Map.pdf

Are formal compliance steps or mitigation required?

Yes

✓ No

Farmlands Protection

General requirements	Legislation	Regulation
The Farmland Protection Policy Act (FPPA) discourages federal activities that would convert farmland to nonagricultural purposes.	Farmland Protection Policy Act of 1981 (7 U.S.C. 4201 et seq.)	7 CFR Part 658

1. Does your project include any activities, including new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use?

Yes

✓ No

If your project includes new construction, acquisition of undeveloped land or conversion, explain how you determined that agricultural land would not be converted:

Review of the USDA Web Soil Survey indicates this Project does not affect any prime or unique farmland. The Property is located within an ''urbanized'' area. Therefore, the Project is not subject to the statutory or regulatory requirements. Attachment 12

Based on the response, the review is in compliance with this section. Document and upload all documents used to make your determination below.

Screen Summary

Compliance Determination

Review of the USDA Web Soil Survey indicates this Project does not affect any prime or unique farmland. The Property is located within an ''urbanized'' area. Therefore, the Project is not subject to the statutory or regulatory requirements. This Project does not include any activities that could potentially convert agricultural land to a non-agricultural use. The project is in compliance with the Farmland Protection Policy Act. Attachment 12

Supporting documentation

12 SS Farmland Protection.pdf

Are formal compliance steps or mitigation required?

Yes

The-Anchor-at-Mariners-Inn	Detroit, MI	900000010276457

- ✓ No

Floodplain Management

General Requirements	Legislation	Regulation
Executive Order 11988, Floodplain Management, requires federal activities to avoid impacts to floodplains and to avoid direct and indirect support of floodplain development to the extent practicable.	Executive Order 11988	24 CFR 55

1. Do any of the following exemptions apply? Select the applicable citation? [only one selection possible]

55.12(c)(3)
55.12(c)(4)
55.12(c)(5)
55.12(c)(6)
55.12(c)(7)
55.12(c)(8)
55.12(c)(9)
55.12(c)(10)
55.12(c)(11)
✓ None of the above

2. Upload a FEMA/FIRM map showing the site here:

5 FIRMETTE(2).pdf

The Federal Emergency Management Agency (FEMA) designates floodplains. The FEMA Map Service Center provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs). For projects in areas not mapped by FEMA, use **the best available information** to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site.

Does your project occur in a floodplain?

✓ No

Based on the response, the review is in compliance with this section.

Yes

Screen Summary

Compliance Determination

According to the Federal Emergency Management Agency (FEMA) floodplain map, dated October 21, 2021 (Panel Number 26163C0285E), the Property is not located within the 100-year flood zone. Furthermore, topographical features present in the Property area are not representative of a flood plain. Furthermore, topographical features present in the Property area are not representative of a flood plain. The proposed Project is not located in a FEMA-designated Special Flood Hazard Area. The Project is in compliance with flood insurance requirements. The Project is in compliance with Executive Order 11988. Attachment 5

Supporting documentation

5 FIRMETTE(2).pdf

Are formal compliance steps or mitigation required?

Yes

✓ No

Historic Preservation

General requirements	Legislation	Regulation
Regulations under Section 106 of the National Historic Preservation Act (NHPA) require a consultative process to identify historic properties, assess project impacts on them, and avoid, minimize, or mitigate adverse effects	Section 106 of the National Historic Preservation Act (16 U.S.C. 470f)	36 CFR 800 "Protection of Historic Properties" https://www.govinfo.gov/content/pkg/CFR-2012-title36-vol3/pdf/CFR-2012-title36-vol3-part800.pdf

Threshold

Is Section 106 review required for your project?

No, because the project consists solely of activities listed as exempt in a Programmatic Agreement (PA). (See the PA Database to find applicable PAs.)
No, because the project consists solely of activities included in a No Potential to Cause Effects memo or other determination [36 CFR 800.3(a)(1)].
✓ Yes, because the project includes activities with potential to cause effects (direct or indirect).

Step 1 – Initiate Consultation

Select all consulting parties below (check all that apply):

✓ State Historic Preservation Offer (SHPO) Completed

✓ Indian Tribes, including Tribal Historic Preservation Officers (THPOs) or Native Hawaiian Organizations (NHOs)

Other Consulting Parties

Describe the process of selecting consulting parties and initiating consultation here:

The Project was reviewed under a Programmatic Agreement between the City of Detroit, ACHP, and the Michigan SHPO. A Section 106 application was subjected to the SHPO to determine if the Project will adversely impact the subject property area or area of potential effect (APE). The Michigan State Housing Development Authority, as another Responsible Entity, determined tribal review.

Document and upload all correspondence, notices and notes (including comments and objections received below).

Was the Section 106 Lender Delegation Memo used for Section 106 consultation?

Yes
No

Step 2 – Identify and Evaluate Historic Properties

1. **Define the Area of Potential Effect (APE), either by entering the address(es) or uploading a map depicting the APE below:**
   A Map of the APE is provided in the attachments.

   In the chart below, list historic properties identified and evaluated in the APE. Every historic property that may be affected by the project should be included in the chart.

   Upload the documentation (survey forms, Register nominations, concurrence(s) and/or objection(s), notes, and photos) that justify your National Register Status determination below.

Address / Location / District	National Register Status	SHPO Concurrence	Sensitive Information
210 Henry Street	Eligible	Yes	✓ Not Sensitive
2465 Cass Avenue	Eligible	Yes	✓ Not Sensitive
2501 2nd Avenue	Eligible	Yes	✓ Not Sensitive
2701 Cass Avenue	Eligible	Yes	✓ Not Sensitive
2714 2nd Avenue	Eligible	Yes	✓ Not Sensitive
2716 Cass Avenue	Eligible	Yes	✓ Not Sensitive
443-467 Henry Street	Eligible	Yes	✓ Not Sensitive
457 Ledyard Street	Eligible	Yes	✓ Not Sensitive
479 Ledyard Street	Eligible	Yes	✓ Not Sensitive
489 Henry Street	Eligible	Yes	✓ Not Sensitive

Additional Notes:

Additional Eligible Properties - SHPO Concurrence Yes for all 408 Temple Street, 2930 Cass Avenue, 2906 Cass Avenue, 2909-2923 2nd Avenue, 2942-2966 2nd Avenue. 2933 2nd Avenue, 2943 2nd Avenue, 606-608 Temple Street, 640 Temple Street, 2727 2nd Avenue The Property is located within the local Cass Park Historic District.

2. **Was a survey of historic buildings and/or archeological sites done as part of the project?**

✓ Yes

Document and upload surveys and report(s) below.
For Archeological surveys, refer to HP Fact Sheet #6, Guidance on Archeological Investigations in HUD Projects.

Additional Notes:

A Certified Archeologist with Mannik & Smith completed trenching activities in early May 2022. What appeared to be a former privy was observed along the southwestern boundary near the alley. Additional excavation of this area revealed three adjoining coal ash dumps. Several artifacts were recovered from the ash dumps for analysis.

No

Step 3 –Assess Effects of the Project on Historic Properties

Only properties that are listed on or eligible for the National Register of Historic Places receive further consideration under Section 106. Assess the effect(s) of the project by applying the Criteria of Adverse Effect. (36 CFR 800.5)] Consider direct and indirect effects as applicable as per guidance on direct and indirect effects.

Choose one of the findings below - No Historic Properties Affected, No Adverse Effect, or Adverse Effect; and seek concurrence from consulting parties.

No Historic Properties Affected

✓ No Adverse Effect

Based on the response, the review is in compliance with this section.

Document reason for finding:

The Project received a No Adverse Effect concurrence from the State Historic Preservation Office in a letter dated August 19, 2022.

Does the No Adverse Effect finding contain conditions?

Yes (check all that apply)

✓ No

Based on the response, the review is in compliance with this section. Document and upload concurrence(s) or objection(s) below.

Adverse Effect

Screen Summary

Compliance Determination

Review of the National Park Service (NPS) National Register of Historic Places, the Michigan State Historic Preservation Office (SHPO), and locally designated resources located in the City of Detroit and Wayne County, documents the Property is not listed in the National Register of Historic Places, however, the Property is located within the local Cass Park Historic District. A Section 106 application was submitted to the SHPO to determine if the Project would adversely impact the Property area or area of potential effect (APE). In a letter dated March 29, 2022, the City's Preservation Specialist determined that no historic properties would be affected by the proposed undertaking. A Concurrence Letter dated April 11, 2022, indicated the proposed Project will have no adverse effect on historic properties within the APE but confirmed that the historical background review indicated the Project area likely contained archaeological resources associated with 19th century residential development in the Cass Park Neighborhood. An archeological Phase I and Phase II survey conducted by a State-approved archeologist was recommended. A Certified Archeologist with Mannik & Smith completed trenching activities in early May 2022. What appeared to be a former privy was observed along the southwestern boundary near the alley. Additional excavation of this area revealed three adjoining coal ash dumps. Several artifacts were recovered from the ash dumps for analysis. The Project received a No Adverse Effect concurrence from the State Historic Preservation Office

in a letter dated August 19, 2022. Based on Section 106 consultation the project will have No Adverse Effect on historic properties. Attachment 13

Supporting documentation

13E SHPO Concurrence Letter August 2022.pdf
13D Phase I and II Archeology Survey and Testing Report July 2022.pdf
13C SHPO Concurrence Letter for Archeology.pdf
13B Section 106 Attachments.pdf
13A Section 106 Application Signed_MV.pdf

Are formal compliance steps or mitigation required?

Yes

✓ No

Noise Abatement and Control

General requirements	Legislation	Regulation
HUD's noise regulations protect residential properties from excessive noise exposure. HUD encourages mitigation as appropriate.	Noise Control Act of 1972 General Services Administration Federal Management Circular 75-2: "Compatible Land Uses at Federal Airfields"	Title 24 CFR 51 Subpart B

1. What activities does your project involve? Check all that apply:

✓ New construction for residential use

NOTE: HUD assistance to new construction projects is generally prohibited if they are located in an Unacceptable zone, and HUD discourages assistance for new construction projects in Normally Unacceptable zones. See 24 CFR 51.101(a)(3) for further details.

Rehabilitation of an existing residential property

A research demonstration project which does not result in new construction or reconstruction

An interstate land sales registration

Any timely emergency assistance under disaster assistance provision or appropriations which are provided to save lives, protect property, protect public health and safety, remove debris and wreckage, or assistance that has the effect of restoring facilities substantially as they existed prior to the disaster
None of the above

4**. Complete the Preliminary Screening to identify potential noise generators in the vicinity (1000' from a major road, 3000' from a railroad, or 15 miles from an airport).**

Indicate the findings of the Preliminary Screening below:

There are no noise generators found within the threshold distances above.

✓ Noise generators were found within the threshold distances.

5. **Complete the Preliminary Screening to identify potential noise generators in the**

Acceptable: (65 decibels or less; the ceiling may be shifted to 70 decibels in circumstances described in §24 CFR 51.105(a))

✓ Normally Unacceptable: (Above 65 decibels but not exceeding 75 decibels; the floor may be shifted to 70 decibels in circumstances described in §24 CFR 51.105(a))

Is your project in a largely undeveloped area?

✓ No

Indicate noise level here: 67

Document and upload noise analysis, including noise level and data used to complete the analysis below.

Yes

Unacceptable: (Above 75 decibels)

HUD strongly encourages conversion of noise-exposed sites to land uses compatible with high noise levels.

Check here to affirm that you have considered converting this property to a non-residential use compatible with high noise levels.

Indicate noise level here: 67

Document and upload noise analysis, including noise level and data used to complete the analysis below.

6. **HUD strongly encourages mitigation be used to eliminate adverse noise impacts. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation. This information will be automatically included in the Mitigation summary for the environmental review.**

Mitigation as follows will be implemented:

✓ No mitigation is necessary.

Explain why mitigation will not be made here:

The HUD Sound Transmission Classification Assessment Tool (STraCAT) was used to determine the noise attenuation for the building walls to bring the noise levels within acceptable levels for interiors. The noise attenuation necessary to bring the levels to below 45 dB was found to be between 22 and 27 dB while the actual combined attenuation for the wall components was found to be 35.43 dB (East Facade - NAL #1) and 33.28 dB (Southeast Corner - NAL #2). The wall components attenuate noise levels to acceptable interior standards.

Based on the response, the review is in compliance with this section.

Screen Summary

Compliance Determination

The Property is located within the applicable distance of Coleman A. Young International Airport, Windsor Airport, and nine busy roadways. PM conducted a Desktop Noise Assessment in general accordance with the US Department of Housing and Urban Development (HUD) Noise Abatement and Control standards contained in 24 CFR 51B. Two NALs (NAL #1 and NAL #2) were used at the northwestern and southeastern corners of the proposed building on the Property for this analysis, based on proximity to noise sources. Using the HUD DNL calculator, the combined DNL for NAL #1 and NAL #2 was 67 and 72 dB, respectively. These results are considered ''normally unacceptable'', which includes noise levels from above 65 dB to 75 dB. The HUD Sound Transmission Classification Assessment Tool (STraCAT) was used to determine the noise attenuation for the building walls to bring the noise levels within acceptable levels for interiors. The noise attenuation necessary to bring the levels to below 45 dB was found to be between 22 and 27 dB while the actual combined attenuation for the wall components was found to be 35.43 dB (East Facade - NAL #1) and 33.28 dB (Southeast Corner - NAL #2). The wall components attenuate noise

levels to acceptable interior standards. The Project is in compliance with HUD's Noise regulation without mitigation. Attachment 14

Supporting documentation

14C STraCAT - SE Corner Unit.pdf
14B STraCAT - East (Cass Ave) Facade.pdf
14A Noise Assessment Ereport.pdf

Are formal compliance steps or mitigation required?

✓ Yes

No

Sole Source Aquifers

General requirements	Legislation	Regulation
The Safe Drinking Water Act of 1974 protects drinking water systems which are the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health.	Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300f et seq., and 21 U.S.C. 349)	40 CFR Part 149

1. Does the project consist solely of acquisition, leasing, or rehabilitation of an existing building(s)?

Yes

✓ No

2. Is the project located on a sole source aquifer (SSA)?

A sole source aquifer is defined as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. This includes streamflow source areas, which are upstream areas of losing streams that flow into the recharge area.

✓ No

Based on the response, the review is in compliance with this section. Document and upload documentation used to make your determination, such as a map of your project (or jurisdiction, if appropriate) in relation to the nearest SSA and its source area, below.

Yes

Screen Summary

Compliance Determination

There are no sole source aquifers in the City of Detroit or Wayne County. The Project is in compliance with Sole Source Aquifer requirements. Attachment 15

The-Anchor-at-Mariners-Inn	Detroit, MI	900000010276457

Supporting documentation

15 Sole Source Aquifer.pdf

Are formal compliance steps or mitigation required?

Yes

✓ No

Wetlands Protection

General requirements	Legislation	Regulation
Executive Order 11990 discourages direct or indirect support of new construction impacting wetlands wherever there is a practicable alternative. The Fish and Wildlife Service's National Wetlands Inventory can be used as a primary screening tool, but observed or known wetlands not indicated on NWI maps must also be processed Off-site impacts that result in draining, impounding, or destroying wetlands must also be processed.	Executive Order 11990	24 CFR 55.20 can be used for general guidance regarding the 8 Step Process.

1. Does this project involve new construction as defined in Executive Order 11990, expansion of a building's footprint, or ground disturbance? The term "new construction" shall include draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after the effective date of the Order

No

✓ Yes

2. Will the new construction or other ground disturbance impact an on- or off-site wetland? The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

"Wetlands under E.O. 11990 include isolated and non-jurisdictional wetlands."

✓ No, a wetland will not be impacted in terms of E.O. 11990's definition of new construction.

Based on the response, the review is in compliance with this section. Document and upload a map or any other relevant documentation below which explains your determination

Yes, there is a wetland that be impacted in terms of E.O. 11990's definition of new construction.

Screen Summary

Compliance Determination

Areas potentially associated with wetlands were not observed on the Property during the site reconnaissance. In addition, review of the National Wetlands Inventory (NWI) Map from the U.S. Fish and Wildlife Service and the EGLE Wetlands Map Viewer did not identify any wetlands on the Property. The Project is in compliance with Executive Order 11990. Attachment 16

Supporting documentation

16 Wetlands.pdf

Are formal compliance steps or mitigation required?

Yes

✓ No

Wild and Scenic Rivers Act

General requirements	Legislation	Regulation
The Wild and Scenic Rivers Act provides federal protection for certain free-flowing, wild, scenic and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS) from the effects of construction or development.	The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287), particularly section 7(b) and (c) (16 U.S.C. 1278(b) and (c))	36 CFR Part 297

1. Is your project within proximity of a NWSRS river?

✓ No

Yes, the project is in proximity of a Designated Wild and Scenic River or Study Wild and Scenic River.
Yes, the project is in proximity of a Nationwide Rivers Inventory (NRI) River.

Screen Summary

Compliance Determination

The National Wild and Scenic Rivers System map (maintained and managed by the Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, and U.S. Forest Service) were reviewed to determine if the Property is within a designated wild and scenic river area. There are no wild and scenic rivers located within the City of Detroit or Wayne County. This Project is not within proximity of a NWSRS river. The project is in compliance with the Wild and Scenic Rivers Act. Attachment 17

Supporting documentation

17 Wild and Scenic Rivers.pdf

Are formal compliance steps or mitigation required?

Yes

✓ No

Environmental Justice

General requirements	Legislation	Regulation
Determine if the project creates adverse environmental impacts upon a low-income or minority community. If it does, engage the community in meaningful participation about mitigating the impacts or move the project.	Executive Order 12898	

HUD strongly encourages starting the Environmental Justice analysis only after all other laws and authorities, including Environmental Assessment factors if necessary, have been completed.

1. Were any adverse environmental impacts identified in any other compliance review portion of this project's total environmental review?

Yes

✓ No

Based on the response, the review is in compliance with this section.

Screen Summary

Compliance Determination

This Project will not have a disproportionately high adverse effect on human health or environment of minority populations and/or low-income populations. The buildings will serve low-income and homeless residents. The development is in the City of Detroit, which is made up of 87% ethnic minorities. New facilities and residences are intended to enhance the quality of life for new and existing residents and the community. No persons will be displaced due to this Project. No adverse environmental impacts were identified in the project's total environmental review. The project is in compliance with Executive Order 12898. Attachment 18

Supporting documentation

18 Environmental Justice.pdf

Are formal compliance steps or mitigation required?

Yes

The-Anchor-at-Mariners-Inn	Detroit, MI	900000010276457

- ✓ No

Mariner's Inn
PM Environmental
October 13, 2022

Response Activity or Continuing Obligation	Required Activities	Party Responsible for Completing Activity	Timing of Activity	Required Follow-up or Reporting
ResAP – Remedial Action	A. Excavate "facility" portion of the subject property with contaminated soils. B. Collect verification of soil remediation (VSR) samples to document removal of contaminated soils below criteria.	General Contractor, Consultant Oversight	During Construction	No Further Action report preparation for the "facility" portion of the subject property and submitted for EGLE review following completion of the remedial excavations
Section 106 – Unanticipated Discoveries Plan	Once construction has started, if the scope of work changes in any way, SHPO will be notified immediately. Also, 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 will be contacted immediately.	Construction Crew, Foremen, Developer	During Construction	Unanticipated Discoveries Plan with SHPO approval
Noise Analysis – Unacceptable Noise	Appropriate construction materials will be incorporated in the building to mitigate noise levels within the acceptable range. Materials to be utilized include two inch by two inch and two inch by four inch wood studs, five and one-half inch glass fiber insulation, five-eighths inch fire-shield gypsum board, four inch face brick, and vinyl windows with aluminum storefronts and curtain walls.	Architect, Construction, Crew, Foremen, Developer	During Construction	Building specs

MARINERS INN
EXECUTIVE SUMMARY

Cinnaire Solutions Contact
Ed Potas, Real Estate Development Manager
Cinnaire Solutions
2111 Woodward Avenue, Suite 600
Detroit, MI 48201
Email: EPotas@cinnaire.com
Phone: 313-544-4009

Mariners Inn Contact
David Sampson, Chief Executive Officer
Mariners Inn
445 Ledyard Street
Detroit, MI 48201
E-mail: dsampson@marinersinn.org
Phone: 313-962-9446

Development Consultant Contact
Joe Heaphy, President
Ethos Development Partners
882 Oakman Boulevard, Suite G
Detroit, MI 48238
Email: jheaphy@ethosdp.com
Phone: 313-850-5844

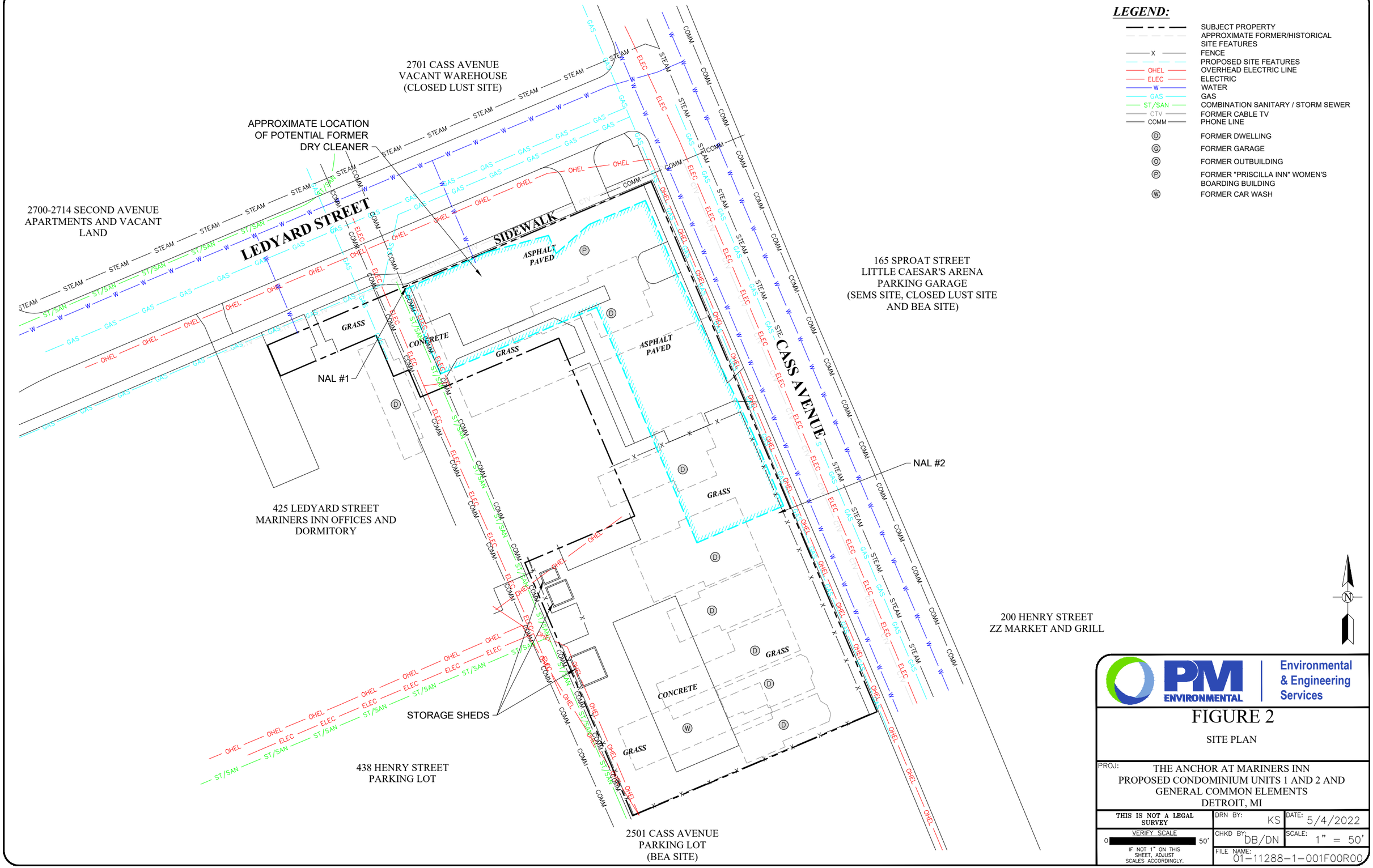
Overview
Cinnaire Solutions, a non-profit housing development organization with significant LIHTC experience, has partnered with another non-profit organization, Mariners Inn, to develop 445 Ledyard Street parcel into a new construction permanent supportive housing, mixed-use project. Located in Midtown Detroit the project site is situated within the Cass Park Historic District. The building will be a balance of contemporary architecture while utilizing materials and scale that are representative of the neighborhood fabric and history.

The project site fronts Cass Avenue, a busy street connecting neighborhood services and public spaces within proximity. The proximity of amenities is reflected in the project location's Walk Score of 82 ("Very Walkable"). The site will also benefit from its proximity to downtown and the developments in Midtown.

Given the strength of the market, the developers of the project are proposing a mixed-use new construction building that will have permanent supportive housing and commercial space. The parking has been designed to reflect the building typology, where most residents will not have vehicles. The residential portion of the building will consist of 44 one-bedroom Permanent Supportive Housing units for individuals who are Homeless or Chronically Homeless. The developers will be requesting 44 Section 8 Project Based Vouchers from MSHDA for these units.

Development Cost
The following is a summary of sources of financing for the project:

Source	Amount	STATUS
Detroit AHLF	$1,500,000	
MSHDA 9% Credits	$13,648,635	Application to be submitted on 10/1/19
Perm Mortgage	$3,000,000	Cinnaire
Deferred Fee	$ 312,425	
TOTAL	**$18,461,060**	



PM ENVIRONMENTAL | Environmental & Engineering Services

FIGURE 2

SITE PLAN

PROJ: THE ANCHOR AT MARINERS INN
PROPOSED CONDOMINIUM UNITS 1 AND 2 AND
GENERAL COMMON ELEMENTS
DETROIT, MI

THIS IS NOT A LEGAL SURVEY	DRN BY: KS	DATE: 5/4/2022
VERIFY SCALE 0 — 50' IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CHKD BY: DB/DN	SCALE: 1" = 50'
	FILE NAME: 01-11288-1-001F00R00	

Airport Map

June 16, 2022

Project Buffer

Airport Polygons

Airport Map

1:144,448

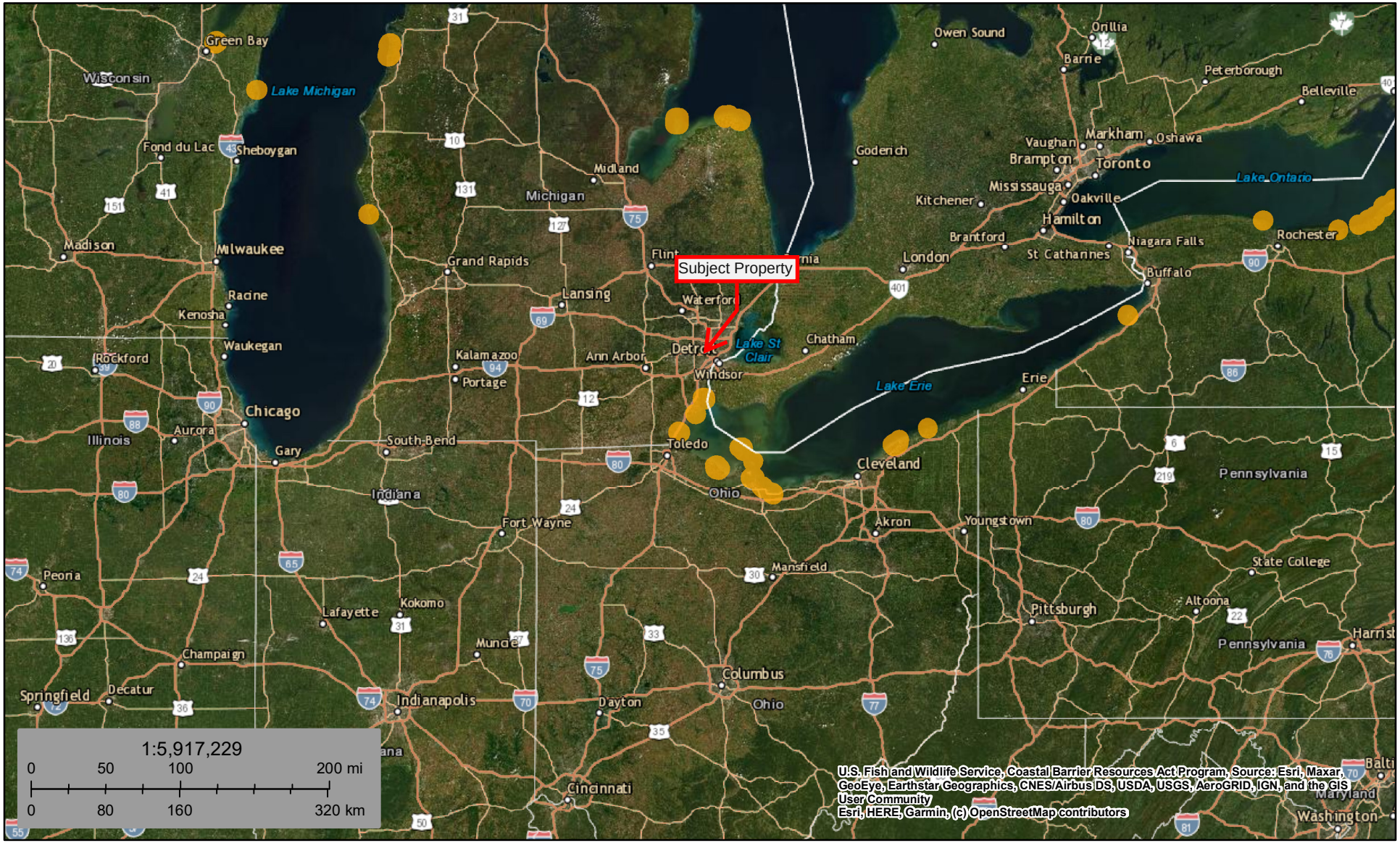
0 0.75 1.5 3 mi

0 1.5 3 6 km

City of Windsor, Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA,

U.S. Fish and Wildlife Service
Coastal Barrier Resources System

CBRS



April 26, 2021

CBRS Units

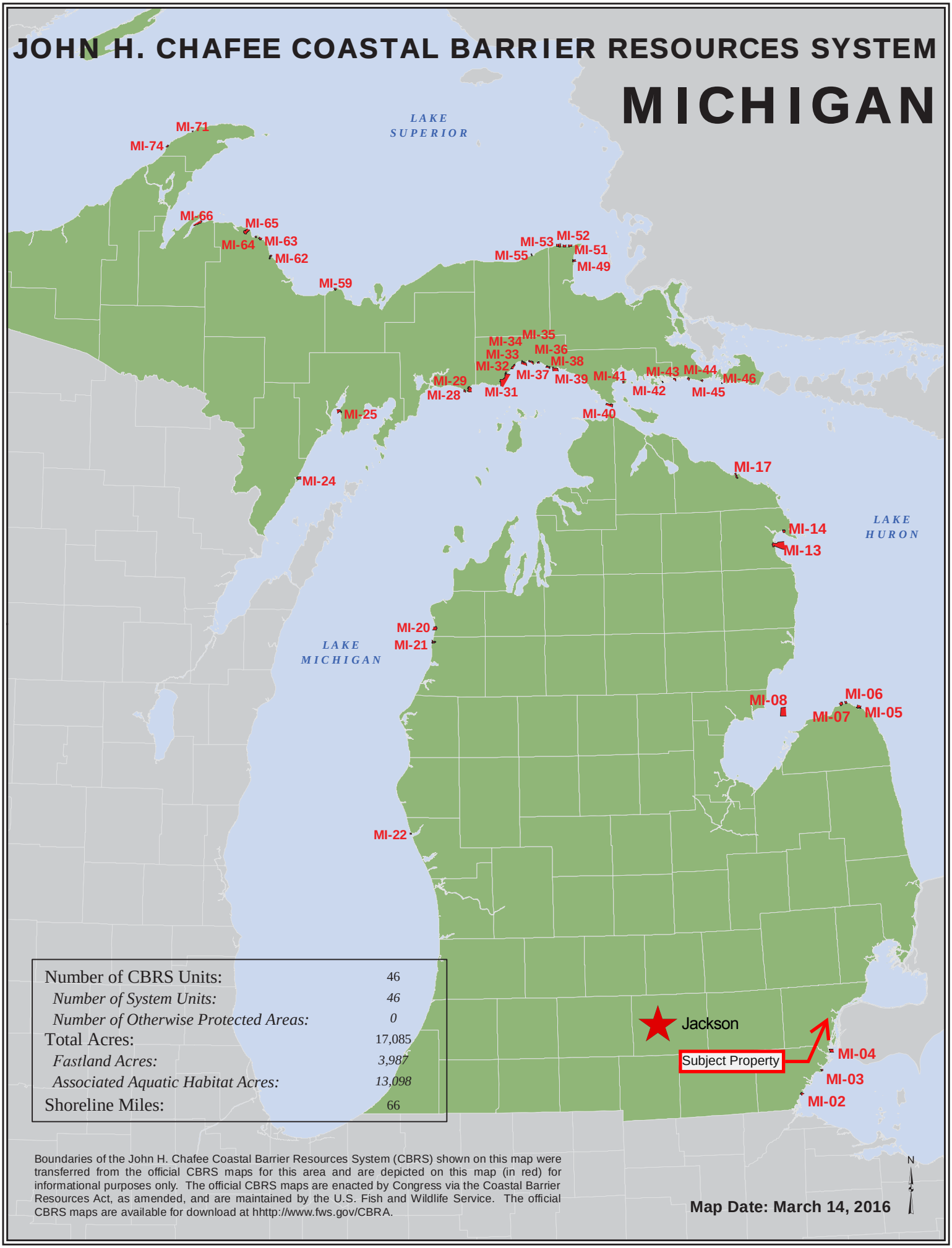
This map is for general reference only. The Coastal Barrier Resources System (CBRS) boundaries depicted on this map are representations of the controlling CBRS boundaries, which are shown on the official maps, accessible at https://www.fws.gov/cbra/maps/index.html. All CBRS related data should be used in accordance with the layer metadata found on the CBRS Mapper website.

The CBRS Buffer Zone represents the area immediately adjacent to the CBRS boundary where users are advised to contact the Service for an official determination (http://www.fws.gov/cbra/Determinations.html) as to whether the property or project site is located "in" or "out" of the CBRS.

CBRS Units normally extend seaward out to the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS mapper.

JOHN H. CHAFEE COASTAL BARRIER RESOURCES SYSTEM

MICHIGAN



Number of CBRS Units:	46
Number of System Units:	*46*
Number of Otherwise Protected Areas:	*0*
Total Acres:	17,085
Fastland Acres:	*3,987*
Associated Aquatic Habitat Acres:	*13,098*
Shoreline Miles:	66

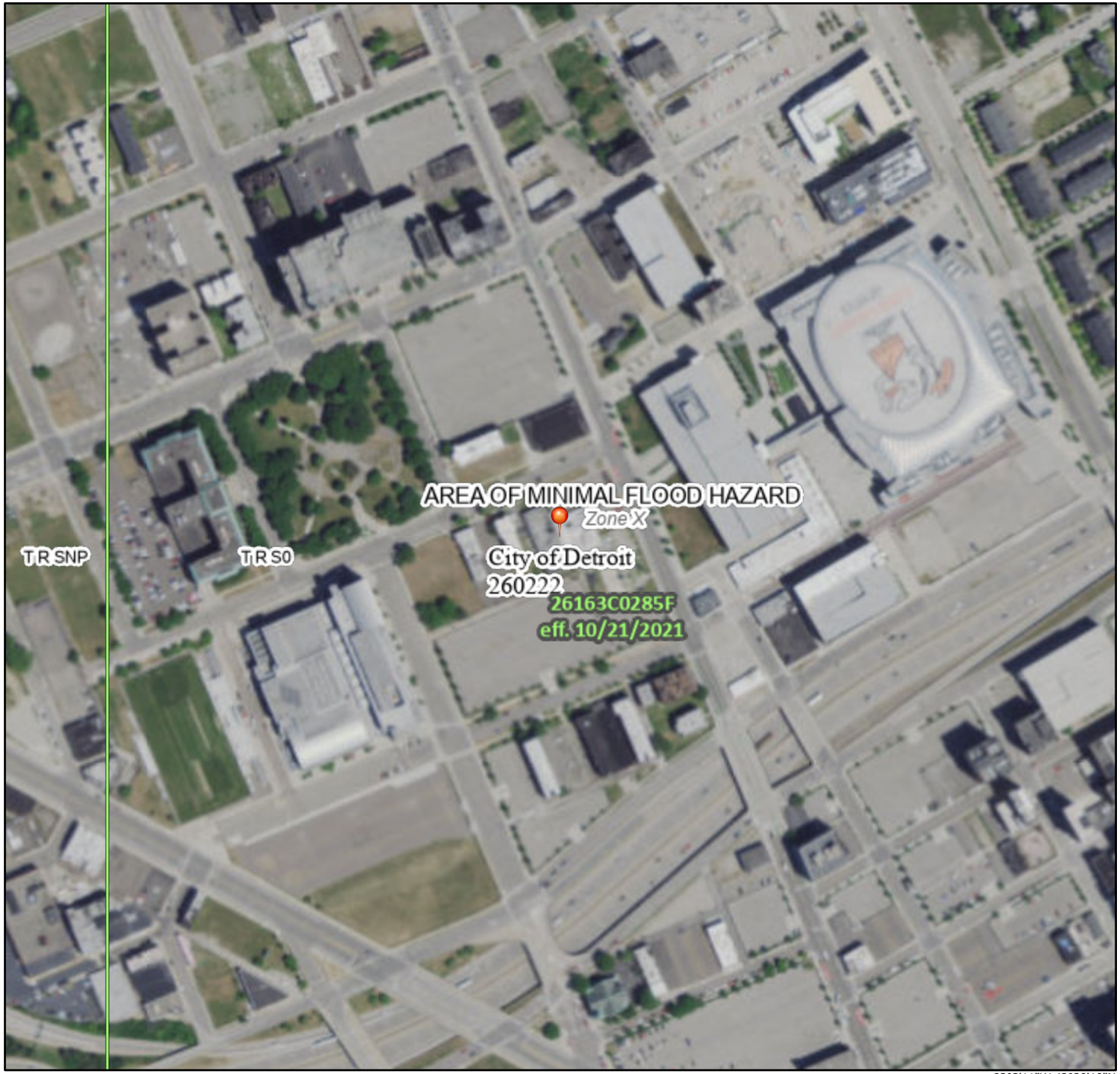
Boundaries of the John H. Chafee Coastal Barrier Resources System (CBRS) shown on this map were transferred from the official CBRS maps for this area and are depicted on this map (in red) for informational purposes only. The official CBRS maps are enacted by Congress via the Coastal Barrier Resources Act, as amended, and are maintained by the U.S. Fish and Wildlife Service. The official CBRS maps are available for download at hhttp://www.fws.gov/CBRA.

Map Date: March 14, 2016

National Flood Hazard Layer FIRMette

FEMA

83°3'48"W 42°20'37"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

83°3'11"W 42°20'10"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

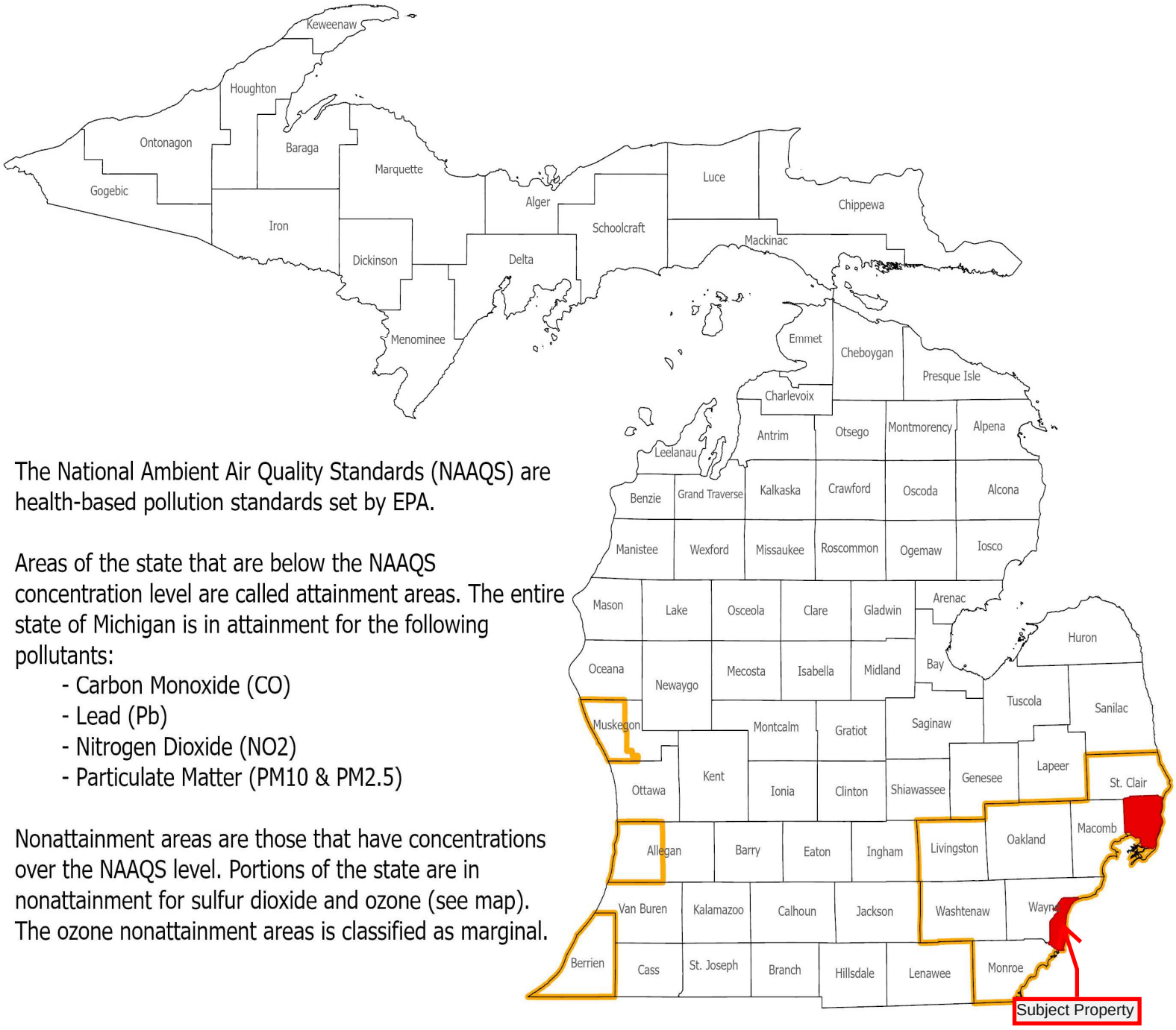
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/25/2022 at 10:24 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Attainment Status for the National Ambient Air Quality Standards



The National Ambient Air Quality Standards (NAAQS) are health-based pollution standards set by EPA.

Areas of the state that are below the NAAQS concentration level are called attainment areas. The entire state of Michigan is in attainment for the following pollutants:

- Carbon Monoxide (CO)
- Lead (Pb)
- Nitrogen Dioxide (NO2)
- Particulate Matter (PM10 & PM2.5)

Nonattainment areas are those that have concentrations over the NAAQS level. Portions of the state are in nonattainment for sulfur dioxide and ozone (see map). The ozone nonattainment areas is classified as marginal.

LEGEND

- Sulfur Dioxide Nonattainment Area
- Ozone Nonattainment Area

See Page 2 for close-up maps of partial county nonattainment areas.

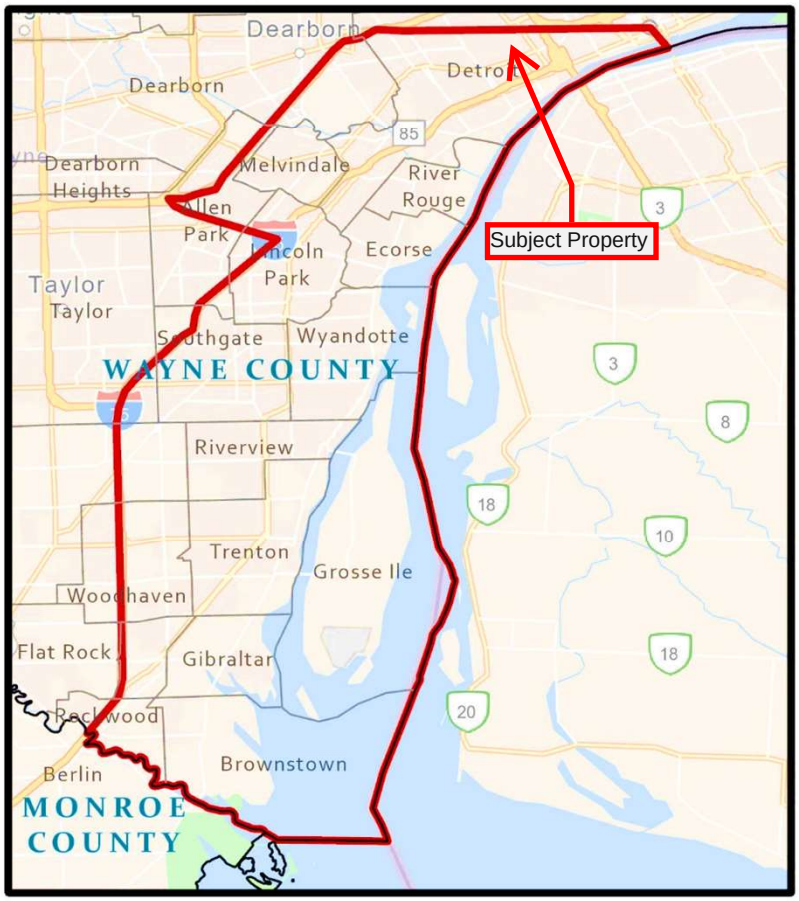
Updated February 5, 2021

Prepared by EGLE, Air Quality Division, State Implementation Plan Development Unit

Close-Up Maps of Partial County Nonattainment Areas

Sulfur Dioxide Nonattainment Areas

Wayne County Area

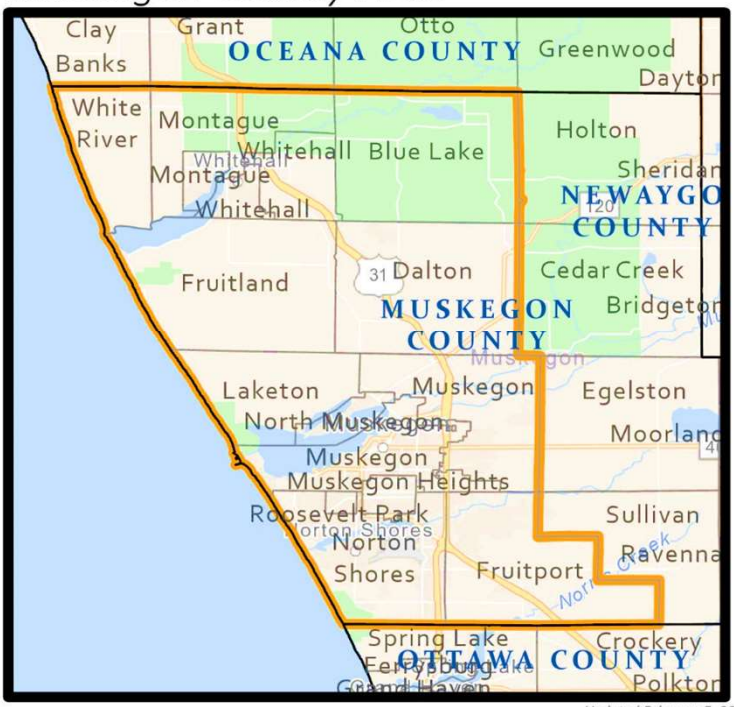


St. Clair County Area

Ozone Nonattainment Areas

Allegan County Area

Muskegon County Area



Updated February 5, 2021
Prepared by EGLE, Air Quality Division, State Implementation Plan Development Unit

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
LANSING

GRETCHEN WHITMER
GOVERNOR

LIESL EICHLER CLARK
DIRECTOR

June 17, 2022

Ms. Lindsey Sorensen, Director of Research Group
PM Environmental, Inc.
560 5th Street, N.W., Suite 301
Grand Rapids, Michigan 49504 **Via email only**

Dear Lindsey Sorensen:

Subject: The Anchor at Mariners Inn LDHA LP Project

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) has reviewed the federal regulations related to general conformity of projects with state implementation plans (SIP) for air quality. In particular, 40 Code of Federal Regulations (CFR) Section 93.150 et seq, which states that any federally funded project in a nonattainment or maintenance area must conform to the Clean Air Act requirements including the State's SIP if they may constitute a significant new source of air pollution.

On August 3, 2018, Wayne County was designated nonattainment for the 2015 National Ambient Air Quality Standard (NAAQS) for ozone, and thus, general conformity must be evaluated when completing construction projects of a given size and scope. EGLE is currently working to complete the required SIP submittal for this area; therefore, an alternative evaluation was completed to assess conformity. Specifically, EGLE considered the following information from the United States Environmental Protection Agency's (USEPA) general conformity guidance, which states, "historical analysis of similar actions can be used in cases where the proposed projects are similar in size and scope to previous projects."

EGLE has reviewed the Anchor at Mariners Inn project proposed to be completed with federal grant monies, including the construction of a six-story, mixed-use apartment building in the City of Detroit. The property will feature 44 one-bedroom units for individuals experiencing homelessness or are chronically homeless and 40 short-term single-room occupancy Recovery Housing units. The property is located at 445 Ledyard Street. Construction is expected to begin in early spring of 2023 with an anticipated completion date of fall 2023.

In reviewing the *"Air Quality and Greenhouse Gas Study: Uptown Orange Apartments in Orange, California,"* dated December 2012, prepared for KTGY Group, Inc., by UltraSystems Environmental, Inc., it was determined that emission levels for the project were below the de minimis levels for general conformity. The Uptown Orange Apartments project and related parking structure construction was estimated to take 33 months to complete, would encompass an area of 5.57 acres, and included two

four-story residential units with a total of 334 apartments, and two parking structures with a total of 494 and 679 parking stalls, respectively.

The size, scope, and duration of the Anchor at Mariners Inn project proposed is much smaller in scale than the Uptown Orange Apartments project described above and should not exceed the de minimis levels included in the federal general conformity requirements. Therefore, it does not require a detailed conformity analysis.

If you have any further questions regarding this matter, please contact me at 517-648-6314; BukowskiB@Michigan.gov; or EGLE, AQD, P.O. Box 30260, Lansing, Michigan 48909-7760.

Sincerely,

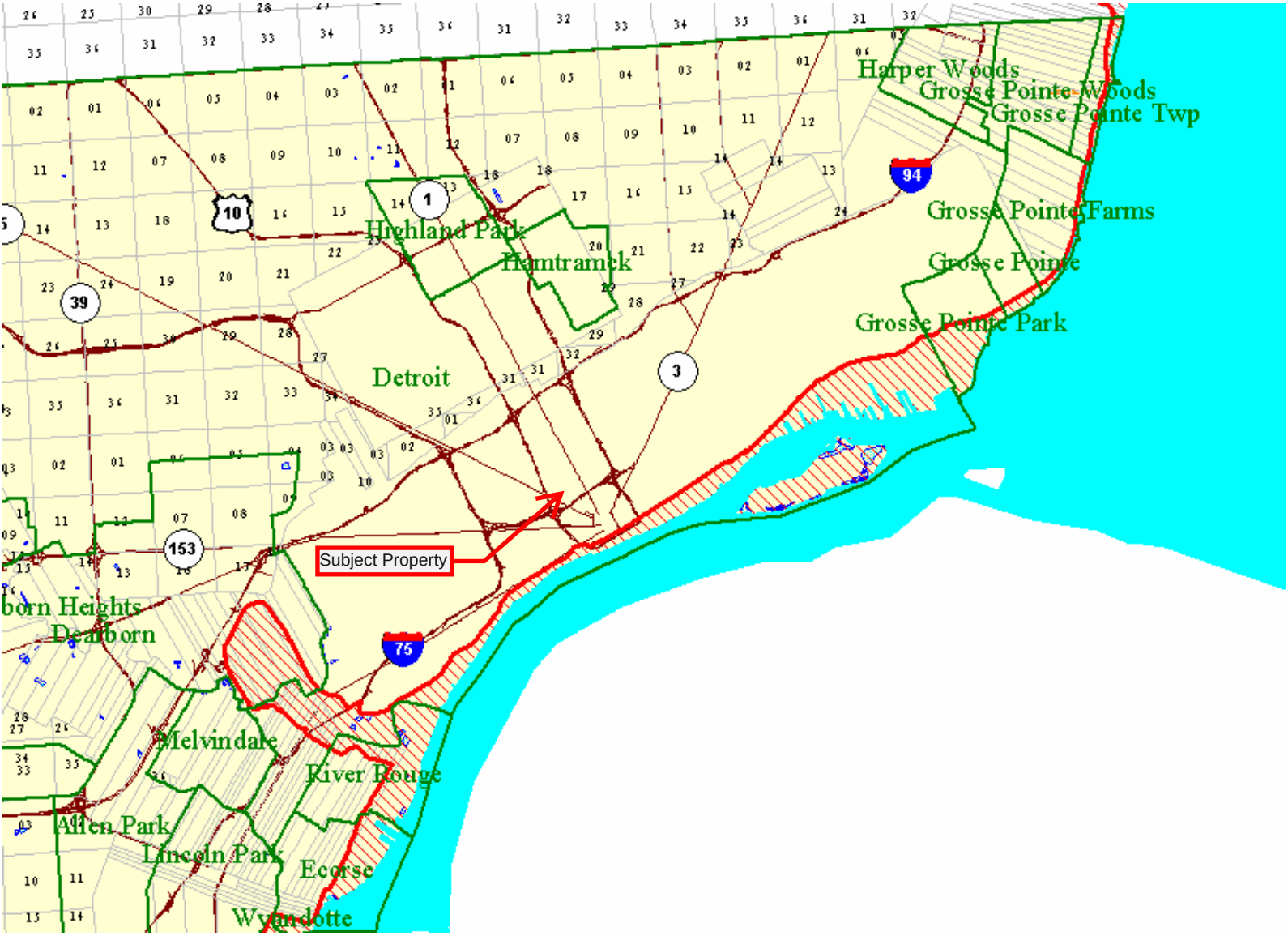
Breanna Bukowski

Breanna Bukowski
Environmental Quality Analyst

cc: Michael Leslie, USEPA Region 5
Carey Kratz, PM Environmental
Penny Dwoinen, City of Detroit, Housing and Revitalization Department

Wayne County
Grosse Point Township, Grosse Point Woods, Grosse Point Farms
Grosse Point, Grosse Point Park, and Detroit, T1S R14E
Detroit, T1S R14E, T2S R13E, andT2S R12E
River Rouge, T2S R11E

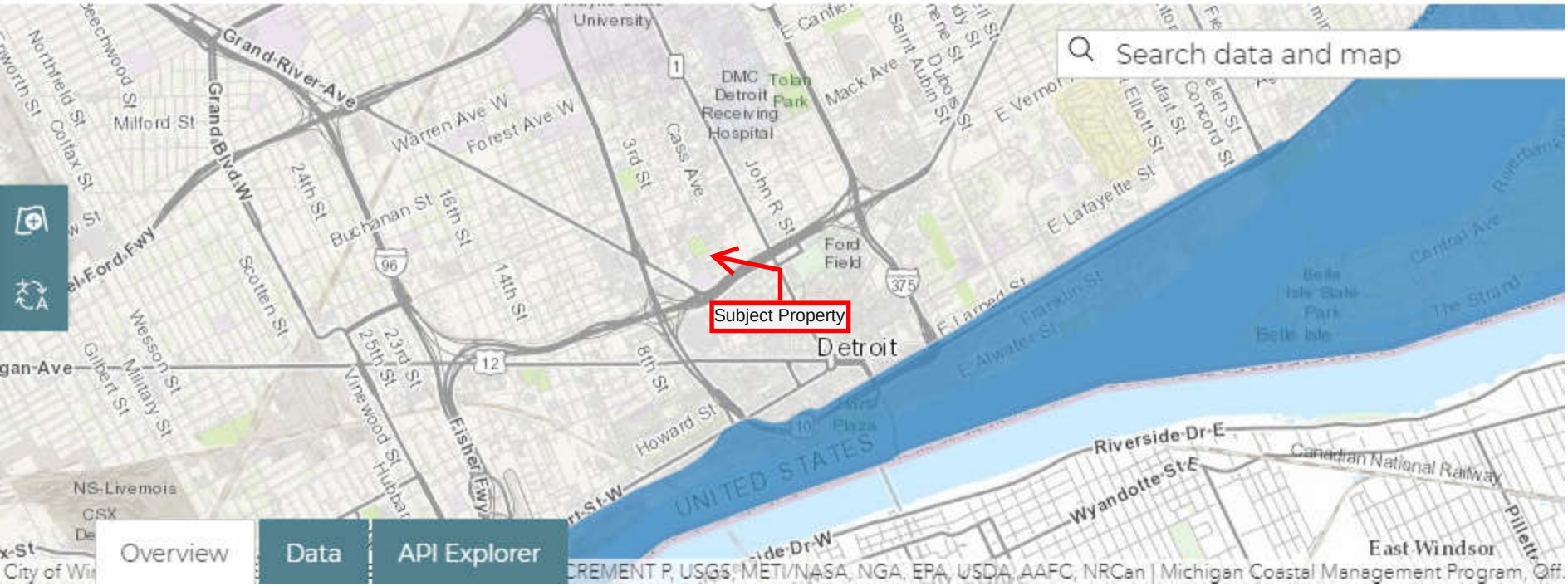
The heavy red line is the ***Coastal Zone Management Boundary***
The red hatched area is the ***Coastal Zone Management Area***.



Department of Environment, Great Lakes, and Energy

Home | Maps and Apps | Story Maps | Data Systems | Open Data | Contact | Michigan.gov/EGLE

Last updated 2 months ago | 42 Records



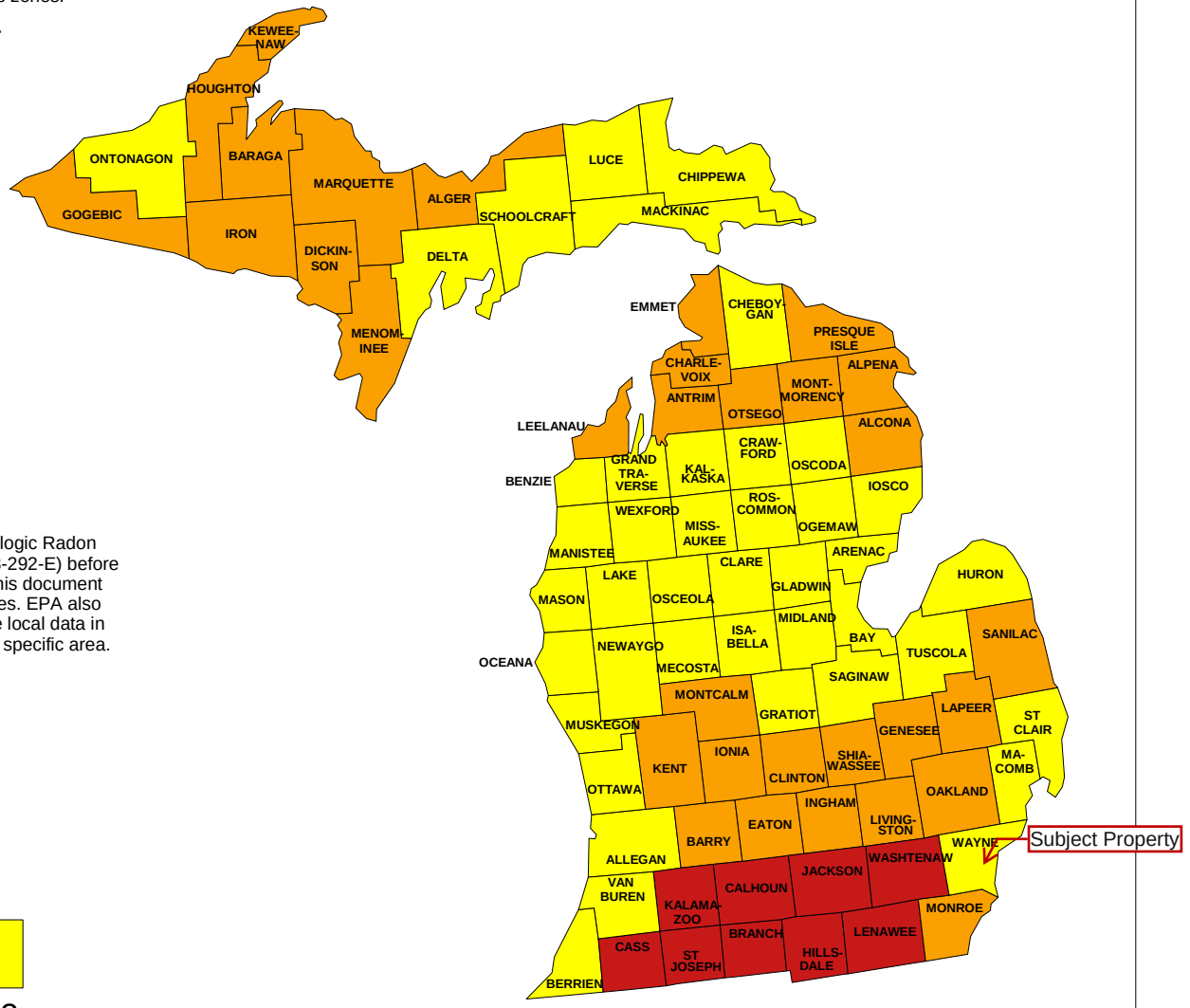
MICHIGAN - EPA Map of Radon Zones

http://www.epa.gov/radon/zonemap.html

The purpose of this map is to assist National, State and local organizations to target their resources and to implement radon-resistant building codes.

This map is not intended to determine if a home in a given zone should be tested for radon. Homes with elevated levels of radon have been found in all three zones.

All homes should be tested, regardless of zone designation.



IMPORTANT: Consult the publication entitled "Preliminary Geologic Radon Potential Assessment of Michigan" (USGS Open-file Report 93-292-E) before using this map. http://energy.cr.usgs.gov/radon/grpinfo.html This document contains information on radon potential variations within counties. EPA also recommends that this map be supplemented with any available local data in order to further understand and predict the radon potential of a specific area.

Zone 1 Zone 2 Zone 3

Department of Environmental Quality

WASTE

Solid Waste
Hazardous Waste
Transporters
Radiological Protection
Michigan Indoor Radon Program
Low-Level Radioactive Waste
Radioactive Materials
Radiological Monitoring & Reporting
Radiological Emergency Preparedness
Waste Compliance & Enforcement

DEQ / WASTE / RADIOLOGICAL PROTECTION / MICHIGAN INDOOR RADON PROGRAM

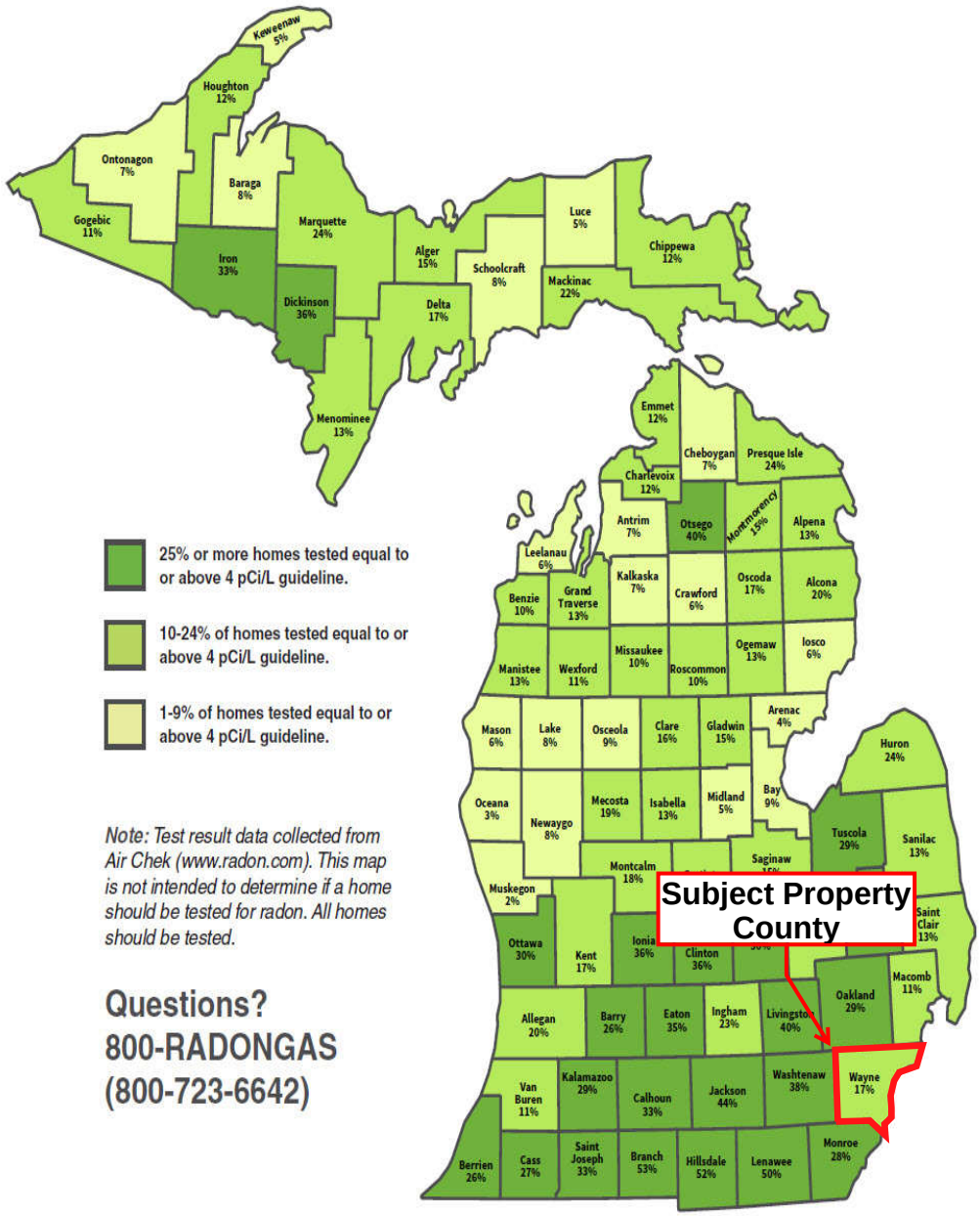
Your County's Radon Levels

Contact: 800-723-6642 or radon@michigan.gov
Agency: Environmental Quality

Some counties are known to have a higher likelihood of having homes with elevated radon. Check out the map below to see if homes in your county typically have elevated radon levels. Keep in mind that homes in counties with a lower likelihood of having high radon levels should still be tested.

While your neighbor's test results may give you an idea of the potential for a problem in your home, radon levels can vary significantly from lot to lot and home to home. Do not rely on your neighbor's test results to determine your risk. Test your own home and be certain! Find additional details on county radon levels on-line at http://mi-radon.info/MI_counties.html.

Click here to learn more about the radon survey, mapping radon levels in Michigan, and the indoor radon program.


Keweenaw 5%
Houghton 12%
Ontonagon 7%
Baraga 8%
Gogebic 11%
Iron 33%
Dickinson 36%
Marquette 24%
Menominee 13%
Alger 15%
Schoolcraft 8%
Delta 17%
Luce 5%
Mackinac 22%
Chippewa 12%
Emmet 12%
Cheboygan 7%
Presque Isle 24%
Charlevoix 12%
Antrim 7%
Otsego 40%
Montmorency 15%
Alpena 13%
Leelanau 6%
Benzie 10%
Grand Traverse 13%
Kalkaska 7%
Crawford 6%
Oscoda 17%
Alcona 20%
Manistee 13%
Wexford 11%
Missaukee 10%
Roscommon 10%
Ogemaw 13%
Iosco 6%
Mason 6%
Lake 8%
Osceola 9%
Clare 16%
Gladwin 15%
Arenac 4%
Huron 24%
Oceana 3%
Newaygo 8%
Mecosta 19%
Isabella 13%
Midland 5%
Bay 9%
Tuscola 29%
Sanilac 13%
Montcalm 18%
Saginaw
Muskegon 2%
Ottawa 30%
Kent 17%
Ionia 36%
Clinton 36%
Saint Clair 13%
Macomb 11%
Oakland 29%
Allegan 20%
Barry 26%
Eaton 35%
Ingham 23%
Livingston 40%
Van Buren 11%
Kalamazoo 29%
Calhoun 33%
Jackson 44%
Washtenaw 38%
Wayne 17%
Berrien 26%
Cass 27%
Saint Joseph 33%
Branch 53%
Hillsdale 52%
Lenawee 50%
Monroe 28%
Subject Property County
25% or more homes tested equal to or above 4 pCi/L guideline.
10-24% of homes tested equal to or above 4 pCi/L guideline.
1-9% of homes tested equal to or above 4 pCi/L guideline.
Note: Test result data collected from Air Chek (www.radon.com). This map is not intended to determine if a home should be tested for radon. All homes should be tested.
Questions?
800-RADONGAS
(800-723-6642)

GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
WARREN DISTRICT OFFICE

LIESL EICHLER CLARK
DIRECTOR

July 21, 2022

The Anchors at Mariners Inn, Limited Dividend Housing Association Limited Partnership
c/o Chris Laurent
10 East Doty Street, Suite 445
Madison, Wisconsin 53703

Dear Chris Laurent:

SUBJECT: Notice of Approval of the Response Activity Plan – Remedial Action Plan for: Anchors at Mariners Inn (proposed development)
445 Ledyard Street, Detroit, Wayne County, Michigan
Tax Identification Number: 02000618-9 (portion of); EGLE Site ID No. 82008730

The Michigan Department of Environment, Great Lakes, and Energy (EGLE), Remediation and Redevelopment Division, has reviewed the Response Activity Plan – Remedial Action Plan for response activities to be undertaken at a portion of the property (the facility) identified as 445 Ledyard Street, Detroit, Wayne County, Michigan. The ResAP dated July 7, 2022, was submitted by PM Environmental on behalf of The Anchors at Mariners Inn, Limited Dividend Housing Association Limited Partnership, pursuant to Section 20114b(3) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). Based upon representations and information contained in the submittal, the response activities as proposed in the Response Activity Plan -Remedial Action Plan are approved.

This approval of the Response Activity Plan – Remedial Action Plan is for the undertaking of response activities to remediate contaminated soils and associated risk for the relevant pathways at a portion of the property (the facility) as identified in Section 8.0 of the response activity plan, received by EGLE on July 18, 2022, and is based upon the representations and information contained in this submittal.

EGLE expresses no opinion as to whether other conditions that may exist will be adequately addressed by the response activities that are proposed. Notwithstanding this approval, if environmental contamination is found to exist that is not addressed by the Response Activity Plan and you are otherwise liable for the contamination, additional response activities may be necessary.

If you should have further questions or concerns, please contact Ms. Jeanne Schlaufman, EGLE, RRD, Warren District Office, SchlaufmanJ1@Michigan.gov.

Sincerely,

Paul J Owens

Paul Owens, District Supervisor
Warren District Office
Remediation and Redevelopment Division

cc: Nicholas Lieder, PM Environmental, Inc.
Beth Vens, EGLE
Jeanne Schlaufman, EGLE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Michigan Ecological Services Field Office
2651 Coolidge Road Suite 101
East Lansing, MI 48823-6360
Phone: (517) 351-2555 Fax: (517) 351-1443
http://www.fws.gov/midwest/EastLansing/

In Reply Refer To: April 26, 2021
Consultation Code: 03E16000-2021-SLI-1324
Event Code: 03E16000-2021-E-04826
Project Name: Ledyard, Detroit, Michigan

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

To Whom It May Concern:

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

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

There are several important steps in evaluating the effects of a project on listed species. Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at http://www.fws.gov/midwest/endangered/section7/s7process/index.html. This website contains step-by-step instructions to help you determine if your project may affect listed species and lead you through the section 7 consultation process.

Under 50 CFR 402.12(e) (the regulations that implement section 7 of the Endangered Species Act), the accuracy of this species list should be verified after 90 days. You may verify the list by visiting the ECOS-IPaC website (http://ecos.fws.gov/ipac/) at regular intervals during project planning and implementation and completing the same process you used to receive the attached list.

For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project area or may be affected by your proposed project.

Please see the "Migratory Birds" section below for important information regarding incorporating migratory birds into your project planning. Our Migratory Bird Program has developed recommendations, best practices, and other tools to help project proponents voluntarily reduce impacts to birds and their habitats. The Bald and Golden Eagle Protection Act prohibitions include the take and disturbance of eagles. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at https://www.fws.gov/midwest/eagle/permits/index.html to help you avoid impacting eagles or determine if a permit may be necessary.

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

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

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

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 03E16000-2021-SLI-1324
Event Code: 03E16000-2021-E-04826
Project Name: Ledyard, Detroit, Michigan
Project Type: DEVELOPMENT
Project Description: Redevelopment
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.33982705,-83.05769142156791,14z

Counties: Wayne County, Michigan

Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

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

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

---

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

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949 General project design guidelines: https://ecos.fws.gov/docs/tess/ipac_project_design_guidelines/doc5663.pdf	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 General project design guidelines: https://ecos.fws.gov/docs/tess/ipac_project_design_guidelines/doc5664.pdf	Threatened

Birds

NAME	STATUS
Piping Plover *Charadrius melodus*	Endangered

Population: [Great Lakes watershed DPS] - Great Lakes, watershed in States of IL, IN, MI, MN, NY, OH, PA, and WI and Canada (Ont.)
There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/6039

Red Knot *Calidris canutus rufa*	Threatened

No critical habitat has been designated for this species.
This species only needs to be considered under the following conditions:

- Only actions that occur along coastal areas during the Red Knot migratory window of MAY 1 - SEPTEMBER 30.

Species profile: https://ecos.fws.gov/ecp/species/1864

Reptiles

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

No critical habitat has been designated for this species.
This species only needs to be considered under the following conditions:

- For all Projects: Project is within EMR Range

Species profile: https://ecos.fws.gov/ecp/species/2202
General project design guidelines:
https://ecos.fws.gov/docs/tess/ipac_project_design_guidelines/doc5280.pdf

Clams

NAME	STATUS
Northern Riffleshell *Epioblasma torulosa rangiana*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/527

Flowering Plants

NAME	STATUS
Eastern Prairie Fringed Orchid *Platanthera leucophaea*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/601

Critical habitats

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

USFWS National Wildlife Refuge Lands And Fish Hatcheries

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

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

Migratory Birds

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

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

---

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

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

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

NAME	BREEDING SEASON
American Bittern *Botaurus lentiginosus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6582	Breeds Apr 1 to Aug 31
American Golden-plover *Pluvialis dominica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Dunlin *Calidris alpina arcticola* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Golden-winged Warbler *Vermivora chrysoptera* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8745	Breeds May 1 to Jul 20
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Willow Flycatcher *Empidonax traillii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/3482	Breeds May 20 to Aug 31
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the

FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

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

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

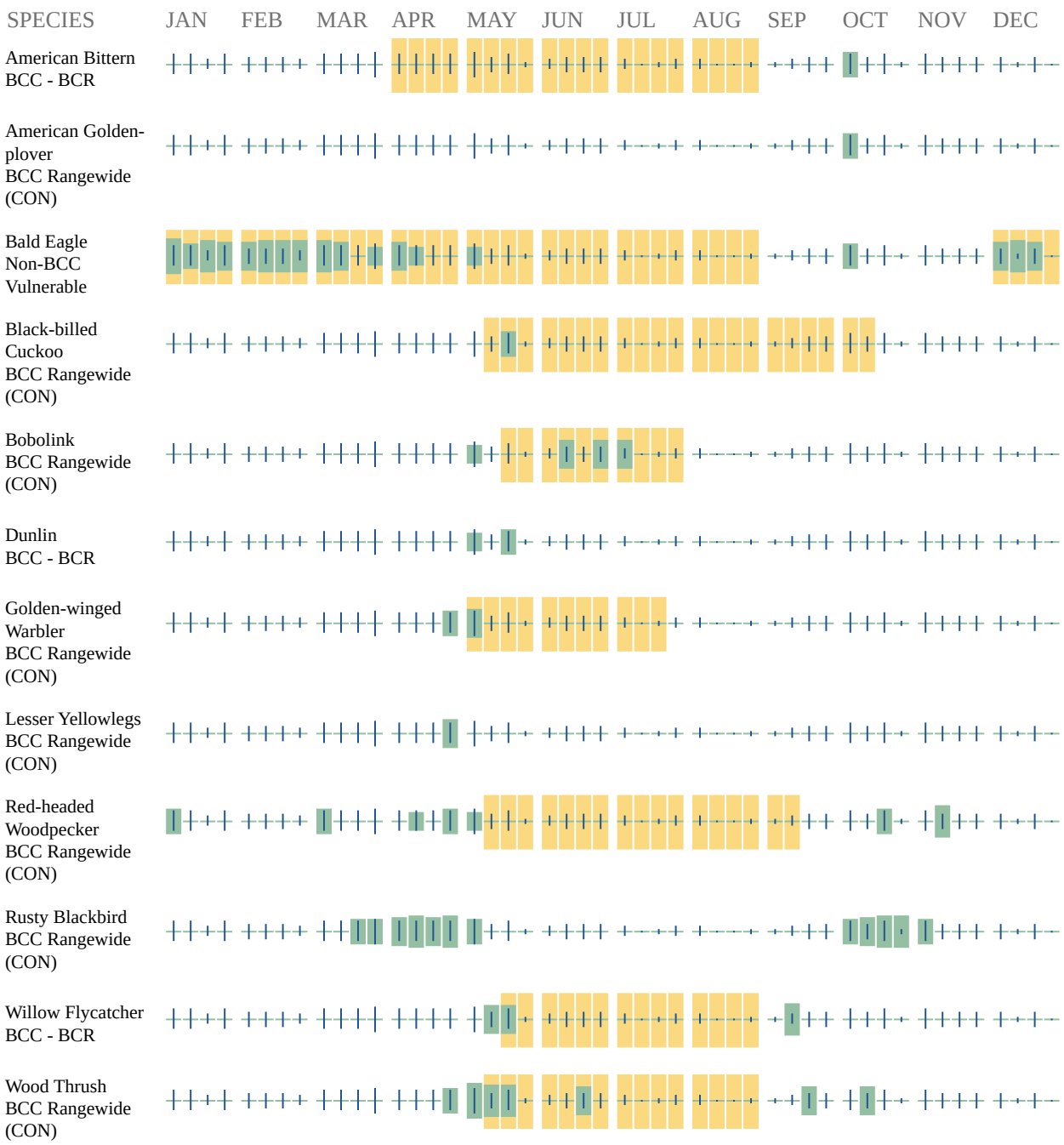
1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability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

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

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

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

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



Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php

- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

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

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

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

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

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

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

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

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab

of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

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

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

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

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

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

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

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be

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

Wetlands

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

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

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

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

Assisted Projects Near Hazardous Operations Map 1
Aerial View

April 26, 2021

1:36,112

0 0.3 0.6 1.2 mi

0 0.5 1 2 km

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Assisted Projects Near Hazardous Operations Map 1
Street View

April 26, 2021

1:36,112

0 0.3 0.6 1.2 mi

0 0.5 1 2 km

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Wayne County, Michigan

April 26, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,060 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wayne County, Michigan
Survey Area Data: Version 6, Jun 1, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 31, 2014—Jun 7, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UrbarB	Urban land-Riverfront complex, dense substratum, 0 to 4 percent slopes	2.0	100.0%
Totals for Area of Interest		**2.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Wayne County, Michigan

UrbarB—Urban land-Riverfront complex, dense substratum, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: 2whsx
Elevation: 560 to 720 feet
Mean annual precipitation: 28 to 38 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 135 to 210 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 80 percent
Riverfront, dense substratum, and similar soils: 19 percent
Minor components: 1 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 0 inches to manufactured layer
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: No

Description of Riverfront, Dense Substratum

Setting

Landform: Wave-worked till plains, water-lain moraines, deltas
Down-slope shape: Linear
Across-slope shape: Linear, convex
Parent material: Loamy human-transported material over clayey lodgment till

Typical profile

^Au - 0 to 6 inches: sandy loam
^Cu1 - 6 to 16 inches: very artifactual sandy loam
^Cu2 - 16 to 46 inches: gravelly-artifactual loam
^Cu3 - 46 to 68 inches: very artifactual loam
2Cd - 68 to 80 inches: clay

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: 56 to 78 inches to densic material
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 28 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline (0.1 to 1.5 mmhos/cm)
Available water capacity: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: B
Ecological site: F099XY007MI - Lake Plain Flats
Hydric soil rating: No

Minor Components

Riverfront, dense substratum, steep

Percent of map unit: 1 percent
Landform: Deltas, wave-worked till plains, water-lain moraines
Down-slope shape: Linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

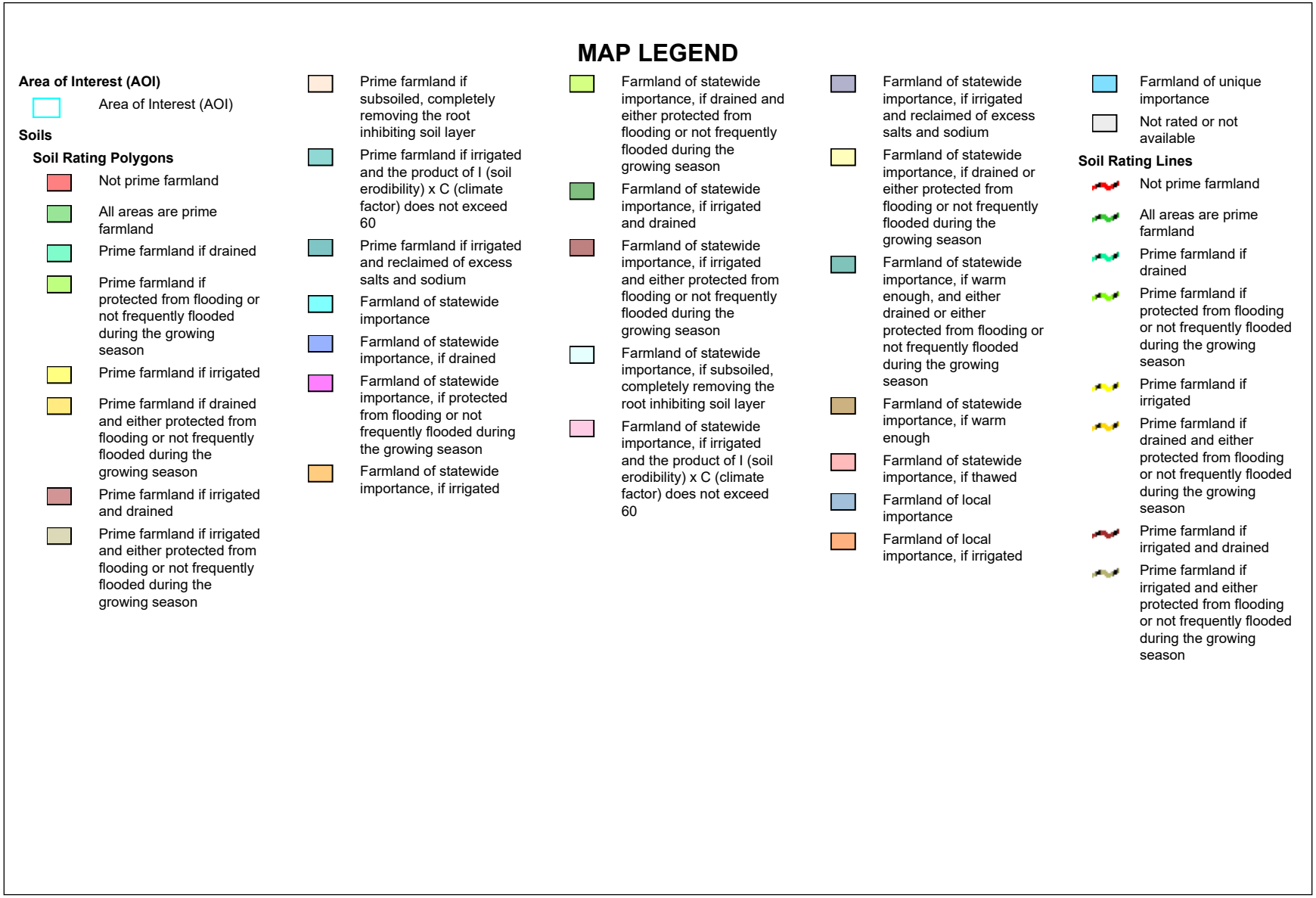
Map Scale: 1:1,060 if printed on A portrait (8.5" x 11") sheet.

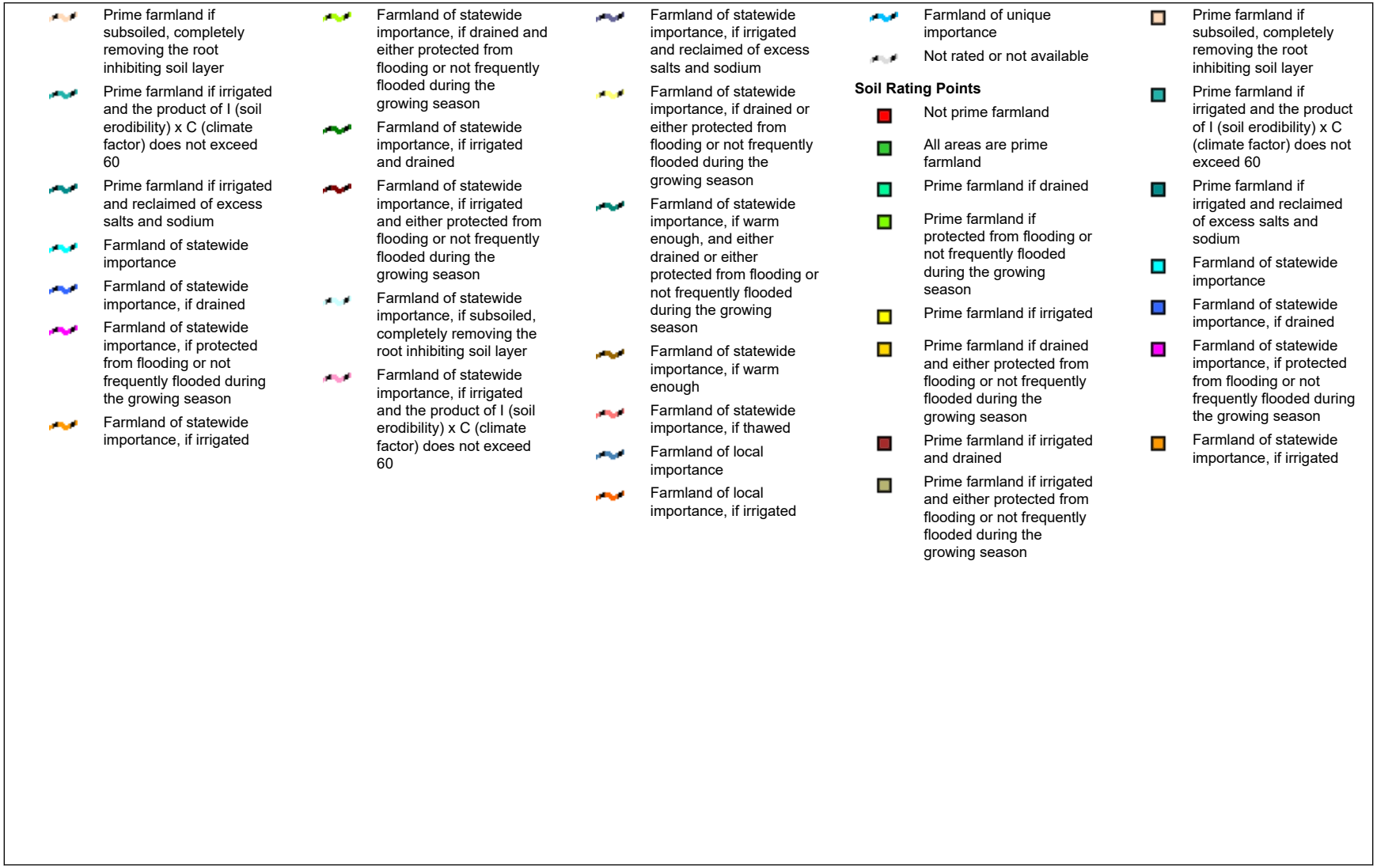
N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84


MAP LEGEND
Area of Interest (AOI)
Area of Interest (AOI)
Soils
Soil Rating Polygons
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Lines
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season


Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Points
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wayne County, Michigan
Survey Area Data: Version 6, Jun 1, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 31, 2014—Jun 7, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
UrbarB	Urban land-Riverfront complex, dense substratum, 0 to 4 percent slopes	Not prime farmland	2.0	100.0%
Totals for Area of Interest			**2.0**	**100.0%**

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Housing and Revitalization Department

Coleman A. Young Municipal Center
2 Woodward Avenue. Suite 908
Detroit, Michigan 48226

Phone: 313.224.6380
Fax: 313.224.1629
www.detroitmi.gov

Submit one application for each project for which comment is requested. Consult the *Instructions for the Application for HRD Section 106 Consultation Form* when completing this application. Once application form is complete please submit via: https://app.smartsheet.com/b/form/1faa296eedac476a9fbf2ef1916ddb99, along with any supplemental attachments, up to 250MB.

I. GENERAL INFORMATION

☒ New submittal
☐ More information relating to and existing project

a. **Project Name:** **The Anchor at Mariners Inn**
b. **Project Municipality**: Detroit
c. **Project Address**: 445 Ledyard St.

II. FEDERAL AGENCY INVOLVEMENT AND RESPONSE CONTACT INFORMATION

a. **State Agency Contact (*if applicable*):** Detroit Housing & Revitalization Department
Contact Name: Penny Dwoinen
Contact Address: Coleman A. Young Municipal Center, 2 Woodward Ave., Suite 908 **City:** Detroit **Zip:** 48226
Email: dwoinenp@detroitmi.gov **Phone:** 313-224-6380

State Agency Contact (*if applicable*): Michigan State Housing Development Authority
Contact Name: Michael Vollick
Contact Address: 735 E. Michigan Avenue **City:** LansingDetroit **Zip:** 48912
Email: vollickm2@michigan.gov **Phone:** 313-456-2596

b. **Applicant (if different than federal agency):** Name of Applicant's agency/firm
Contact Name: Applicant contact's name
Contact Address: Applicant contact's mailing address **City:** Applicant's city **State:** Applicant contact's state **Zip:** Applicant contact's zip code
Email: Applicant contact's email **Phone:** Applicant contact's phone #

c. **Consulting Firm (if applicable):** PM Environmental, Inc.
Contact Name: Carey Kratz
Contact Address: 3340 Ranger Rd. **City:** Lansing **State:** MI **Zip**: 48906
Email: kratz@pmenv.com Phone: 248-762-7093

III. PROJECT INFORMATION

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

i. **Maps.** Please indicate all maps that will be submitted as attachments to this form.
☒Street map, clearly displaying the direct and indirect APE boundaries
☐Site map
☒USGS topographic map Name(s) of topo map(s): Detroit, MI
☐Aerial map
☒Map of photographs
☒Other: Historic Maps

ii. **Site Photographs**

Coleman A. Young Municipal Center
2 Woodward Avenue. Suite 908
Detroit, Michigan 48226
Phone: 313.224.6380
Fax: 313.224.1629
www.detroitmi.gov

iii. **Describe the APE:**
The APE encompasses all areas from which the proposed new construction will be visible. Immediately surrounding the site are 3- and 4-story commercial and apartment buildings to the north and west; a parking lot to the south; a city park to the northwest; and a multi-deck parking structure (modern) to the east. Beyond this inner ring, but still within the viewshed, are several taller commercial/office buildings, the former Kresge Company headquarters, the Masonic Temple/Auditorium, and a former hotel. Also on the outer ring are smaller commercial buildings to the northeast and apartment buildings to the south. On the western edge of the APE is Cass Technical High School, and on the eastern edge is the Little Caesar's Arena; both are modern structures. The APE is bounded to the south by Fisher Freeway (I-75), to the southwest by Grand River Avenue, and by Woodward Avenue to the east. The Site Context Massing figure in the project plans (p. 4) shows the height of the adjoining buildings in relation to the current proposed construction. A small corner of the project site falls within the Cass Park Historic District. The Cass Henry Historic District is located south of the project site.

iv. **Describe the steps taken to define the boundaries of the APE:**
A site visit was performed by MSG on 7/9/2021 to observe and document ground conditions, identify potentially affected historic/architectural resources (over 50 years of age), and assess the possible future impacts from the project. Photographs were taken of roadway features and buildings within and adjoining the project corridor that may be directly or indirectly affected by the project. A photo log showing the features and setting of the project corridor is attached. The recommended APE represents the maximum distance from which the proposed new construction may be visible.

b. **Project Work Description**
Describe all work to be undertaken as part of the project:
This project involves the construction of a four-story building at the southwest corner of Ledyard St. and Cass Ave. The new building will include 44 units of permanent supportive housing, 40 units of recovery housing, a variety of community services, and several retail storefronts on Cass Ave. The new L-shaped building will wrap around the existing one-story Dainforth Baker French addition to Mariners Inn (1956), which was constructed in 1995. The two buildings will not be physically connected, but shared garden space between them includes athletic/fitness spaces, meditative space, dining space, and play space for visiting families. Landscaping along Ledyard and Cass will be extended the full width and depth of the parcel (including a new surface parking lot to the south) to provide visual continuity and enhance the streetscape. Exterior siding materials will be gray brick veneer and black/white metal panels, with colored metal accent panels.

Effective as of 3/16/2021, a Certificate of Appropriateness was issued for the revised application (#21-7112) by the Detroit Historic District Commission, signifying conformance with local design guidelines and the Secretary of the Interior's Standards for Rehabilitation (36 CFR Part 67).

IV. IDENTIFICATION OF HISTORIC PROPERTIES

a. **Scope of Effort Applied**

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

A research request was submitted to the SHPO on June 18, 2021. Data was sent by the SHPO on June 28, 2021. MSG also consulted our in-house collection of historic maps of the City of Detroit; Sanborn fire insurance maps of Detroit curated online by the Library of Congress; Hinsdale's 1931 *Archaeological*

Coleman A. Young Municipal Center
2 Woodward Avenue. Suite 908
Detroit, Michigan 48226
Phone: 313.224.6380
Fax: 313.224.1629
www.detroitmi.gov

Atlas of Michigan; and the DTE aerial photo collection of metropolitan Detroit, curated online by Wayne State University.

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

b. **Identification Results**

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

B. **Provide the name and qualifications of the person who made recommendations of eligibility for the above-ground identification forms.**
Name Maura Johnson **Agency/Consulting Firm:** The Mannik & Smith Group, Inc.
Is the individual a 36CFR Part 61 Qualified Historian or Architectural Historian ☒ Yes ☐ No
Are their credentials currently on file with the SHPO? ☒ Yes ☐ No
If NO attach this individual's qualifications form and resume.

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

A. **Attach Archaeological Sensitivity Map.**

B. **Summary of previously reported archaeological sites and surveys:**
No archaeological sites have been recorded within the general vicinity of the Project Area. The Project Area is located at the southern end of a large, multi-block area that was the subject of a desktop review and archaeological sensitivity assessment completed in 1982 by Resource Analysts, Inc. This assessment found that some portions of the Study Area (including the general vicinity of the current Project Area) were developed prior to the 1870s and may retain intact archaeological resources dating to the mid-19th century residential development of this part of Detroit.

C. **Town/Range/Section or Private Claim numbers:** P.C. 55

D. **Width(s), length(s), and depth(s) of proposed ground disturbance(s):** Ground disturbance will occur throughout the Project Area. Ground disturbance will include the excavation of foundations for the proposed new mixed-use apartment/retail building, emplacement of buried utilities, and grading and drainage for the new parking lot at the southern end of the Project Area.

E. **Will work potentially impact previously undisturbed soils?** ☐ Yes ☒ No
***If YES,* summarize new ground disturbance:**
Summary of new ground disturbance

F. **Summarize past and present land use:**
The property at 445 Ledyard St. was originally located on P.C. 55 (known as Cass Farm), and would have been part of a so-called ribbon farm settled by early French immigrants. However, it is far enough away from the Detroit River that this location likely consisted only of cultivated fields. Territorial Governor Lewis Cass purchased P.C. 55 in 1816; in 1859 he began subdividing and selling off parcels from the northern end of the farm, above Grand River Ave. The area was soon platted by Cass's son-in-law, Henry Ledyard, with Cass Park at its center. This neighborhood soon became an

Coleman A. Young Municipal Center
2 Woodward Avenue. Suite 908
Detroit, Michigan 48226
Phone: 313.224.6380
Fax: 313.224.1629
www.detroitmi.gov

early streetcar suburb and fashionable residential neighborhood. The 1884 Sanborn Fire Insurance map of Detroit shows only the eastern edge of the Project Area, but it was occupied by six single-family homes and two duplexes at that time. Unfortunately the rear end of the parcels are off the edge of the map, so potential outhouse locations are not shown. In addition to these houses fronting on Cass, the 1897 Sanborn map shows three single-family houses fronting on Ledyard within the Project Area. Outbuildings (potentially covering the former locations of outhouses, which had been forbidden by city ordinance by this time) were present within the Project Area on the lots at 391, 405 and 419 Cass. By 1921 the house at 419 Cass had been replaced by a single large building occupying the entire parcel and housing multiple stores and a restaurant. Indicating the downward trend of socioeconomic status in the neighborhood, many of the surrounding apartment buildings in 1921 were labeled on the Sanborn map as "Rooming" apartments. By 1950 the house formerly at 2557 Cass had been demolished and replaced by a parking lot, and the duplex at 2525-2527 Cass had been demolished and replaced by an auto-washing facility. High-altitude aerial photographs of the city indicate that by 1961, only the large multi-store building at the corner of Ledyard and Cass and one house remained within the Project Area. These both disappeared sometime between 1981 and 1997. The parking lot that currently occupies the northeastern part of the Project Area was built in the late 1990s, and the southern end of the Project Area has only been occupied by two successive basketball courts since that time as well.

G. **Potential to adversely affect significant archaeological resources**:
☐ Low ☒ Moderate ☐ High
For moderate and high potential, is fieldwork recommended? ☒ Yes ☐ No
Briefly justify the recommendation:
It is likely that the former residential lots fronting on Cass within the Project Area were originally developed at least by the 1860s, when cisterns and privies were still allowed in the city. Furthermore, while it has traditionally been assumed that archaeological resources representing domestic sites post-dating ca. 1880 were rare or non-existent in the city, recent projects in nearby neighborhoods have proven the opposite to be true; in fact, intact archaeological resources dating as recently as the 1920s have been documented. While the subsequent commercial development of the northeastern part of the Project Area likely disturbed or destroyed any historic archaeological features, the lack of redevelopment in the southern half of the Project Area indicates that such features (associated with the former residential lots at 2525-2547 Cass) may survive below the modern ground surface.

H. **Has fieldwork already been conducted?** ☐ Yes ☒ No
If YES:
☐ Previously surveyed; refer to A. and B. above.
☐ Newly surveyed; attach report copies and provide full report reference here:
Full report reference

I. **Provide the name and qualifications of the person who provided the information for the Archaeology section:**
Name: Robert C. Chidester **Agency/Firm:** The Mannik & Smith Group, Inc.
Is the person a 36CFR Part 61 Qualified Archaeologist? ☒ Yes ☐ No
Are their credentials currently on file with the SHPO? ☒ Yes ☐ No
If NO, attach this individual's qualifications form and resume.

Archaeological site locations are legally protected.
This application may not be made public without first redacting sensitive archaeological information.

V. DETERMINATION OF EFFECT

Housing and Revitalization Department
CITY OF DETROIT

Coleman A. Young Municipal Center
2 Woodward Avenue. Suite 908
Detroit, Michigan 48226

Phone: 313.224.6380
Fax: 313.224.1629
www.detroitmi.gov

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

a. **Basis for determination of effect**:
For archaeological resources, we recommend a conditional finding of no effects. The land-use history of the Project Area indicates that archaeological resources associated with 19th-century residential development in the Cass Park neighborhood may be present in the southern half of the Project Area. A Phase I archaeological survey consisting of limited mechanical trenching is recommended to determine (a) whether such resources exist, and if so, (b) whether they are eligible for the NRHP.

The project will have no adverse effect on historic/architectural resources, as the proposed new construction is consistent with local and federal guidelines and standards.

b. **Determination of effect**
☐ **No historic properties will be affected**
☒ **Historic properties will be affected** and the project will (check one):
☒ have **No Adverse Effect** on historic properties within the APE.
☐ have an **Adverse Effect** on one or more historic properties in the APE and the federal agency, or federally authorized representative, will consult with the SHPO and other parties to resolve the adverse effect under 800.6.

Applicant Signature:_____ Date: 11/08/2021

Type or Print Name: Michael Vollick

Title: Environmental OFficer - MSHDA

Housing and Revitalization Department

Coleman A. Young Municipal Center
2 Woodward Avenue. Suite 908
Detroit, Michigan 48226

Phone: 313.224.6380
Fax: 313.224.1629
www.detroitmi.gov

ATTACHMENT CHECKLIST

Identify any materials submitted as attachments to the form:

☐ Additional federal, state, local government, applicant, consultant contacts

☒ Maps of project location

Number of maps attached: 4

☒ Site Photographs

☒Map of photographs

☒ Plans and specifications

☐ Other information pertinent to the work description: Identify the type of materials attached

☒ Documentation of previously identified historic properties

☐ Architectural Properties Identification Forms

☒ Map showing the relationship between the previously identified properties, your project footprint, and project APE

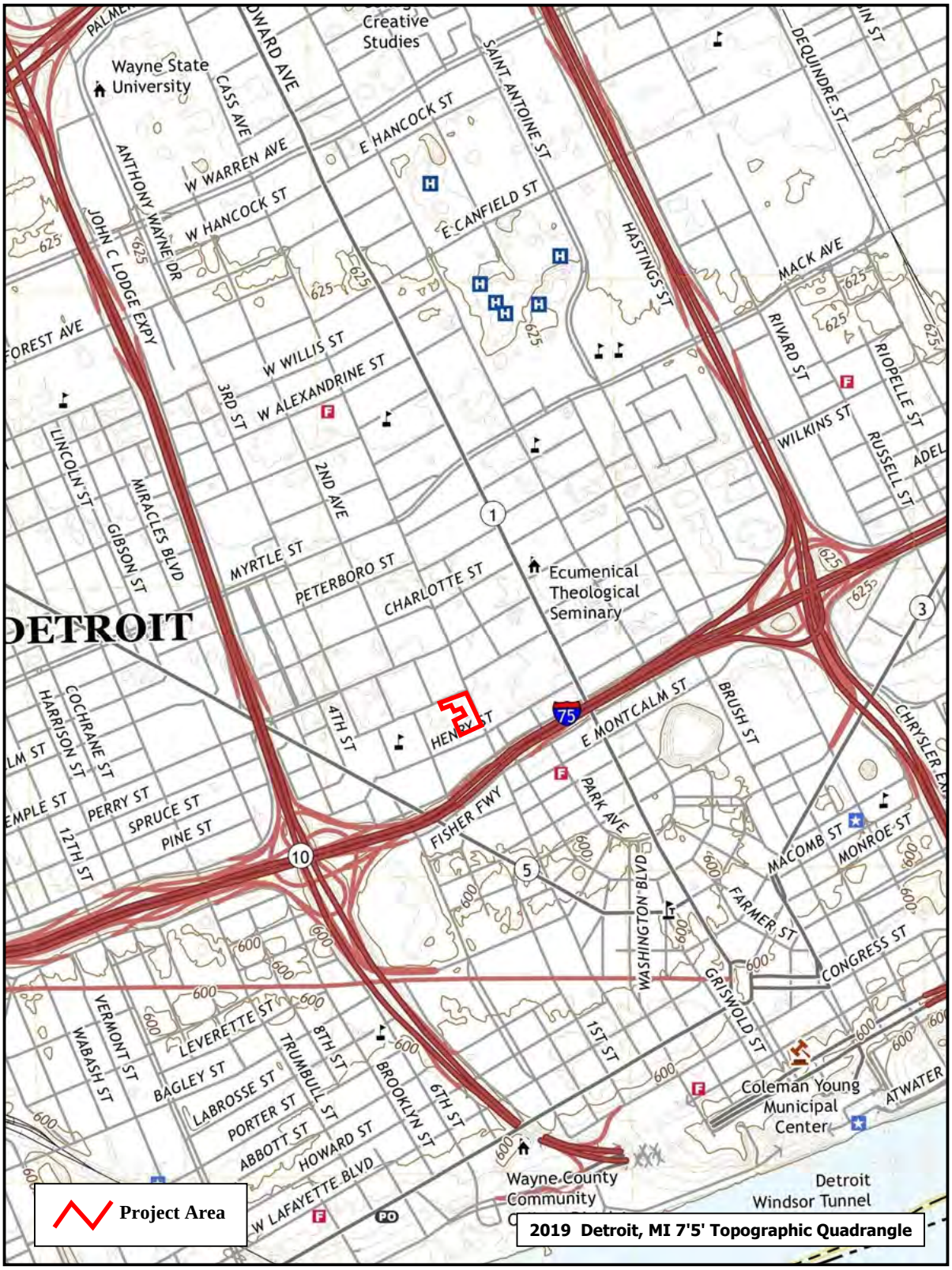
☐ Above-ground qualified person's qualification form and resume

☒ Archaeological sensitivity map

☐ Survey report

☐ Archaeologist qualifications and resume

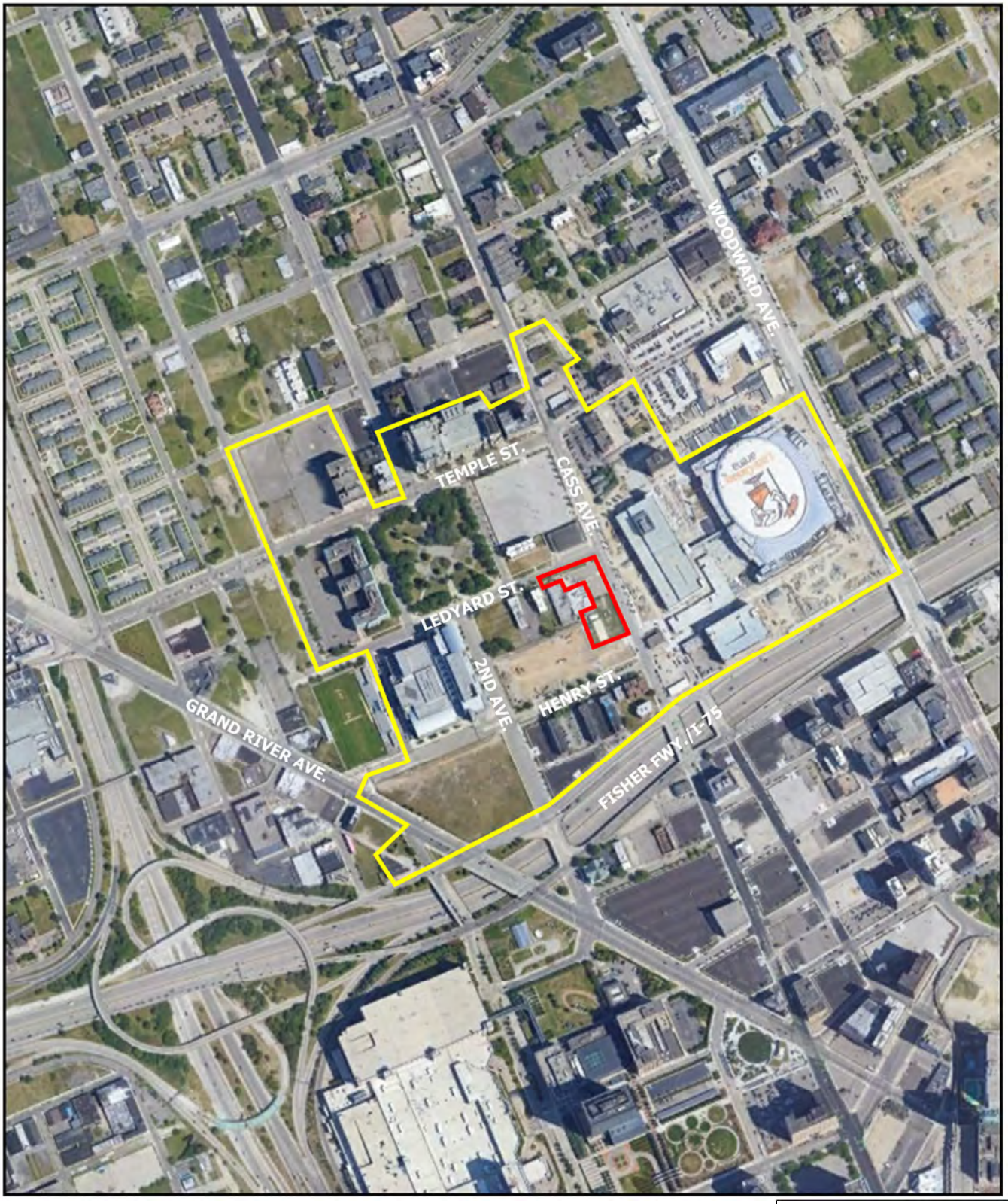
☒ Other: Historic map reproductions



Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

Project Location
Mariners Inn
445 Ledyard Street
Detroit, Wayne County, Michigan

N



Project Area

Area of Potential Effects

0 feet 500

0 meters 200

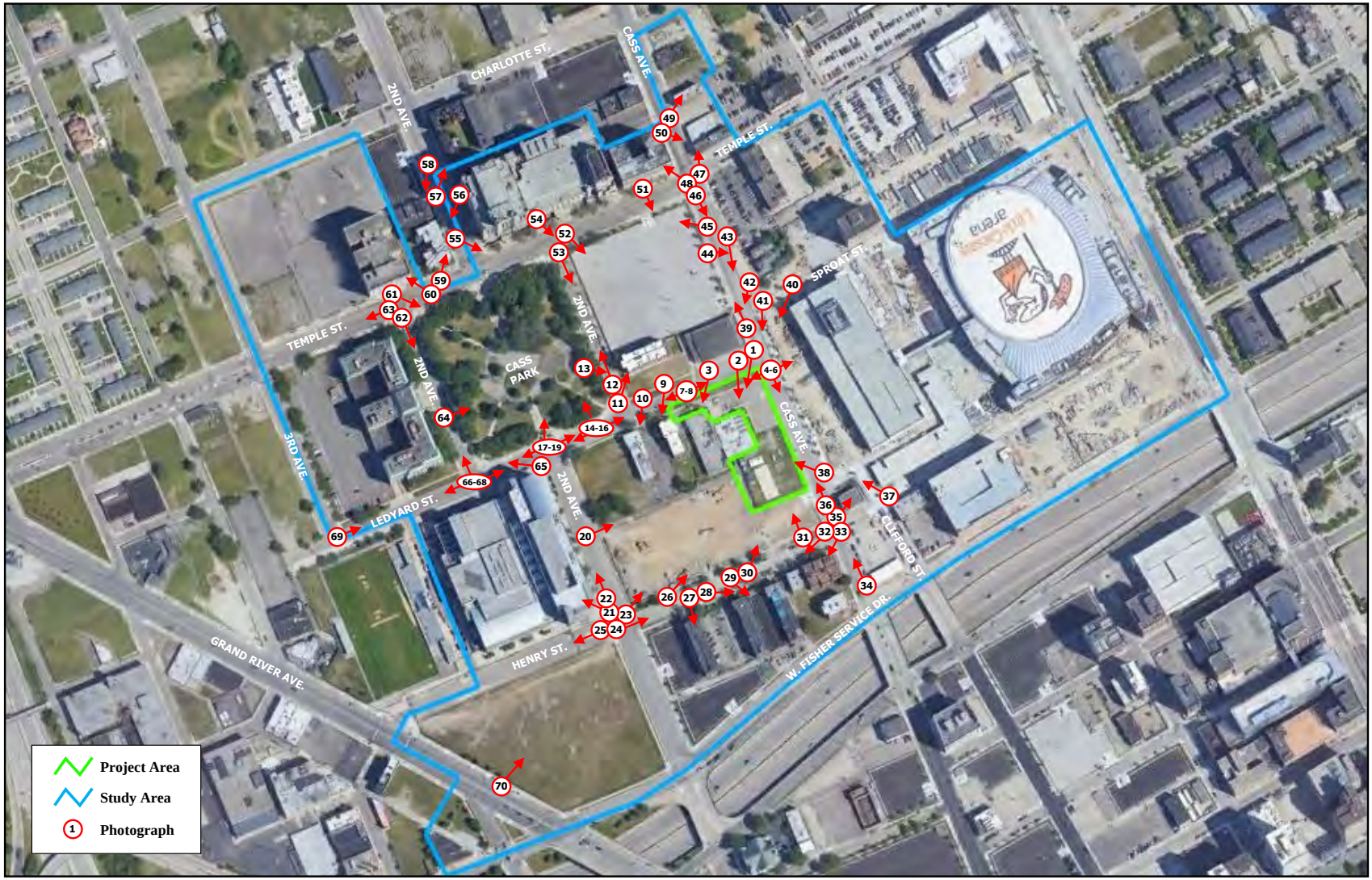
Mannik Smith GROUP

TECHNICAL SKILL. CREATIVE SPIRIT.

www.MannikSmithGroup.com

Area of Potential Effects
Mariners Inn
445 Ledyard Street
Detroit, Wayne County, Michigan

N



Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

Photo Key
Mariners Inn
445 Ledyard Street
Detroit, Wayne County, Michigan

N

Photo 1: Overall view of project site, looking south from corner of Ledyard `Street and Cass Avenue.

Photo 2: 445 Ledyard Street, view looking south.

Photo 3: 445 Ledyard Street, view looking south.

Photo 4: View west along project site and down Ledyard Street.

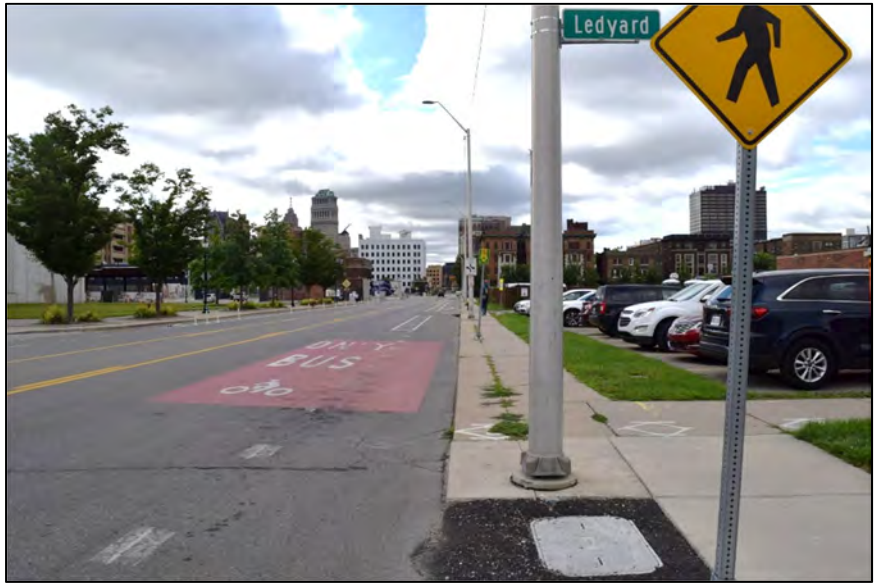


Photo 5: View south on Cass Avenue from Ledyard Street.

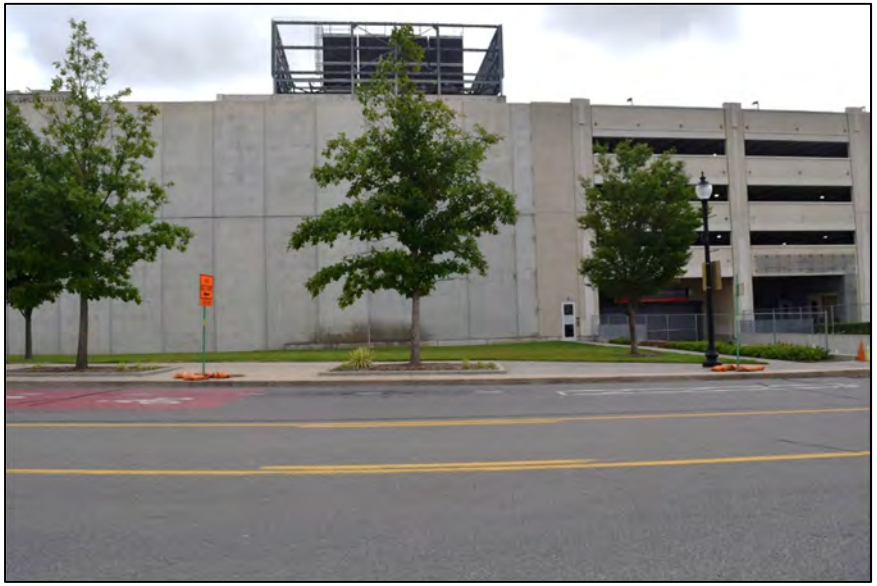


Photo 6: View east from corner of Cass Avenue and Ledyard Street.

Photo 7: View east along Ledyard Street toward Cass Avenue, project site on right.

Photo 8: View west on Ledyard Street from project site, toward 2nd Avenue.

Photo 9: 457 Ledyard Street, view looking south.

Photo 10: 479 Ledyard Street, view looking south.

Photo 11: 2714 2nd Avenue, view looking north.

Photo 12: View north on 2nd Avenue, toward Temple Street; 2714 2nd Avenue on right, Masonic Temple in distance.

Photo 13: View east from 2nd Avenue past 2714 2nd Avenue, toward project site.

Photo 14: View east on Ledyard Street from 2nd Avenue toward Cass Avenue; project site barely visible in distance on right.

Photo 15: View west on Ledyard Street from 2nd Avenue toward 2nd Avenue.

Photo 16: View north into Cass Park from Ledyard Street just west of 2nd Avenue. Masonic Temple in background.

Photo 17: View east on Ledyard Street from 2nd Avenue toward Cass Avenue

Photo 18: View west on Ledyard Street from 2nd Avenue toward 3rd Avenue.

Photo 19: View of entrance to Cass Park from Ledyard Street, looking north from intersection with 2nd Avenue.

Photo 20: View east down alley from 2nd Avenue; project site in distance.

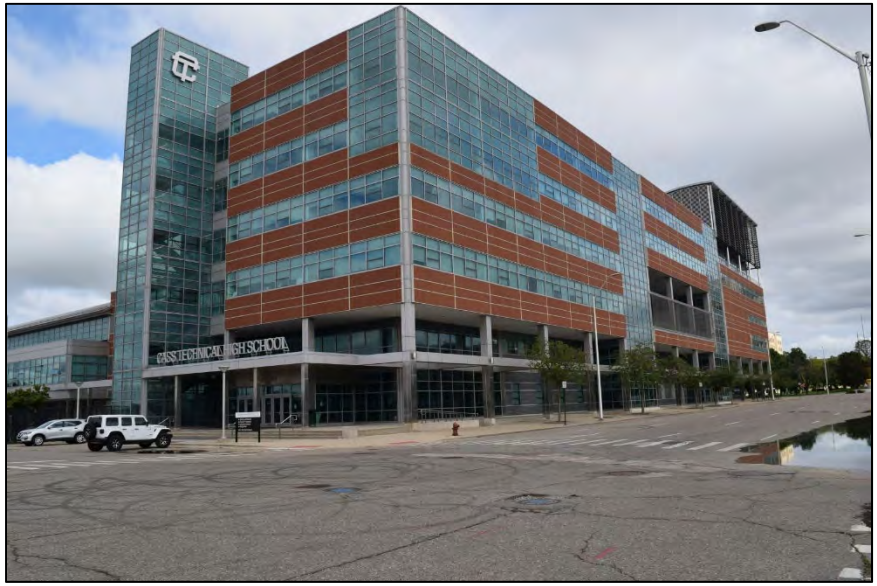


Photo 21: 2501 2nd Avenue, Cass Technical High School. View northwest from intersection of 2nd Avenue and Henry Street.

Photo 22: View north on 2nd Avenue from Henry .Street. Cass Park and Masonic Temple in background.

Photo 23: View northeast from intersection of 2nd Avenue and Henry Street towards project site.

Photo 24: View east on Henry Street from 2nd Avenue toward Cass Avenue.

Photo 25: View west on Henry Street from 2nd Avenue toward Grand River Avenue.

Photo 26: View northeast from Henry Street toward project site.

Photo 27: 489 Henry Street, view looking south.

Photo 28: Neighborhood view of south side of Henry Street, looking east toward Cass Avenue.

Photo 29: 443, 447, and 467 Henry Street, view looking southeast.

Photo 30: View looking north from Henry Street toward project site.

Photo 31: View looking north from Henry Street toward project site.

Photo 32: Neighborhood view of south side of Henry Street looking southwest from corner of Cass Avenue, 2465 Cass on left.

Photo 33: View southwest across intersection of Cass Avenue and Henry Street. 2465 Cass on left, view down Henry Street in distance.

Photo 34: View north on Cass Avenue from W. Fisher Service Drive. Project site on left in distance.

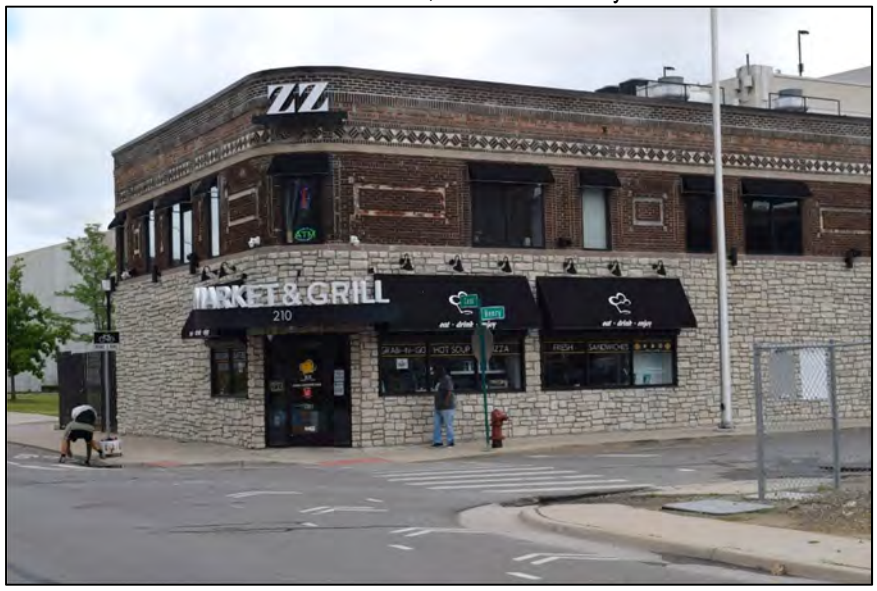


Photo 35: 210 Henry Street at northeast corner of intersection with Cass Avenue.

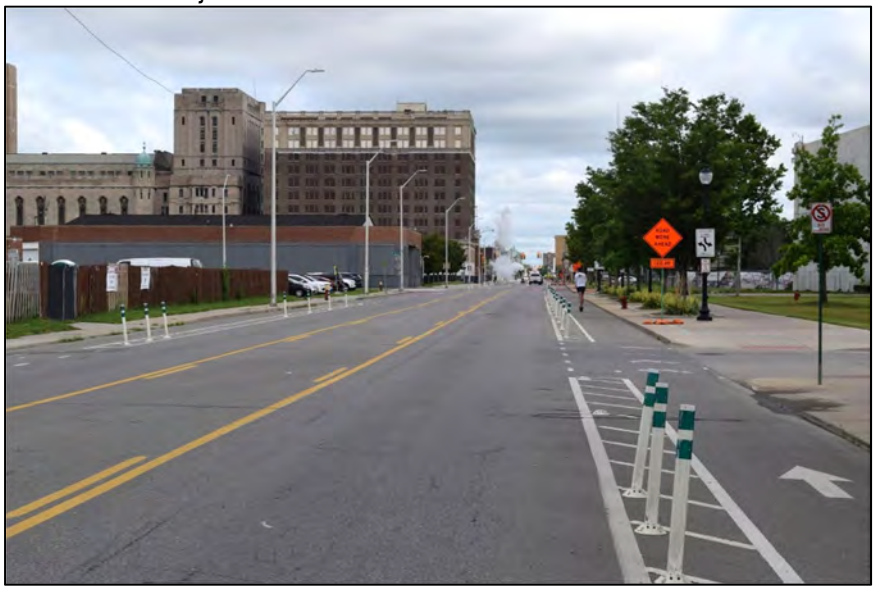


Photo 36: View north on Cass Avenue from vicinity of rear of 210 Henry Street. Project site on left.

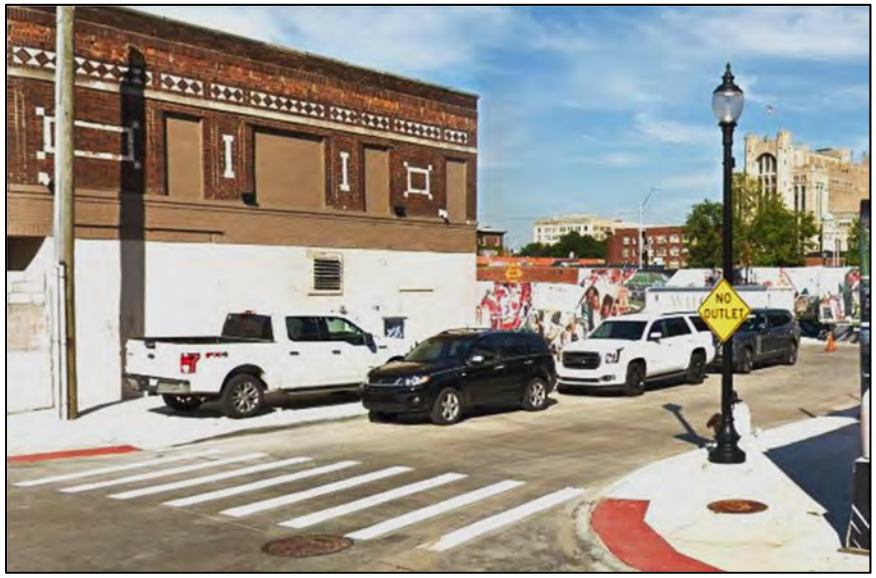


Photo 37: View northwest from intersection of Clifford and Henry Streets toward project site (Google image captured 9/2018).

Photo 38: View west across Cass Avenue toward project site.

Photo 39: View north on Cass Avenue from Ledyard Street, 2701 Cass Avenue on left.

Photo 40: View south from Sproat Street toward project site.

Photo 41: View south toward project site from intersection of Sproat Street and Cass Avenue.

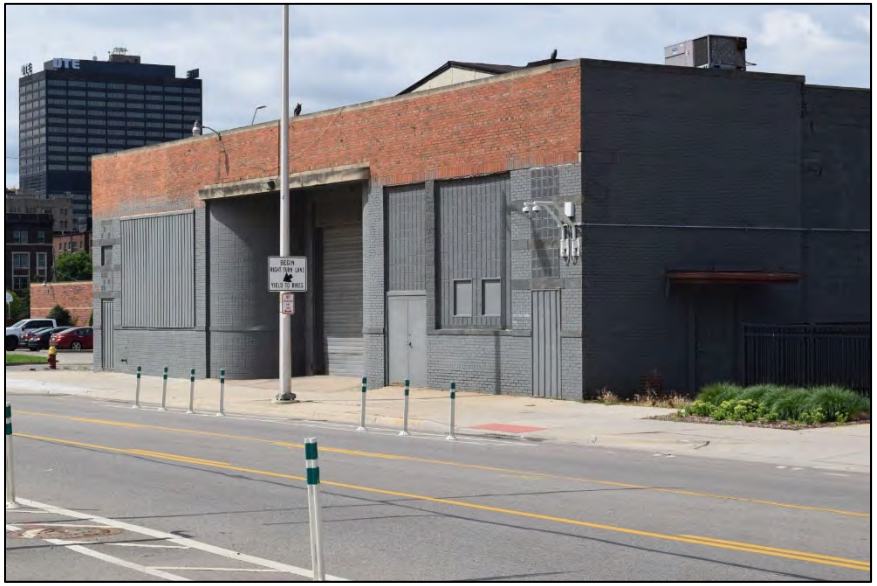


Photo 42: 2701 Cass Avenue, view looking south.

Photo 43: Looking south on Cass Avenue, project site visible in distance in center of image.

Photo 44: 2716 Cass Avenue, view looking east.

Photo 45: View of Masonic Temple looking west from Cass Avenue.

Photo 46: View south on Cass Avenue from Temple Street, project site barely visible on right in distance.

Photo 47: Building located at northeast corner of Cass Avenue and Temple Street. View looking north.

Photo 48: 408 Temple Street at northwest corner of Cass Avenue and Temple Street, View looking northwest.

Photo 49: 2930 Cass Avenue, view looking north.

Photo 50: 2906 Cass Avenue, view looking east.

Photo 51: View looking south from Temple Street toward project site.

Photo 52: View looking southeast from intersection of Temple Street and 2nd Avenue, toward project site.

Photo 53: View south on 2nd Avenue from Temple Street.

Photo 54: View looking southeast from steps of Masonic Temple toward project site.

Photo 55: View looking southeast across 2nd Avenue toward Temple Street. Masonic Temple on left, Cass Park in background.

Photo 56: 2909-2923 2nd Avenue, view looking south.

Photo 57: 2942-2966 2nd Avenue, view looking north.

Photo 58: 2943 and 2933 2nd Avenue in foreground. View looking south.

Photo 59: 606-608 Temple Street, view looking north.

Photo 60: 640 Temple Street, view looking northwest.

Photo 61: View looking southeast across intersection of Temple Street and 2nd Avenue. Cass Park in background.

Photo 62: View south on 2nd Avenue from Temple Street.

Photo 63: View west on Temple Street from 2nd Avenue.

Photo 64: View east into Cass Park from 2nd Avenue.

Photo 65: 2727 2nd Avenue, view looking west from corner of Ledyard Street and 2nd Avenue.

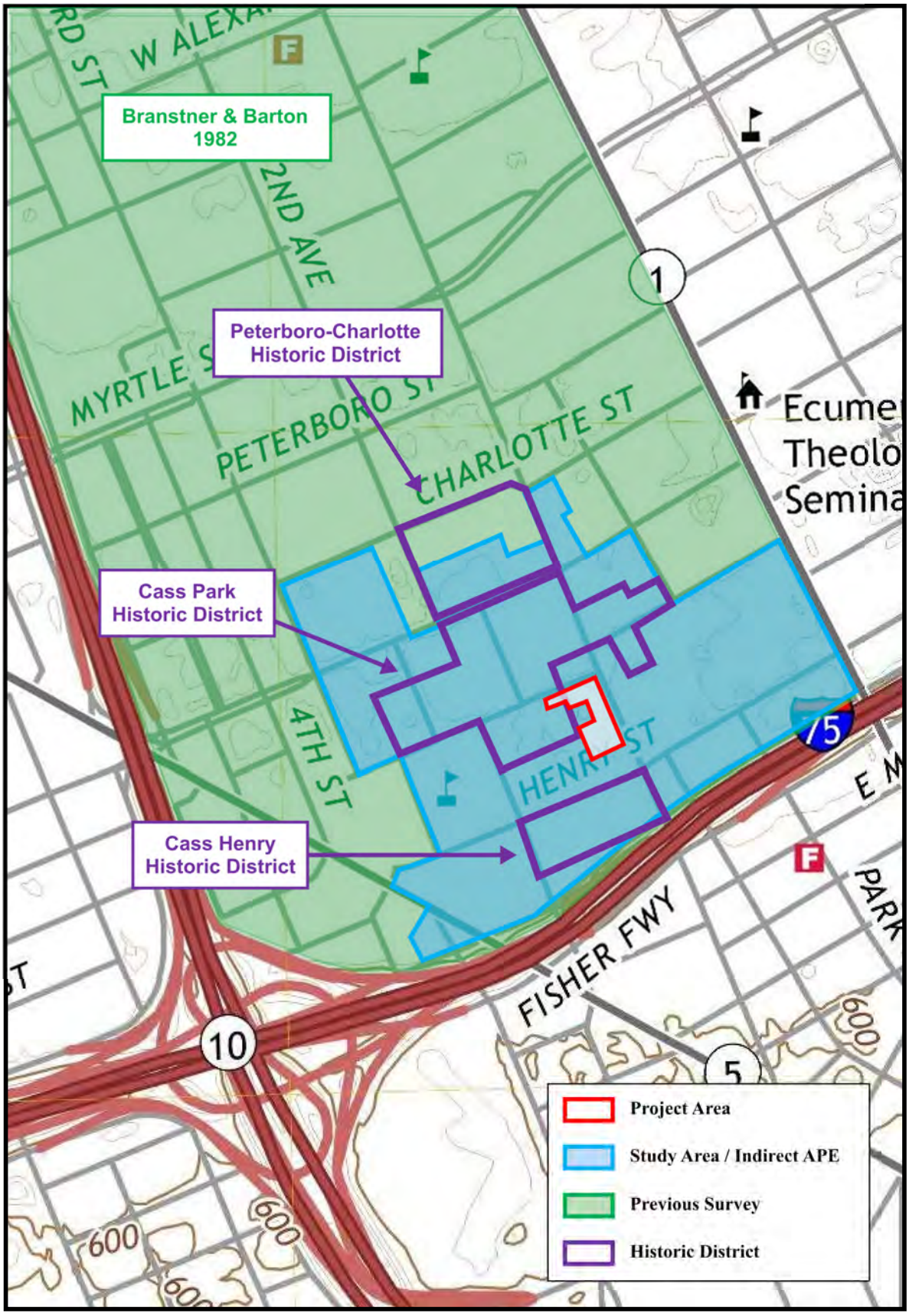
Photo 66: View east on Ledyard Street from intersection with 2nd Avenue.

Photo 67: View north on 2nd Avenue from Ledyard Street.

Photo 68: View west on Ledyard Street from intersection with 2nd Avenue.

Photo 69: View east on Ledyard Street from 3rd Avenue.

Photo 70: View northeast in direction of project site from Grand River Avenue.



Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

Archaeological Sensitivity Map
(Not For Public Distribution)
Mariners Inn
445 Ledyard Street
Detroit, Wayne County, Michigan

N

National Register of Historic Places

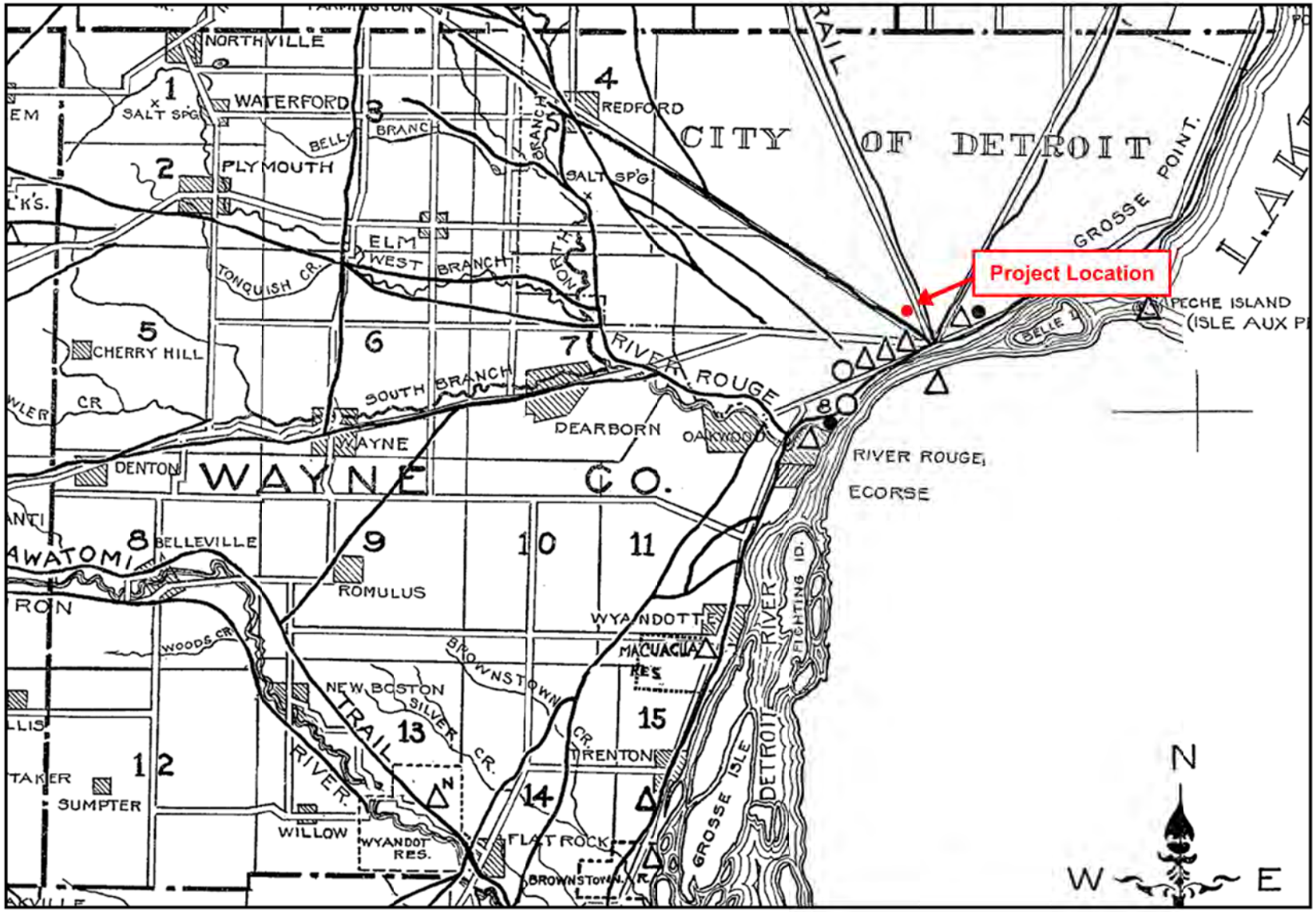
SRHS #	Category	Site Name	City / Township	Historic Function	Current Function	Period of Significance	Level of Significance	Area(s) of Significance	NRHP Criteria	Date Listed	Comments
P48433	District	Cass Park Historic District	Detroit	Recreation and Culture / Social / Domestic / Commerce / Landscape / Transportation	Recreation and Culture / Social / Domestic / Commerce / Landscape	1850-1899	State, National	Commerce, Social History, Architecture	A, B, C	2005	25 building contributing. Significant persons Lewis Cass.

City of Detroit Local Historic Districts

District Name	City / Township	Historic Function	Current Function	Significant Date(s)	Level of Significance	Area(s) of Significance
Cass Henry Historic District	Detroit	Domestic / Commerce	Domestic / Commerce	1900-1923	Local	Architecture, Commerce
Peterboro-Charlotte Historic District	Detroit	Domestic / Commerce	Domestic / Commerce	N/A	Local	N/A

Previous Cultural Resource Surveys

ER #	County	Title	Primary Author	Additional Authors	Year	Conducted by	Submitted to	Notes
N/A	Wayne	South Cass Corridor Intensive Level Survey (Detroit, Wayne County).	Florek, Marilyn	Marleen Tulas	2002	University Cultural Center Association	N/A	Seven historic districts and 15 individually-eligible properties were identified.
ER-4104	Wayne	A Literature Cultural Resource Survey and Field Inspection of the Cass Corridor Project Area, Detroit, Michigan.	Branstner, Mark C.	David Barton	1982	Resource Analysts, Inc.	N/A	



Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

Archaeological Atlas of Michigan
Wayne County
(Hinsdale 1931)

N

Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

1810 Map of Detroit City
(Greeley 1810)

NE

Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

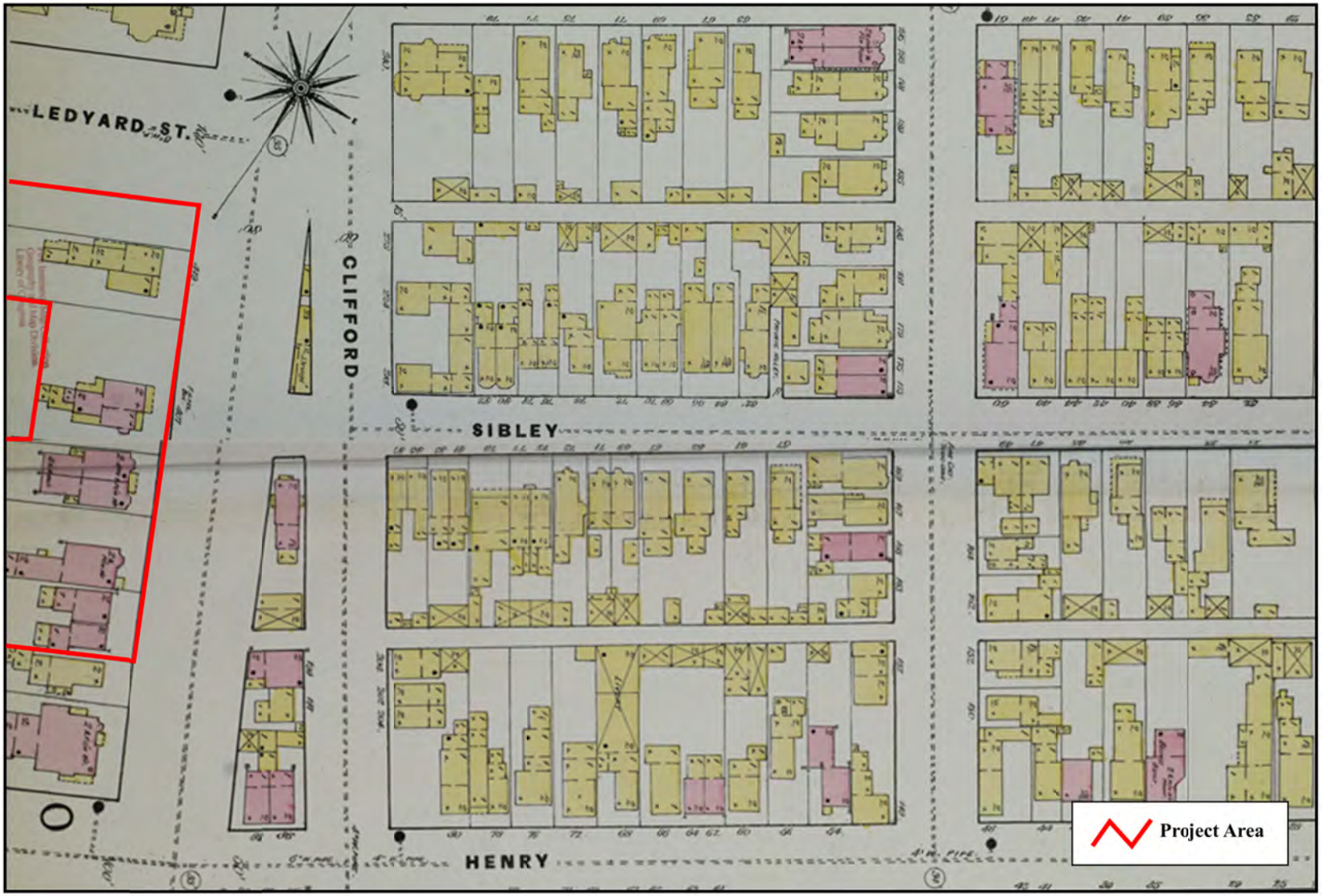
1870 Plan of Detroit City (Detail)
(Mitchell 1870)

NE

Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

1895 Map of Detroit City (Detail)
(Tallman 1895)

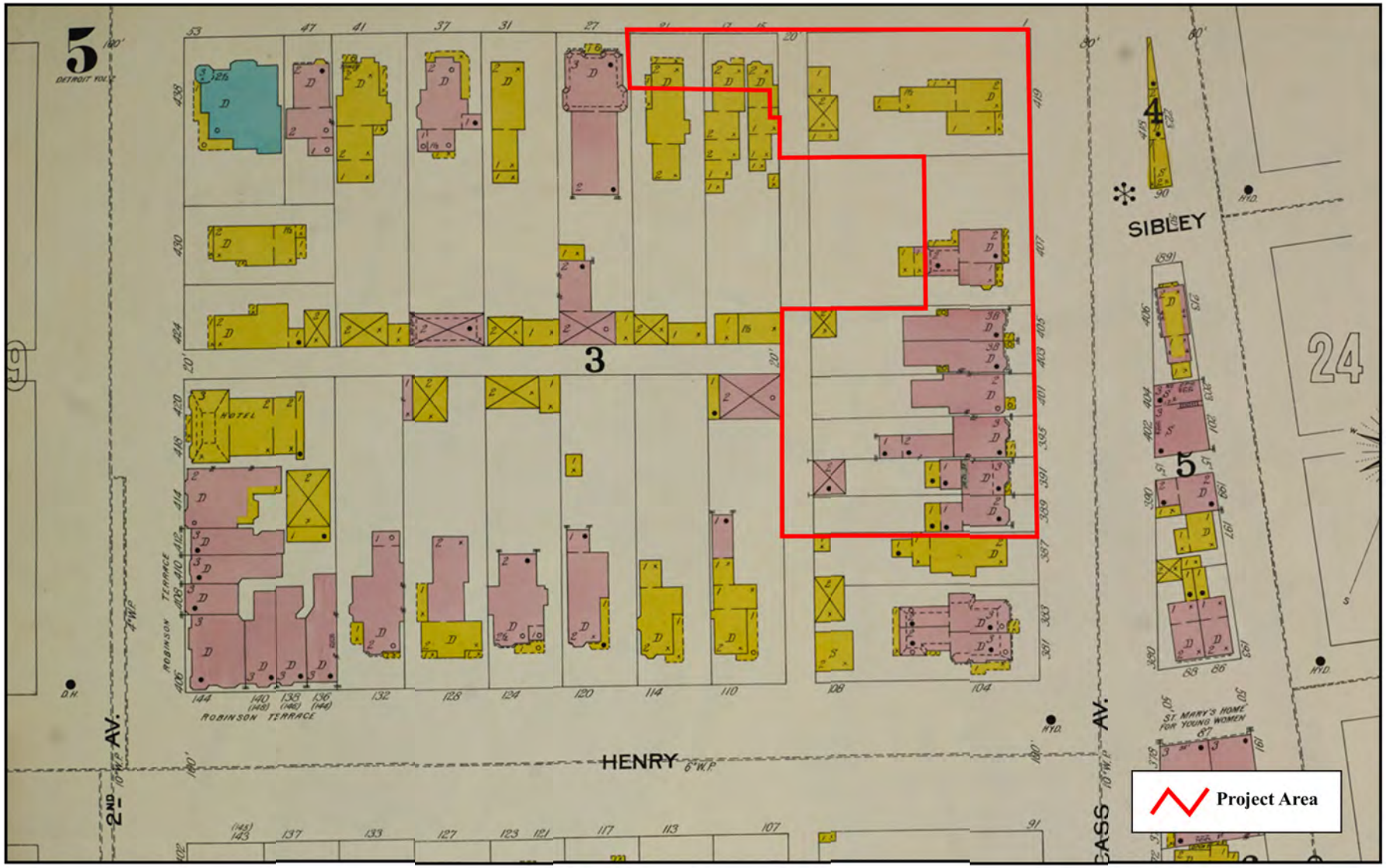
NE



Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

1884 Fire Insurance Map
(Sanborn Map Company 1884)

NW



Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

1897 Fire Insurance Map
(Sanborn Map Company 1897)

NE

Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

1921 Fire Insurance Map
(Sanborn Map Company 1921)

NE

Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

1950 Fire Insurance Map
(Sanborn Map Company 1950)

NE

Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

1918 Topographic Map
15' Detroit, MI Quadrangle
(USGS 2021)

N

Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

1949 High-Altitude Aerial Imagery
Wayne County
(Wayne State University n.d.)

N

Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

1961 High-Altitude Aerial Imagery
Wayne County
(Wayne State University n.d.)

N

Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

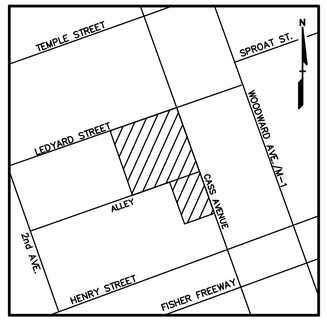
1981 High-Altitude Aerial Imagery
Wayne County
(Wayne State University n.d.)

N

Mannik Smith GROUP
TECHNICAL SKILL. CREATIVE SPIRIT.
www.MannikSmithGroup.com

1997 High-Altitude Aerial Imagery
Wayne County
(Wayne State University n.d.)

N



LOCATION MAP – NOT TO SCALE

GENERAL PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
3. ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1. GRADE.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
5. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
7. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
8. ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
9. ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
10. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
11. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
12. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
13. ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH WITH PRE EMERGENT, SEE SPECIFICATIONS. SHREDDED PALETTE AND DYED MULCH WILL NOT BE ACCEPTED.
14. ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
15. SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.

KEY:

- = DECIDUOUS TREES
- = SHRUBS
- = RAISED PLANTING BEDS
- = PERENNIAL AND SHRUB PLANTINGS
- = IRRIGATED SOD LAWN
- = RUBBERIZED SURFACING
- = PERMEABLE PAVERS
- = MEXICAN BEACH PEBBLE

DECIDUOUS TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
13	AR2.5	Red Maple	*Acer rubrum*	2.5" Cal.	B&B
8	AL2.5	Serviceberry	*Amelanchier laevis*	2.5" Cal.	B&B
3	CC2.5	Eastern Redbud	*Cercis canadensis*	2.5" Cal.	B&B
6	CM2.5	Cornelian Cherry Dogwood	*Cornus mas*	2.5" Cal.	B&B
9	TOTAL DEC.				

SUGGESTED SHRUB PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
	CS24	Red Osier Dogwood	*Cornus servicea*	24" ht.	Cont.
	CO24	Buttonbush	*Cephalanthus occidentalis*	24" ht.	Cont.
	AA24	Red Chokeberry	*Aronia arbutifolia 'Brilliantissima'*	24" ht.	Cont.
	PF24	Shubby Cinquefoil	*Potentilla fruticosa*	24" ht.	Cont.

SUGGESTED PERENNIAL PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
	AC	Canadian Wild Ginger	*Asarum canadense*	1 Gal.	Cont.
	DC	Tufted Hair Grass	*Deschampsia cespitosa*	1 Gal.	Cont.
	EP	Purple Cone Flower	*Echinacea purpurea 'Magnus'*	1 Gal.	Cont.
	HS	Spellbound' Coral Bells	*Heuchera 'Spellbound'*	1 Gal.	Cont.
	HM	All Gold Japanese Forest Grass	*Hakonechola macra*	1 Gal.	Cont.
	OC	Interrupted Fern	*Osmunda cinnomonea*	1 Gal.	Cont.
	OR	Royal Purple Fern	*Osmunda regalis 'purpurascens'*	1 Gal.	Cont.
	SS	Little Bluestem	*Schizachyrium scoparium*	1 Gal.	Cont.

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY SUPERVISION AND THAT THEY COMPLY, TO THE BEST OF MY KNOWLEDGE, WITH ALL THE BUILDING CODES AND ORDINANCES OF THE CITY OF DETROIT, MI.

08/31/2020
08/10/2020

Issued for 100% Design Development
Issued for Progress Review

LANDON BONE BAKER ARCHITECTS
1625 W Carroll Avenue Chicago IL 60612
p 312-988-9100
www.landonbonebaker.com

Mariners Inn

445 Ledyard Street
Detroit MI 48201

1831

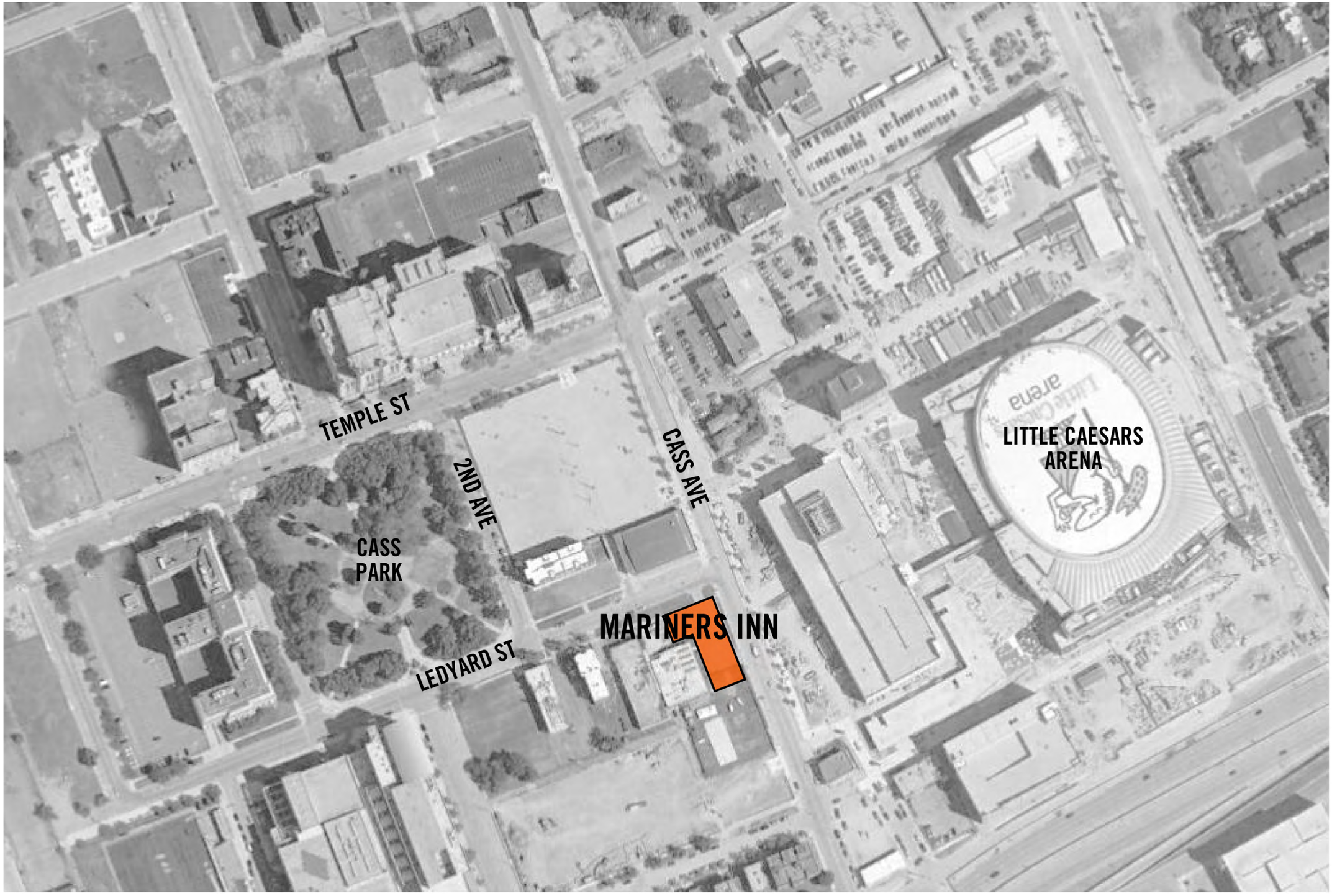
LANDSCAPE PLAN

L-1.0

8/9/2019 11:49 AM

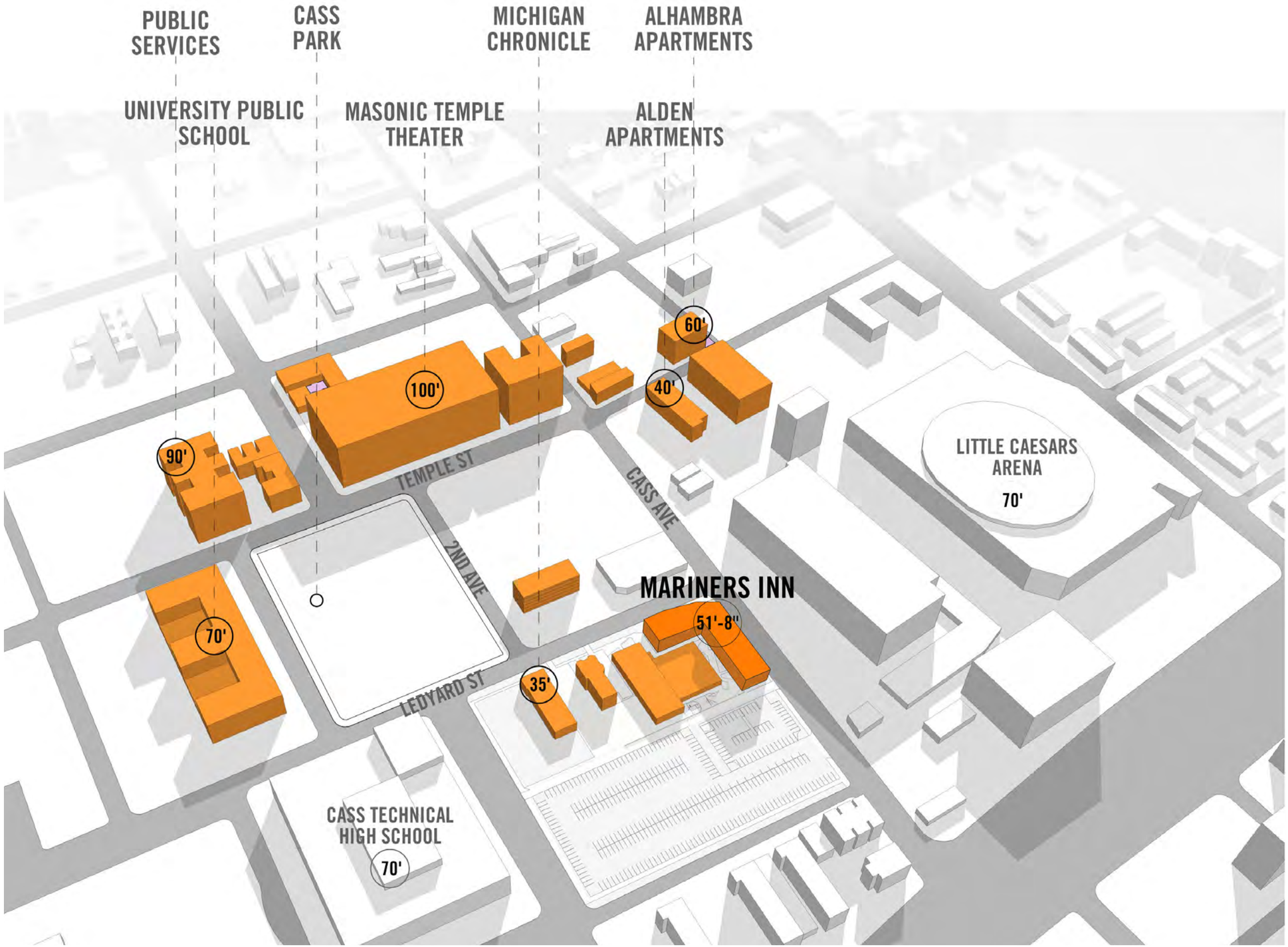
Mariners Inn

PDD Design Review / March 4, 2021



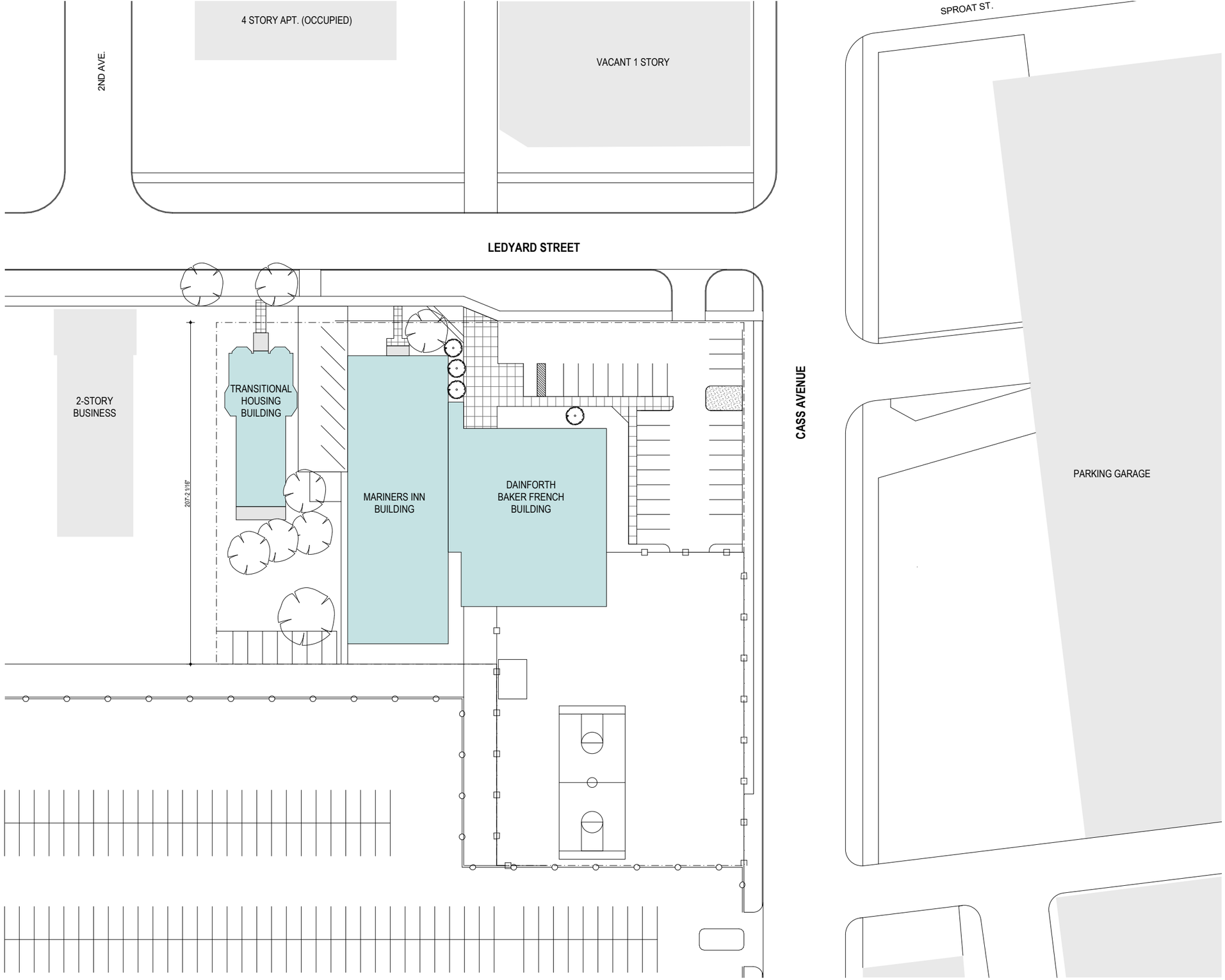
SITE LOCATION MAP

LANDON BONE BAKER ARCHITECTS



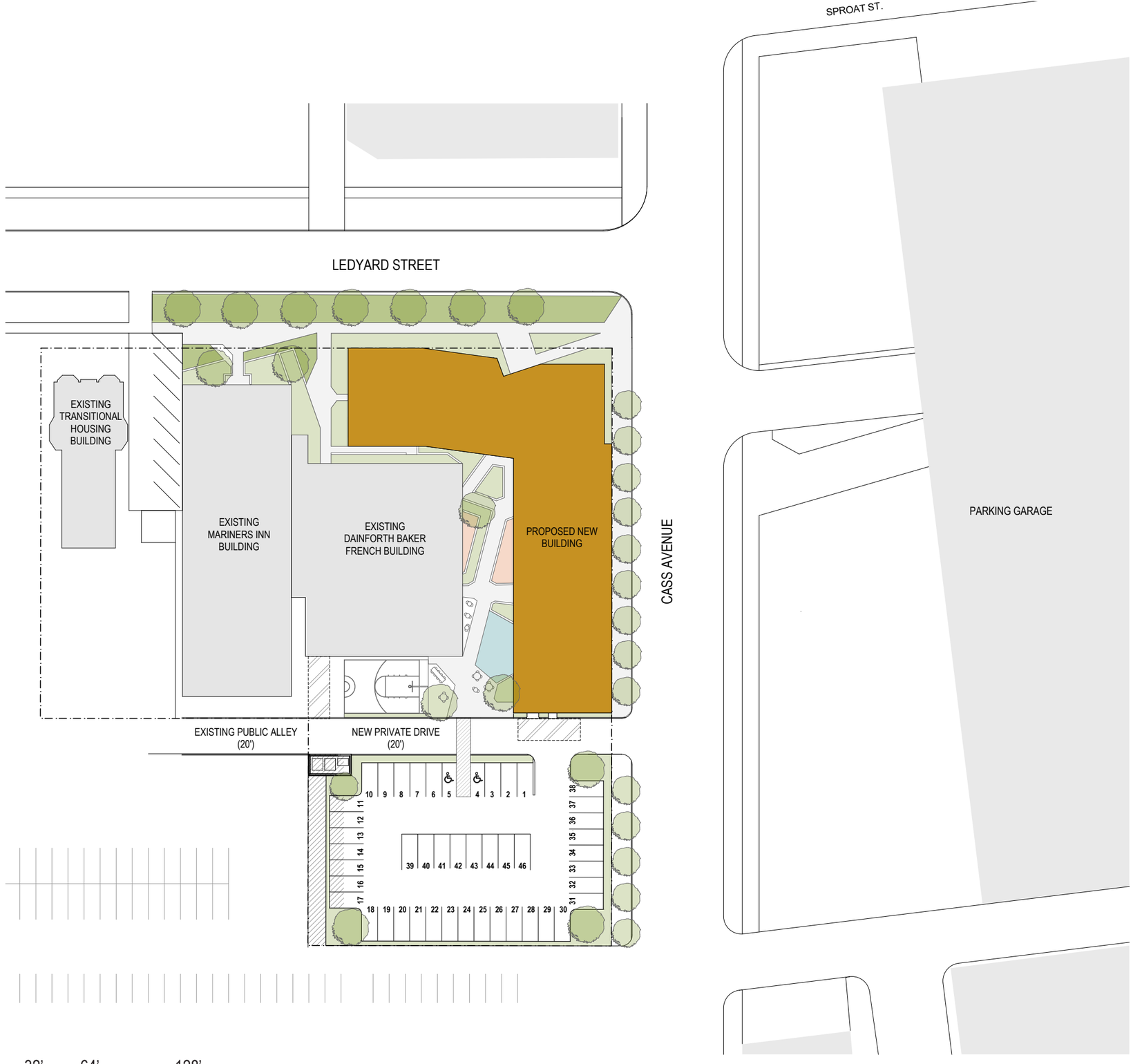
SITE CONTEXT MASSING

LANDON BONE BAKER ARCHITECTS



EXISTING SITE PLAN

LANDON BONE BAKER ARCHITECTS



PROPOSED SITE PLAN

LANDON BONE BAKER ARCHITECTS

AERIAL VIEW FROM NORTH

VIEW FROM NORTH

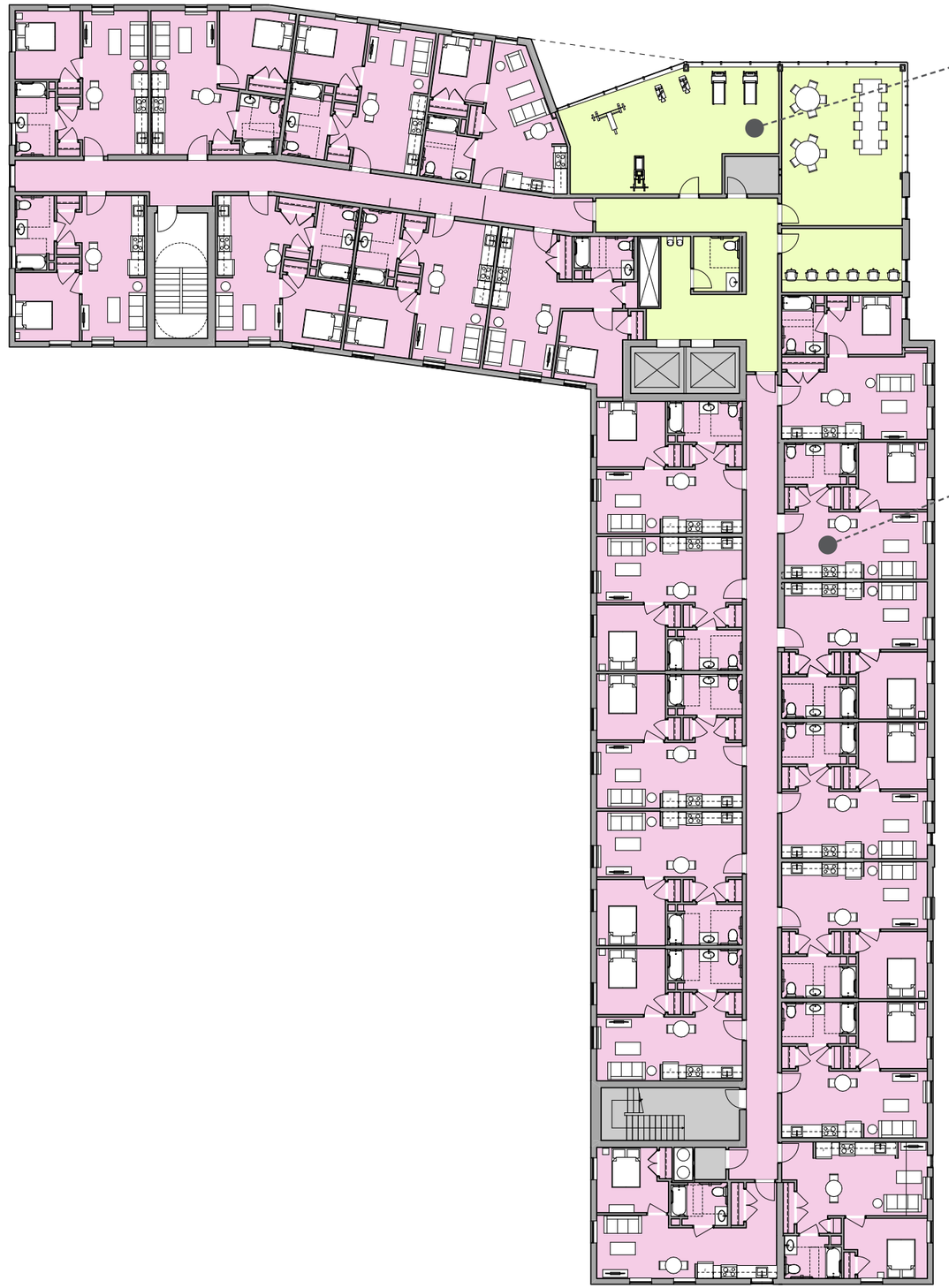
LANDON BONE BAKER ARCHITECTS

CASS AVENUE ELEVATION

LANDON BONE BAKER ARCHITECTS

1ST FLOOR PLAN

LANDON BONE BAKER ARCHITECTS



N

2ND FLOOR PLAN

LANDON BONE BAKER ARCHITECTS

N

3RD FLOOR PLAN

LANDON BONE BAKER ARCHITECTS

N

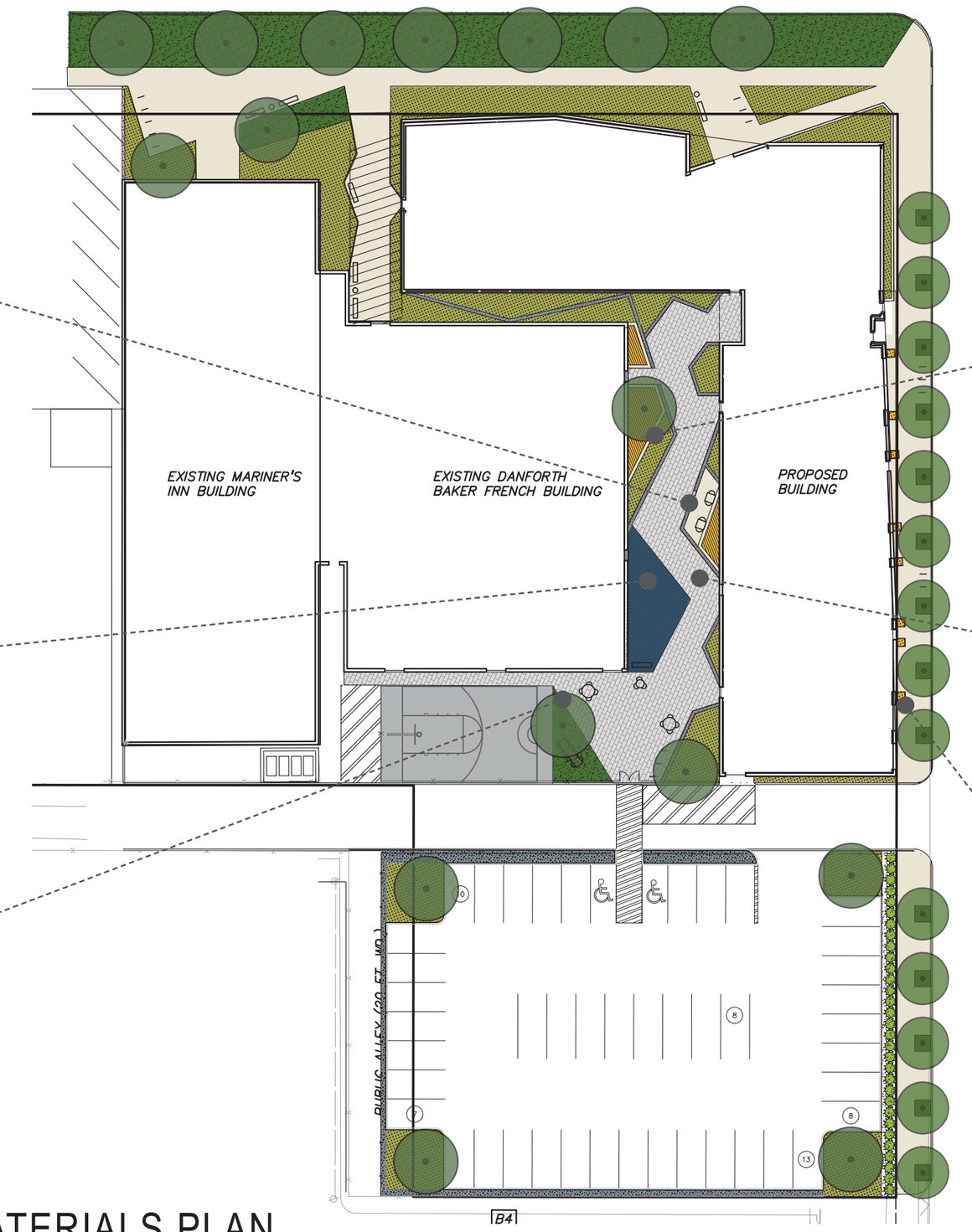
4TH FLOOR PLAN

LANDON BONE BAKER ARCHITECTS

GAME TABLES

FITNESS EQUIPMENT

RIVER ROCK EDGING



RAISED PLANTING BEDS

PERVIOUS PLANK PAVERS

PLANTERS IN R.O.W.

LANDSCAPE FEATURES & MATERIALS PLAN

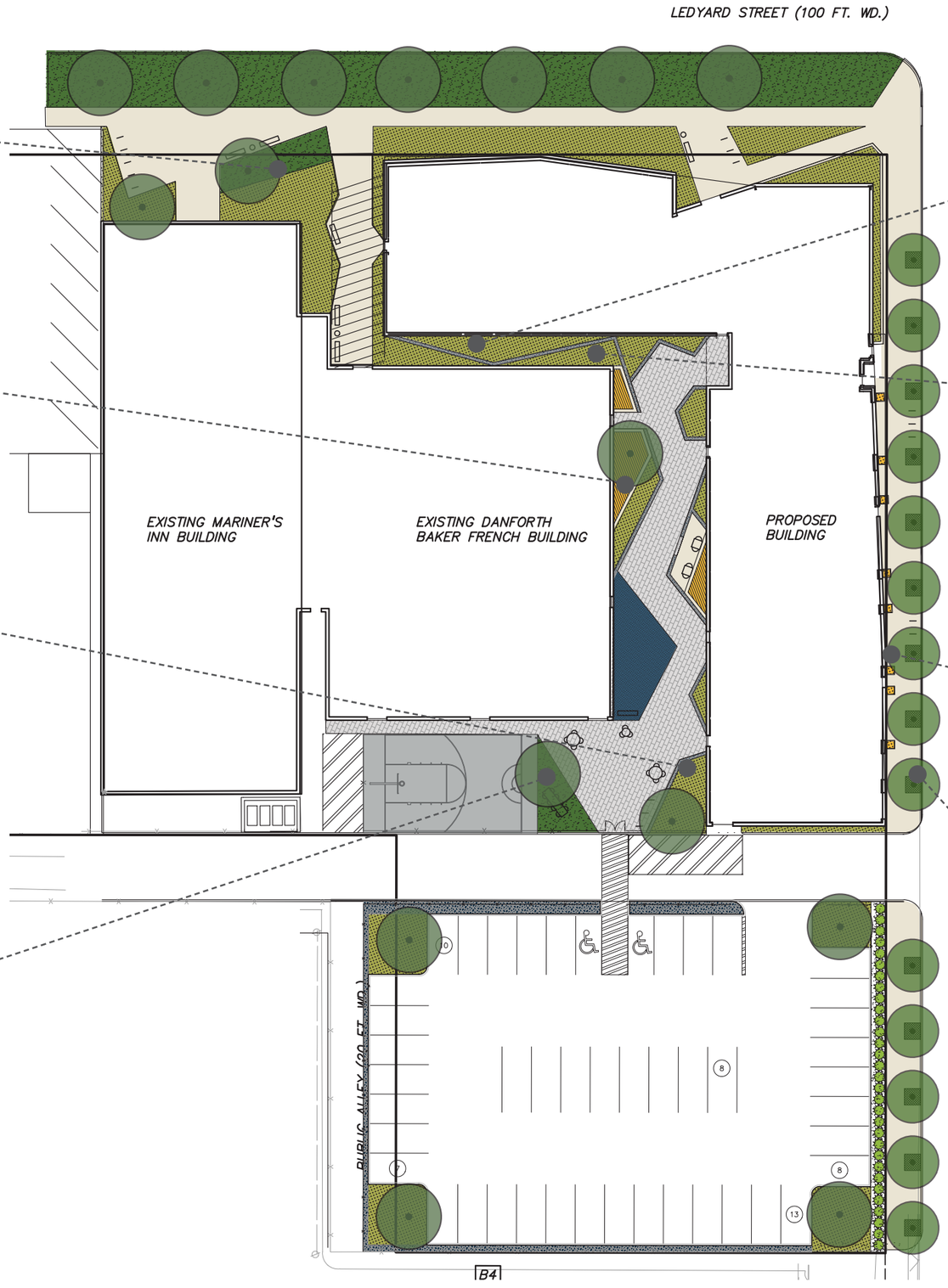
LANDON BONE BAKER ARCHITECTS

CORNUS SERICEA
(RED OSIER DOGWOOD)

HEUCHERA ‘SPELLBOUND’
(SPELLBOUND CORAL BELLS)

DESCHAMPSIA CEPITOSA
(‘PIXIE FOUNTAIN’ TUFTED HAIR GRASS)

ACER RUBRUM - RED MAPLE



OSMUNDA CINNAMOMEA
(INTERRUPTED FERN)

HAKONECHOLA MACRA
(ALL GOLD JAPENESE FOREST GRASS)
+
ASARUM CANADENSE
(CANADIAN WILD GINGER)

ANNUALS IN PLANTERS

AMELANCHIER LAEVIS
(ALLEGHENY SERVICEBERRY)

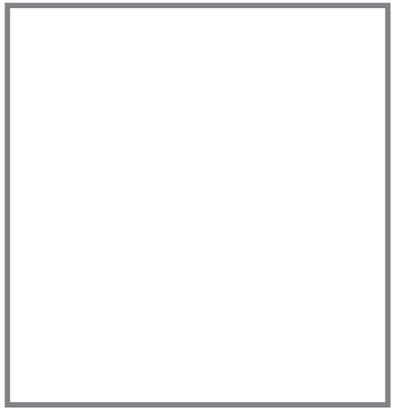
N

LANDSCAPE PLANTING PLAN

LANDON BONE BAKER ARCHITECTS

GRAY BRICK / SIOUX CITY EBONITE

ATAS VERSA-LOCK METAL PANEL



BONE WHITE

ATAS STELLAR ACCENT METAL

PEACOCK

SAGE

SEA GLASS

GOLDENROD

ATAS DESIGN WALL METAL PANEL

MATTE BLACK

EXTERIOR MATERIAL SELECTIONS

LANDON BONE BAKER ARCHITECTS

EAST (CASS AVE.) ELEVATION

NORTH (LEDYARD ST.) ELEVATION

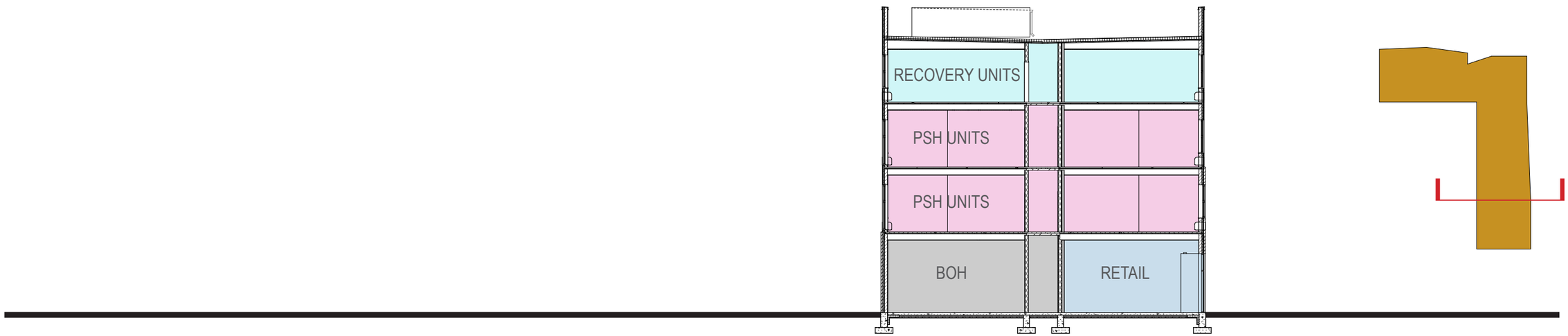
LANDON BONE BAKER ARCHITECTS

WEST ELEVATION

SOUTH ELEVATION

LANDON BONE BAKER ARCHITECTS

LONGITUDINAL BUILDING SECTION



TRANSVERSE BUILDING SECTION

LANDON BONE BAKER ARCHITECTS

GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STRATEGIC FUND
STATE HISTORIC PRESERVATION OFFICE

QUENTIN L. MESSER, JR.
PRESIDENT

April 11, 2022

MICHAEL VOLLICK
MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY
735 EAST MICHIGAN AVENUE
PO BOX 30044
LANSING MI 48909

RE: ER22-240 The Anchor at Mariners Inn, 445 Ledyard Street, T2S, R12E, Detroit, Wayne County (HUD)

Dear Mr. Vollick:

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

The historical background review indicated that the project area likely has archaeological resources associated with 19th century residential development in the Cass Park neighborhood in the southern half of the project area. Based on this information a Phase I survey consisting of limited mechanized trenching was recommended. We concur with the recommendation.

Based on the information provided for our review, it is the opinion of the State Historic Preservation Officer (SHPO) that the proposed undertaking will have **no adverse effect** [36 CFR § 800.5(b)] on historic properties within the area of potential effects for the above-cited undertaking **provided the following conditions are met:**

- Project monitoring must be conducted by a professional archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards (36 CFR Part 61).
- Any archaeological resources identified during monitoring must be evaluated and impacts to eligible resources must be avoided, minimized, or mitigated.
- Monitoring results must be reported to this office for review and comment and must meet the Secretary of the Interior's Standards for Archaeological Documentation and state archaeology guidelines. As an additional condition, note that the SHPO does not accept the results of surveys conducted in snow-covered or frozen ground conditions.

If you concur, the accompanying form must be signed by an agency official with legal authority to act on behalf of the agency [36 CFR § 800.2(a)]. Please return the signed original to us. Please note that the Section 106 review process will not be complete and HUD's responsibility to comply with 36 CFR § 800.4, "Identification of historic properties," and 36 CFR § 800.5, "Assessment of adverse effects," will not be

fulfilled until we have received this letter with the original signature of the agency official. **If the agency official disagrees with these conditions, then consultation with this office shall be reopened per 36 CFR § 800.5(a).**

Enclosed, for your convenience, is a list of archaeological consultants found to meet or exceed federal professional requirements. We recommend that you solicit and compare a minimum of three bids prior to selecting a consultant.

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

The State Historic Preservation Office is not the office of record for this undertaking. You are therefore asked to maintain a copy of this letter with your environmental review record for this undertaking. **If the scope of work changes in any way, or if artifacts or bones are discovered, please notify this office immediately.**

Please note that the Section 106 review process cannot proceed until we are able to consider the information requested above. This letter does not clear the project. If you have any questions, please contact Brian Grennell Cultural Resource Management Specialist (grennellb@michigan.gov; 517-335-2721). For questions regarding archaeological concerns, please contact Staff Archaeologist Michael J. Hambacher (hambacherm@michigan.gov, 517-335-9837). **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,

Martha MacFarlane Faes
Deputy State Historic Preservation Officer

MMF:SSE:BGG

Enclosure(s)

copy: Penny Dwoinen, City of Detroit
Carey Kratz, PM Environmental

GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STRATEGIC FUND
STATE HISTORIC PRESERVATION OFFICE

QUENTIN L. MESSER, JR.
PRESIDENT

April 11, 2022

MICHAEL VOLLICK
MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY
735 EAST MICHIGAN AVENUE
PO BOX 30044
LANSING MI 48909

RE: ACCEPTANCE LETTER

ER22-240 The Anchor at Mariners Inn, 445 Ledyard Street, T2S, R12E, Detroit, Wayne County (HUD)

We have received comments from the State Historic Preservation Office (SHPO) regarding the above-cited undertaking at the location noted above. We intend to follow the conditions as specified by the SHPO.

I concur: _____ Date: _____

Printed name and title of agency official: _____

GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STRATEGIC FUND
STATE HISTORIC PRESERVATION OFFICE

QUENTIN L. MESSER, JR.
PRESIDENT

August 19, 2022

MICHAEL VOLLICK
MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY
735 EAST MICHIGAN AVENUE
PO BOX 30044
LANSING, MI 48909

RE: ER22-240 The Anchor at Mariners Inn, 445 Ledyard Street, T02s, R12E, Detroit, Wayne County (HUD)

Dear Mr. Vollick:

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. We also reviewed the report *Phase I/II Archaeological Survey and Testing: Mariners Inn Expansion, City of Detroit, Wayne County, Michigan* by Athena Zissis, Robert Chidester, and Meagan Bell of The Mannik & Smith Group. One archaeological site, 20WN1232, was identified during these investigations. The site consists of late nineteenth century domestic features and refuse. However, this site was heavily disturbed during the later half of the twentieth century by the construction of an auto wash facility. As a result, the consultant recommended that 20WN1232 was not an NRHP-eligible resource.

Based on the information provided for our review, it is the opinion of the State Historic Preservation Officer (SHPO) that the effects of the proposed undertaking do not meet the criteria of adverse effect [36 CFR § 800.5(a)(1)]. Therefore, the project will have **no adverse effect** [36 CFR § 800.5(b)] on historic properties within the area of potential effects for the above-cited undertaking.

This letter evidences HUD's compliance with 36 CFR § 800.4 "Identification of historic properties" and 36 CFR § 800.5 "Assessment of adverse effects," and the fulfillment of HUD's responsibility to notify the SHPO, as a consulting party in the Section 106 process, under 36 CFR § 800.5(c) "Consulting party review." **If the scope of work changes in any way, please notify this office immediately. In the unlikely event that human remains, or archaeological material are encountered during construction activities related to the above-cited undertaking, work must be halted, and the Michigan SHPO and other appropriate authorities must be contacted immediately.**

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

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

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,

Martha MacFarlane-Faes
Deputy State Historic Preservation Officer

MMF:SSE

copy: Penny Dwoinen, DHRP

PM ENVIRONMENTAL
Risk Well Managed

Environmental & Engineering Services Nationwide

ENVIRONMENTAL SERVICES

BUILDING ARCHITECTURE, ENGINEERING & SCIENCE

INDUSTRIAL HYGIENE SERVICES

BROWNFIELDS & ECONOMIC INCENTIVES CONSULTING

Know Your Risk.
Take Control.
Work with the Experts.

www.pmenv.com

DESKTOP NOISE ASSESSMENT

The Anchor at Mariners Inn
Proposed Mariners Inn Condominium Unit Nos. 1 and 2
and General Common Elements
Located in the Eastern and Southern Portions of
445 Ledyard Street, Detroit, Michigan
PM Project Number 01-11288-1-0001

Prepared for:

Cinnaire Solutions Corporation
2111 Woodward Avenue, Suite 600
Detroit, Michigan 48201

Prepared by:

PM Environmental
4080 West Eleven Mile Road
Berkley, Michigan 48072

PM ENVIRONMENTAL
Risk Well Managed

Corporate Headquarters
Lansing, Michigan
3340 Ranger Road, Lansing, MI 48906
f: 877.884.6775
t: 517.321.3331

Michigan Locations
Berkley **Bay City**
Grand Rapids **Lansing**
Oak Park

May 19, 2022

Mr. Edward Potas
Cinnaire Solutions Corporation
2111 Woodward Avenue, Suite 600
Detroit, Michigan 48201

Re: Phase I Environmental Site Assessment of The Anchor at Mariners Inn
Proposed Mariners Inn Condominium Unit Nos. 1 and 2 and
General Common Elements
Located in the Eastern and Southern Portions of 445 Ledyard Street,
Detroit, Michigan
PM Environmental Project No. 01-11288-1-0001

Dear Mr. Potas:

PM Environmental (PM) has completed the Desktop Noise Assessment of the above referenced property. This Desktop Noise Assessment was conducted in general accordance with the US Department of Housing and Urban Development (HUD) Noise Abatement and Control standards contained in 24 CFR 51B. This report was also prepared in conformance with Michigan State Housing Development Authority's (MSHDA's) Environmental Review Requirements for 2022.

The purpose of the Desktop Noise Assessment was to gather sufficient information to develop an independent professional opinion regarding possible noise concerns associated with the subject property through designated Noise Assessment Locations (NALs) on the subject property.

The Desktop Noise Assessment for the above referenced property represents the product of PM's professional expertise and judgment in the environmental consulting industry, and it is reasonable for **THE ANCOR AT MARINERS INN, LDHA, LP**, **CINNAIRE SOLUTIONS CORPORTATION**, **MARINERS INN**, **PROTESTANT EPISCOPAL CHURCH OF THE DIOCESE OF MICHIGAN**, **AND THE MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY** to rely on PM's Desktop Noise Assessment report.

If you have any questions related to this report, please do not hesitate to contact our office at 248.336.9988.

Sincerely,
PM ENVIRONMENTAL

Devon Nagengast
Staff Consultant

Peter S. Bosanic, P.E., EP
Principal

TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION

PM Environmental, Inc. (PM) was retained to conduct a Desktop Noise Assessment of the Mariners Inn located at the Eastern and Southern Portion of 445 Ledyard Street, Detroit, Wayne County, Michigan (hereafter referred to as the "subject property"). This Desktop Noise Assessment was conducted in general accordance with the US Department of Housing and Urban Development (HUD) Noise Abatement and Control standards contained in 24 CFR 51B. This report was also prepared in conformance with MSHDA's Environmental Review Requirements for 2022.

THIS REPORT WAS PREPARED FOR THE EXCLUSIVE USE OF THE ANCOR AT MARINERS INN, LDHA, LP, CINNAIRE SOLUTIONS CORPORTATION, MARINERS INN, PROTESTANT EPISCOPAL CHURCH OF THE DIOCESE OF MICHIGAN, AND THE MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY, EACH OF WHOM MAY RELY ON THE REPORT'S CONTENTS.

The proposed development/rehabilitation utilizes state sources of funding. This assessment was conducted to provide the noise level and associated noise category at each designated Noise Assessment Location (NAL) at the subject property. This assessment does not include an evaluation of noise attenuation but general guidance is provided at the end of this assessment.

MSHDA requires that a noise assessment be completed properties that are located within 1,000 feet of a major roadway, 3,000 feet of a railroad, or 15 miles of a military or FAA-regulated airports.

The noise level calculated at a NAL is known as the day-night average sound level or DNL. A calculated DNL can fall within three categories:

1. Acceptable: DNL not exceeding 65 decibels (dB)
2. Normally Unacceptable: DNL above the 65 dB threshold but not exceeding 75 dB
3. Unacceptable: DNL above 75 dB

Two NALs (NAL #1 and NAL #2) on the subject property were used for this analysis based on proximity to noise sources. A map with the subject property boundaries, buildings, and NALs is included as Appendix A.

The following is a summary of the applicable noise sources identified at each NAL.

NAL #1 (northwest corner of proposed building)

Noise Source with Applicable Distance	Name	Distance to NAL
Airports	Coleman A. Young International Airport	4.80 miles northeast
	Windsor Airport	6.34 miles southeast
Busy Road(s)	Ledyard Street	50 feet north
	Temple Street	582 feet north
	2nd Avenue	450 feet west
	Cass Avenue	194 feet east
	Clifford Street	600 feet southeast
	Southbound Interstate-75 (I-75) Service Drive	773 feet south

Noise Source with Applicable Distance	Name	Distance to NAL
	Southbound I-75 Off Ramp	815 feet south
	I-75	912 feet south

NAL #2 (southeast corner of proposed building)

Noise Source with Applicable Distance	Name	Distance to NAL
Airports	Coleman A. Young International Airport	4.80 miles northeast
	Windsor Airport	6.30 miles southeast
Busy Road(s)	Ledyard Street	225 feet north
	Temple Street	760 feet north
	Cass Avenue	38 feet east
	Clifford Street	340 feet southeast
	Southbound I-75 Service Drive	563 feet south
	Southbound I-75 Off Ramp	604 feet south
	I-75	680 feet south
	Northbound I-75 Service Drive	780 feet south
	2nd Avenue	620 feet west

The noise sources identified within the table are further discussed below.

2.0 EVALUATION OF NOISE SOURCES

2.1: Airports

Coleman A. Young is located approximately 4.80 miles northeast of the subject property. Based on the Noise Contour Map for the airport (Appendix B), the airport is not within a distance of concern.

Windsor International Airport is located approximately 6.32 miles southeast. Based on the Noise Contour Map for the airport (Appendix B), the site is not within a distance of concern.

2.2: Major Roadways

The major roadways near the site are:

- Ledyard Street
- Temple Street
- 2nd Avenue
- Cass Avenue
- Clifford Street
- Southbound I-75 Service Drive
- Southbound I-75 Off Ramp
- I-75
- Northbound I-75 Service Drive

AADT data was available Michigan Department of Transportation (MDOT) for 2020. However, due to what appeared to be much lower than expected traffic associated with COVID restrictions,

the 2020 data was not utilized in the calculations. Traffic projections for all roadways are provided in Appendix C.

Ledyard Street has one-lane eastbound and westbound sections. Speed limit signs were not posted along Ledyard Street; however, based on the nearby speed limits and residential area, the speed limit is likely 25 mph. A stop sign is located within 160 feet of NAL #1 and within 225 feet of NAL #2. Traffic counts were obtained through the Michigan Department of Transportation (MDOT). Projections were calculated through 2032. A growth rate of 1% per year compounded was judged appropriate as traffic levels are expected to remain relatively stable.

Temple Street has one-lane eastbound and westbound sections, with a center turn lane. Speed limit signs were not posted along Temple Street; however, based on the nearby speed limits and downtown commercial area, the speed limit is likely 35 mph. There are no stop signs or stop lights within 600 feet of the subject property. Traffic counts were obtained through the Michigan MDOT. Projections were calculated through 2032. A growth rate of 1% per year compounded was judged appropriate as traffic levels are expected to remain relatively stable.

Cass Avenue has one-lane northbound and southbound sections, with a center turn lane. The speed limit is 35 mph near the subject property. There are no stop signs or stop lights within 600 feet of the subject property. Traffic counts were obtained through MDOT. Projections were calculated through 2032. A growth rate of 1% per year compounded was judged appropriate as traffic levels are expected to remain relatively stable.

Clifford Street has three-lane northbound sections. Speed limit signs were not posted along Clifford Street; however, based on the nearby speed limits and downtown commercial area, the speed limit is likely 35 mph. A stop sign is located within 600 feet of NAL #1 and 340 feet of NAL #2. Traffic counts were obtained through MDOT. Projections were calculated through 2032. A growth rate of 1% per year compounded was judged appropriate as traffic levels are expected to remain relatively stable.

Southbound I-75 Service Drive has three-lane southbound sections. The speed limit is expected to vary based on the nature of the roadway; however, PM approximated the average speed near the subject property to be 35 mph. There are no stop signs or stop lights within 600 feet of the subject property. Traffic counts were obtained through MDOT. Projections were calculated through 2032. A growth rate of 1% per year compounded was judged appropriate as traffic levels are expected to remain relatively stable.

Southbound I-75 Off Ramp has two-lane southbound sections. The speed limit is expected to vary based on the nature of the roadway; however, PM approximated the average speed near the subject property to be 50 mph. There are no stop signs or stop lights within 600 feet of the subject property. Traffic counts were obtained through MDOT. Projections were calculated through 2032. A growth rate of 1% per year compounded was judged appropriate as traffic levels are expected to remain relatively stable.

I-75 has a four-lane northbound and southbound sections. The speed limit is 55 mph near the subject property. There are no stop signs or stop lights within 600 feet of the subject property. Traffic counts were obtained through the MDOT. Projections were calculated through 2032. A growth rate of 1% per year compounded was judged appropriate as traffic levels are expected to remain relatively stable.

Northbound I-75 Service Drive has three-lane northbound sections. The speed limit is expected to vary based on the nature of the roadway; however, PM approximated the average speed near the subject property to be 35 mph. There are no stop signs or stop lights within 600 feet of the subject property. Traffic counts were obtained through MDOT. Projections were calculated through 2032. A growth rate of 1% per year compounded was judged appropriate as traffic levels are expected to remain relatively stable.

2nd Avenue four-lane northbound sections. The speed limit is 25 mph near the subject property. A stop sign is located within 450 feet of NAL #1. Traffic counts were obtained through MDOT. Projections were calculated through 2032. A growth rate of 1% per year compounded was judged appropriate as traffic levels are expected to remain relatively stable.

N2.3: Railroads

No railroad tracks were identified within 3,000 feet of the subject property.

3.0 CALCULATIONS

Using the HUD DNL calculator, the noise level at NAL #1 from the noise sources, as predicted for operations in 2032, is 67 dB. This result is Normally Unacceptable.

Using the HUD DNL calculator, the noise level at NAL #2 from the noise sources, as predicted for operations in 2032, is 72 dB. This result is Normally Unacceptable.

Noise DNL calculator worksheets for each NAL are provided in Appendix D.

4.0 CONCLUSIONS

The following is a summary of the findings of this assessment.

NAL #	Combined Source DNL (dB)	Category
1 (northwest corner of proposed building)	67	Normally Unacceptable
2 (southeast corner of proposed building)	72	Normally Unacceptable

HUD ATTENUATION GUIDANCE

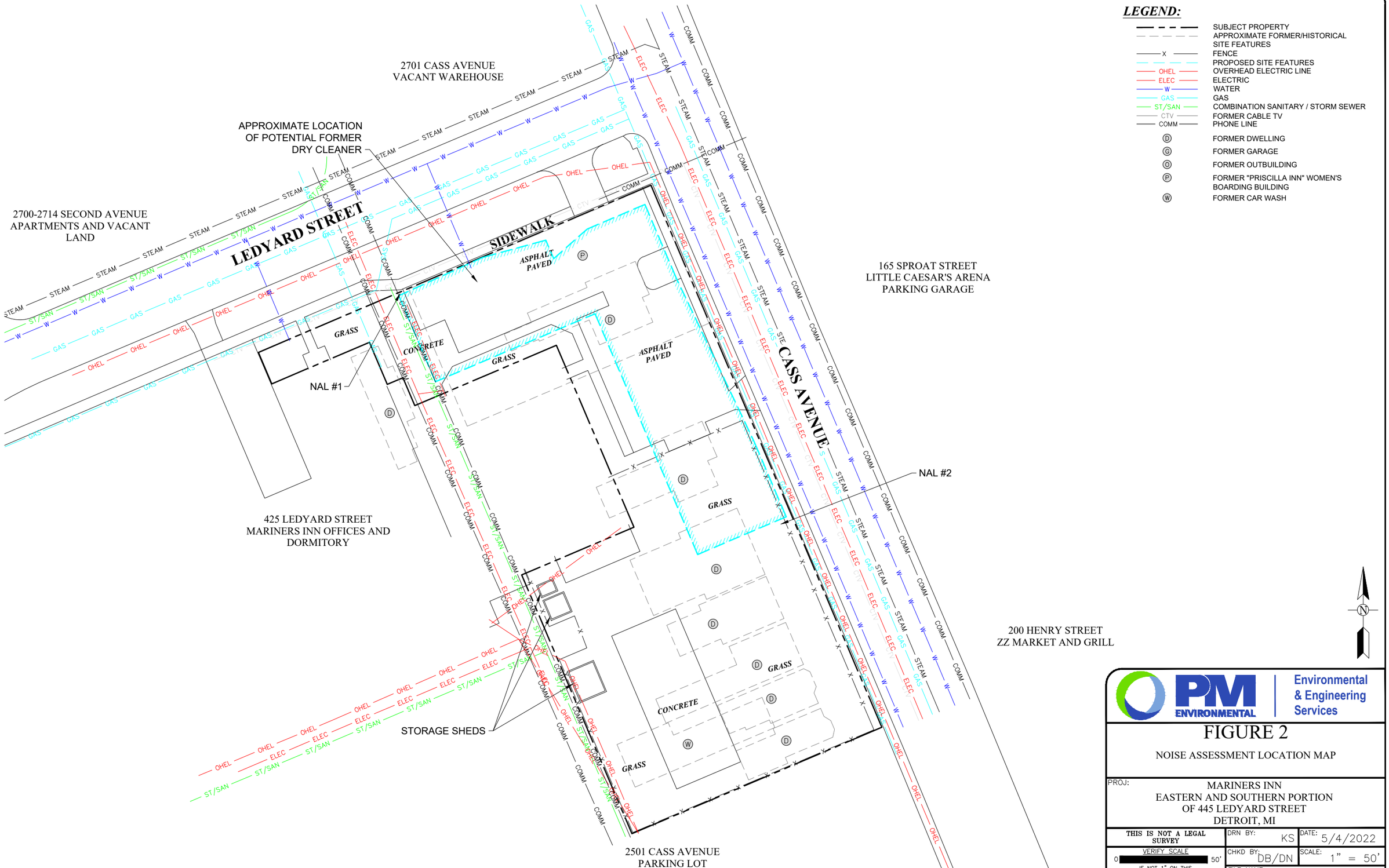
The "Normally Unacceptable" noise zone includes community noise levels from above 65 dB to 75 dB. Approvals in this noise zone require a minimum of 5 dB additional sound attenuation for buildings having noise-sensitive uses if the day-night average sound level is greater than 65 dB but does not exceed 70 dB, or a minimum of 10 dB of additional sound attenuation if the day-night average sound level is greater than 70 dB but does not exceed 75 dB (HUD generally gives a 1 dB variance up to 76 dB). Additionally, I-75 is sunken approximately 13 feet below grade nearest the subject property, which will provide some noise attenuation from the traffic. The project architect will need to complete attenuation documentation for the project by completing either a Sound Transmission Classification Assessment Tool (STraCAT) form or HUD Figure 19. Interior noise levels must be mitigation for 45 dB or less.

5.0 REFERENCES

- 24 CFR Part 51 Subpart B
- The Noise Guidebook, U.S. Department of Housing and Urban Development,
- Michigan Department of Transportation (MDOT)
- https://www.hudexchange.info/programs/environmental-review/dnl-calculator/

Appendix A

PM ENVIRONMENTAL Environmental & Engineering Services



PM ENVIRONMENTAL | Environmental & Engineering Services

FIGURE 2

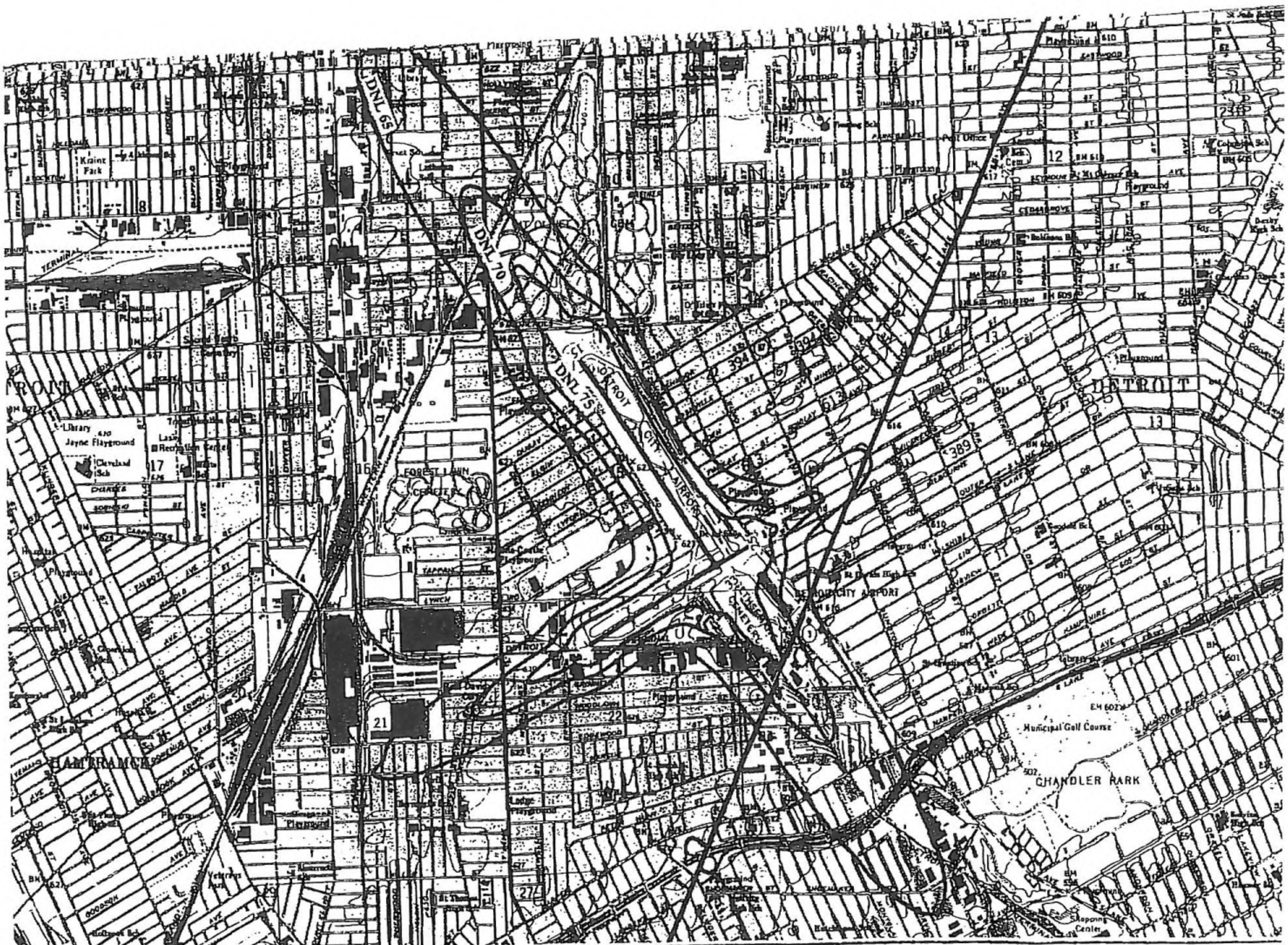
NOISE ASSESSMENT LOCATION MAP

PROJ: MARINERS INN
EASTERN AND SOUTHERN PORTION
OF 445 LEDYARD STREET
DETROIT, MI

THIS IS NOT A LEGAL SURVEY	DRN BY: KS	DATE: 5/4/2022
VERIFY SCALE 0 — 50' IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CHKD BY: DB/DN	SCALE: 1" = 50'
	FILE NAME: 01-11288-1-001F00R00	

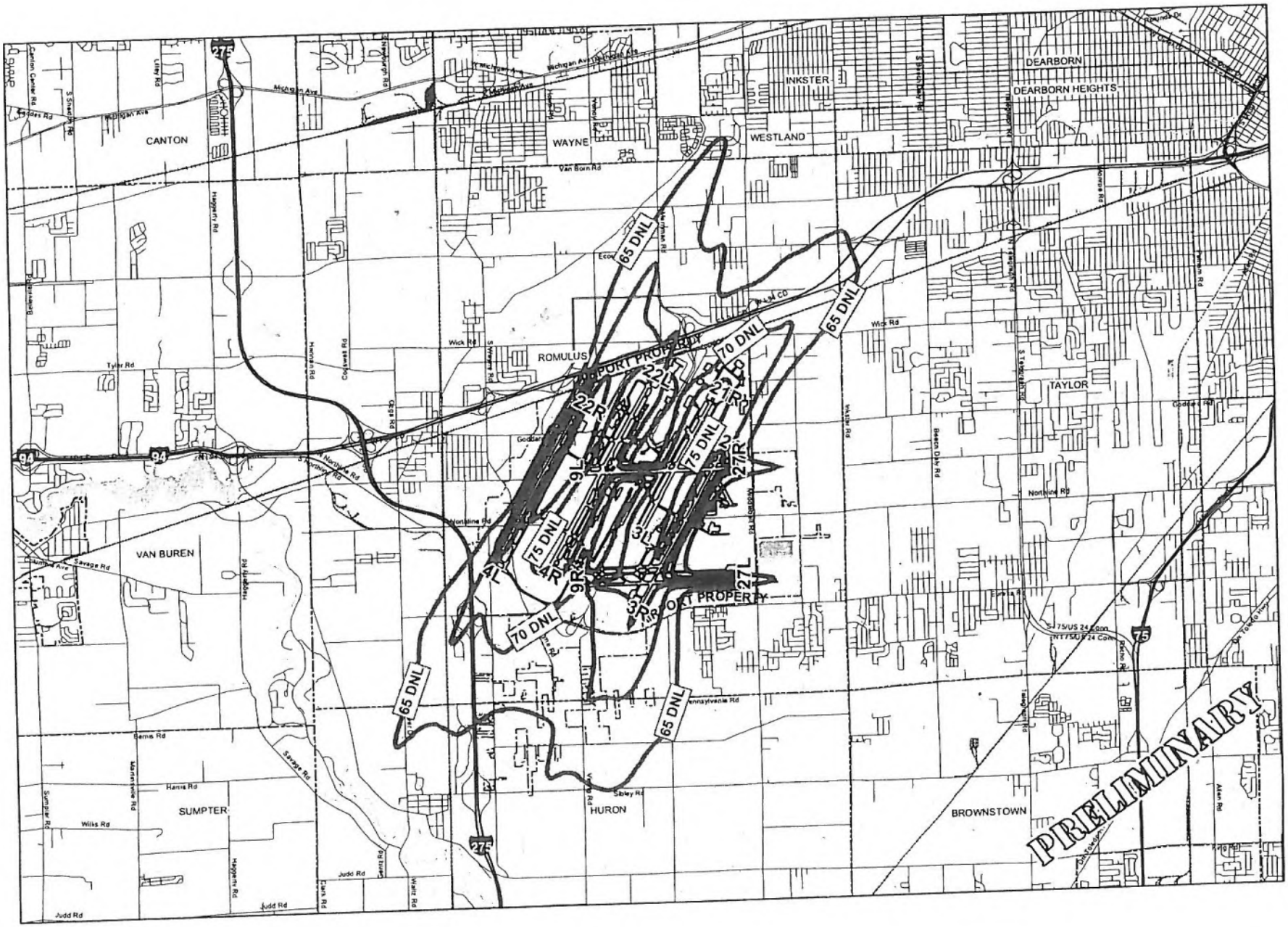
Appendix B

PM ENVIRONMENTAL Environmental & Engineering Services



ITY OF DETROIT
RPORT DEPARTMENT

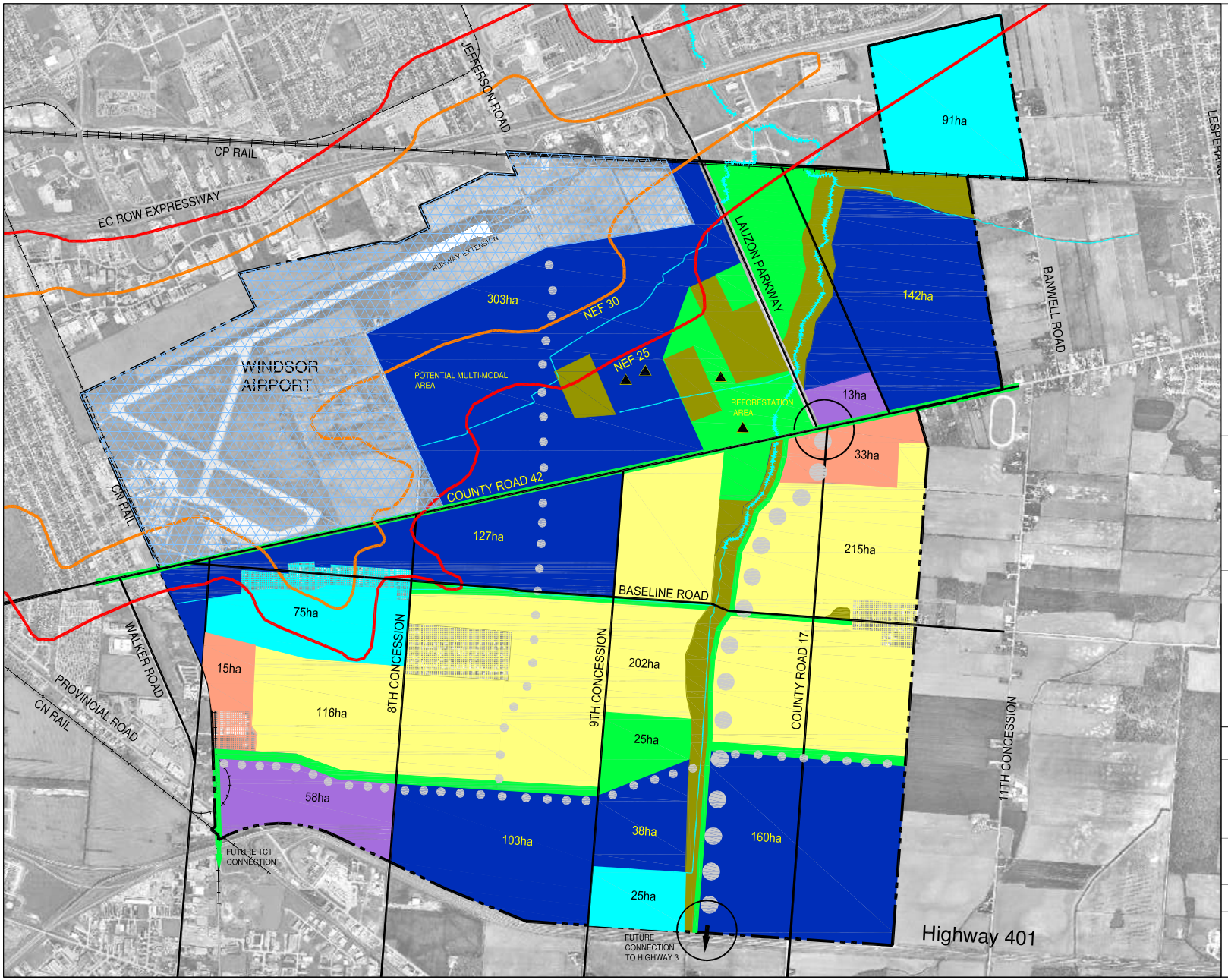
1996 BAS E
NOISE EXPOSU ONTOURS



Existing (2004) Noise Contour

Source: Michigan Department of Natural Resources, SEMCOG

DETROIT METROPOLITAN WAYNE COUNTY AIRPORT



LEGEND:

- Residential
- Commercial
- Mixed Use
- Industrial
- Business Park
- Natural Heritage/EPA
- Open Space
- Airport Lands
- Future Roads (potential location*)
- Potenial Interchange
- Natural Corridor Linkage Opportunities

* Final location to be determined through the Class EA process.

LAND USE:		
	Residential	550ha
	Mixed Use	50ha
	Commercial	70ha
	Business Park	190ha
	Industrial	875ha
	Airport	420ha

Stantec Consulting Limited

Stantec

N6A 5J7
Tel. (519)645-2007
Fax. (519)645-6575
www.stantec.com

CITY OF WINDSOR

WINDSOR ANNEXED AREA MASTER PLAN STUDY

CONCEPT 1

September 2006	614-01073CP1.dwg

1:25000 0 250 750 1250m

Appendix C

PM ENVIRONMENTAL Environmental & Engineering Services

Auto and Heavy Truck 10-year ADT Projections

Nothbound 2nd Avenue

	Cars	% Change	Trucks	% Change
2018	671	#REF!	17	#REF!
2019	668	0	28	65
	Avg % change:	#REF!	Avg % change:	#REF!
	Avg % change (Last 5-yr Trend):	#REF!	Avg % change (Last 5-yr Trend):	#REF!
	% Change/Year Assumption	1	**%/Year Change Assumption**	1

2031 Projections

	Cars	Trucks
2018	671	17
2019	668	28
2020	675	28
2021	681	29
2022	688	29
2023	695	29
2024	702	29
2025	709	30
2026	716	30
2027	723	30
2028	731	31
2029	738	31
2030	745	31
2031	753	32
2032	760	32

Predicted 2032 Auto AADT	Predicted 2032 Truck AADT
760	32

Auto and Heavy Truck 10-year ADT Projections

Cass Avenue

	Cars	% Change	Trucks	% Change
2018	6115	NA	152	NA
2019	6084	-1	237	56
	Avg % change:	-1	Avg % change:	56
	Avg % change (Last 5-yr Trend):	-1	Avg % change (Last 5-yr Trend):	56
	% Change/Year Assumption	1	**%/Year Change Assumption**	1

2032 Projections

	Cars	Trucks
2018	6115	152
2019	6084	237
2020	6145	239
2021	6206	242
2022	6268	244
2023	6331	247
2024	6394	249
2025	6458	252
2026	6523	254
2027	6588	257
2028	6654	259
2029	6721	262
2030	6788	264
2031	6856	267
2032	6924	270

Predicted 2032 Auto AADT	Predicted 2032 Truck AADT
6924	270

Auto and Heavy Truck 10-year ADT Projections

Clifford Street

	Cars	% Change	Trucks	% Change
2018	2329	NA	58	NA
2019	2317	-1	92	59
	Avg % change:	-1	Avg % change:	59
	Avg % change (Last 5-yr Trend):	-1	Avg % change (Last 5-yr Trend):	59
	% Change/Year Assumption	1	**%/Year Change Assumption**	1

2032 Projections

	Cars	Trucks	
2018	2329	58	
2019	2317	92	
2020	2340	93	
2021	2364	94	
2022	2387	95	
2023	2411	96	
2024	2435	97	
2025	2460	98	
2026	2484	99	58
2027	2509	100	
2028	2534	101	
2029	2559	102	
2030	2585	103	
2031	2611	104	
2032	2637	105	

Predicted 2032 Auto AADT	Predicted 2032 Truck AADT
2637	105

Auto and Heavy Truck 10-year ADT Projections

I-75

	Cars	% Change	Trucks	% Change
2018	88699	NA	11082	NA
2019	106103	20	13687	24
	Avg % change:	20	Avg % change:	24
	Avg % change (Last 5-yr Trend):	20	Avg % change (Last 5-yr Trend):	24
	% Change/Year Assumption	1	**%/Year Change Assumption**	1

2032 Projections

	Cars	Trucks
2018	88699	11082
2019	106103	13687
2020	107164	13824
2021	108236	13962
2022	109318	14102
2023	110411	14243
2024	111515	14385
2025	112630	14529
2026	113757	14674
2027	114894	14821
2028	116043	14969
2029	117204	15119
2030	118376	15270
2031	119560	15423
2032	120755	15577

Predicted 2032 Auto AADT	Predicted 2032 Truck AADT
120755	15577

Auto and Heavy Truck 10-year ADT Projections

Ledyard Street

	Cars	% Change	Trucks	% Change
2018	1679	NA	42	NA
2019	1671	0	68	62
	Avg % change:	0	Avg % change:	62
	Avg % change (Last 5-yr Trend):	0	Avg % change (Last 5-yr Trend):	62
	% Change/Year Assumption	1	**%/Year Change Assumption**	1

2032 Projections

	Cars	Trucks
2018	1679	42
2019	1671	68
2020	1688	69
2021	1705	69
2022	1722	70
2023	1739	71
2024	1756	71
2025	1774	72
2026	1792	73
2027	1809	74
2028	1828	74
2029	1846	75
2030	1864	76
2031	1883	77
2032	1902	77

Predicted 2032 Auto AADT	Predicted 2032 Truck AADT
1902	77

Auto and Heavy Truck 10-year ADT Projections

Northbound I-75 Service Drive

	Cars	% Change	Trucks	% Change
2018	3779	NA	95	NA
2019	3760	-1	151	59
	Avg % change:	-1	Avg % change:	59
	Avg % change (Last 5-yr Trend):	-1	Avg % change (Last 5-yr Trend):	59
	% Change/Year Assumption	1	**%/Year Change Assumption**	1

2032 Projections

	Cars	Trucks
2018	3779	95
2019	3760	151
2020	3798	153
2021	3836	154
2022	3874	156
2023	3913	157
2024	3952	159
2025	3991	160
2026	4031	162
2027	4072	164
2028	4112	165
2029	4153	167
2030	4195	168
2031	4237	170
2032	4279	172

Predicted 2032 Auto AADT	Predicted 2032 Truck AADT
4279	172

Auto and Heavy Truck 10-year ADT Projections

Southbound Cass Avenue

	Cars	% Change	Trucks	% Change
2018	705	NA	19	NA
2019	433	-39	105	453
	Avg % change:	-39	Avg % change:	453
	Avg % change (Last 5-yr Trend):	-39	Avg % change (Last 5-yr Trend):	453
	% Change/Year Assumption	1	**%/Year Change Assumption**	1

2032 Projections

	Cars	Trucks
2018	705	19
2019	433	105
2020	437	106
2021	442	107
2022	446	108
2023	451	109
2024	455	110
2025	460	111
2026	464	113
2027	469	114
2028	474	115
2029	478	116
2030	483	117
2031	488	118
2032	493	119

Predicted 2032 Auto AADT	Predicted 2032 Truck AADT
493	119

Auto and Heavy Truck 10-year ADT Projections

Southbound I-75 Off Ramp

	Cars	% Change	Trucks	% Change
2018	7077	NA	566	NA
2019	7042	0	563	-1
	Avg % change:	0	Avg % change:	-1
	Avg % change (Last 5-yr Trend):	0	Avg % change (Last 5-yr Trend):	-1
	% Change/Year Assumption	1	**%/Year Change Assumption**	1

2032 Projections

	Cars	Trucks
2018	7077	566
2019	7042	563
2020	7112	569
2021	7184	574
2022	7255	580
2023	7328	586
2024	7401	592
2025	7475	598
2026	7550	604
2027	7625	610
2028	7702	616
2029	7779	622
2030	7857	628
2031	7935	634
2032	8014	641

Predicted 2032 Auto AADT	Predicted 2032 Truck AADT
8014	641

Auto and Heavy Truck 10-year ADT Projections

Southbound I-75 Service Drive

	Cars	% Change	Trucks	% Change
2018	1296	NA	31	NA
2019	1290	0	50	61
	Avg % change:	0	Avg % change:	61
	Avg % change (Last 5-yr Trend):	0	Avg % change (Last 5-yr Trend):	61
	% Change/Year Assumption	1	**%/Year Change Assumption**	1

2032 Projections

	Cars	Trucks
2018	1296	31
2019	1290	50
2020	1303	51
2021	1316	51
2022	1329	52
2023	1342	52
2024	1356	53
2025	1369	53
2026	1383	54
2027	1397	54
2028	1411	55
2029	1425	55
2030	1439	56
2031	1454	56
2032	1468	57

Predicted 2032 Auto AADT	Predicted 2032 Truck AADT
1468	57

Auto and Heavy Truck 10-year ADT Projections

Temple Street

	Cars	% Change	Trucks	% Change
2018	4139	NA	103	NA
2019	4118	-1	164	59
	Avg % change:	-1	Avg % change:	59
	Avg % change (Last 5-yr Trend):	-1	Avg % change (Last 5-yr Trend):	59
	% Change/Year Assumption	1	**%/Year Change Assumption**	1

2032 Projections

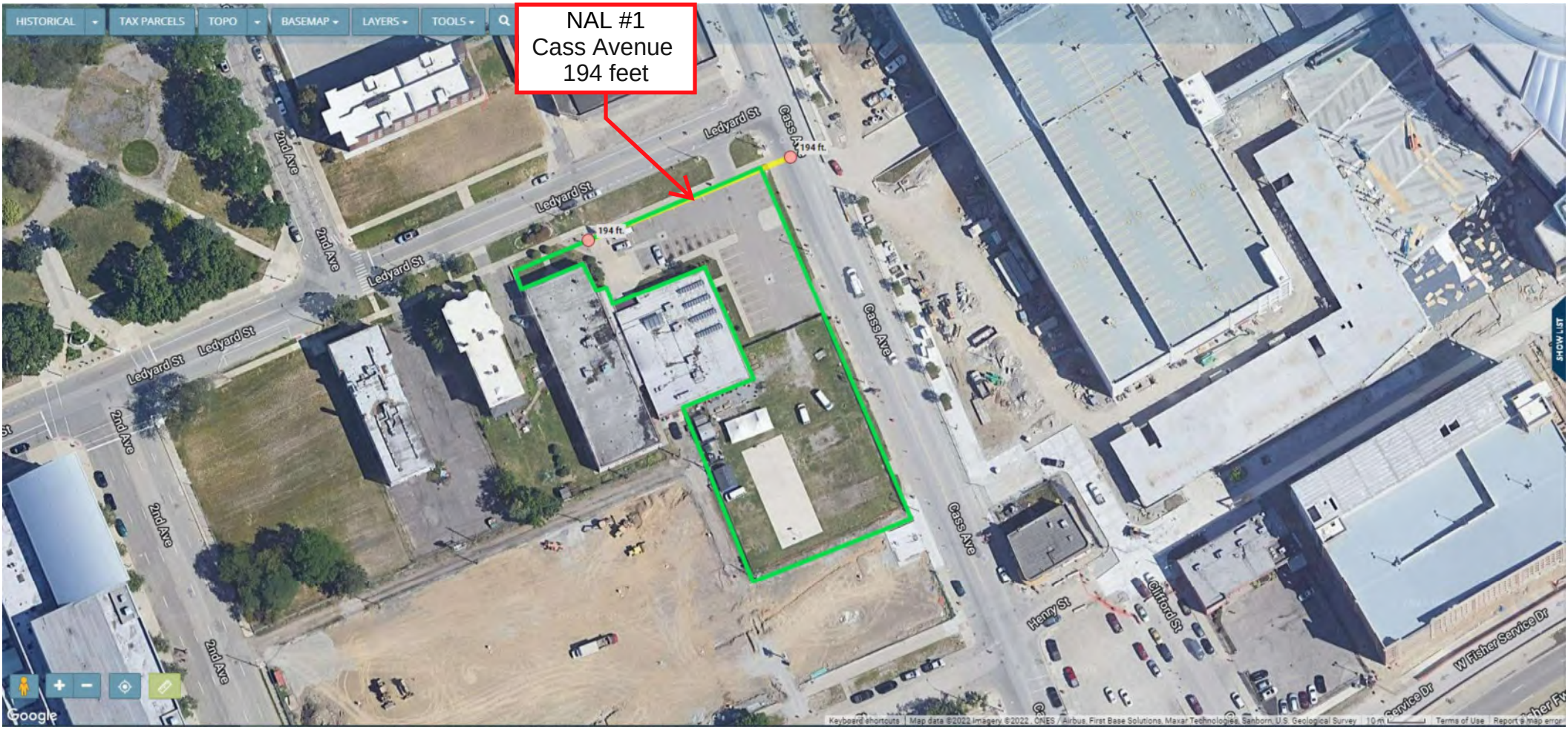
	Cars	Trucks
2018	4139	103
2019	4118	164
2020	4159	166
2021	4201	167
2022	4243	169
2023	4285	171
2024	4328	172
2025	4371	174
2026	4415	176
2027	4459	178
2028	4504	179
2029	4549	181
2030	4594	183
2031	4640	185
2032	4687	187

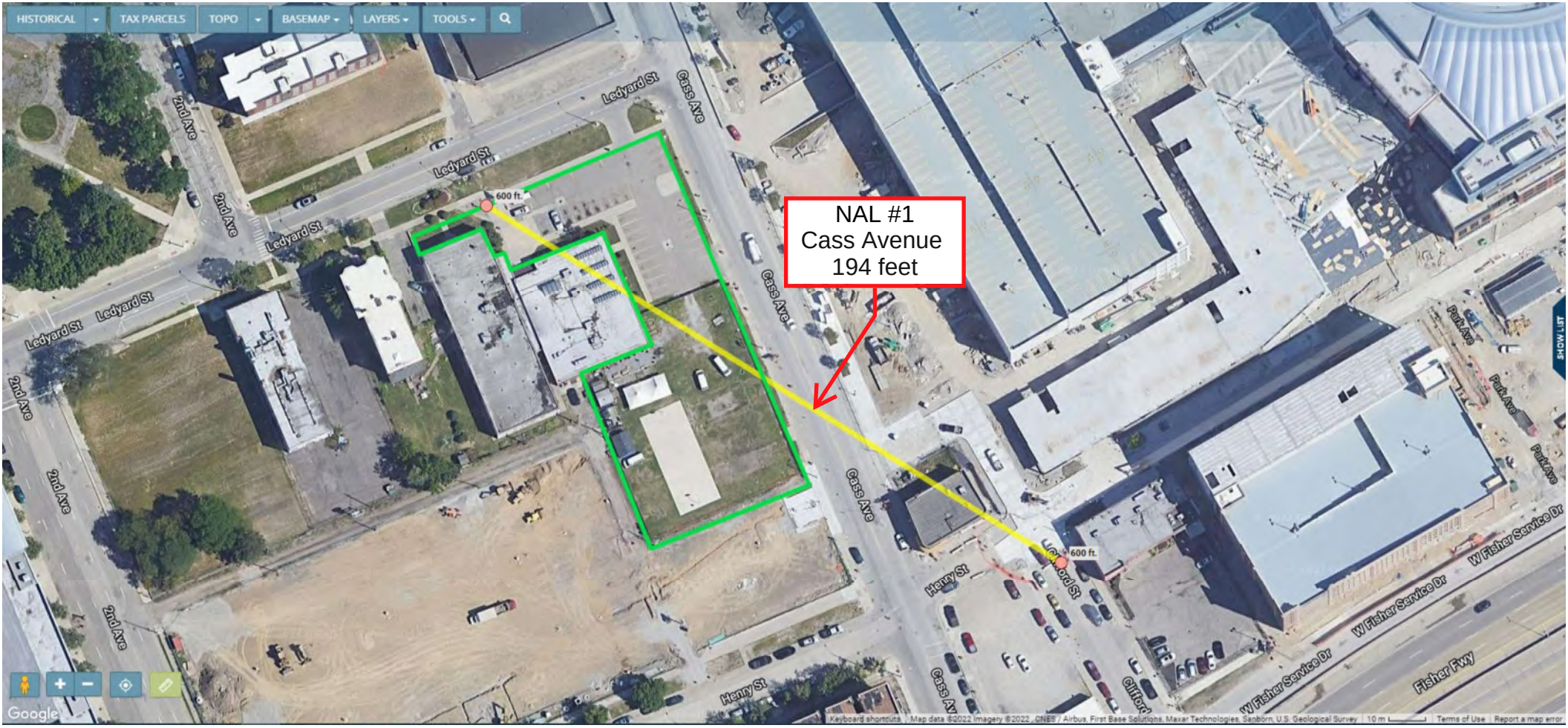
Predicted 2032 Auto AADT	Predicted 2032 Truck AADT
4687	187

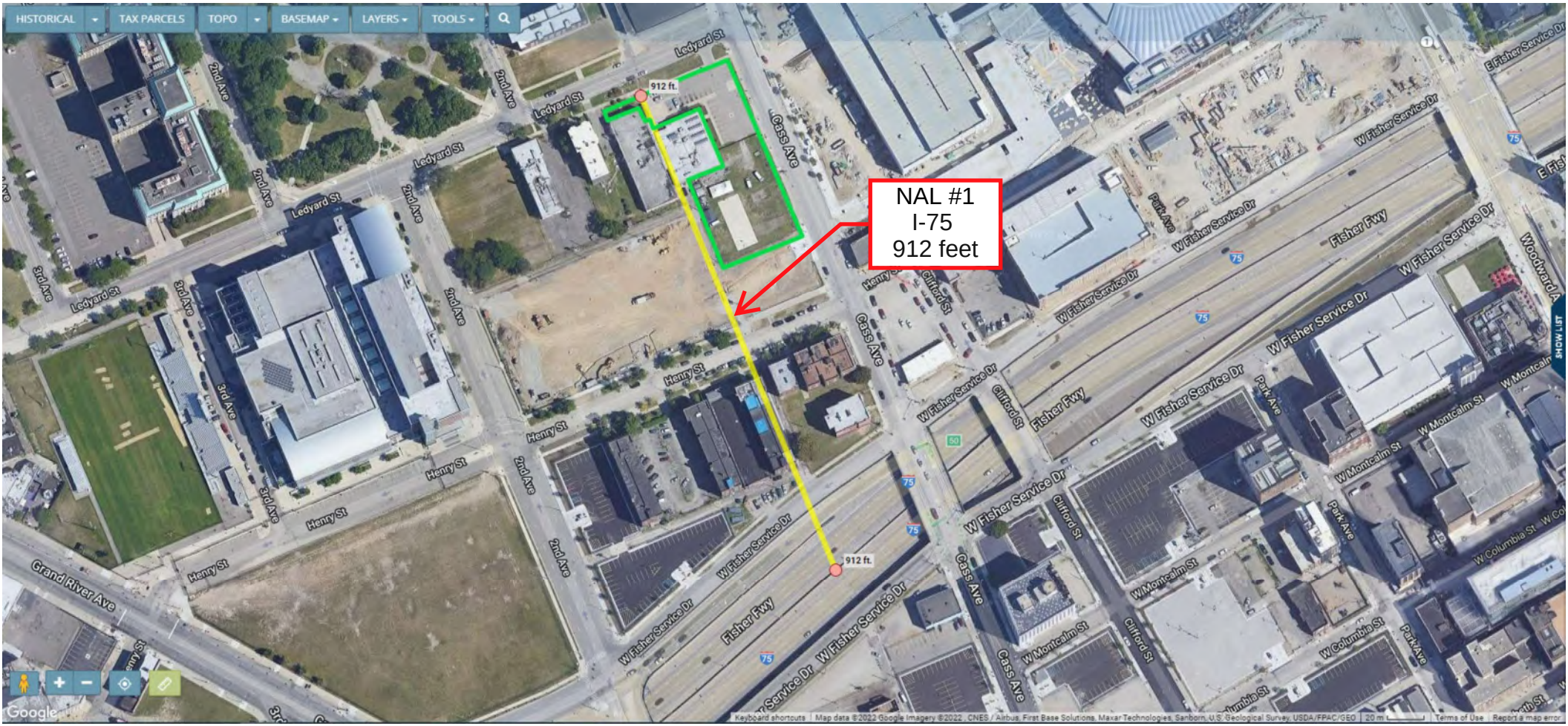

NAL #1
Coleman A. Young
International Airport
4.80 miles
4.80 mi.
4.80 mi.
HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
Highland Park
Hamtramck
Grosse Pointe Farms
CORNERSTONE VILLAGE
Grosse Pointe
Grosse Pointe Park
CONNER CREEK
ISLANDVIEW
MILWAUKEE JUNCTION
HENRY FORD
WAYNE STATE
MEDICAL CENTER
MIDTOWN
EASTERN MARKET
CASS CORRIDOR
NORTH CORKTOWN
CORKTOWN
RIVERTOWN WAREHOUSE DISTRICT
Detroit
Belle Isle
UNITED STATES
CANADA
Detroit River
RIVERSIDE
CLAYTOWN
Dearborn
SPRINGWELLS
WEST SIDE INDUSTRIAL
Windsor
WALKERVILLE
EAST WINDSOR
Tecumseh
Google


NAL #1
Windsor Airport
6.34 miles
6.34 mi.
6.34 mi.
Detroit
Windsor
Dearborn
Melvindale
River Rouge
Zug Island
Belle Isle
Tecumseh
WAYNE STATE
MEDICAL CENTER
MIDTOWN
EASTERN MARKET
CASS CORRIDOR
NORTH CORKTOWN
CORKTOWN
CLAYTOWN
SPRINGWELLS
WEST SIDE INDUSTRIAL
DELRAY
SANDWICH
WALKERVILLE
EAST WINDSOR
SOUTH WALKERVILLE
FOREST GLADE
RIVERSIDE
ISLANDVIEW
SOUTH CAMERON
REMINGTON PARK
DEVONSHIRE HEIGHTS
SOUTH WINDSOR
UNITED STATES
CANADA
Detroit River
Google


NAL #1
2nd Avenue
450 feet
450 ft.
450 ft.
HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
Temple St
Ledyard St
Henry St
Sproat St
Cass Ave
2nd Ave
3rd Ave
4th St
Union St
Clifford St
Park Ave
W Fisher Service Dr
Fisher Fwy
Google


NAL #1
Cass Avenue
194 feet
HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
194 ft.
194 ft.
Ledyard St
Ledyard St
Ledyard St
Ledyard St
Ledyard St
2nd Ave
2nd Ave
2nd Ave
2nd Ave
Cass Ave
Cass Ave
Cass Ave
Henry St
Clifford St
W Fisher Service Dr
Google

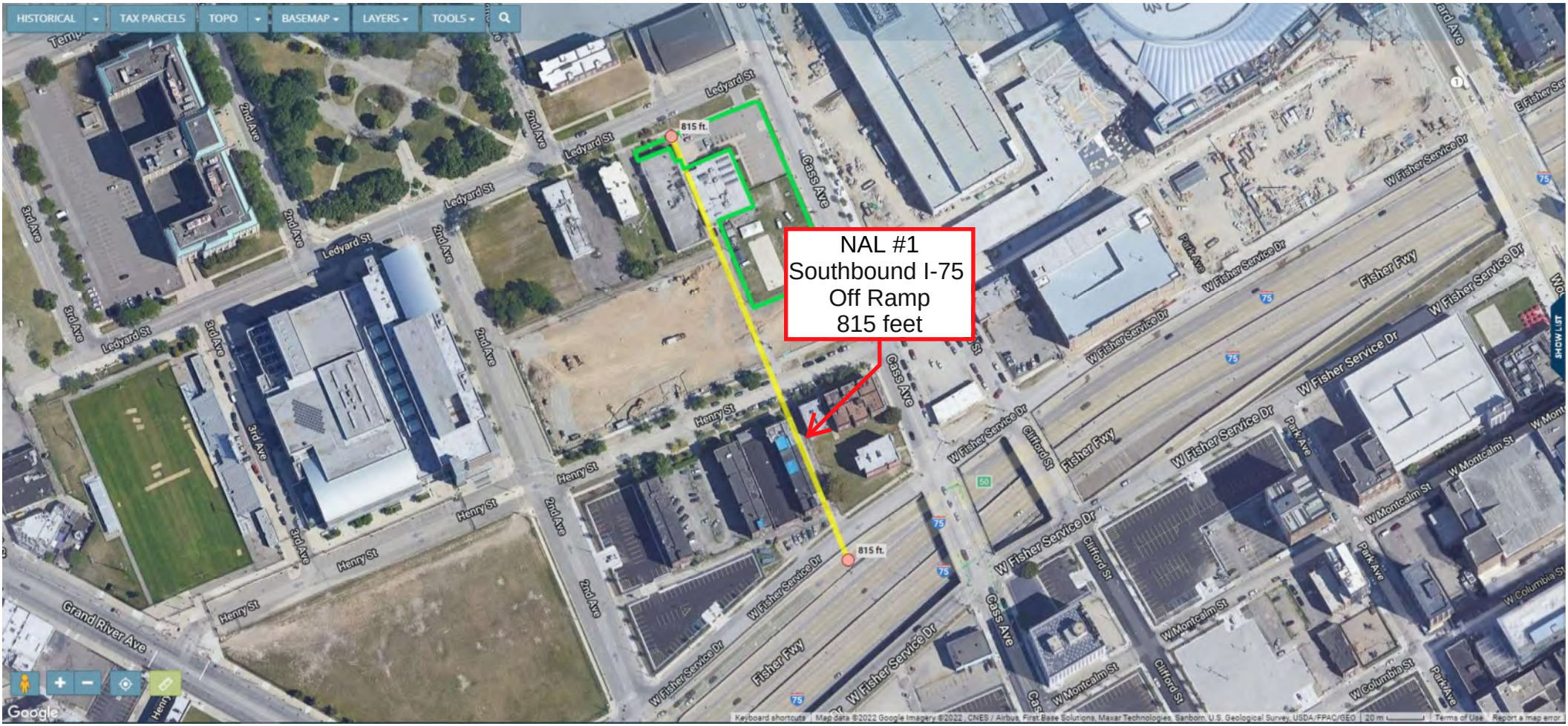

HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
NAL #1
Cass Avenue
194 feet
600 ft.
600 ft.
Ledyard St
2nd Ave
Cass Ave
Henry St
Clifford St
W Fisher Service Dr
Fisher Fwy
Park Ave
Google

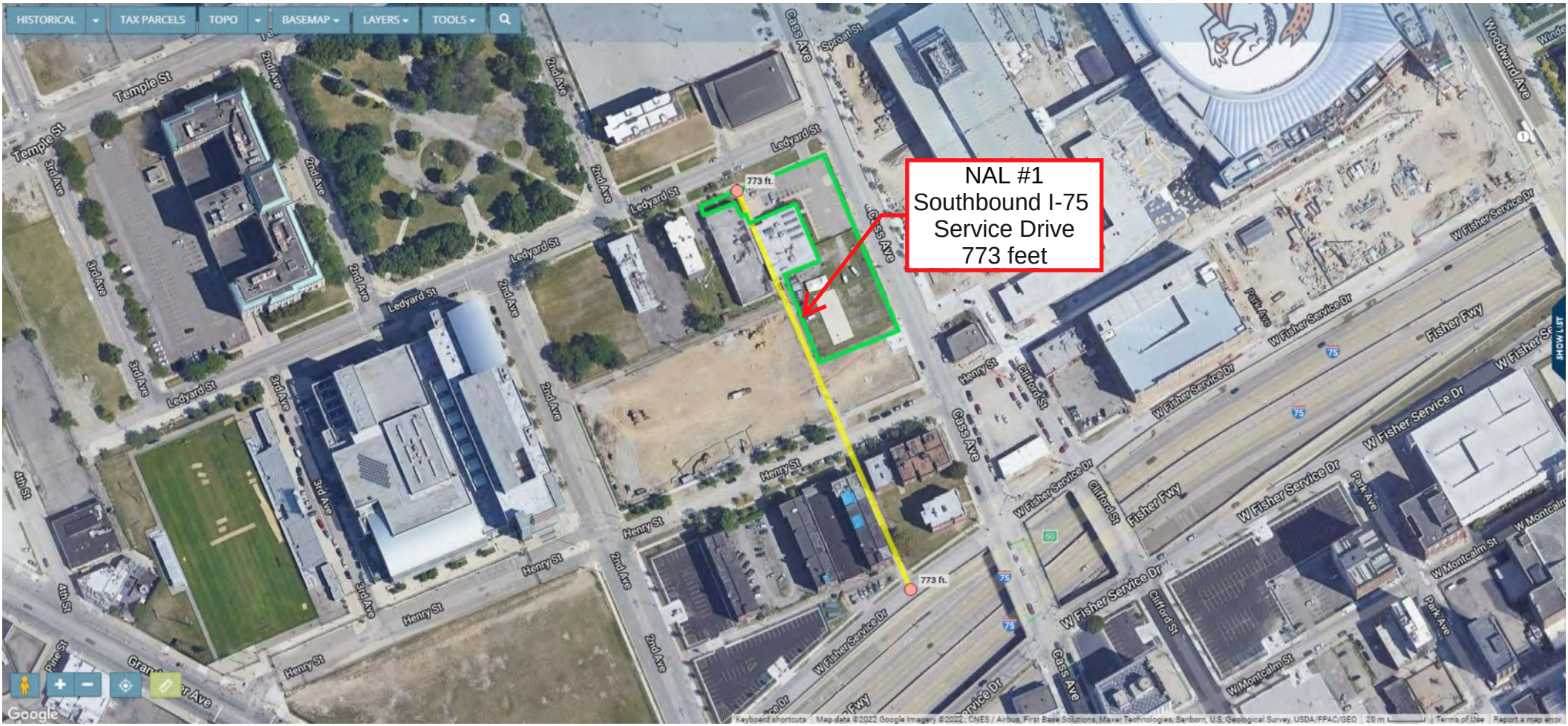

HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
912 ft.
912 ft.
NAL #1
I-75
912 feet
Ledyard St
2nd Ave
3rd Ave
Cass Ave
Henry St
Grand River Ave
W Fisher Service Dr
Fisher Fwy
Clifford St
Park Ave
W Montcalm St
W Columbia St
Woodward Ave
Google

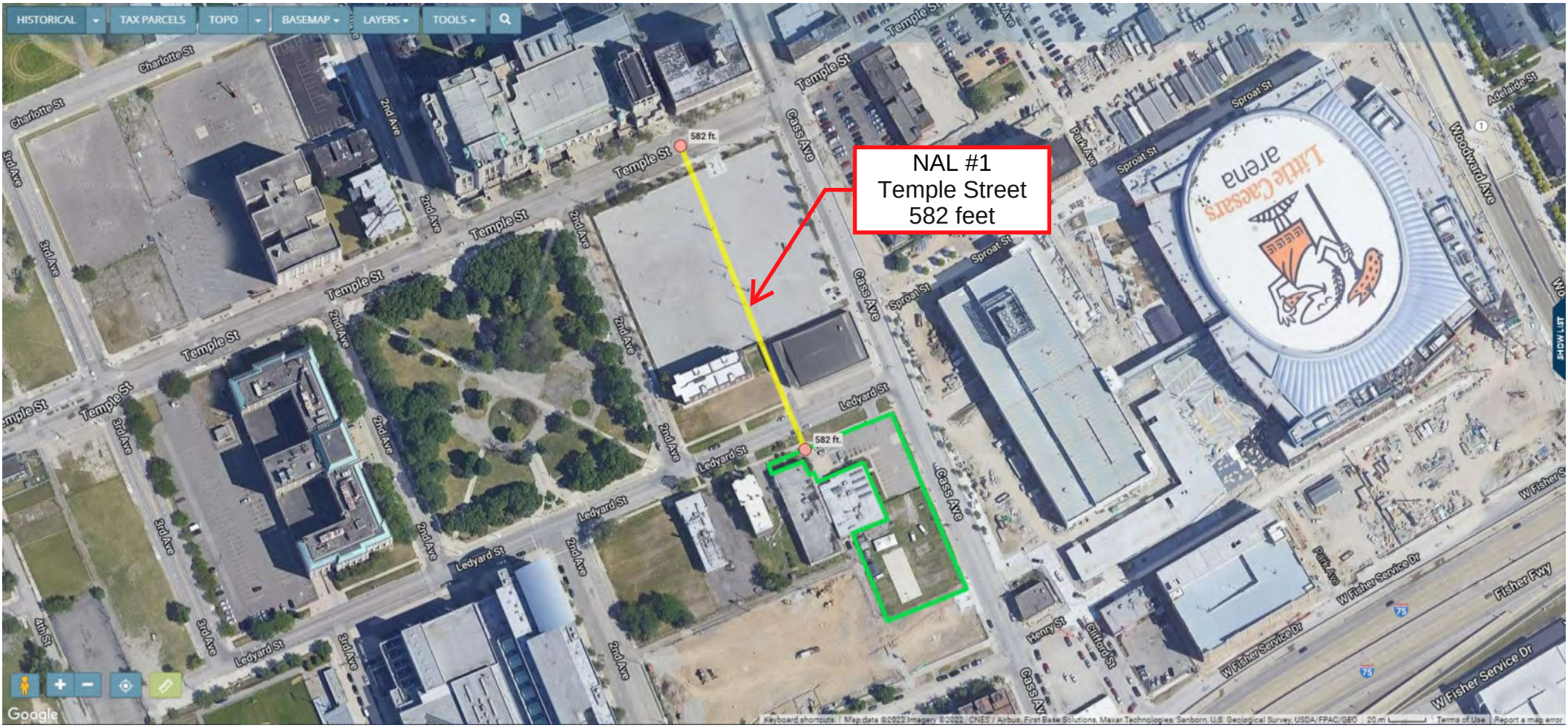

NAL #1
Ledyard Street
50 feet
50 ft.
50 ft.
Ledyard St
2nd Ave
Cass Ave
Henry St
Clifford St
W Fisher Service
HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
Google


HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
NAL #1
Northbound 2nd
Avenue
232 feet
232 ft.
232 ft.
Ledyard St
Ledyard St
Ledyard St
Ledyard St
Ledyard St
2nd Ave
2nd Ave
2nd Ave
2nd Ave
2nd Ave
2nd Ave
Cass Ave
Cass Ave
Cass Ave
Henry St
Clifford St
Google
Keyboard shortcuts
Map data ©2022 Imagery ©2022 , CNES / Airbus, First Base Solutions, Maxar Technologies, Sanborn, U.S. Geological Survey
10 m
Terms of Use
Report a map error

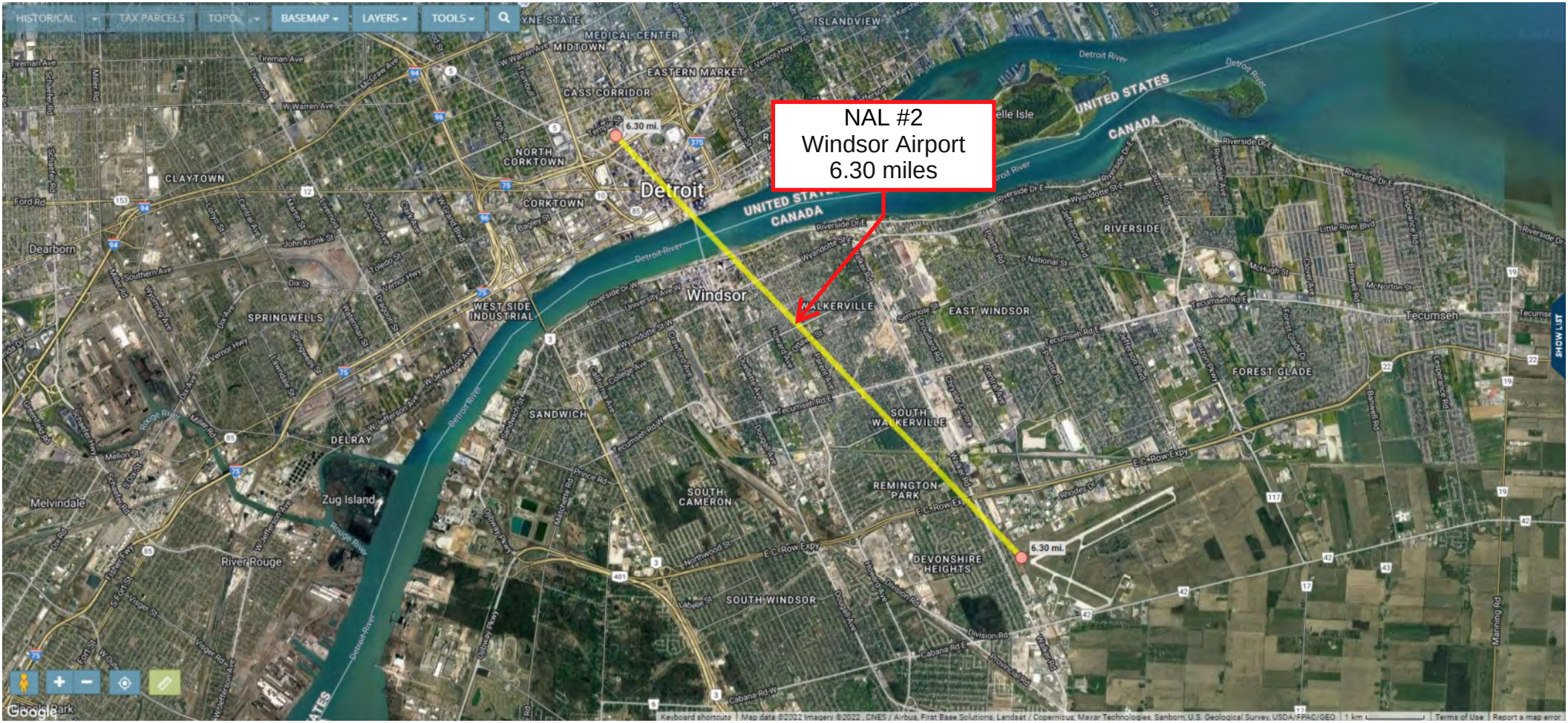

NAL #1
Southbound 2nd Avenue
685 feet
685 ft.
685 ft.
Ledyard St
2nd Ave
Gass Ave
3rd Ave
Henry St
HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
Google
10:54 AM
5/3/2022


HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
NAL #1
Southbound I-75
Off Ramp
815 feet
815 ft.
815 ft.
Ledyard St
2nd Ave
3rd Ave
Cass Ave
Henry St
Grand River Ave
W Fisher Service Dr
Fisher Fwy
Clifford St
Park Ave
W Montcalm St
W Columbia St
Google

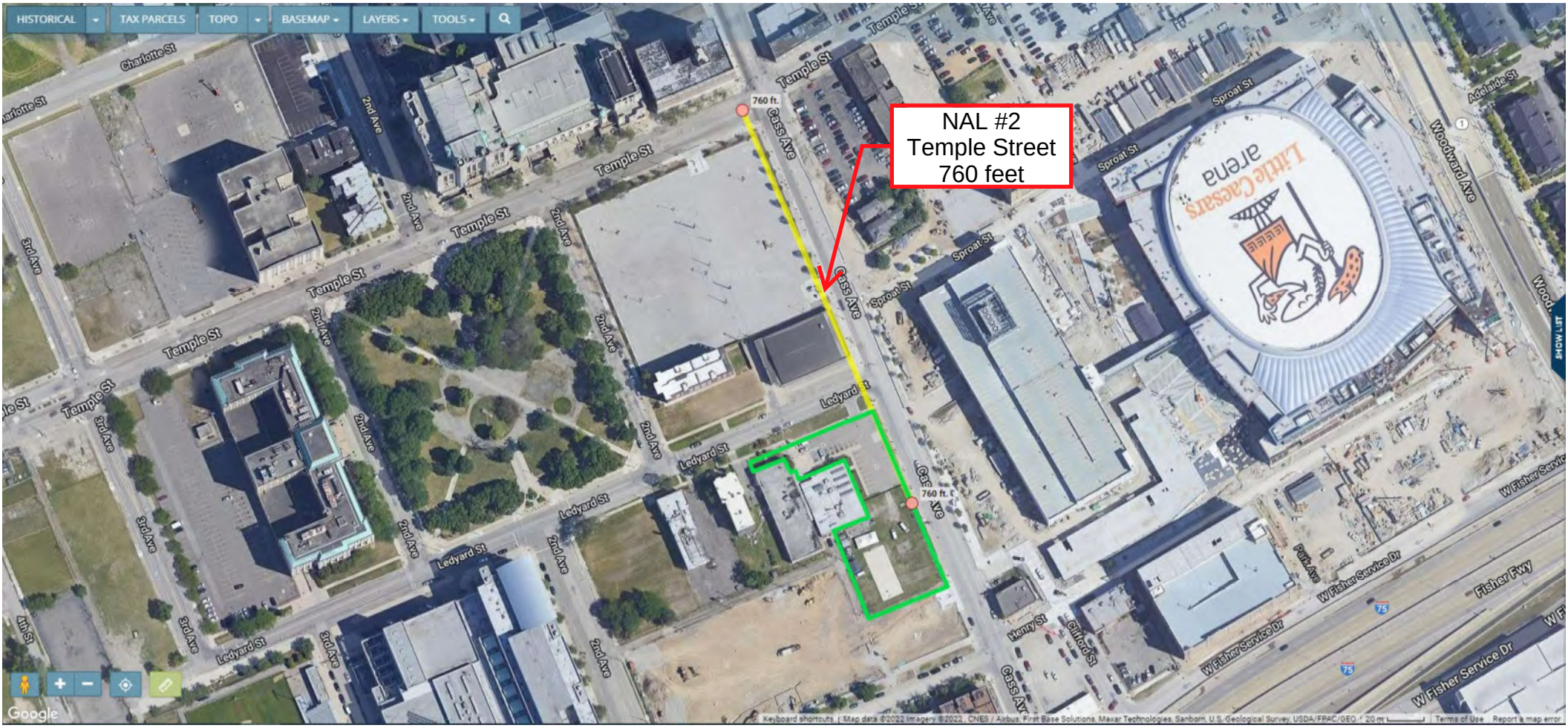

NAL #1
Southbound I-75
Service Drive
773 feet
773 ft.
773 ft.
HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
Temple St
Ledyard St
Henry St
Sproat St
Cass Ave
Woodward Ave
W Fisher Service Dr
Fisher Fwy
Clifford St
Park Ave
W Montcalm St
2nd Ave
3rd Ave
4th St
Pine St
Google

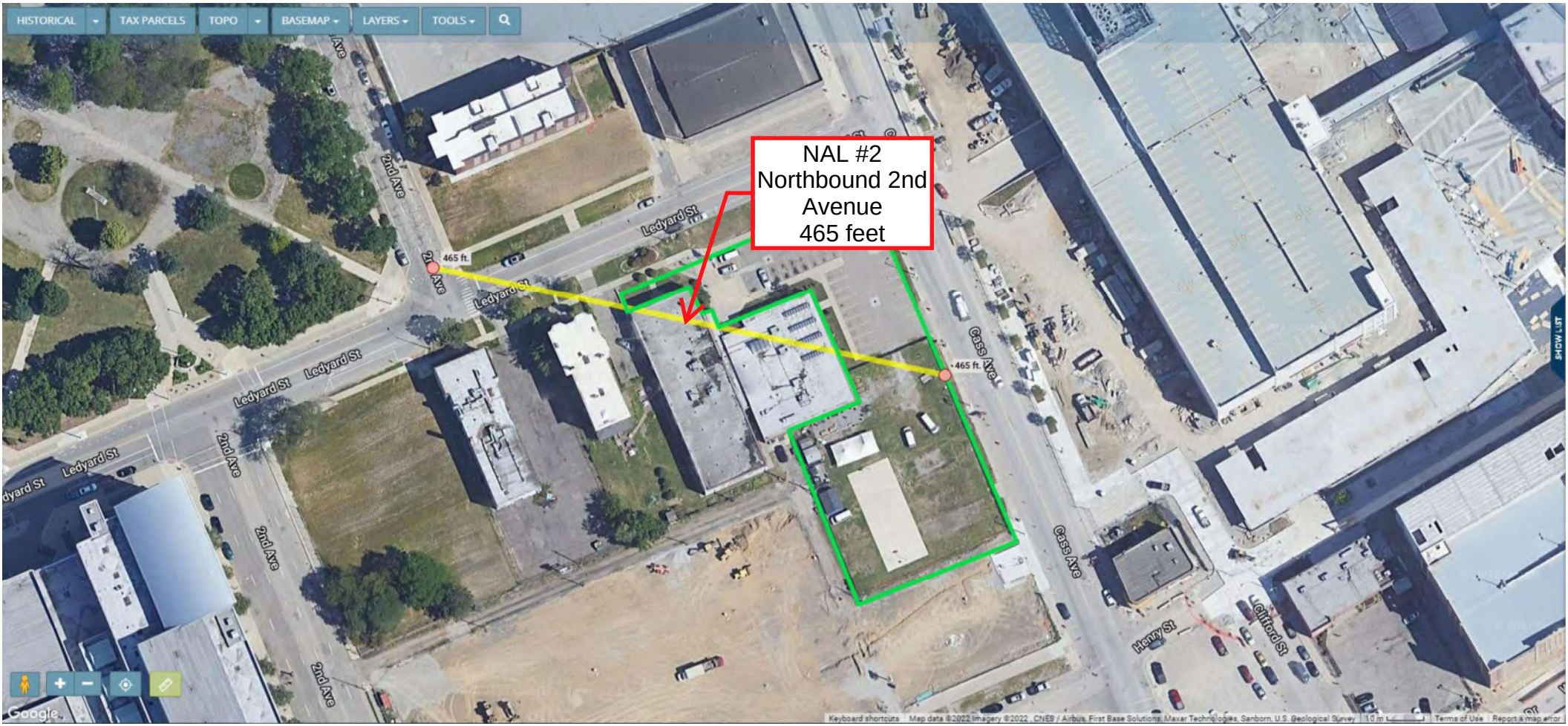

NAL #1
Temple Street
582 feet
582 ft.
582 ft.
Temple St
Ledyard St
Cass Ave
Sproat St
Park Ave
Woodward Ave
Adelaide St
Little Caesars arena
W Fisher Service Dr
Fisher Fwy
Henry St
Clifford St
Charlotte St
2nd Ave
3rd Ave
4th St
Google

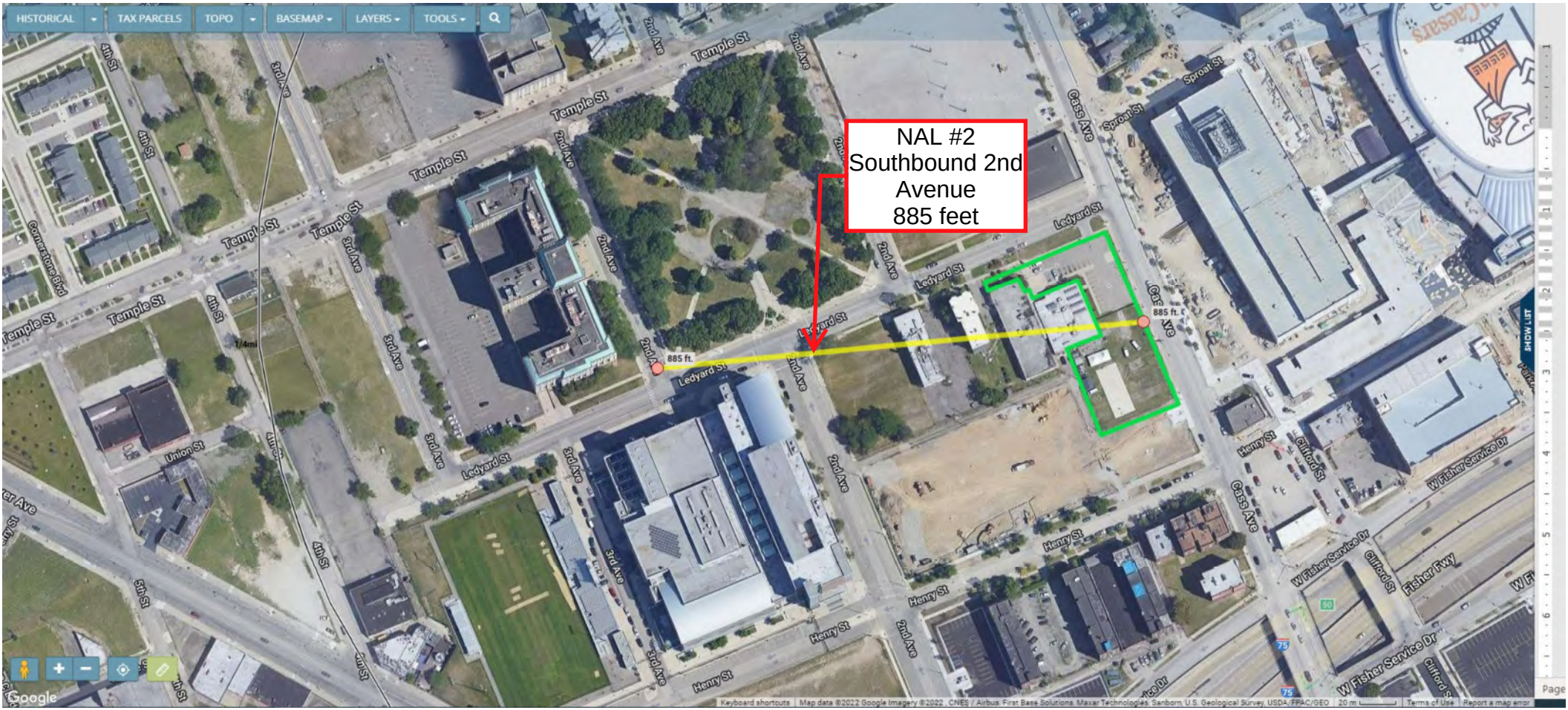

NAL #2
Coleman A. Young
International Airport
4.80 miles
4.80 mi.
4.80 mi.
HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
Detroit
Windsor
Dearborn
Highland Park
Hamtramck
Grosse Pointe
Grosse Pointe Park
CORNERSTONE VILLAGE
CONNER CREEK
ISLANDVIEW
MILWAUKEE JUNCTION
HENRY FORD
WAYNE STATE
MEDICAL CENTER
MIDTOWN
EASTERN MARKET
CASS CORRIDOR
NORTH CORKTOWN
CORKTOWN
RIVERTOWN WAREHOUSE DISTRICT
CLAYTOWN
SPRINGWELLS
WEST SIDE INDUSTRIAL
RIVERSIDE
WALKERVILLE
EAST WINDSOR
Belle Isle
UNITED STATES
CANADA
Detroit River
I-96 Express
Google

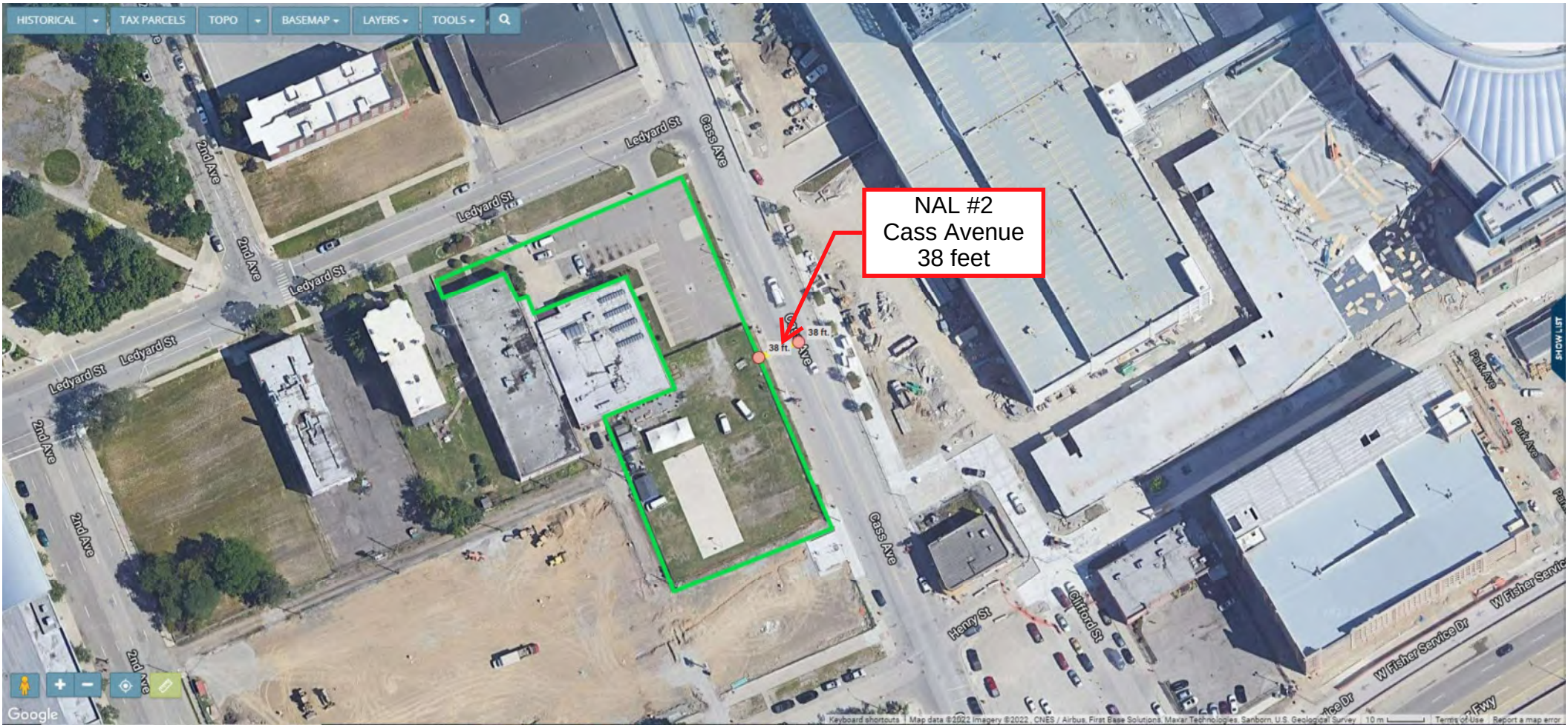

NAL #2
Windsor Airport
6.30 miles
6.30 mi.
6.30 mi.
Detroit
Windsor
CANADA
UNITED STATES
Detroit River
Dearborn
Melvindale
River Rouge
Zug Island
SPRINGWELLS
CLAYTOWN
CORKTOWN
NORTH CORKTOWN
MIDTOWN
CASS CORRIDOR
EASTERN MARKET
MEDICAL CENTER
ISLANDVIEW
WEST SIDE INDUSTRIAL
SANDWICH
DELRAY
WALKERVILLE
EAST WINDSOR
SOUTH WALKERVILLE
FOREST GLADE
RIVERSIDE
Tecumseh
SOUTH CAMERON
REMINGTON PARK
DEVONSHIRE HEIGHTS
SOUTH WINDSOR
HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
Google
Keyboard shortcuts
Map data ©2022 Imagery ©2022 , CNES / Airbus, First Base Solutions, Landsat / Copernicus, Maxar Technologies, Sanborn, U.S. Geological Survey, USDA/FPAC/GEO
1 km
Terms of Use
Report a map error

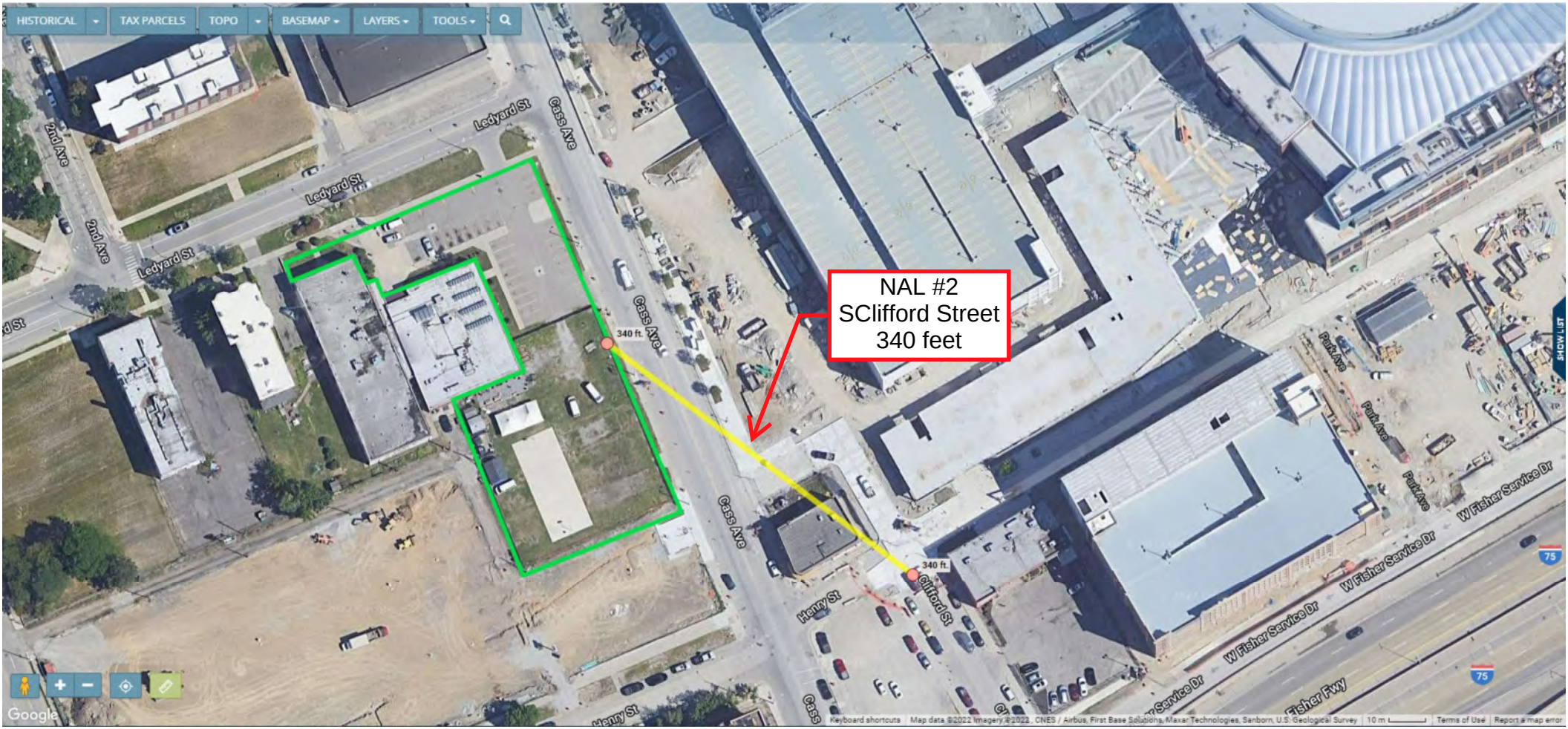

NAL #2
Cass Avenue
225 feet
225 ft.
225 ft.
Ledyard St
Ledyard St
Ledyard St
Ledyard St
2nd Ave
2nd Ave
2nd Ave
2nd Ave
Cass Ave
Cass Ave
Cass Ave
Henry St
Clifford St
W Fisher Service
HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
Google
Keyboard shortcuts
Map data ©2022 Imagery ©2022 , CNES / Airbus, First Base Solutions, Maxar Technologies, Sanborn, U.S. Geological Survey
10 m
Terms of Use
Report a map error

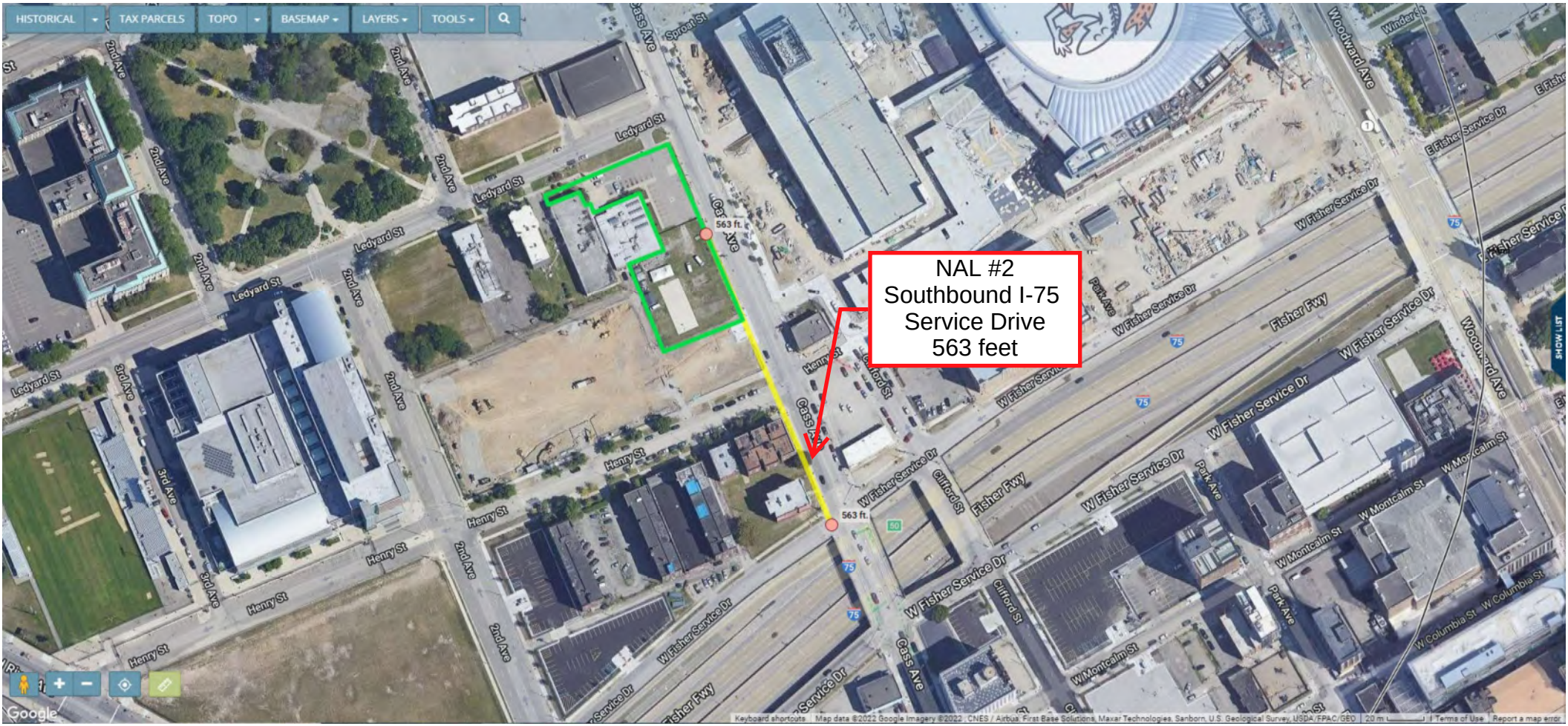

NAL #2
Temple Street
760 feet
760 ft.
760 ft.
Cass Ave
Temple St
Sproat St
Ledyard St
2nd Ave
3rd Ave
Woodward Ave
Adelaide St
Little Caesars arena
W Fisher Service Dr
Fisher Fwy
Park Ave
Henry St
Clifford St
Charlotte St
4th St
HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
Google


HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
NAL #2
Northbound 2nd
Avenue
465 feet
465 ft.
465 ft.
2nd Ave
Ledyard St
Cass Ave
Henry St
Clifford St
Google

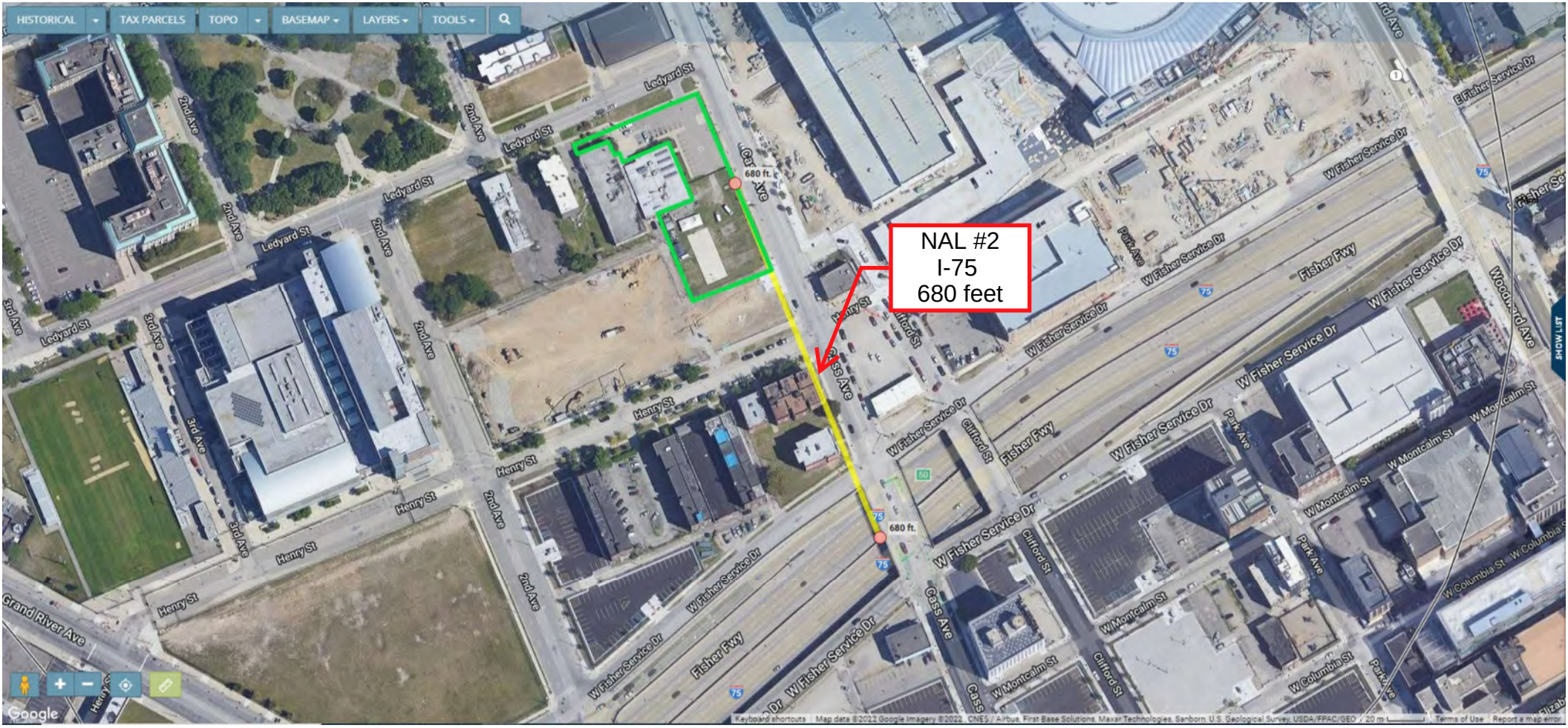

NAL #2
Southbound 2nd Avenue
885 feet
885 ft.
885 ft.
HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
Temple St
Ledyard St
Henry St
Union St
Sproat St
Cass Ave
2nd Ave
3rd Ave
4th St
5th St
W Fisher Service Dr
Fisher Fwy
Clifford St
Google

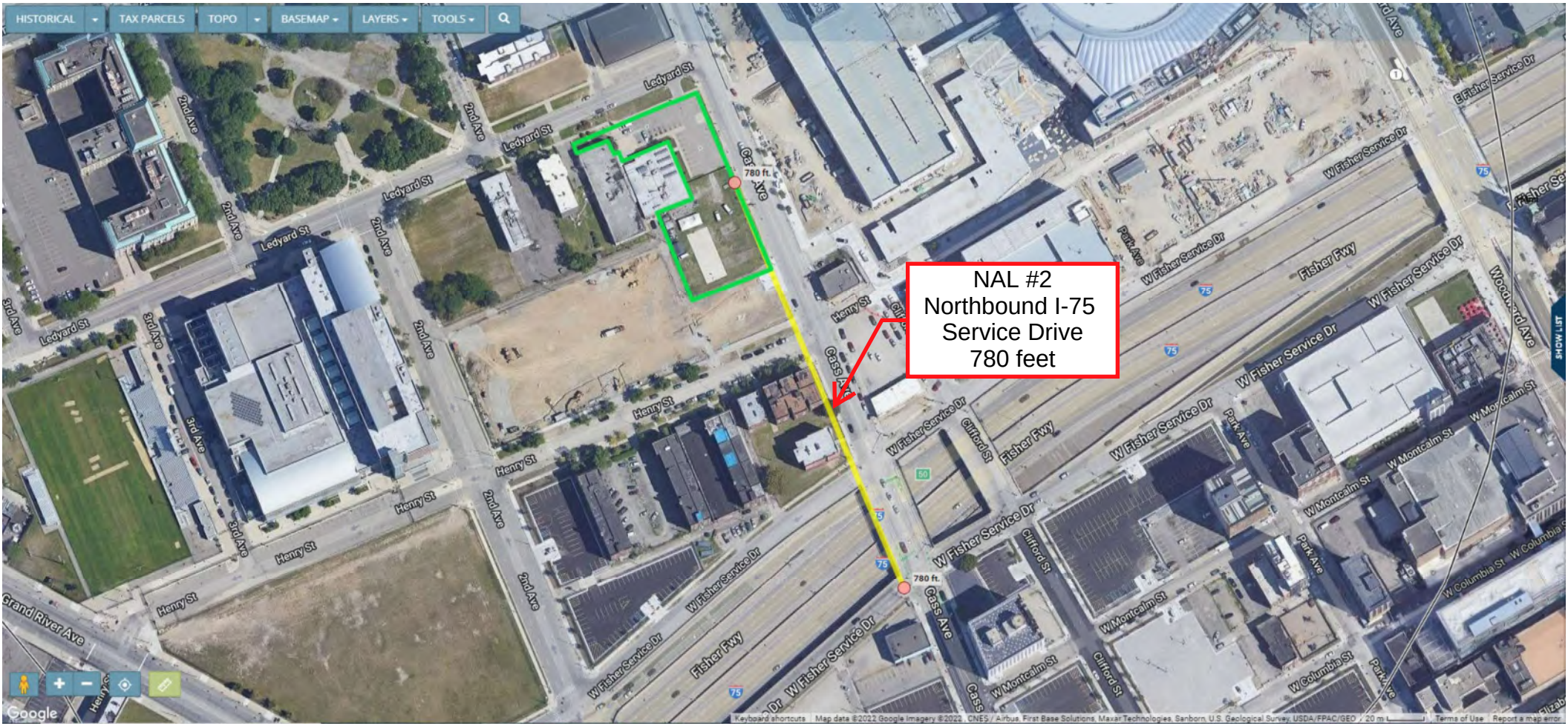

HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
NAL #2
Cass Avenue
38 feet
38 ft.
38 ft.
Ledyard St
Ledyard St
Ledyard St
Ledyard St
2nd Ave
2nd Ave
2nd Ave
2nd Ave
Cass Ave
Cass Ave
Cass Ave
Henry St
Clifford St
W Fisher Service Dr
W Fisher Servic
Park Ave
Park Ave
Google

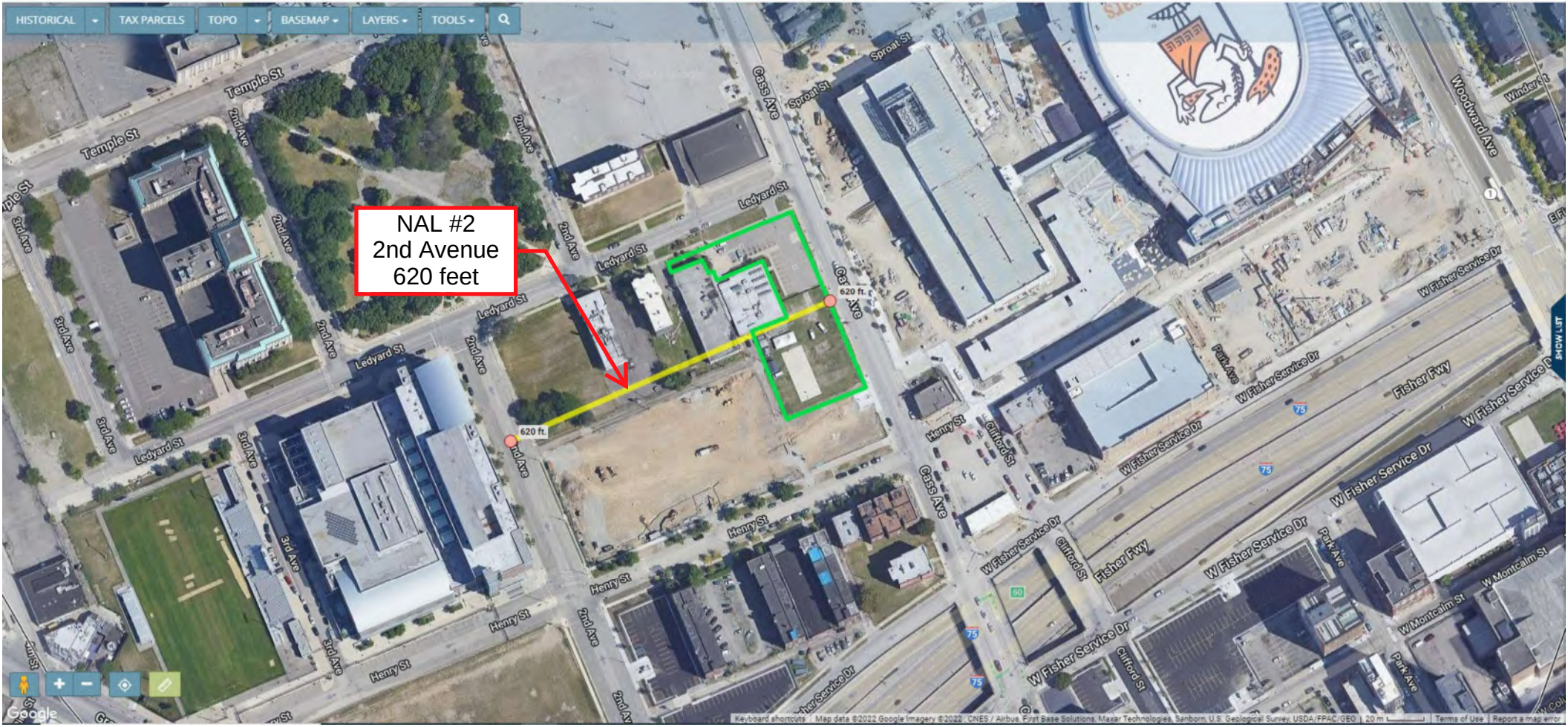

HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
NAL #2
SClifford Street
340 feet
340 ft.
340 ft.
Ledyard St
Cass Ave
2nd Ave
Henry St
Clifford St
Park Ave
W Fisher Service Dr
Fisher Fwy
75
Google


NAL #2
Southbound I-75
Service Drive
563 feet
563 ft.
563 ft.
HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
Ledyard St
Henry St
W Fisher Service Dr
Fisher Fwy
Gass Ave
Clifford St
Park Ave
Woodward Ave
W Montcalm St
W Columbia St
2nd Ave
3rd Ave
Google


HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
NAL #2
Southbound I-75
Off Ramp
604 feet
604 ft.
604 ft.
Cass Ave
Woodward Ave
Fisher Fwy
W Fisher Service Dr
Clifford St
Park Ave
Ledyard St
Henry St
W Montcalm St
W Columbia St
2nd Ave
3rd Ave
Google


NAL #2
I-75
680 feet
680 ft.
680 ft.
HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
Ledyard St
2nd Ave
3rd Ave
Henry St
Grand River Ave
W Fisher Service Dr
Fisher Fwy
Cass Ave
Clifford St
Park Ave
W Montcalm St
W Columbia St
Woodward Ave
Google


HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
NAL #2
Northbound I-75
Service Drive
780 feet
780 ft.
780 ft.
Ledyard St
2nd Ave
3rd Ave
Henry St
Cass Ave
W Fisher Service Dr
Fisher Fwy
Clifford St
Park Ave
W Montcalm St
W Columbia St
Woodward Ave
Grand River Ave
Google


HISTORICAL
TAX PARCELS
TOPO
BASEMAP
LAYERS
TOOLS
NAL #2
2nd Avenue
620 feet
620 ft.
Temple St
Ledyard St
Henry St
Sproat St
Cass Ave
2nd Ave
3rd Ave
Park Ave
Clifford St
Woodward Ave
W Fisher Service Dr
Fisher Fwy
W Montcalm St
Google

Appendix D

PM ENVIRONMENTAL Environmental & Engineering Services

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	The Anchor at Mariners II
Record Date	05/17/2022
User's Name	DNL 1

Road # 1 Name:	**Ledyard Street**

Road #1

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☑
Effective Distance	50	50	50
Distance to Stop Sign	160	160	160
Average Speed	25	25	25
Average Daily Trips (ADT)	1902	39	38
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	49	42	63
Calculate Road #1 DNL	63	Reset	

Road # 2 Name:	**Temple Street**

Road #2

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☑
Effective Distance	582	582	582

Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	4687	94	93
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	45	38	48
Calculate Road #2 DNL	50	Reset	

Road # 3 Name:	**2nd Avenue**

Road #3

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☑
Effective Distance	232	232	232
Distance to Stop Sign			
Average Speed	25	25	25
Average Daily Trips (ADT)	760	16	16
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	40	33	46
Calculate Road #3 DNL	47	Reset	

Road # 4 Name:	**Cass Avenue**

Road #4

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☑
Effective Distance	194	194	194
Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	6924	135	135
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	53	46	57
Calculate Road #4 DNL	59	Reset	

Road # 5 Name:	Clifford Street

Road #5

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	600	600	600
Distance to Stop Sign	600	600	600
Average Speed	35	35	35
Average Daily Trips (ADT)	2637	53	52
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	42	35	48
Calculate Road #5 DNL	49	Reset	

Road # 6 Name:	Southbound I-75 Service Drive

Road #6

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	733	733	733
Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	1468	29	28
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	38	31	41
Calculate Road #6 DNL	43	Reset	

Road # 7 Name:	Southbound I-75 Off Ramp

Road #7

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	815	815	815
Distance to Stop Sign			
Average Speed	50	50	50
Average Daily Trips (ADT)	8014	331	330

Average Daily Trips (ADT)	8014	321	320
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	48	44	51
Calculate Road #7 DNL	53	Reset	

Road # 8 Name:	**I-75**

Road #8

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☑
Effective Distance	912	912	912
Distance to Stop Sign			
Average Speed	55	55	55
Average Daily Trips (ADT)	120755	779	778
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	60	48	55
Calculate Road #8 DNL	61	Reset	

Road # 9 Name:	**Southbound Cass Avenue**

Road #9

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☑
Effective Distance	685	685	685
Distance to Stop Sign			
Average Speed	25	25	25
Average Daily Trips (ADT)	493	59	59
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	31	32	45
Calculate Road #9 DNL	45	Reset	

Vehicles with a Gross
26,000 pounds and th
carry more than 15 se
trucks, as well as sem
recreational vehicles,
commercial vehicles f
stated.

Add Road Source | Add Rail Source

Airport Noise Level	

Loud Impulse Sounds?	○Yes ◉No
Combined DNL for all Road and Rail sources	**67**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
  - Incorporate natural or man-made barriers. See ***The Noise Guidebook (/resource/313/hud-noise-guidebook/)***
  - Construct noise barrier. See the **Barrier Performance Module (/programs/environmental-review/bpm-calculator/)**

Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (/resource/3822/day-night-noise-level-assessment-tool-user-guide/)

Day/Night Noise Level Assessment Tool Flowcharts (/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	The Anchors at Mariners Inn
Record Date	05/17/2022
User's Name	NAL 2

Road # 1 Name:	**Ledyard Street**

Road #1

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	225	225	225
Distance to Stop Sign	160	160	160
Average Speed	25	25	25
Average Daily Trips (ADT)	1902	39	38
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	39	32	53
Calculate Road #1 DNL	53	Reset	

Road # 2 Name:	Temple Street

Road #2

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	760	760	760
Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	4687	94	93
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	43	36	46
Calculate Road #2 DNL	48	Reset	

Road # 3 Name:	2nd Avenue

Road #3

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	620	620	620
Distance to Stop Sign			
Average Speed	25	25	25
Average Daily Trips (ADT)	760	16	16
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	33	27	40
Calculate Road #3 DNL	41	Reset	

Road # 4 Name:	Cass Avenue

Road #4

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	38	38	38
Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	6924	135	135
Night Fraction of ADT	15	15	15

Road Gradient (%)			2
Vehicle DNL	64	57	67
Calculate Road #4 DNL	69	Reset	

Road # 5 Name:	**Clifford Street**

Road #5

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☑
Effective Distance	340	340	340
Distance to Stop Sign	340	340	340
Average Speed	35	35	35
Average Daily Trips (ADT)	3637	53	52
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	45	36	51
Calculate Road #5 DNL	52	Reset	

Road # 6 Name:	**Southbound I-75 Service Drive**

Road #6

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☑
Effective Distance	563	563	563
Distance to Stop Sign			

Average Speed	35	35	35
Average Daily Trips (ADT)	1468	29	28
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	40	33	43
Calculate Road #6 DNL	45	Reset	

Road # 7 Name:	**Southbound I-75 Off Ramp**

Road #7

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☑
Effective Distance	604	604	604
Distance to Stop Sign			
Average Speed	50	50	50
Average Daily Trips (ADT)	8014	321	320
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	50	46	53
Calculate Road #7 DNL	55	Reset	

Road # 8 Name:	**I-75**

Road #8

Road #8

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	680	680	680
Distance to Stop Sign			
Average Speed	55	55	55
Average Daily Trips (ADT)	120755	7789	7788
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	62	60	67
Calculate Road #8 DNL	69	Reset	

Road # 9 Name:	**Northbound I-75 Service Drive**

Road #9

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	780	780	780
Distance to Stop Sign			
Average Speed	25	25	25
Average Daily Trips (ADT)	4279	86	86
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	39	32	46
Calculate Road #9 DNL	47	Reset	

Add Road Source Add Rail Source	
Airport Noise Level	
Loud Impulse Sounds?	○Yes ◉No
Combined DNL for all Road and Rail sources	**72**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location

- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
    - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
    - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
    - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
    - Incorporate natural or man-made barriers. See ***The Noise Guidebook (/resource/313/hud-noise-guidebook/)***
    - Construct noise barrier. See the **Barrier Performance Module (/programs/environmental-review/bpm-calculator/)**

Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (/resource/3822/day-night-noise-level-assessment-tool-user-guide/)

Day/Night Noise Level Assessment Tool Flowcharts (/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)

Sound Transmission Classification Assessment Tool (STraCAT)

Overview

The Sound Transmission Classification Assessment Tool (STraCAT) is an electronic version of Figures 17 and 19 in The HUD Noise Guidebook. The purpose of this tool is to document sound attenuation performance of wall systems. Based on wall, window, and door Sound Transmission Classification (STC) values, the STraCAT generates a composite STC value for the wall assembly as a whole. Users can enter the calculated noise level related to a specific Noise Assessment Location in front of a building façade and STraCAT will generate a target required attenuation value for the wall assembly in STC. Based on wall materials, the tool will state whether the composite wall assembly STC meets the required attenuation value.

How to Use This Tool

Location, Noise Level and Wall Configuration to Be Analyzed
STraCAT is designed to calculate the attenuation provided by the wall assembly for one wall of one unit. If unit exterior square footage and window/door configuration is identical around the structure, a single STraCAT may be sufficient. If units vary, at least one STraCAT should be completed for each different exterior unit wall configuration to document that all will achieve the required attenuation. Additionally, if attenuation is not based on a single worst-case NAL, but there are multiple NALs which require different levels of attenuation around the structure, a STraCAT should be completed for each differing exterior wall configuration associated with each NAL.

Exterior wall configurations associated with an NAL include those with parallel (facing) or near-parallel exposure as well as those with perpendicular exposure. When a façade has parallel or perpendicular exposure to two or more NALs, you should base the required attenuation on the NAL with the highest calculated noise level. For corner units where the unit interior receives exterior noise through two facades, the STraCAT calculation should incorporate the area of wall, window and door materials pertaining to the corner unit's total exterior wall area (i.e., from both walls).

Information to Be Entered
Users first enter basic project information and the NAL noise level that will be used as the basis for required attenuation. This noise level must be entered in whole numbers. STraCAT users then enter information on wall, window and door component type and area. Again, as noted above, the wall, window and door entries are based on one unit, and one wall (except for corner units as discussed above). The tool sums total wall square footage based on the combined area of walls, doors and windows for the façade being evaluated.

Users may input STC values for materials in one of two ways. The tool includes a dropdown menu

of common construction materials with STC values prefilled. If selected construction materials are not included in this dropdown menu, the user may also enter the STC for a given component manually. Verification of the component STC must be included in the ERR. Documentation includes the architect or construction manager's project plans showing wall material specifications. For new construction or for components that will be newly installed in an existing wall, documentation also includes the manufacturer's product specification sheet (cut sheet) documenting the STC rating of selected doors and windows.

Required STC Rating and Determination of Compliance

Finally, based on project information entered the tool will indicate the required STC rating for the wall assembly being evaluated and whether or not the materials specified will produce a combined rating that meets this requirement. Note that for noise levels above 75 dB DNL, either HUD (for 24 CFR Part 50 reviews) or the Responsible Entity (for 24 CFR Part 58 reviews) must approve the level and type of attenuation, among other processing requirements. Required attenuation values generated by STraCAT for NALs above 75 dB DNL should therefore be considered tentative pending approval by HUD or the RE.

Part I - Description

Part I - Description

Project

The Anchor - Mariners Inn

Sponsor/Developer

Cinnaire

Location

445 Ledyard Street, Detroit MI

Prepared by

LBBA

Noise Level

72

Date

6/30/2022

Primary Source(s)

Street

Part II - Wall Components

Part II - Wall Components

Wall Construction Detail	Area	STC
2"x6" wood studs; 16"o.c.; 5 1/2" glass fiber insulation; 5/8" fire-shield gypsum board one side; 5/8" fire-shield gypsum board other side	6173	**38**
4" face brick one course; 1/2" air space; 3/4" insulation board; 2"x4" wood studs 16"O.C.; 1/2" gypsum board on resilient channels	4283	**54**
Add new wall		
	10,456 Sq. Feet	**40.21**

Window Construction Detail	Quantity	Sq Ft/Unit	STC
Vinyl Window; Fixed/Awning	1	1613	28
Aluminum Storefront	1	812	34
Aluminum Curtain Wall	1	408	34
Add new window			

Door Construction Detail	Quantity	Sq Ft/Unit	STC
Add new door			

Part III - Results

Part III - Results

Wall Statistics

Stat	Value
Area:	10456 ft^2
Wall STC:	40.21

Aperture Statistics

Aperture	Count	Area	% of wall
Windows:	3	**ft^2**	**27.09%**
Doors:	0	**0 ft^2**	**0%**

Evaluation Criteria

Criteria	Value
Noise source sound level (dB):	**72**
Combined STC for wall assembly:	**34.43**
Required STC rating:	**30**
Does wall assembly meet requirements?	**Yes**

Print

Part 4 - Tips

Part 4 - Tips

What do you do if the preferred wall design is not sufficient to achieve the required attenuation? Another wall design with more substantial materials will work, but may not be the most cost-effective solution. Try adding some other elements for just a little more attenuation.

For example:

- Staggering the studs in a wall offers approximately 4dB of additional protection.
- Increasing the stud spacing from 16" on center to 24" can increase the STC from 2-5dB.
- Adding a 2" air space can provide 3dB more attenuation.
- Increasing a wall's air space from 3" to 6"can reduce noise levels by an additional 5dB.
- Adding a layer of ½" gypsum board on "Z" furring channels adds 2dB of attenuation.
- Using resilient channels and clips between wall panels and studs can improve the STC from 2-5dB.
- Adding a layer of ½" gypsum board on resilient channels adds 5dB of attenuation.
- Adding acoustical or isolation blankets to a wall's airspace can add 4-10dB of attenuation.
- A 1" rockwool acoustical blanket adds 3dB to the wall's STC.
- Filling the cells of lightweight concrete masonry units with expanded mineral loose-fill insulation adds 2dB to the STC.

Sound Transmission Classification Assessment Tool (STraCAT)

Overview

The Sound Transmission Classification Assessment Tool (STraCAT) is an electronic version of Figures 17 and 19 in The HUD Noise Guidebook. The purpose of this tool is to document sound attenuation performance of wall systems. Based on wall, window, and door Sound Transmission Classification (STC) values, the STraCAT generates a composite STC value for the wall assembly as a whole. Users can enter the calculated noise level related to a specific Noise Assessment Location in front of a building façade and STraCAT will generate a target required attenuation value for the wall assembly in STC. Based on wall materials, the tool will state whether the composite wall assembly STC meets the required attenuation value.

How to Use This Tool

Location, Noise Level and Wall Configuration to Be Analyzed
STraCAT is designed to calculate the attenuation provided by the wall assembly for one wall of one unit. If unit exterior square footage and window/door configuration is identical around the structure, a single STraCAT may be sufficient. If units vary, at least one STraCAT should be completed for each different exterior unit wall configuration to document that all will achieve the required attenuation. Additionally, if attenuation is not based on a single worst-case NAL, but there are multiple NALs which require different levels of attenuation around the structure, a STraCAT should be completed for each differing exterior wall configuration associated with each NAL.

Exterior wall configurations associated with an NAL include those with parallel (facing) or near-parallel exposure as well as those with perpendicular exposure. When a façade has parallel or perpendicular exposure to two or more NALs, you should base the required attenuation on the NAL with the highest calculated noise level. For corner units where the unit interior receives exterior noise through two facades, the STraCAT calculation should incorporate the area of wall, window and door materials pertaining to the corner unit's total exterior wall area (i.e., from both walls).

Information to Be Entered
Users first enter basic project information and the NAL noise level that will be used as the basis for required attenuation. This noise level must be entered in whole numbers. STraCAT users then enter information on wall, window and door component type and area. Again, as noted above, the wall, window and door entries are based on one unit, and one wall (except for corner units as discussed above). The tool sums total wall square footage based on the combined area of walls, doors and windows for the façade being evaluated.

Users may input STC values for materials in one of two ways. The tool includes a dropdown menu

of common construction materials with STC values prefilled. If selected construction materials are not included in this dropdown menu, the user may also enter the STC for a given component manually. Verification of the component STC must be included in the ERR. Documentation includes the architect or construction manager's project plans showing wall material specifications. For new construction or for components that will be newly installed in an existing wall, documentation also includes the manufacturer's product specification sheet (cut sheet) documenting the STC rating of selected doors and windows.

Required STC Rating and Determination of Compliance

Finally, based on project information entered the tool will indicate the required STC rating for the wall assembly being evaluated and whether or not the materials specified will produce a combined rating that meets this requirement. Note that for noise levels above 75 dB DNL, either HUD (for 24 CFR Part 50 reviews) or the Responsible Entity (for 24 CFR Part 58 reviews) must approve the level and type of attenuation, among other processing requirements. Required attenuation values generated by STraCAT for NALs above 75 dB DNL should therefore be considered tentative pending approval by HUD or the RE.

Part I - Description

Part I - Description

Project

The Anchor - Mariners Inn

Sponsor/Developer

Cinnaire

Location

445 Ledyard Street, Detroit MI

Prepared by

LBBA

Noise Level

72

Date

6/30/2022

Primary Source(s)

Street

Part II - Wall Components

Part II - Wall Components

Wall Construction Detail	Area	STC
2"x6" wood studs; 16"o.c.; 5 1/2" glass fiber insulation; 5/8" fire-shield gypsum board one side; 5/8" fire-shield gypsum board other side	439	38

Add new wall

	439 Sq. Feet	**38**

Window Construction Detail	Quantity	Sq Ft/Unit	STC
Vinyl Window; Fixed/Awning	1	96	28

Add new window

Door Construction Detail	Quantity	Sq Ft/Unit	STC

Add new door

Part III - Results

Part III - Results

Wall Statistics

Stat	Value
Area:	439 ft^2
Wall STC:	38

Aperture Statistics

Aperture	Count	Area	% of wall
Windows:	1	**96 ft^2**	**21.87%**
Doors:	0	**0 ft^2**	**0%**

Evaluation Criteria

Criteria	Value
Noise source sound level (dB):	**72**
Combined STC for wall assembly:	**33.28**
Required STC rating:	**30**
Does wall assembly meet requirements?	**Yes**

Print

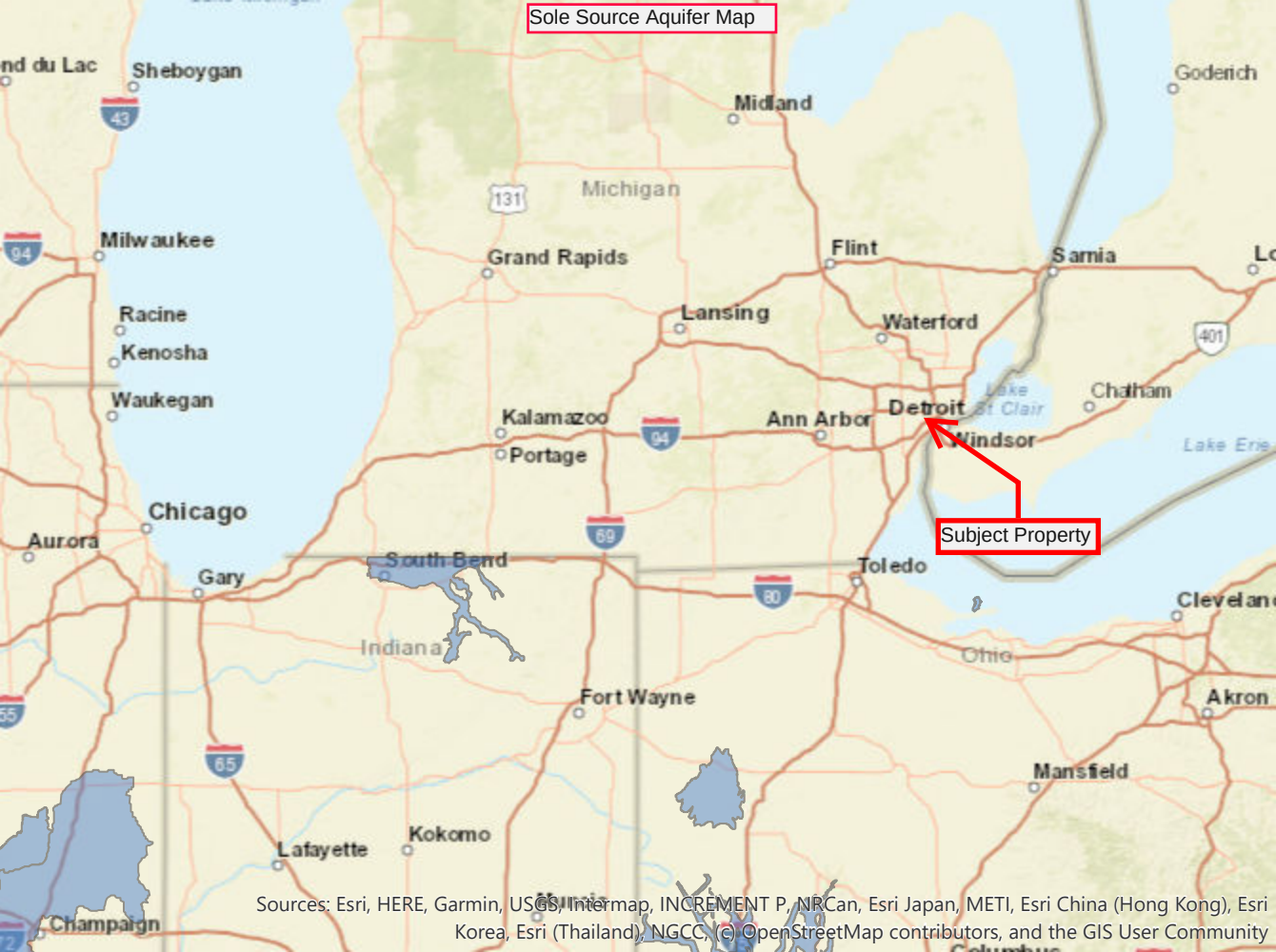
Part 4 - Tips

Part 4 - Tips

What do you do if the preferred wall design is not sufficient to achieve the required attenuation? Another wall design with more substantial materials will work, but may not be the most cost-effective solution. Try adding some other elements for just a little more attenuation.

For example:

- Staggering the studs in a wall offers approximately 4dB of additional protection.
- Increasing the stud spacing from 16" on center to 24" can increase the STC from 2-5dB.
- Adding a 2" air space can provide 3dB more attenuation.
- Increasing a wall's air space from 3" to 6"can reduce noise levels by an additional 5dB.
- Adding a layer of ½" gypsum board on "Z" furring channels adds 2dB of attenuation.
- Using resilient channels and clips between wall panels and studs can improve the STC from 2-5dB.
- Adding a layer of ½" gypsum board on resilient channels adds 5dB of attenuation.
- Adding acoustical or isolation blankets to a wall's airspace can add 4-10dB of attenuation.
- A 1" rockwool acoustical blanket adds 3dB to the wall's STC.
- Filling the cells of lightweight concrete masonry units with expanded mineral loose-fill insulation adds 2dB to the STC.


Sole Source Aquifer Map
Subject Property
Sheboygan
Midland
Goderich
Michigan
Milwaukee
Grand Rapids
Flint
Sarnia
Racine
Kenosha
Lansing
Waterford
Waukegan
Kalamazoo
Ann Arbor
Detroit
Chatham
Windsor
Portage
Chicago
Aurora
Gary
South Bend
Toledo
Indiana
Ohio
Fort Wayne
Akron
Mansfield
Lafayette
Kokomo
Champaign
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Wetlands Map Viewer

April 1, 2022

Part 303 Final Wetlands Inventory

- Wetlands as identified on NWI and MIRIS maps
- Soil areas which include wetland soils
- Wetlands as identified on NWI and MIRIS maps and soil areas which include wetland soils

1:9,617

0 0.07 0.15 0.3 mi

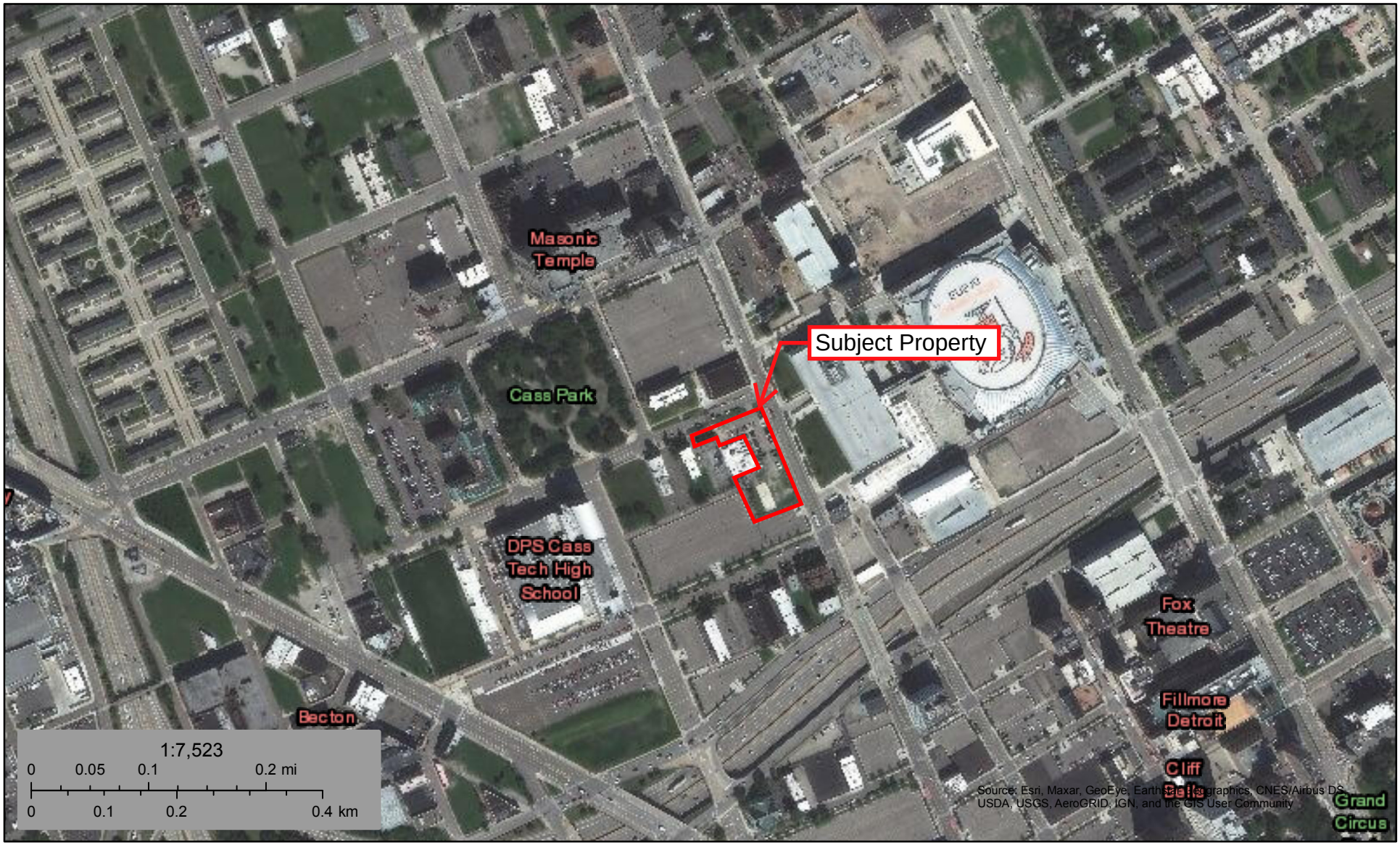
0 0.13 0.25 0.5 km

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap

U.S. Fish and Wildlife Service

National Wetlands Inventory

Wetlands



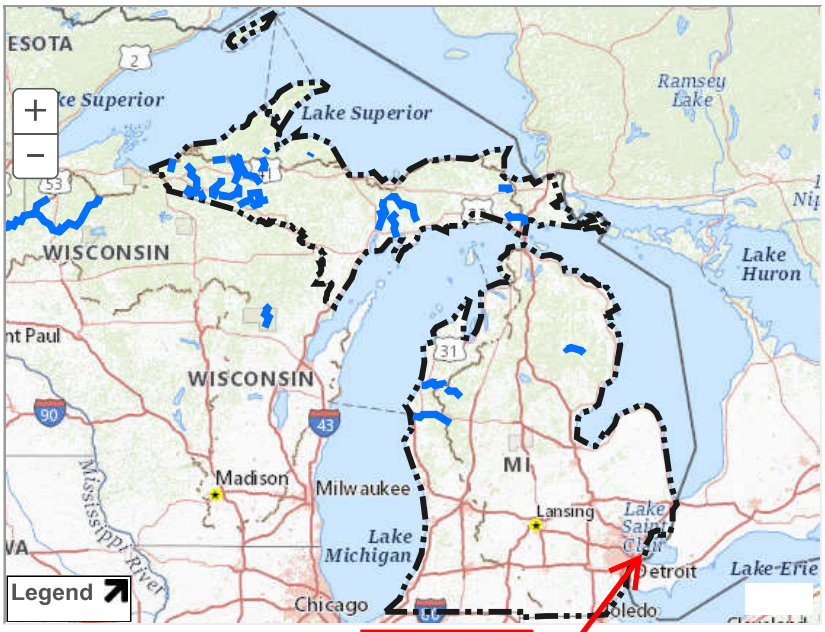
April 1, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

MICHIGAN

Michigan has approximately 51,438 miles of river, of which 656.4 miles are designated as wild & scenic—just a bit more than 1% of the state's river miles.



+ View larger map

Choose A State Go

Choose A River Go

Nourished by the fertile soils of the region, rivers of the Midwest explode with life, from great avian migrations to ancient fishes.

AuSable River
Bear Creek
Black River
Carp River
Indian River
Manistee River
Ontonagon River
Paint River
Pere Marquette River
Pine River
Presque Isle River
Sturgeon River (Hiawatha National Forest)
Sturgeon River (Ottawa National Forest)
Tahquamenon River (East Branch)
Whitefish River
Yellow Dog River

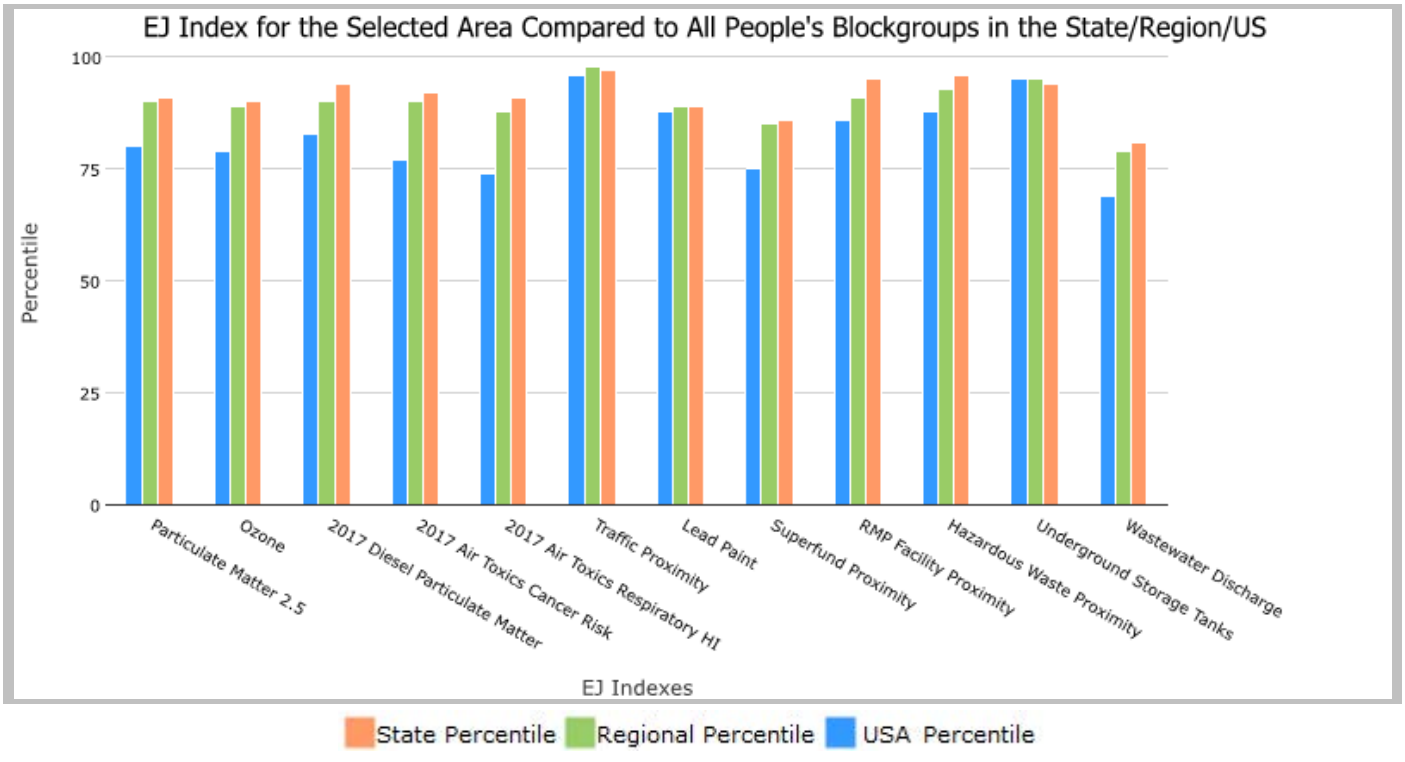
EJScreen Report (Version 2.0)

1 mile Ring Centered at 42.339831,-83.058271, MICHIGAN, EPA Region 5

Approximate Population: 18,629

Input Area (sq. miles): 3.14

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
Environmental Justice Indexes			
EJ Index for Particulate Matter 2.5	91	90	80
EJ Index for Ozone	90	89	79
EJ Index for 2017 Diesel Particulate Matter*	94	90	83
EJ Index for 2017 Air Toxics Cancer Risk*	92	90	77
EJ Index for 2017 Air Toxics Respiratory HI*	91	88	74
EJ Index for Traffic Proximity	97	98	96
EJ Index for Lead Paint	89	89	88
EJ Index for Superfund Proximity	86	85	75
EJ Index for RMP Facility Proximity	95	91	86
EJ Index for Hazardous Waste Proximity	96	93	88
EJ Index for Underground Storage Tanks	94	95	95
EJ Index for Wastewater Discharge	81	79	69



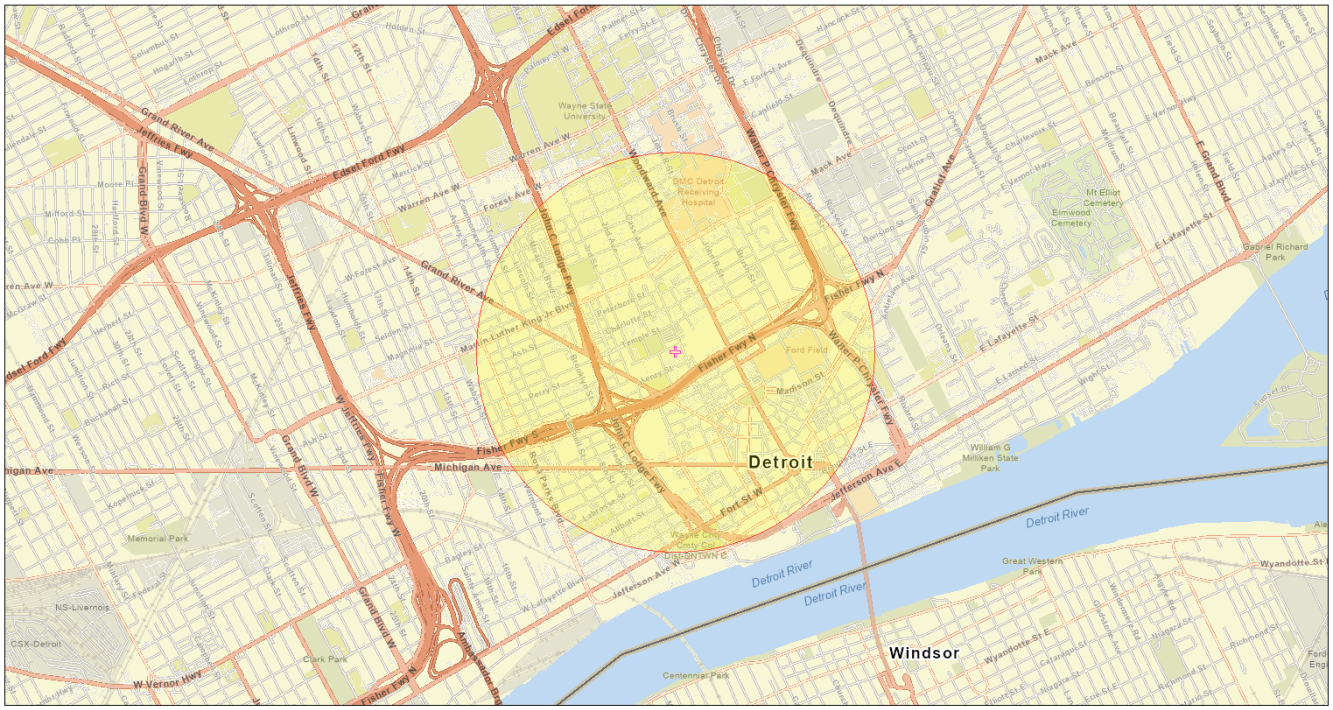
This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJScreen Report (Version 2.0)

1 mile Ring Centered at 42.339831,-83.058271, MICHIGAN, EPA Region 5

Approximate Population: 18,629

Input Area (sq. miles): 3.14



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	1

EJScreen Report (Version 2.0)

1 mile Ring Centered at 42.339831,-83.058271, MICHIGAN, EPA Region 5

Approximate Population: 18,629

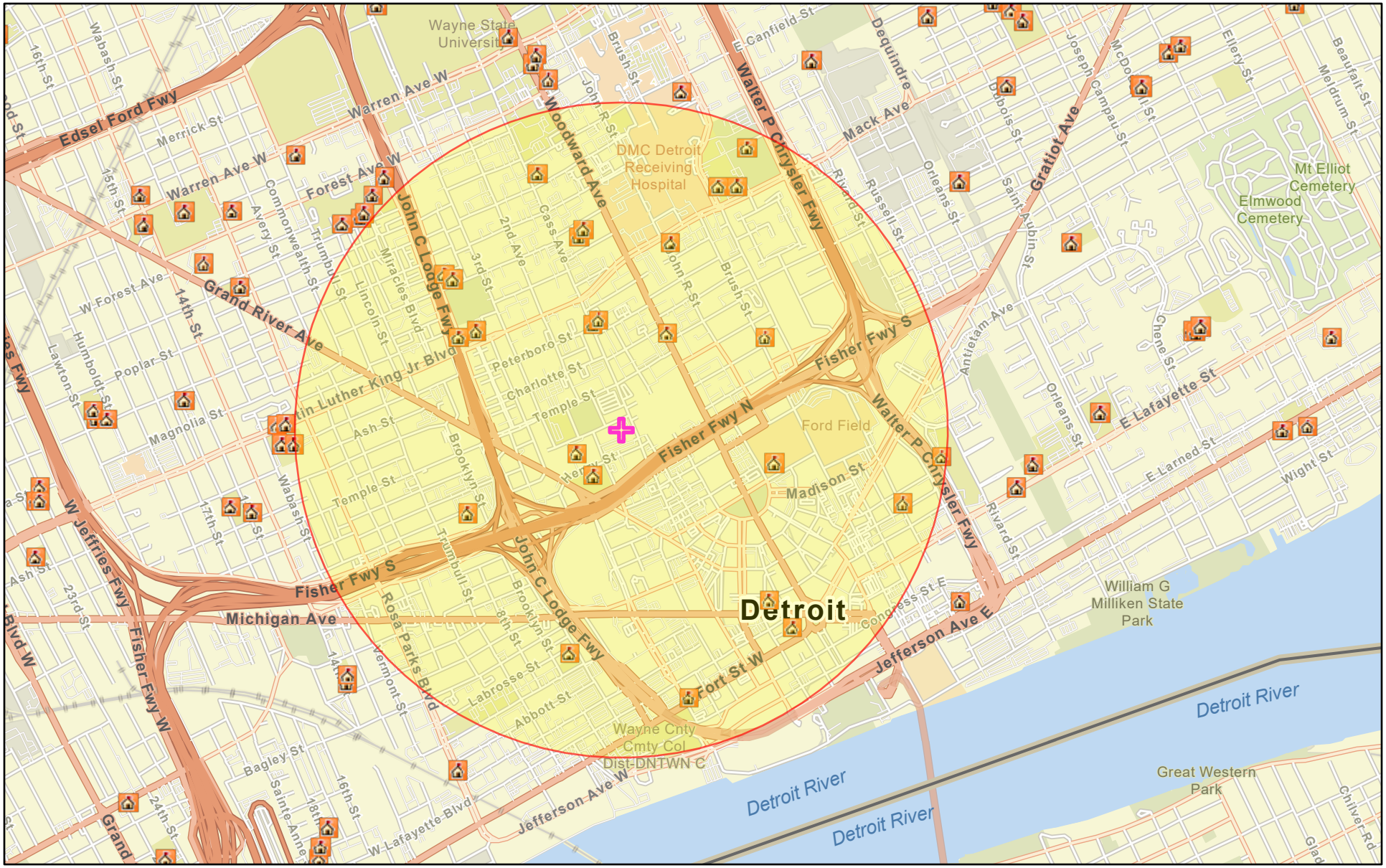
Input Area (sq. miles): 3.14

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Pollution and Sources							
Particulate Matter 2.5 (µg/m^3)	10.1	8.75	98	8.96	86	8.74	85
Ozone (ppb)	44.7	43.8	54	43.5	59	42.6	73
2017 Diesel Particulate Matter* (µg/m^3)	0.434	0.209	98	0.279	80-90th	0.295	80-90th
2017 Air Toxics Cancer Risk* (lifetime risk per million)	30	23	99	24	95-100th	29	80-90th
2017 Air Toxics Respiratory HI*	0.3	0.25	99	0.3	70-80th	0.36	<50th
Traffic Proximity (daily traffic count/distance to road)	4700	830	97	610	98	710	97
Lead Paint (% Pre-1960 Housing)	0.56	0.37	73	0.37	72	0.28	81
Superfund Proximity (site count/km distance)	0.049	0.15	36	0.13	41	0.13	41
RMP Facility Proximity (facility count/km distance)	1.2	0.53	86	0.83	77	0.75	80
Hazardous Waste Proximity (facility count/km distance)	4	1.1	94	1.8	87	2.2	84
Underground Storage Tanks (count/km^2)	31	7.3	95	4.8	97	3.9	98
Wastewater Discharge (toxicity-weighted concentration/m distance)	5E-05	0.41	27	9	24	12	27
Socioeconomic Indicators							
Demographic Index	60%	28%	89	28%	89	36%	82
People of Color	65%	25%	88	26%	87	40%	74
Low Income	58%	32%	86	29%	89	31%	87
Unemployment Rate	8%	6%	73	5%	78	5%	76
Linguistically Isolated	1%	2%	72	2%	66	5%	51
Less Than High School Education	15%	9%	80	10%	79	12%	68
Under Age 5	4%	6%	37	6%	33	6%	33
Over Age 64	12%	17%	29	16%	33	16%	38

*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's 2017 Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

For additional information, see: www.epa.gov/environmentaljustice

School Location Map



June 16, 2022

Project Buffer

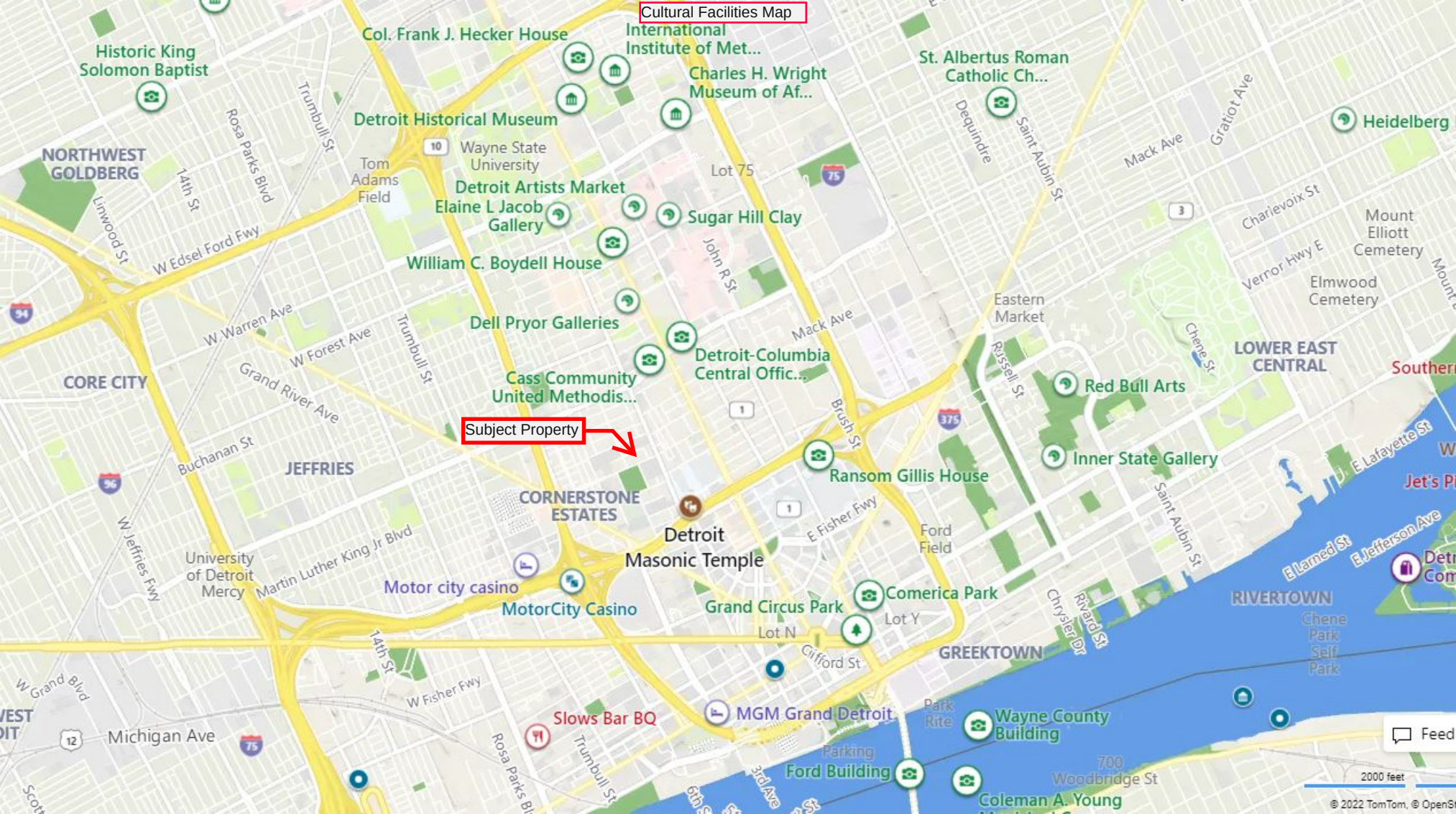
Schools

Search Result (point)

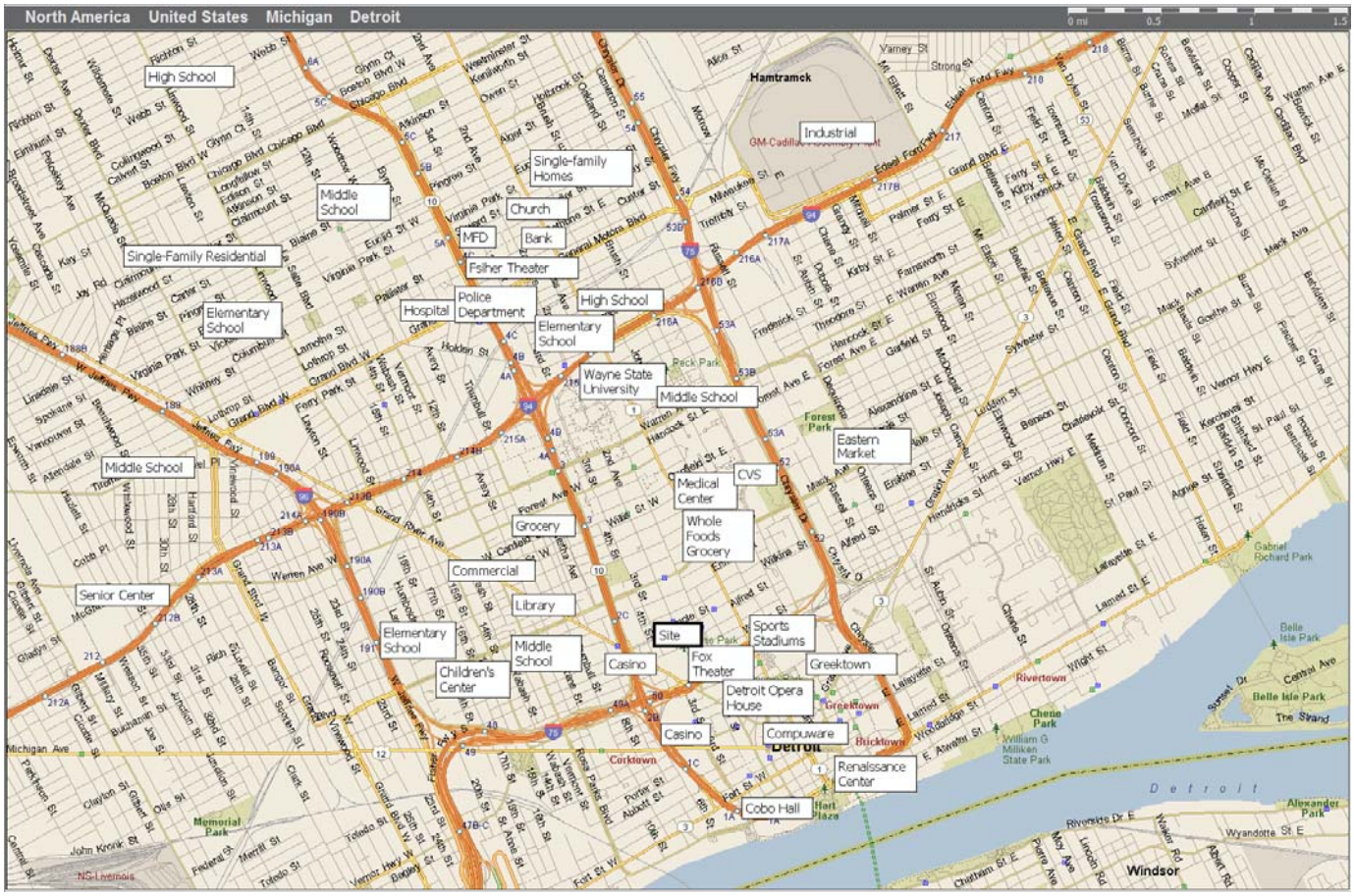
1:36,112

0 0.23 0.45 0.9 mi

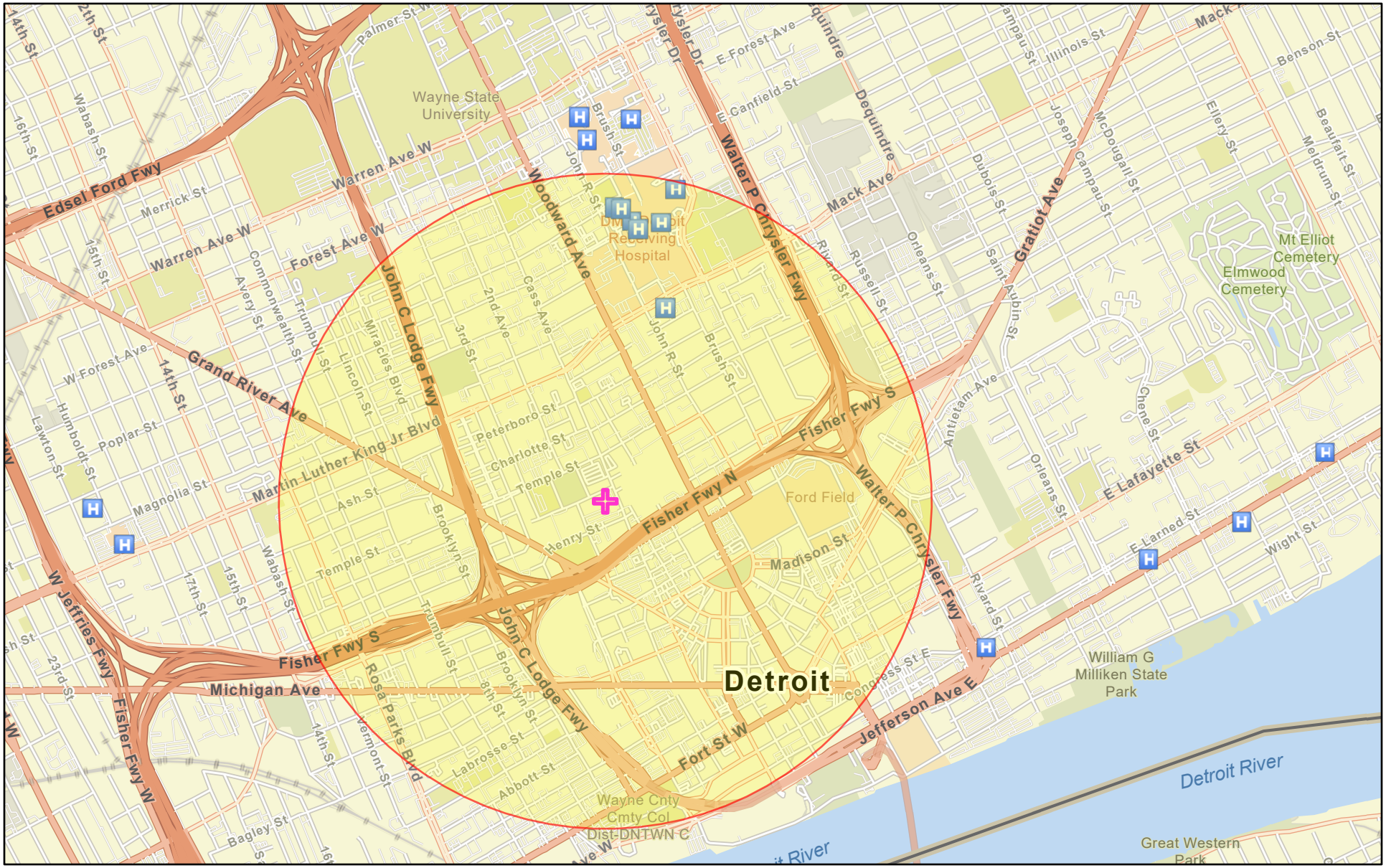
0 0.35 0.7 1.4 km


Cultural Facilities Map
Col. Frank J. Hecker House
International Institute of Met...
Historic King Solomon Baptist
Charles H. Wright Museum of Af...
St. Albertus Roman Catholic Ch...
Heidelberg
Detroit Historical Museum
NORTHWEST GOLDBERG
Wayne State University
Tom Adams Field
Lot 75
Detroit Artists Market
Elaine L Jacob Gallery
Sugar Hill Clay
William C. Boydell House
Mount Elliott Cemetery
Elmwood Cemetery
Eastern Market
Dell Pryor Galleries
Detroit-Columbia Central Offic...
LOWER EAST CENTRAL
Cass Community United Methodis...
CORE CITY
Red Bull Arts
Subject Property
Ransom Gillis House
Inner State Gallery
JEFFRIES
CORNERSTONE ESTATES
Detroit Masonic Temple
Ford Field
University of Detroit Mercy
Motor city casino
MotorCity Casino
Grand Circus Park
Comerica Park
Lot Y
Lot N
GREEKTOWN
RIVERTOWN
Slows Bar BQ
MGM Grand Detroit
Wayne County Building
Ford Building
Coleman A. Young
Michigan Ave
2000 feet
© 2022 TomTom, © OpenSt

Map: Local Area and Amenities



Hospital Location Map



June 16, 2022

Project Buffer

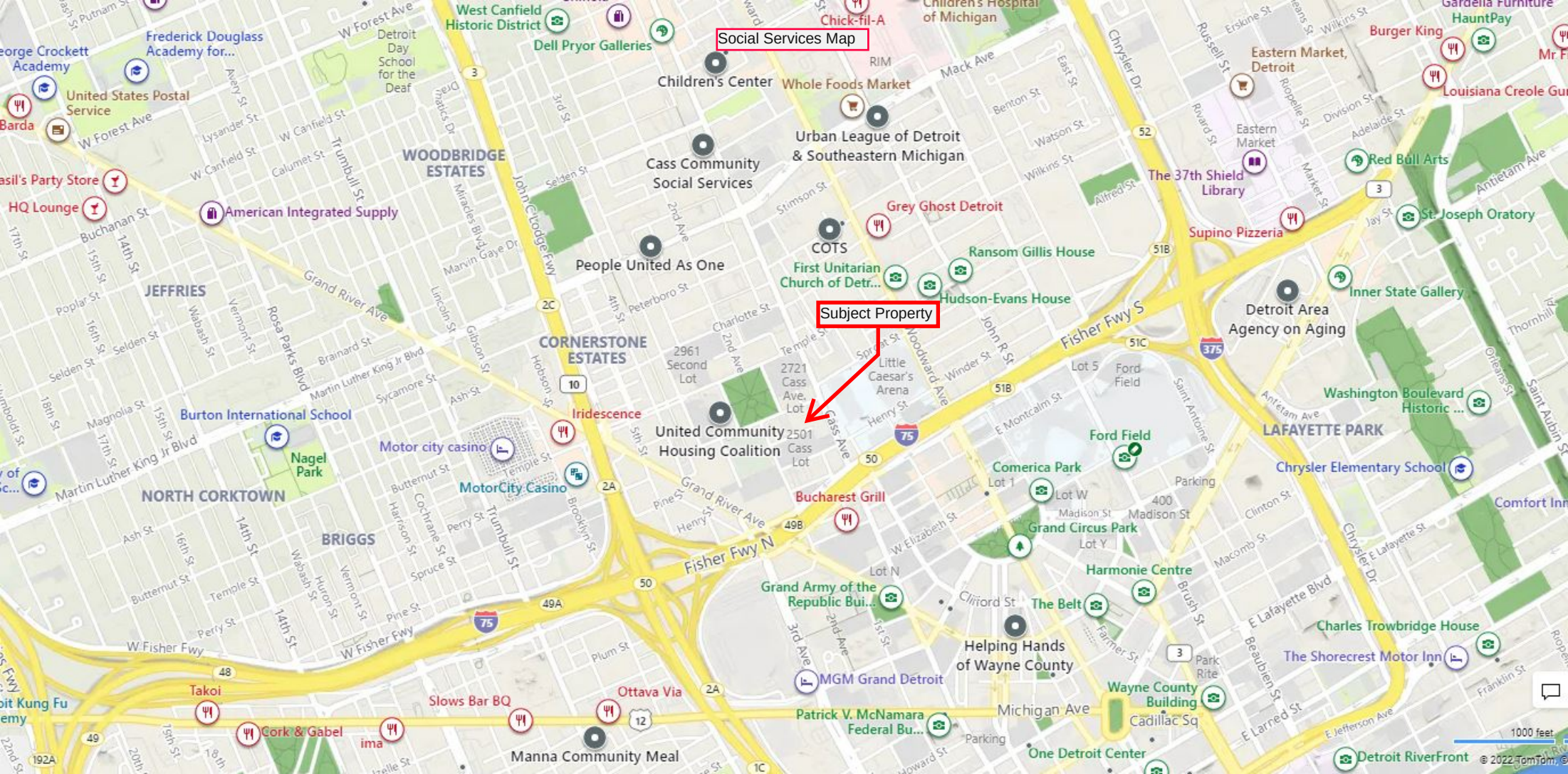
Hospitals

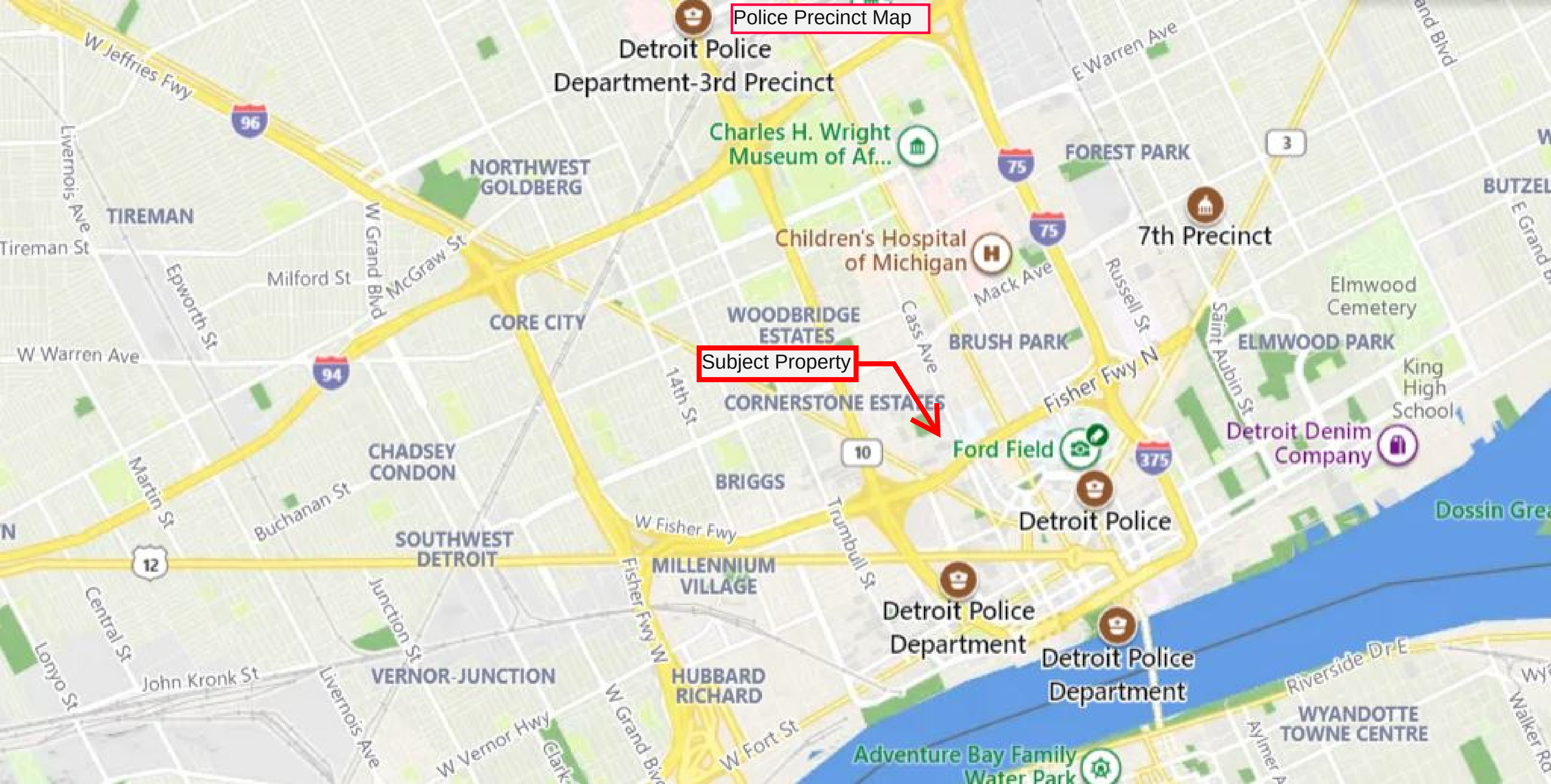
Search Result (point)

1:36,112

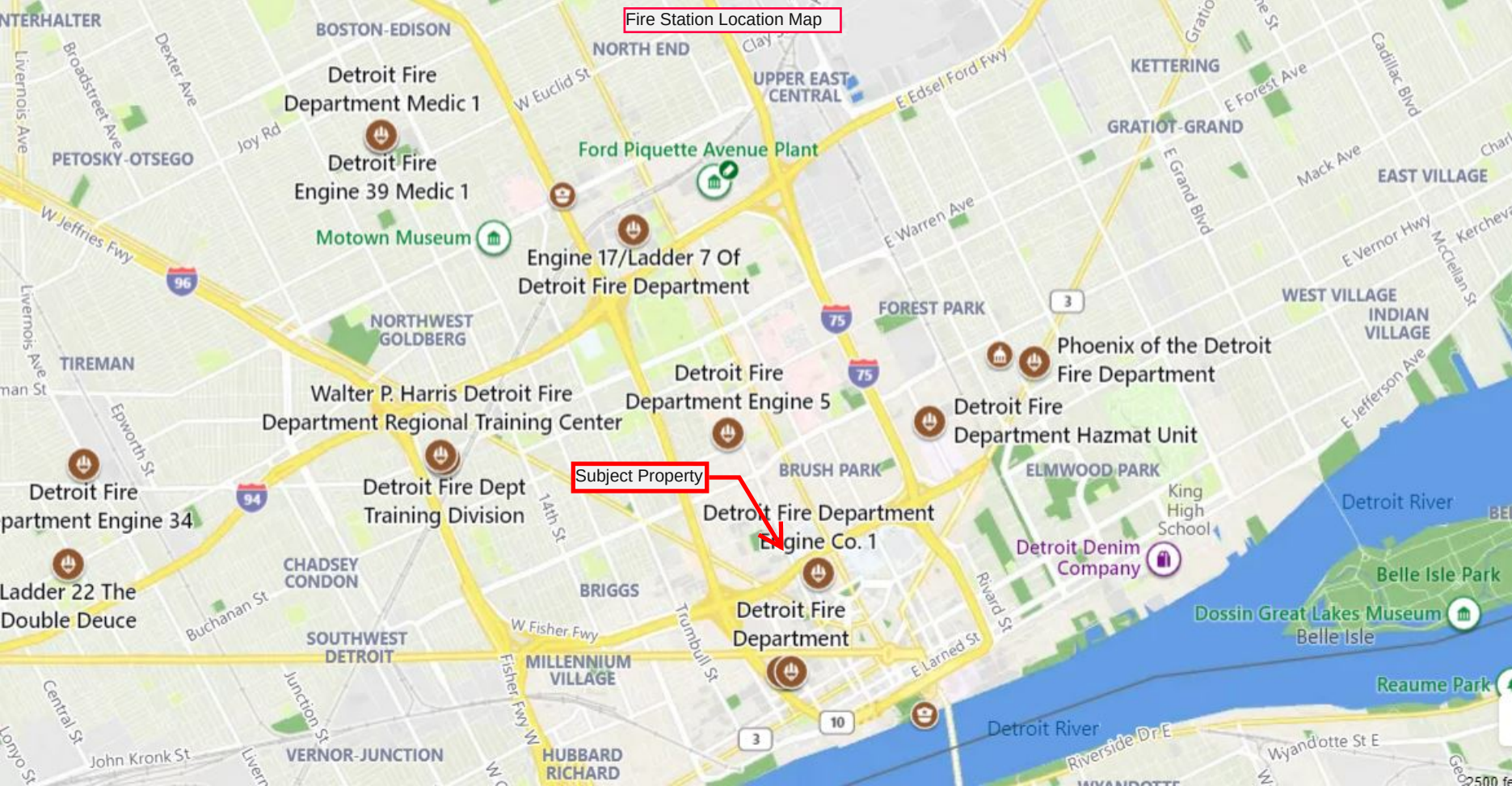
0 0.23 0.45 0.9 mi

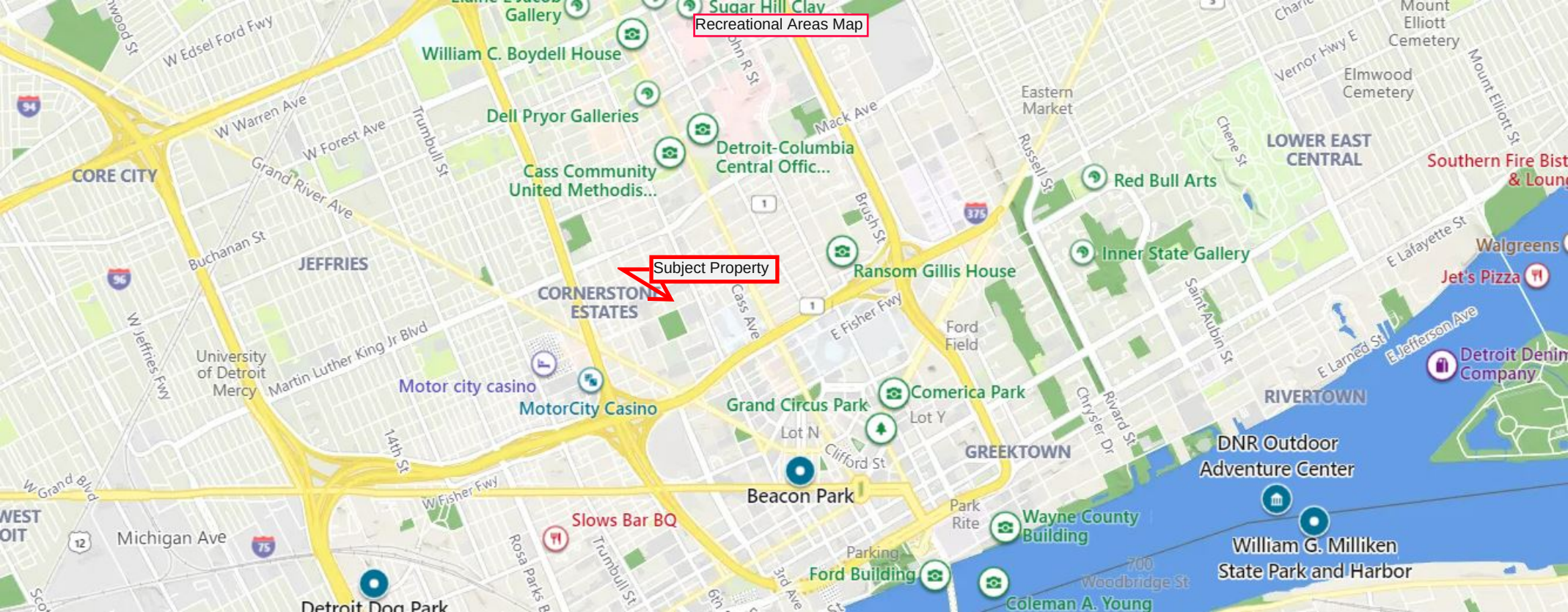
0 0.35 0.7 1.4 km


Social Services Map
Subject Property
Children's Center
Cass Community Social Services
Urban League of Detroit & Southeastern Michigan
People United As One
COTS
Grey Ghost Detroit
Ransom Gillis House
Hudson-Evans House
First Unitarian Church of Detr...
United Community Housing Coalition
2501 Cass Lot
2721 Cass Ave, Lot
2961 Second Lot
Detroit Area Agency on Aging
Inner State Gallery
Supino Pizzeria
The 37th Shield Library
Red Bull Arts
St. Joseph Oratory
Eastern Market
Eastern Market, Detroit
Whole Foods Market
Chick-fil-A
Dell Pryor Galleries
West Canfield Historic District
Frederick Douglass Academy for...
Detroit Day School for the Deaf
United States Postal Service
American Integrated Supply
HQ Lounge
Basil's Party Store
Burton International School
Nagel Park
Motor city casino
MotorCity Casino
Iridescence
Bucharest Grill
Comerica Park
Ford Field
Lot 1
Lot W
Lot Y
Lot N
Lot 5
Grand Circus Park
Harmonie Centre
The Belt
Helping Hands of Wayne County
Grand Army of the Republic Bui...
MGM Grand Detroit
Wayne County Building
Cadillac Sq
Michigan Ave
Patrick V. McNamara Federal Bu...
One Detroit Center
Detroit RiverFront
Little Caesar's Arena
Washington Boulevard Historic ...
Chrysler Elementary School
Comfort Inn
Charles Trowbridge House
The Shorecrest Motor Inn
Louisiana Creole Gu
Takoi
Slows Bar BQ
Ottava Via
Cork & Gabel
Manna Community Meal
WOODBRIDGE ESTATES
JEFFRIES
CORNERSTONE ESTATES
NORTH CORKTOWN
BRIGGS
LAFAYETTE PARK
Fisher Fwy S
Fisher Fwy N
W Fisher Fwy
Grand River Ave
W Forest Ave
Martin Luther King Jr Blvd
Michigan Ave
1000 feet
© 2022 TomTom, ©



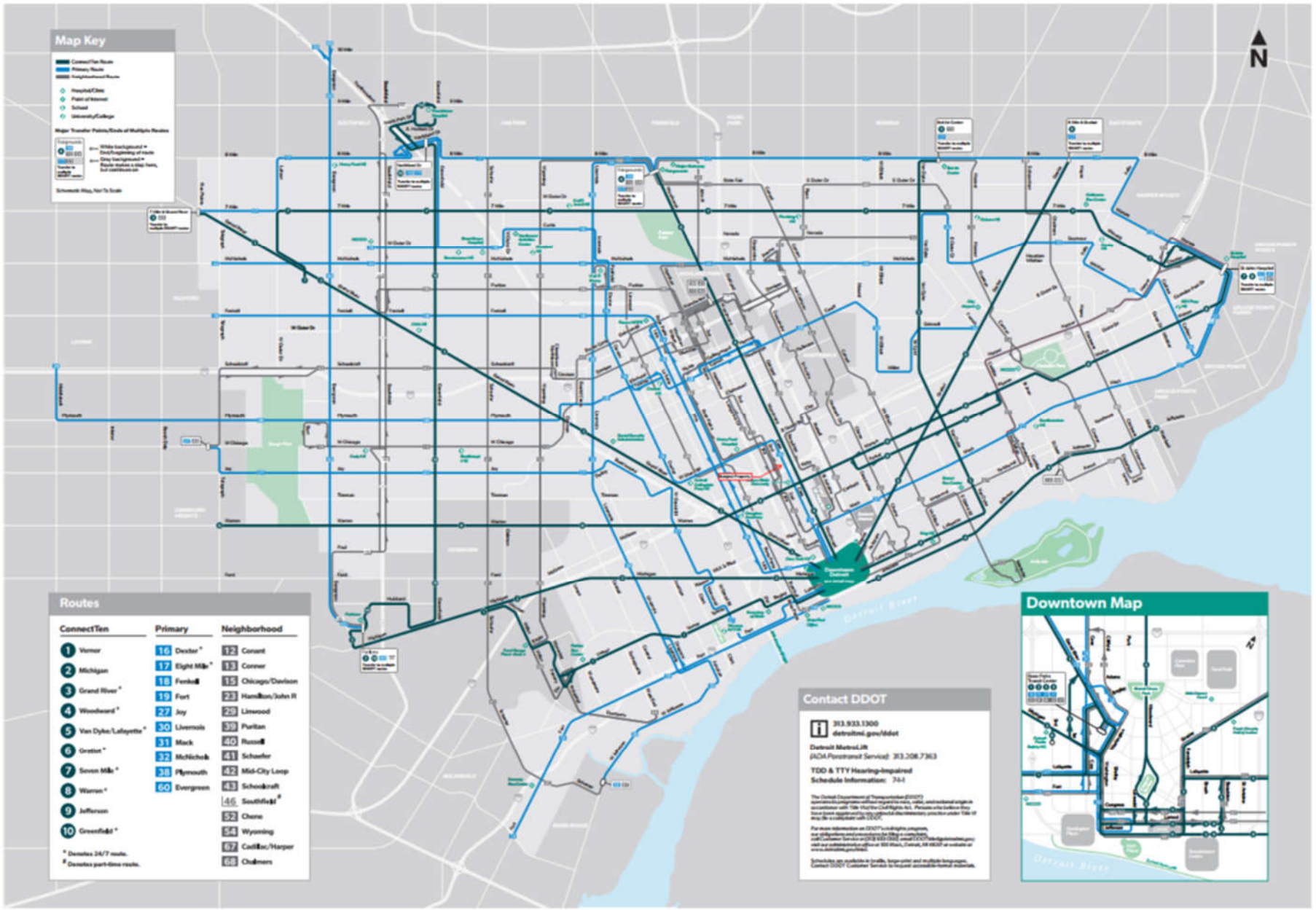
Police Precinct Map
Detroit Police Department-3rd Precinct
Subject Property
7th Precinct
Detroit Police
Detroit Police Department
Detroit Police Department
Charles H. Wright Museum of Af...
Children's Hospital of Michigan
Ford Field
Detroit Denim Company
Adventure Bay Family Water Park
FOREST PARK
NORTHWEST GOLDBERG
TIREMAN
CORE CITY
WOODBRIDGE ESTATES
BRUSH PARK
CORNERSTONE ESTATES
ELMWOOD PARK
CHADSEY CONDON
BRIGGS
SOUTHWEST DETROIT
MILLENNIUM VILLAGE
VERNOR-JUNCTION
HUBBARD RICHARD
WYANDOTTE TOWNE CENTRE
BUTZEL
Elmwood Cemetery
King High School
W Jeffries Fwy
E Warren Ave
W Warren Ave
Tireman St
Milford St
McGraw St
Mack Ave
Fisher Fwy N
W Fisher Fwy
Fisher Fwy W
Buchanan St
John Kronk St
W Vernor Hwy
W Fort St
Riverside Dr E
Livernois Ave
Epworth St
W Grand Blvd
14th St
Cass Ave
Russell St
Saint Aubin St
Trumbull St
Martin St
Central St
Junction St
Lonyo St
Dossin Grea
96
94
75
375
12
10
3


Fire Station Location Map
Detroit Fire Department Medic 1
Detroit Fire Engine 39 Medic 1
Ford Piquette Avenue Plant
Motown Museum
Engine 17/Ladder 7 Of Detroit Fire Department
Phoenix of the Detroit Fire Department
Detroit Fire Department Hazmat Unit
Detroit Fire Department Engine 5
Walter P. Harris Detroit Fire Department Regional Training Center
Detroit Fire Dept Training Division
Subject Property
Detroit Fire Department Engine Co. 1
Detroit Fire Department
Detroit Fire partment Engine 34
Ladder 22 The Double Deuce
Detroit Denim Company
King High School
Dossin Great Lakes Museum
Belle Isle
Belle Isle Park
Reaume Park
Detroit River
BOSTON-EDISON
NORTH END
UPPER EAST CENTRAL
KETTERING
GRATIOT-GRAND
EAST VILLAGE
PETOSKY-OTSEGO
NORTHWEST GOLDBERG
TIREMAN
FOREST PARK
WEST VILLAGE
INDIAN VILLAGE
BRUSH PARK
ELMWOOD PARK
CHADSEY CONDON
BRIGGS
SOUTHWEST DETROIT
MILLENNIUM VILLAGE
VERNOR-JUNCTION
HUBBARD RICHARD
W Euclid St
E Edsel Ford Fwy
E Forest Ave
Cadillac Blvd
Joy Rd
W Jeffries Fwy
E Warren Ave
E Grand Blvd
Mack Ave
E Vernor Hwy
McClellan St
Livernois Ave
Broadstreet Ave
Dexter Ave
Epworth St
14th St
Buchanan St
W Fisher Fwy
Trumbull St
Rivard St
E Larned St
Fisher Fwy W
Junction St
Central St
John Kronk St
Riverside Dr E
Wyandotte St E
E Jefferson Ave
96
94
75
3
10


Recreational Areas Map
Subject Property
Gallery
Sugar Hill Clay
William C. Boydell House
Dell Pryor Galleries
Detroit-Columbia Central Offic...
Cass Community United Methodis...
CORE CITY
JEFFRIES
CORNERSTONE ESTATES
Ransom Gillis House
Red Bull Arts
Inner State Gallery
LOWER EAST CENTRAL
Eastern Market
Elmwood Cemetery
Mount Elliott Cemetery
Southern Fire Bist & Loun
Walgreens
Jet's Pizza
Detroit Denim Company
RIVERTOWN
Motor city casino
MotorCity Casino
University of Detroit Mercy
Martin Luther King Jr Blvd
Grand Circus Park
Comerica Park
Lot N
Lot Y
Ford Field
GREEKTOWN
Beacon Park
DNR Outdoor Adventure Center
William G. Milliken State Park and Harbor
Wayne County Building
Ford Building
Coleman A. Young
Slows Bar BQ
Detroit Dog Park
Michigan Ave
W Grand Blvd
W Fisher Fwy
E Fisher Fwy
W Edsel Ford Fwy
W Warren Ave
W Forest Ave
Grand River Ave
Buchanan St
Trumbull St
Cass Ave
Brush St
Mack Ave
Russell St
Chene St
E Lafayette St
E Larned St
E Jefferson Ave
Saint Aubin St
Rivard St
Chrysler Dr
Clifford St
14th St
W Jeffries Fwy
Rosa Parks Blvd
Park Rite
Parking
700 Woodbridge St
Vernor Hwy E
Mount Elliott St
John R St

DDOT System Map

Last Revised: November 15, 2021



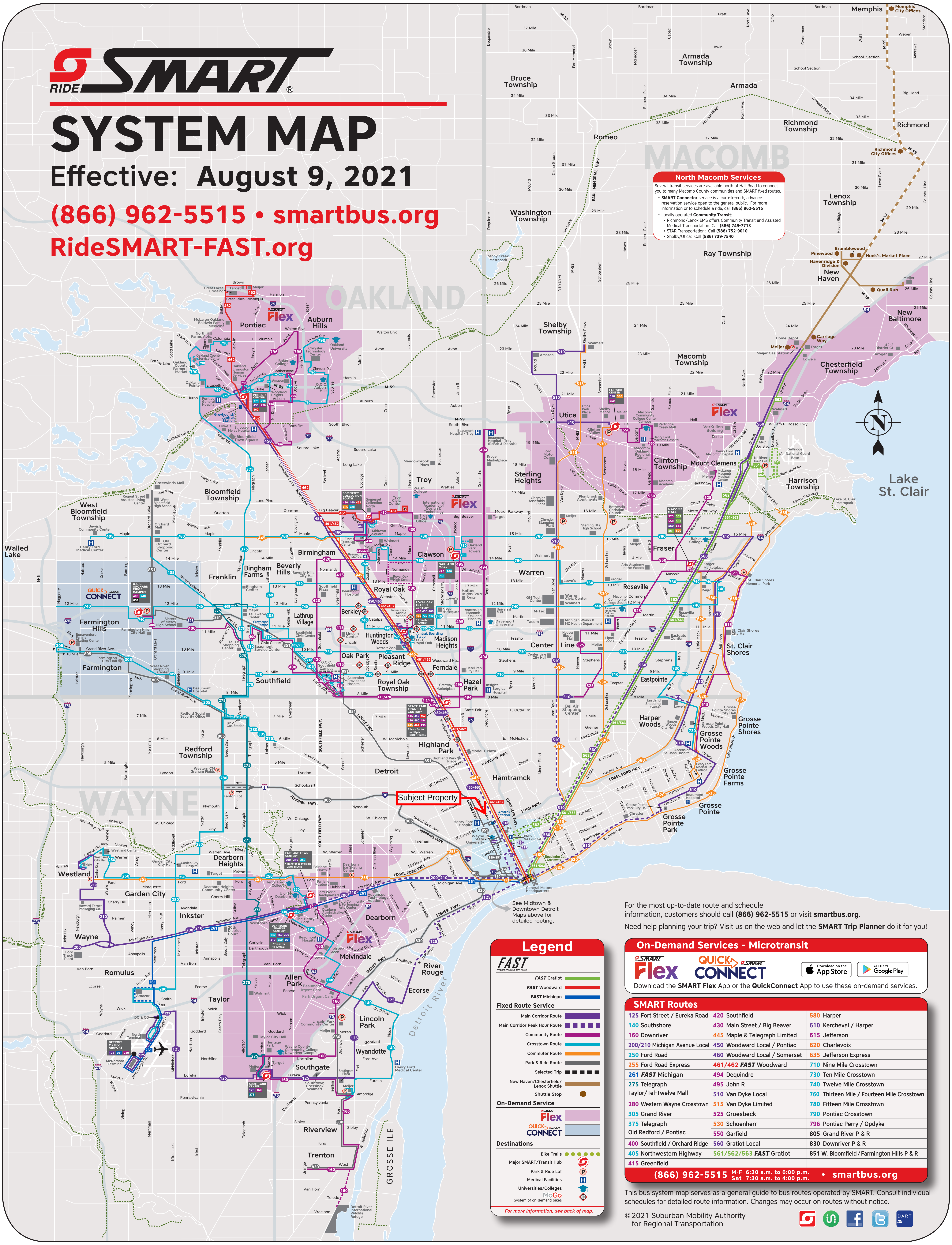
RIDE SMART®

SYSTEM MAP

Effective: August 9, 2021

(866) 962-5515 • smartbus.org

RideSMART-FAST.org



North Macomb Services

Several transit services are available north of Hall Road to connect you to many Macomb County communities and SMART fixed routes.

- **SMART Connector** service is a curb-to-curb, advance reservation service open to the general public. For more information or to schedule a ride, call **(866) 962-5515**
- Locally operated **Community Transit**:
  - Richmond/Lenox EMS offers Community Transit and Assisted Medical Transportation: Call **(586) 749-7713**
  - STAR Transportation: Call **(586) 752-9010**
  - Shelby/Utica: Call **(586) 739-7540**

For the most up-to-date route and schedule information, customers should call **(866) 962-5515** or visit **smartbus.org**.

Need help planning your trip? Visit us on the web and let the **SMART Trip Planner** do it for you!

Legend

FAST — Frequent. Affordable. Safe. Transit.

- ***FAST*** Gratiot
- ***FAST*** Woodward
- ***FAST*** Michigan

Fixed Route Service

- Main Corridor Route
- Main Corridor Peak Hour Route
- Community Route
- Crosstown Route
- Commuter Route
- Park & Ride Route
- Selected Trip
- New Haven/Chesterfield/Lenox Shuttle
- Shuttle Stop

On-Demand Service

- SMART Flex
- QUICK CONNECT SMART

Destinations

- Bike Trails
- Major SMART/Transit Hub
- Park & Ride Lot
- Medical Facilities
- Universities/Colleges
- MoGo — System of on-demand bikes

For more information, see back of map.

On-Demand Services - Microtransit

SMART Flex · QUICK CONNECT SMART · Download on the App Store · GET IT ON Google Play

Download the **SMART Flex** App or the **QuickConnect** App to use these on-demand services.

SMART Routes

125 Fort Street / Eureka Road	420 Southfield	580 Harper
140 Southshore	430 Main Street / Big Beaver	610 Kercheval / Harper
160 Downriver	445 Maple & Telegraph Limited	615 Jefferson
200/210 Michigan Avenue Local	450 Woodward Local / Pontiac	620 Charlevoix
250 Ford Road	460 Woodward Local / Somerset	635 Jefferson Express
255 Ford Road Express	461/462 ***FAST*** Woodward	710 Nine Mile Crosstown
261 ***FAST*** Michigan	494 Dequindre	730 Ten Mile Crosstown
275 Telegraph Taylor/Tel-Twelve Mall	495 John R	740 Twelve Mile Crosstown
	510 Van Dyke Local	760 Thirteen Mile / Fourteen Mile Crosstown
280 Western Wayne Crosstown	515 Van Dyke Limited	780 Fifteen Mile Crosstown
305 Grand River	525 Groesbeck	790 Pontiac Crosstown
375 Telegraph Old Redford / Pontiac	530 Schoenherr	796 Pontiac Perry / Opdyke
	550 Garfield	805 Grand River P & R
400 Southfield / Orchard Ridge	560 Gratiot Local	830 Downriver P & R
405 Northwestern Highway	561/562/563 ***FAST*** Gratiot	851 W. Bloomfield / Farmington Hills P & R
415 Greenfield		

(866) 962-5515 M-F 6:30 a.m. to 6:00 p.m. Sat 7:30 a.m. to 4:00 p.m. • **smartbus.org**

This bus system map serves as a general guide to bus routes operated by SMART. Consult individual schedules for detailed route information. Changes may occur on routes without notice.