

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

Project Information

Project Name: Preserve-on-Ash-I

HEROS Number: 900000010339404

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

RE Preparer: Kim Siegel, City of Detroit

State / Local Identifier: Detroit, Michigan

Certifying Officer: Julie Schneider, Director

Grant Recipient (if different than Responsible Entity): N/A

PHA Code:

Point of Contact:

Consultant (if applicable): GEI CONSULTANTS, INC.

Point of Contact: Ryan Hoffman

Project Location: Ash Street, Detroit, MI 48208

Additional Location Information:

The proposed project POA I is located in North Corktown, Detroit, Michigan between 14th Street and 16th Street, north and south of Ash Street. Specific parcels include

the following: * Parcel 10005256-9, located at 3309 14th Street * Parcel 10005433-7, located at 3314 15th Street * Parcel 10005260-1, located at 3107 14th Street * Parcel 10006018-22, located at 3316 16th Street * Parcel 10005816-34, located at 3325 15th Street

Direct Comments to:

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

POA I is the first housing phase of the City of Detroit's neighborhood revitalization plan, known as the Greater Corktown Neighborhood Framework Plan. This phase commences the housing plan for this revitalization plan, which involves new construction of over 800 affordable housing units. The City of Detroit received a \$30M HUD CNI grant to support implementation of this revitalization plan. The City also created a joint venture between The Community Builders, Inc., and American Community Developers, who serve as the Housing Implementation Entity (HIE) for this HUD CNI grant award. TCB also serves as the People Implementation Entity (PIE) for the grant and will be the owner, property manager, and supportive service provider for POA I. The Preserve on Ash I ("POA I") is the first phase of a multiphase housing development plan in the North Corktown neighborhood. The POA I site is bounded by Martin Luther King Jr. Boulevard to the north, 14th Street to the east, Butternut Street to the south, and 16th Street to the west. POA I includes acquisition and new construction of 5 buildings totaling 87,555 SF, including 5,865 SF commercial space and 69 mixed income housing units, on approximately 2.33-acres of land currently owned by the City of Detroit. This Project serves a range of household incomes with 15 units (22%) restricted to 30% or less of AMI with project based rental subsidy, 33 units (48%) restricted to less than 60% AMI, and 21 (30%) market rate units. A description of each building is listed below. For additional information, refer to the attached site plan. Building L: The largest multi-family building located at the northwest corner of 14th and Ash Street. This building is 44,370 SF including 4,698 SF of commercial space with 32 units total comprised of 15 1-bedroom units (averaging 624 SF) and 17 2-bedroom units (averaging 897 SF). Building H: This building is 9,420 SF with 1,167 SF of commercial space and is located at the southwest corner of 14th and Ash Street, across the street from building L. Building H contains 7 total units, with 3 1-bedroom units (averaging 641 SF), 3 2-bedroom units (averaging 854 SF), and 1 3-bedroom unit (averaging 1,290 SF). Buildings C1, C2, & C3: There are 3 identical buildings C1, C2, and C3 that are each 11,255 SF with no commercial space located on the north side of Ash Street, adjacent to one another and west of building L. Buildings C1, C2, and C3 contain 10 units within each building (30 units total). Each C building has 5 1-bedroom units (averaging 626 SF), 2 2-bedroom units (averaging 875 SF), and 3 3-bedroom units (averaging 1,188 SF). The majority of the resident building amenities are in Building L. It contains a package room with a package locker system, bike storage room, tenant storage room, resident lounge, property management, maintenance, and supportive service offices, and outdoor patio area. There are 47 onsite parking spaces for POA I residents and there is ample unrestricted on street parking surrounding the site on a first come first served basis. This review is for \$1,723,753.00 in CDBG funding (\$215,651.98 2022, \$1,210,533.00 in 2023 and \$297,568.02 in 2024) and \$2,771,417 in CNI funding.

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

The Community Builders (TCB) (Developer) was selected by the City of Detroit through a competitive RFQ process to partner in multiple mixed income housing developments as part of the Greater Corktown Framework Plan (Plan). The City received a \$30M HUD FY2020 Choice Neighborhoods Implementation (CNI) grant to implement the Framework Plan. TCB is part of a multifaceted team working with the City to implement the mixed-income development goals of the Plan, which will guide housing, greenspace, infrastructure, sustainability and transportation investments. Under the Framework Plan, the City's partners including TCB will develop approximately 841 new housing units within Greater Corktown. Driving the need for balanced housing development is the rapid increase in market rate housing, retail and commercial development spurred by the Ford Motor Company's major investment in the acquisition and redevelopment of multiple sites in Corktown. These sites will anchor a 1.2 million sq. ft. "innovation campus" that will house 2,500 skilled jobs. The purpose of POA I and future housing phases under the Greater Corktown Choice Neighborhoods Implementation (CNI) grant are to build a mixed-income community for all incomes to create an equitable community. In addition to protecting displacement through the preservation and expansion of affordable housing units, this Housing Strategy builds a neighborhood where high-quality, accessible, and diverse housing options are affordable to households of all incomes. Greater Corktown stands on the brink of major investment and at a critical period of transition. The strategy leverages Ford Motor Company's \$740 million investment in Greater Corktown to achieve the City's desired outcomes. Every phase of CNI housing plan is within a 10-minute walk of Ford's new campus. Though North Corktown's large amount of blight and vacant land has previously created barriers to revitalization, the City's extensive public land holdings now present an opportunity to be activated for the development of mixed-income housing alongside Ford's investment. While other neighborhoods were considered for the HUD CNI grant application, the Greater Corktown area was ultimately chosen due to its significant amount of planned and completed private and public investment and due to the City's land holdings in North Corktown.

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

Currently the North Corktown area consists of acres of underutilized vacant land. There are very few residential and business structures in the area. The surrounding neighboring areas have begun to experience a resurgence in public and private investments, which has encouraged economic development, investment, and demand for this North Corktown area. The Primary Market Area (PMA) for the Preserve on Ash I was based on a market study completed by Shaw Research & Consulting, is comprised of 19 census tracts, and is generally bounded by West Grand Boulevard to the north, the Detroit River to the south, Woodward Avenue to the east, and Livernois Avenue to the west. The North Corktown PMA has experienced modest growth over

the last decade, and the overall population is anticipated to grow by two percent over the next five years, in contrast to the City of Detroit as whole, which is estimated to decrease by this percentage. The largest age cohort for the PMA in 2020, consisted of persons between the ages of 20 and 44 years old, accounting for 38% of all people living within the PMA. The PMA had an average of 2.14 persons per households in 2021, slightly fewer compared to the City of Detroit as whole with an average of 2.53 persons. The median household income for the North Corktown PMA is slightly below the City's averages but has experienced relatively healthy gains over the last decade - increasing at a rate notably higher than the city and county. As of 2023, the median household income for the North Corktown PMA was estimated at \$35,373. Steady median household income appreciation is expected to continue over the next five years, with an annual increase of 4% for the PMA. If POA I did not occur, this site and the surrounding vacant lots would likely remain vacant for several more years to come. Alternatively, if the land were eventually be developed it would likely become market rate housing due to the growing housing demand stemming from nearby public and private investment. POA I preserves affordability within North Corktown while revitalizing vacant land that is city owned.

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

[Att 3 EA Maps-f.pdf](#)

[2 Proposed Building Site Plans.pdf](#)

[1 Site Plan.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	Funding Amount
B22MC260006	Community Planning and Development (CPD)	Community Development Block Grants (CDBG) (Entitlement)	\$215,651.98
B23MC260006	Community Planning and Development (CPD)	Community Development Block Grants (CDBG) (Entitlement)	\$1,210,533.00
B24MC260006	Community Planning and Development (CPD)	Community Development Block Grants (CDBG) (Entitlement)	\$297,568.02
MI5F536CNG120	Public Housing	Choice Neighborhoods	\$2,771,417.00

Estimated Total HUD Funded, Assisted or Insured Amount: \$3,287,294.00

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)]: \$37,416,704.00

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	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	There are no civilian airports within 2,500 feet and no military airfields within 15,000 feet of the project (Attachments 1 and 2). The property is located approximately 5.4 miles to the SW of the nearest civil or commercial service large airport (Coleman A. Young Airport). Detroit-Metro Airport is just over 15 miles to the SW of the property. The project site is not within an Airport Clear Zone or Accident Potential Zone. No military airfields are located in

		Wayne County or the nearby vicinity (Attachment 1 & 2 - Airport Maps).
<p>Coastal Barrier Resources Act Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>The project site is not within a Coastal Barrier Resource System (CRBS) Unit, or CRBS buffer zone, as defined under the Coastal Barrier Improvement Act of 1990 [16 Resources Act of 1982 (PL 97-348), as amended by the Coastal Barrier Improvement Act of 1990 (PL 101-591) (Attachment 1 - CRB Map).</p>
<p>Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>The project involves new construction and is not located within a Special Flood Hazard Area as depicted on the Flood Insurance Rate Map panel 26163C0280E, effective February 2, 2012 (Attachments 1 and 2). The project would not involve either direct or indirect support of development in a floodplain.</p>
<p>STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR §50.4 & § 58.5</p>		
<p>Air Quality Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>The State of Michigan is designated as being in 'attainment' for carbon monoxide, lead, nitrogen dioxide, and PM10. Most of Wayne County, including the project location, is in 'attainment' for sulfur dioxide. Most of Wayne County, including the project location, is in 'maintenance' for ozone (Attachments 1 and 2 - Air Quality Documentation). Local and Regional air quality will not be significantly affected. This project is not likely to exceed de minimis emissions levels or the screening level established by the state or air quality management district for the pollutant(s) in maintenance status identified above. The ozone de minimis emission level is 100 tons per year (Attachment 3 - EPA De Minimis Table) or anything below Moderate classification air quality threshold (which is between 81 and 93 parts per billion, or 0.081 and 0.093 parts per million) (Attachment 4 2015 NAAQ Standard for Ozone). In addition, the</p>

		<p>Michigan Department of Environment, Great Lakes, and Energy (EGLE) reviewed the project and concluded the project is not likely to exceed de minimis emissions levels included in the federal general conformity requirements (Attachment 5 - Gen Conformity Letter). Measures to control fugitive dust will be utilized to ensure that construction activities 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 fugitive dust.</p>
<p>Coastal Zone Management Act Coastal Zone Management Act, sections 307(c) & (d)</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>The project site is not in a Coastal Zone Management area per Michigan Department of Environment, Great Lakes and Energy (EGLE) Office of the Great Lakes (Attachment 1 - Coastal Zones).</p>
<p>Contamination and Toxic Substances 24 CFR 50.3(i) & 58.5(i)(2)]</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>A Phase I ESA in conformance with the scope and limitations of ASTM E 1527 13 and MSHDA Environmental Review Requirements was initially conducted for the project site in January 2021 (Attachment 1). Four (4) onsite RECs and five (5) offsite RECs were identified associated with historical filling stations and dry cleaners. A Phase II ESA was subsequently conducted to investigate the presence or absence of impacts to the project site. Volatile and semi volatile compounds as well as several metals were detected in soil within the POA I project boundary (Attachment 2). This soil contamination was among seven (7) RECs that were identified during the most recent Phase I ESA on October 12, 2022 (Attachment 1). Five separate Response Activity Plans (ResAPs) were prepared (to align with the five newly combined lots and the five proposed buildings) were prepared and shared with the Michigan Department of Energy, Great Lakes &</p>

		<p>Environment (EGLE). ResAPs were revised based on EGLE comments in 2022 and 2023, and final ResAPs were submitted to EGLE on September 1, 2023 (Attachment 3). EGLE approved the five ResAPs on September 8, 2023 (Attachment 4). The contaminants identified on the POA I properties which pose an unacceptable risk to property occupants for the identified complete pathways include:</p> <ul style="list-style-type: none">* Residential Direct Contact:<ul style="list-style-type: none">o Arsenico Various PNAS* Residential Soil Volatilization to Indoor Air:<ul style="list-style-type: none">o Benzeneo Ethylbenzeneo Naphthaleneo Phenanthreneo Tetrachloroethyleneo Mercury <p>All compliance and mitigating factors will be addressed in accordance with the approved ResAPs. This will involve installing a vapor barrier with active SSDS beneath the building structures; installing hard paved surfaces to cover the ground surface and prevent exposure and contact to remaining contaminants; installing a demarcation layer and a minimum of 6 inches of clean engineered fill and topsoil in areas not covered by hard surface cover to indicate when fill soils are present (this engineered fill will be planted with grass and/or other landscape plants); preparing a long term Operation and Maintenance Plan for the buildings, which will identify potential exposure routes and methods for the prevention of exposure. Surveys for lead-based paint, asbestos-containing materials (ACM), and radon were not performed because there are no existing structures on site. Therefore, lead-based paint and ACM in building materials are not a concern. The project site is in Wayne County which is designated as Zone 2 for radon gas hazards by the U.S. EPA. According to EGLE 10-24% of homes tested in Wayne County have a radon</p>
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		<p>level equal to or greater than the U.S. EPA action level of 4 pCi/L (Attachment 5). No further assessment is required for this project.</p>
<p>Endangered Species Act Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Threatened and Endangered species listed by the U.S. Fish & Wildlife Service in Wayne County include the Eastern Massasauga rattlesnake, northern riffleshell, piping plover, red knot, eastern prairie fringed orchid, Indiana bat, and northern long eared bat. The project site does not include any suitable habitat for the identified species (Attachment 1 - Endangered Species List).</p>
<p>Explosive and Flammable Hazards Above-Ground Tanks)[24 CFR Part 51 Subpart C</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>The project consists of new construction that will result in an increase of residential density; therefore, the exemptions to 24 CFR 51C include activities that do not result in the increasing residential densities, converting the type of use of a building to habitation, or making a vacant building habitable are not applicable. The project does not involve explosive or flammable materials or operations. There is no visual evidence or indication of unobstructed or unshielded above ground storage tanks (fuel oil, gasoline, propane, etc.) or operations utilizing explosive/flammable material at or in close proximity to the property. The radius report for the Phase I ESA lists a couple of regulated ASTs within 1-mile. One site is in fact listed as closed because the AST has been removed. Two ASTs are listed at site J49 approximately 1/4 mile east of the project site. A review of the most recent aerial imagery on Google Earth and Google Maps shows that the tanks, which appear to be diesel tanks and are listed as 1,000-gallon capacity, are not within 1,000 feet of the project site. Based on the reported capacities and contents the Acceptable Separation</p>

		<p>Distance for these tanks is 277 feet (Attachment 1 - ASD Assessment). No other ASTs that would constitute a potential explosive or flammable hazard were identified on the aerial imagery, which show most of the area as residential homes. The project does not involve storage of explosive or flammable hazards and the surrounding area is primarily residential with no explosive or flammable hazards (Attachment 2 - Pipeline Map).</p>
<p>Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>The project site consists of urban land; therefore, the project would not affect farmlands. According to the U.S. Department of Agriculture Natural Resources Conservation Services Resource Assessment Division Map for Michigan there are no protected farmlands in the City of Detroit (Attachment 1 - Soil Survey and Classification). The project site does not presently have any agricultural use.</p>
<p>Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>The project involves new construction and is not located within a Special Flood Hazard Area as depicted on the Flood Insurance Rate Map panel 26163C0280E, effective February 2, 2012 (Attachments 1 and 2 - Floodplain Maps). The project would not involve either direct or indirect support of development in a floodplain.</p>
<p>Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Based on Section 106 consultation the project will have No Adverse Effect on historic properties. Conditions: Other. Upon satisfactory implementation of the conditions, which should be monitored, the project is in compliance with Section 106.</p>
<p>Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>HUD Noise Standards - Fishbeck conducted an online noise assessment for the property as required by MSHDA in 2021 when the POA I project was first proposed (66 dB) and again in 2023 (65 dB). One airport and two busy highways (I 75 and I 96) that bend around the</p>

		<p>project site were identified within the applicable search distances. The closest railroad is more than 3,000 feet south of the project and, according to Federal Railroad Administration data, does not appear to be in use and is not expected to contribute to the noise level at the project site. Coleman A. Young Airport is located approximately 5.4 miles northeast of the project site. The most recent Airport Master Record for Coleman A. Young Airport shows that the site still does not meet the threshold for noise mitigation. I 75 and I 96 are approximately 1,500 feet south and 2,000 feet west, respectively, of the project site. This portion of the interstate is recessed, which provides some noise attenuation. When the DNL was first calculated in 2021, the sound level was 66 dB or Normally Unacceptable. However, the calculation was re-done in 2023 and the sound level was 65 dB or Acceptable. Both calculations are included because the datasets were slightly different. For the 2021 calculation of 66 dB, there was a separate calculation made that accounted for a "barrier" that acted as noise attenuation between the project site and the highways. That "barrier" is the elevation differential between the recessed highway and the project site. Using HUD's Barrier Performance Module, a noise attenuation of about 7.6 dB was calculated, which can be subtracted from the calculated sound level of 66 dB (and 65 dB), which results in an effective sound level of 58.4 dB (and 57.4 dB). Therefore, with the noise attenuation from the barrier, the resulting sound level is in the Acceptable range, and STraCAT calculations are not necessary. No mitigation is required for noise levels at or below 65 dB (Attachment 1 - Noise</p>
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		<p>Assessment). Construction Noise - City of Detroit prohibits the use of certain equipment between 10:00pm and 7:00am within or next to areas zoned residential. Construction noise is not anticipated to affect indoor uses associated with the nearest sensitive receptors because the nearest such site is the Burton International Academy east of the project site. The remainder of the surrounding area is a mix of residences and vacant lots. Operation Noise - The new residential and mixed-use structures are not anticipated to introduce new permanent noise sources which would interfere with surrounding residential uses.</p>
<p>Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>There are no U.S. EPA designated sole-source aquifers in Michigan (Attachment 1 - SSA Map). The proposed site is not located within a sole-source aquifer watershed and would not affect a sole-source aquifer or negatively impact the water quality or any aquifers in the area.</p>
<p>Wetlands Protection Executive Order 11990, particularly sections 2 and 5</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>The project site is not located near or within a wetland area (Attachment 1 - NWI Map). Therefore, the project would not affect wetland or riparian areas.</p>
<p>Wild and Scenic Rivers Act Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>No Wild and Scenic Rivers are located within the City of Detroit or Wayne County (Attachment 1 - Wild and Scenic Rivers). The nearest designated river is the Pere Marquette which is approximately 170 miles northwest of the site.</p>
<p>HUD HOUSING ENVIRONMENTAL STANDARDS</p>		
<p>ENVIRONMENTAL JUSTICE</p>		
<p>Environmental Justice Executive Order 12898</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>No adverse environmental impacts were identified in the project's total environmental review. The project is in compliance with Executive Order 12898. The proportion of the population below poverty level in the census tract for the project site is similar to neighboring</p>

		<p>tracts but greater than the proportion in Wayne County overall. The median income in the census tract for the project site is similar to the median income for neighboring tracts and lower than the median income for Wayne County. The unemployment rate in the area around the project is similar to that of the City and higher than the County unemployment rate (Attachment 1 - EJ Documentation).</p>
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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	<p>This redevelopment project is in agreement with both the City of Detroit Master Plan and Zoning Ordinances. The site is currently zoned a mix of residential and business categories. The City of Detroit zoning ordinance that supports the implementation of a comprehensive citizen-driven master plan that envisions the transformation of a once thriving neighborhood near downtown Detroit. This development is compatible with the City's goals for residential development and will have a positive impact on the area within which it exists. The proposed development is anticipated to revitalize the area immediately surrounding the site. The buildings will maintain compatible characteristics, including use and scale, with the surrounding environs.</p>	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
Soil Suitability / Slope/ Erosion / Drainage and Storm Water Runoff	1	<p>Topography - The development site is approximately level ground. After construction the site will likely have slopes less than about 2%. Site Geology -Soil survey data indicate the soils at the property are primarily Shebeon-Urban land complex (0-4% slopes) with a small portion labeled as Blount-Urban land complex (0-4% slopes). These loamy soils are somewhat poorly drained. A geotechnical investigation was performed and verified that no special construction methods are necessary to ensure proper footings for the buildings. Specifically, over-excavation of geotechnically unsuitable materials will be necessary at foundation locations (Attachment 1). Erosion - Erosion by natural forces is not anticipated to be of concern following development of the site. During construction the project site will be surrounded by approved soil erosion and sedimentation control systems. These systems shall be maintained throughout the construction phases of the project to minimize the potential for water borne migration of soils off site and protect adjacent and downstream storm water inlets. Stormwater - Stormwater runoff at the project site will enter the municipal sewer system. The amount of storm water entering the sewer will be an increase over the current condition as vacant lots but is anticipated to be less than the previously fully developed condition because of the on-site stormwater detention.</p>	
Hazards and Nuisances including Site Safety and Site-Generated Noise	2	<p>The project involves development in vacant lots. By developing these lots it will reduce the hazards and nuisances posed by vacant city lots. The City of Detroit prohibits the use of certain equipment between 10:00pm and 7:00am within or next to areas zoned residential. Construction noise is not anticipated to affect indoor uses associated with the nearest sensitive</p>	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		receptors because the nearest such site is the Burton International Academy east of the project site. The remainder of the surrounding area is a mix of residences and vacant lots.	
SOCIOECONOMIC			
Employment and Income Patterns	2	The Socioeconomic Status (NSES) database available through NEPAssist indicates that the project site is located in Tract 5215, Wayne County (Attachment 2). This tract's Socioeconomic Status Index has a value of 36.4 (2011-2015). The Index is on a scale from 0 to 100 with 50 being the national average. The Socioeconomic Status Index for this time period incorporates the following: * median household income, which in this tract was \$17,500 * percent of households with income below the Federal Poverty Line, which in this tract was 49.5% * the educational attainment of adults (age 25+), which in this tract, 66.2% of adults were high school grads who did not hold a bachelor's degree, and 14.2% of adults held a bachelor's degree * unemployment rate, which in this tract was 17.7% * percent of households with children under the age of 18 that are "female-headed" (no male present), which in this tract is 90.6%	
Demographic Character Changes / Displacement	2	The project will provide much needed additional affordable housing within a tight market and will not result in the displacement of individuals (Attachment 2).	
Demographic Character Changes / Displacement	2	The project will provide much needed additional affordable housing within a tight market and will not result in the displacement of individuals (Attachment 2).	
Environmental Justice EA Factor	2	The proportion of the population below poverty level in the census tract for the project site is similar to neighboring tracts but greater than the proportion in Wayne County overall. The median income in the census tract for the project site is similar to the median income for neighboring tracts	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		and lower than the median income for Wayne County. The unemployment rate in the area around the project is similar to that of the City and higher than the County unemployment rate (Attachment 2).	
Environmental Justice EA Factor	2	The proportion of the population below poverty level in the census tract for the project site is similar to neighboring tracts but greater than the proportion in Wayne County overall. The median income in the census tract for the project site is similar to the median income for neighboring tracts and lower than the median income for Wayne County. The unemployment rate in the area around the project is similar to that of the City and higher than the County unemployment rate (Attachment 2).	
COMMUNITY FACILITIES AND SERVICES			
Educational and Cultural Facilities (Access and Capacity)	2	The proposed development will have a small effect to educational facilities. Public education is offered in the area by Detroit Public Schools. Several pre-schools, elementary, middle, and high schools are located within 1-2 miles of the property. Burton International Academy is a pre-K through 8th grade school adjacent east of the project site. Not all units would have children and some children may already be in the district. The walk-score map also shows several nearby educational facilities beyond the Burton International Academy north of MLK Jr. Blvd (Attachment 2). The cultural center of Detroit is less than 2 miles from the site and includes places like the Motown Museum, Museum of Contemporary Art, Michigan Science Center, and For Piquette Avenue Plant Museum. Refer to Attachment 3 for maps of educational and cultural facilities.	
Educational and Cultural Facilities (Access and Capacity)	2	The proposed development will have a small effect to educational facilities. Public education is offered in the area by Detroit Public Schools. Several pre-schools, elementary, middle, and high schools are	

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		<p>located within 1-2 miles of the property. Burton International Academy is a pre-K through 8th grade school adjacent east of the project site. Not all units would have children and some children may already be in the district. The walk-score map also shows several nearby educational facilities beyond the Burton International Academy north of MLK Jr. Blvd (Attachment 2). The cultural center of Detroit is less than 2 miles from the site and includes places like the Motown Museum, Museum of Contemporary Art, Michigan Science Center, and For Piquette Avenue Plant Museum. Refer to Attachment 3 for maps of educational and cultural facilities.</p>	
<p>Commercial Facilities (Access and Proximity)</p>	<p>2</p>	<p>The project will add to the current residential base with 5,865 SF of new retail space and is not expected to negatively impact existing commercial facilities that are located around the project site. The project is expected to bring in new residents, which will benefit the neighboring commercial establishments. Commercial businesses and retail establishments are available along Grand River Ave. approximately 1/3 mile east of the project site. The Walk-score of 52/100 shows there is a variety of commercial facilities within a reasonable walking distance and the Bike-score of 85 indicates that even more are reasonably convenient (Attachment 2). Refer to Attachment 3 for a map of commercial facilities.</p>	
<p>Commercial Facilities (Access and Proximity)</p>	<p>2</p>	<p>The project will add to the current residential base with 5,865 SF of new retail space and is not expected to negatively impact existing commercial facilities that are located around the project site. The project is expected to bring in new residents, which will benefit the neighboring commercial establishments. Commercial businesses and retail establishments are available along Grand</p>	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		River Ave. approximately 1/3 mile east of the project site. The Walk-score of 52/100 shows there is a variety of commercial facilities within a reasonable walking distance and the Bike-score of 85 indicates that even more are reasonably convenient (Attachment 2). Refer to Attachment 3 for a map of commercial facilities.	
Health Care / Social Services (Access and Capacity)	1	The area of the project site has adequate health care service providers for the City and surrounding communities. The project is located just over 2 miles from Henry Ford Hospital to the north and a group of medical facilities, including the John Dingell VA Medical Center, Karmanos Cancer Institute, and Detroit Receiving Hospital to the northeast. Social services are available in Detroit. The William Booth Legal Aid Clinic and Salvation Army Harbor Light are just to the northwest. There are several small neighborhood churches throughout the North Corktown area (Covenant house, 2959 Martin Luther King Jr. Blvd.; Greater Dequindre Church of God, 3338 Rosa Parks Blvd.; Sharon Missionary Baptists Church, 3532 Rosa Parks Blvd.; Trinity Episcopal Church, 1519 Martin Luther King Jr. Blvd.) that provide a variety of resources including day care, education, crisis care, outreach, mental health support, substance abuse support, and other social services. The Community Builders, Inc. also have their own social services and case management program known as Community Life. Case Managers will be available to all residents to connect them with additional support and social services. Refer to Attachment 3 for maps of health care and social services.	
Health Care / Social Services (Access and Capacity)	1	The area of the project site has adequate health care service providers for the City and surrounding communities. The project is located just over 2 miles from Henry Ford Hospital to the north and a group of	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		<p>medical facilities, including the John Dingell VA Medical Center, Karmanos Cancer Institute, and Detroit Receiving Hospital to the northeast. Social services are available in Detroit. The William Booth Legal Aid Clinic and Salvation Army Harbor Light are just to the northwest. There are several small neighborhood churches throughout the North Corktown area (Covenant house, 2959 Martin Luther King Jr. Blvd.; Greater Dequindre Church of God, 3338 Rosa Parks Blvd.; Sharon Missionary Baptists Church, 3532 Rosa Parks Blvd.; Trinity Episcopal Church, 1519 Martin Luther King Jr. Blvd.) that provide a variety of resources including day care, education, crisis care, outreach, mental health support, substance abuse support, and other social services. The Community Builders, Inc. also have their own social services and case management program known as Community Life. Case Managers will be available to all residents to connect them with additional support and social services. Refer to Attachment 3 for maps of health care and social services.</p>	
<p>Solid Waste Disposal and Recycling (Feasibility and Capacity)</p>	<p>2</p>	<p>Solid waste and recycling services will be provided by contractors of the City of Detroit. GFL Environmental is the refuse hauler for the area of the project site. The development is not expected to negatively impact the solid waste disposal service. The City of Detroit also has voluntary curbside recycling available for residents in single-family homes or a house with up to 4 units.</p>	
<p>Solid Waste Disposal and Recycling (Feasibility and Capacity)</p>	<p>2</p>	<p>Solid waste and recycling services will be provided by contractors of the City of Detroit. GFL Environmental is the refuse hauler for the area of the project site. The development is not expected to negatively impact the solid waste disposal service. The City of Detroit also has voluntary curbside recycling available for residents in single-family homes or a house with up to 4 units.</p>	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
Waste Water and Sanitary Sewers (Feasibility and Capacity)	2	The stormwater and sewer systems are operated by the City of Detroit Water and Sewerage Department. Wastewater generated at the project site will be collected and processed by the city system. The increase in residential density associated with the proposed project is not anticipated to have a negative effect on the sanitary system because much of the area was previously residential prior to the lots becoming vacant.	
Waste Water and Sanitary Sewers (Feasibility and Capacity)	2	The stormwater and sewer systems are operated by the City of Detroit Water and Sewerage Department. Wastewater generated at the project site will be collected and processed by the city system. The increase in residential density associated with the proposed project is not anticipated to have a negative effect on the sanitary system because much of the area was previously residential prior to the lots becoming vacant.	
Water Supply (Feasibility and Capacity)	2	Water will be provided to the project site by the City of Detroit and is in compliance with State and Federal Drinking Water Acts. The proposed project will slightly increase residential density and likewise increase water demands. The City of Detroit Water and Sewerage Department has capacity and plans to accommodate area growth in the Master Plan and the water supply will not be negatively impacted by this development.	
Water Supply (Feasibility and Capacity)	2	Water will be provided to the project site by the City of Detroit and is in compliance with State and Federal Drinking Water Acts. The proposed project will slightly increase residential density and likewise increase water demands. The City of Detroit Water and Sewerage Department has capacity and plans to accommodate area growth in the Master Plan and the water supply will not be negatively impacted by this development.	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
Public Safety - Police, Fire and Emergency Medical	2	The project site is served by the Detroit Police Department and Detroit Fire Department. The slight increase in residential density may have a slight increase in demand for these services over the existing vacant lots but is not of a scale anticipated to negatively impact these services. Refer to Attachment 3 for maps of police, fire, and emergency medical/health care facilities.	
Public Safety - Police, Fire and Emergency Medical	2	The project site is served by the Detroit Police Department and Detroit Fire Department. The slight increase in residential density may have a slight increase in demand for these services over the existing vacant lots but is not of a scale anticipated to negatively impact these services. Refer to Attachment 3 for maps of police, fire, and emergency medical/health care facilities.	
Parks, Open Space and Recreation (Access and Capacity)	2	The project site is within reasonable walking distance from several parks and recreational facilities. Downey Park is a small open space just a couple of blocks west of the project site and Nagel Park just east of the site is somewhat larger with a sports field. Several other larger parks are located within a short walking distance from the project site. These parks are fairly large and include a variety of amenities. Refer to Attachment 3 for a map of parks, open space, and recreation.	
Parks, Open Space and Recreation (Access and Capacity)	2	The project site is within reasonable walking distance from several parks and recreational facilities. Downey Park is a small open space just a couple of blocks west of the project site and Nagel Park just east of the site is somewhat larger with a sports field. Several other larger parks are located within a short walking distance from the project site. These parks are fairly large and include a variety of amenities. Refer to Attachment 3 for a map of parks, open space, and recreation.	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
Transportation and Accessibility (Access and Capacity)	2	The project site is located near several public bus stops including one located at 14th & Ash St. nearby Martin Luther King, Jr. Blvd. has a bike lane. The project site is also relatively close to two highways (I-96 and I-75) and about 1 mile from downtown Detroit. Refer to Attachment 3 for a map of bus stations.	
Transportation and Accessibility (Access and Capacity)	2	The project site is located near several public bus stops including one located at 14th & Ash St. nearby Martin Luther King, Jr. Blvd. has a bike lane. The project site is also relatively close to two highways (I-96 and I-75) and about 1 mile from downtown Detroit. Refer to Attachment 3 for a map of bus stations.	
NATURAL FEATURES			
Unique Natural Features /Water Resources	2	The project site is currently vacant, urban land with no unique natural features and no water resources.	
Unique Natural Features /Water Resources	2	The project site is currently vacant, urban land with no unique natural features and no water resources.	
Vegetation / Wildlife (Introduction, Modification, Removal, Disruption, etc.)	2	The project site is currently vacant, urban land.	
Vegetation / Wildlife (Introduction, Modification, Removal, Disruption, etc.)	2	The project site is currently vacant, urban land.	
Other Factors 1			
Other Factors 1			
Other Factors 2			
Other Factors 2			
CLIMATE AND ENERGY			
Climate Change	2	The vulnerability of a site to the effects of climate change can be viewed as the combination of the exposure of the site to changing climatic conditions and the sensitivity of the site to these changes. The	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		<p>vulnerability of a site primarily results from the following four climate change interactions: changes in precipitation, sea level rise, rising temperatures, extreme weather. Primary vulnerabilities in Detroit are increased flooding and heat. The project includes greenspace surrounding the proposed buildings, which can help to decrease the heat island effect. The project is not within or near a floodplain and so flooding from water bodies is not expected to impact the site. Localized flooding from increased precipitation is possible but stormwater improvements planned for the project can help decrease that likelihood.</p>	
Climate Change	2	<p>The vulnerability of a site to the effects of climate change can be viewed as the combination of the exposure of the site to changing climatic conditions and the sensitivity of the site to these changes. The vulnerability of a site primarily results from the following four climate change interactions: changes in precipitation, sea level rise, rising temperatures, extreme weather. Primary vulnerabilities in Detroit are increased flooding and heat. The project includes greenspace surrounding the proposed buildings, which can help to decrease the heat island effect. The project is not within or near a floodplain and so flooding from water bodies is not expected to impact the site. Localized flooding from increased precipitation is possible but stormwater improvements planned for the project can help decrease that likelihood.</p>	
Energy Efficiency	1	<p>The project will meet the current State and local codes concerning energy consumption. Other than some fossil fuels used by the utility companies to generate electricity, the project site is not anticipated to have a substantial effect on the use, extraction, or depletion of a natural resource. Energy use during construction is expected to be consistent</p>	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		with typical construction equipment. The location is served by DTE Energy (electricity and natural gas). The proposed buildings will meet current energy efficiency standards by achieving the Enterprise Green Communities Standards.	
Energy Efficiency	1	The project will meet the current State and local codes concerning energy consumption. Other than some fossil fuels used by the utility companies to generate electricity, the project site is not anticipated to have a substantial effect on the use, extraction, or depletion of a natural resource. Energy use during construction is expected to be consistent with typical construction equipment. The location is served by DTE Energy (electricity and natural gas). The proposed buildings will meet current energy efficiency standards by achieving the Enterprise Green Communities Standards.	

Supporting documentation

[Att 3 EA Maps-f\(1\).pdf](#)

[Att 2 Various Documentation.pdf](#)

[Att 1 POA I Geotechnical Report.pdf](#)

Additional Studies Performed:

ASTM Phase I Environmental Site Assessment by GEI, January 26, 2021 ASTM Phase I Environmental Site Assessment by GEI, October 12, 2022 (includes summary of 2021 Phase I ESA and Phase II ESA sampling conducted by GEI between January 2021 and October 2022) Phase II Environmental Site Investigation by GEI, February 6, 2023 Subsurface Exploration and Geotechnical Engineering Report by GEI, March 17, 2021 Part 201 Response Activity Plan, Property at 3314 15th Street (Building C1) by GEI, July 13, 2023, Revised August 25, 2023 Part 201 Response Activity Plan, Property at 3325 15th Street (Building C2) by GEI, July 13, 2023, Revised August 25, 2023 Part 201 Response Activity Plan, Property at 3316 16th Street (Building C3) by GEI, July 13, 2023, Revised August 25, 2023 Part 201 Response Activity Plan, Property at 3107 14th Street (Building H) by GEI, July 13, 2023, Revised August 25, 2023 Part 201 Response Activity Plan, Property at 3309 14th Street (Building L) by GEI, July 13, 2023, Revised August 25, 2023

Field Inspection [Optional]: Date and completed

by:

Mike Leahy

9/14/2022 12:00:00 AM

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

1. U.S. Federal Emergency Management Agency. Flood Map Service Center [https://msc.fema.gov/portal/home] Accessed January 7, 2021; verified no change on November 28, 2022 and August 21, 2023
2. U.S. Fish & Wildlife Service, National Wetland Inventory [https://www.fws.gov/wetlands/Data/Mapper.html] Accessed January 7, 2021; verified no change on November 28, 2022 and August 21, 2023
3. National Oceanic and Atmospheric Administration, 2019. Coastal Zone Management Program Office for Coastal Zone Management. [https://coast.noaa.gov/czm/mystate/#michigan] Accessed December 22, 2020; verified no change on November 28, 2022 and August 21, 2023
4. Michigan Department of Environment, Great Lakes and Energy (EGLE) Coastal Management Program maps [https://www.michigan.gov/documents/egle/wrd-cm-coastal-zone-maps_690358_7.pdf] Accessed December 22, 2020; verified no change on November 28, 2022 and August 21, 2023
5. U.S. Fish & Wildlife Service, Midwest Region. County Distribution of Federally-listed Endangered and Threatened Species. [https://www.fws.gov/midwest/endangered/lists/michigan-cty.html] Accessed November 30, 2022 and August 21, 2023
6. National Wild and Scenic Rivers System. Electronic Database Search for National Wild and Scenic Rivers in Michigan. [https://www.rivers.gov/michigan.php] Accessed December 22, 2020; verified no change on November 28, 2022 and August 21, 2023
7. U.S. EPA. Sole Source Aquifer interactive map [https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b] Accessed December 22, 2020; verified no change on November 28, 2022 and August 21, 2023
8. EGLE, Air Quality Division, Air Quality Source Information [https://www.michigan.gov/-/media/Project/Websites/egle/Documents/Programs/AQD/monitoring/naaqs-ambient-status-map.pdf?rev=4210e4ab95724e17a481533285bd066f] Accessed November 28, 2022 and August 21, 2023
9. U.S. Department of Agriculture, Natural Resources Conservation Service. Web Soil Survey [https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx] Accessed December 8, 2020; verified no change on November 28, 2022 and August 21, 2023
10. U.S. EPA. NEPAassist [https://www.epa.gov/nepa/nepassist] Accessed November 29, 2022 and August 21, 2023
11. U.S. EPA. EJSscreen [https://www.epa.gov/ejscreen] Accessed November 29, 2022 and August 21, 2023
12. Walk Score [https://www.walkscore.com/score/1350-28th-st-sw-wyoming-mi-49509]
13. HUD Exchange. [https://www.hudexchange.info/programs/environmental-review/explosive-and-flammable-facilities/]
14. HUD Exchange. [https://www.hudexchange.info/programs/environmental-review/dnl-calculator/]

15. HUD Exchange. [<https://www.hudexchange.info/programs/environmental-review/bpm-calculator/>] 16. Michigan Department of Environment, Great Lakes and Energy (EGLE) Radon map [<https://www.michigan.gov/egle/-/media/Project/Websites/egle/Documents/Programs/MMD/Radon/Map-Of-Michigan-Radon-Levels.pdf?rev=ae32655908cb484d9edc1ac084ecb1d3&hash=83EB86500E6482C6A9F8E5A109515BA5>] 17. Tribal Historic Preservation Offices (various). Cultural resources information. November 17, 2022; December 1, 2022; December 2, 2022; and December 12, 2022 18. GEI Consultants. Identification of Historic Properties for an Application for State Historic Preservation Office (SHPO) Section 106 Consultation. November 30, 2022. 19. GEI Consultants. Five (5) Part 201 Response Activity Plans. July 13, 2023, Revised August 25, 2023. 20. EGLE Remediation and Redevelopment Division (RRD). Notices of Approval of Response Activity Plans to Comply with 201 07a(1)(b). Dated September 8, 2023.

List of Permits Obtained:

None obtained at this time. Project is currently pending building permit approval.

Public Outreach [24 CFR 58.43]:

To fulfill the requirements of the HUD Choice Neighborhood Grant, a specified number of community engagement meetings and activities were held with results recorded to provide adequate community feedback to HUD. Ongoing outreach has continued and is planned in the future with presentations to neighborhood associations and other residents groups.

Cumulative Impact Analysis [24 CFR 58.32]:

The proposed POA I development will improve the aesthetic appeal, design, and quality of the North Corktown neighborhood. The project will not have a significant impact on the environment as there are few natural resource areas nearby that will be affected in this previously developed area. Site contamination from previous uses will be mitigated to prevent exposure to future occupants and users of the site.

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

The development team along with the City of Detroit searched for a site that would be transformative to this neighborhood. The project site meets development goals based upon the proximity to downtown Detroit and investment activity within the Historic Corktown neighborhood to the South. Due to the number of vacant and underutilized parcels owned by the City of Detroit and/or City Land Bank and the close proximity to Historic Corktown, this area was selected as prime location, no other

alternative sites were selected. As such, the consistent positive community feedback regarding the site plan and architectural designs, no other design was selected.

No Action Alternative [24 CFR 58.40(e)]

The benefit of the development will revitalize the barren neighborhood and strengthen as well as help to sustain a once disinvested community. The adverse impact to the human environment of not implementing the preferred alternative is the continued disinvestment, lack of affordable housing and economic growth for the members of this community.

Summary of Findings and Conclusions:

The proposed project will provide critically needed affordable housing within a tight residential market while not resulting in the displacement of any individuals. The project will not result in a significant impact on the quality of the human environment. The project provides a positive impact in a deteriorated neighborhood.

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
Historic Preservation	The objects collected during the trenching investigation will be donated to Wayne State University (WSU). Further, each future phase of the POA Project would require additional Section 106 review.	N/A	The mitigation plan will be developed in coordination with the City HRD.	
Contamination and Toxic Substances	Vapor intrusion will be mitigated with installation of SSDSs and contaminated soil will be covered in place in accordance with EGLE approved Response Activity Plans.	N/A	Vapor intrusion will be mitigated with installation of SSDSs and contaminated soil will be covered in place in	

			<p>accordance with EGLE approved Response Activity Plans. Response Activity Plans have additional detail regarding the Mitigation Plan.</p>	
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Project Mitigation Plan

Contamination and Toxic Substances - Refer to attached Mitigation Plan. Specifications for the implementation of these plans are being provided to the contractor. Installation activities will be overseen by an environmental professional. This work will be performed at the time of construction of the buildings and other site improvements. A long-term Operation and Maintenance Plan will be prepared for the buildings, which will identify potential exposure routes and methods for the prevention of exposure. Historic Preservation - Refer to attached Mitigation Plan.

[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

There are no civilian airports within 2,500 feet and no military airfields within 15,000 feet of the project (Attachments 1 and 2). The property is located approximately 5.4 miles to the SW of the nearest civil or commercial service large airport (Coleman A. Young Airport). Detroit-Metro Airport is just over 15 miles to the SW of the property. The project site is not within an Airport Clear Zone or Accident Potential Zone. No military airfields are located in Wayne County or the nearby vicinity (Attachment 1 & 2 - Airport Maps).

Supporting documentation

[Att 2 - Airport Hazards \(Aerial\).pdf](#)

[Att 1 - Airport Hazards \(Maps\).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

The project site is not within a Coastal Barrier Resource System (CRBS) Unit, or CRBS buffer zone, as defined under the Coastal Barrier Improvement Act of 1990 [16 Resources Act of 1982 (PL 97-348), as amended by the Coastal Barrier Improvement Act of 1990 (PL 101-591) (Attachment 1 - CRB Map).

Supporting documentation

[Att 1 - CBR Map.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:

[Att 2 - Floodplain map.pdf](#)

[Att 1 - FEMA Firmette.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 project involves new construction and is not located within a Special Flood Hazard Area as depicted on the Flood Insurance Rate Map panel 26163C0280E, effective February 2, 2012 (Attachments 1 and 2). The project would not involve either direct or indirect support of development in a floodplain.

Supporting documentation

[Att 2 - Floodplain map\(1\).pdf](#)

[Att 1 - FEMA Firmette\(1\).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

Ozone 0.07 ppb (parts per million)

Provide your source used to determine levels here:

FINAL RULE: IMPLEMENTATION OF THE 2015 NATIONAL AMBIENT AIR QUALITY STANDARDS FOR OZONE: NONATTAINMENT AREA CLASSIFICATIONS APPROACH

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:

Ozone 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.

Screen Summary

Compliance Determination

The State of Michigan is designated as being in 'attainment' for carbon monoxide, lead, nitrogen dioxide, and PM10. Most of Wayne County, including the project location, is in 'attainment' for sulfur dioxide. Most of Wayne County, including the project location, is in 'maintenance' for ozone (Attachments 1 and 2 - Air Quality Documentation). Local and Regional air quality will not be significantly affected. This project is not likely to exceed *de minimis* emissions levels or the screening level

established by the state or air quality management district for the pollutant(s) in maintenance status identified above. The ozone de minimis emission level is 100 tons per year (Attachment 3 - EPA De Minimis Table) or anything below Moderate classification air quality threshold (which is between 81 and 93 parts per billion, or 0.081 and 0.093 parts per million) (Attachment 4 2015 NAAQ Standard for Ozone). In addition, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) reviewed the project and concluded the project is not likely to exceed de minimis emissions levels included in the federal general conformity requirements (Attachment 5 - Gen Conformity Letter). Measures to control fugitive dust will be utilized to ensure that construction activities 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 fugitive dust.

Supporting documentation

[Att 5 - Gen Conformity Letter_Preserve on Ash I_12-20-23.pdf](#)

[Att 4 - 2015 NAAQ Standards for Ozone.pdf](#)

[Att 3 - EPA De Minimis Emission Levels Tables.pdf](#)

[Att 2 - 2023 EPA Greenbook-Michigan.pdf](#)

[Att 1 - 2023 Documentation for 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

The project site is not in a Coastal Zone Management area per Michigan Department of Environment, Great Lakes and Energy (EGLE) Office of the Great Lakes (Attachment 1 - Coastal Zones).

Supporting documentation

[Att 1 - Coastal Zones.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.

Vapor intrusion will be mitigated with installation of SSDSs and contaminated soil will be covered in place in accordance with EGLE approved Response Activity Plans.

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 ESA in conformance with the scope and limitations of ASTM E 1527 13 and MSHDA Environmental Review Requirements was initially conducted for the project site in January 2021 (Attachment 1). Four (4) onsite RECs and five (5) offsite RECs were identified associated with historical filling stations and dry cleaners. A Phase II ESA was subsequently conducted to investigate the presence or absence of impacts to the project site. Volatile and semi volatile compounds as well as several metals were detected in soil within the POA I project boundary (Attachment 2). This soil contamination was among seven (7) RECs that were identified during the most recent Phase I ESA on October 12, 2022 (Attachment 1). Five separate Response Activity Plans (ResAPs) were prepared (to align with the five newly combined lots and the five proposed buildings) were prepared and shared with the Michigan Department of Energy, Great Lakes & Environment (EGLE). ResAPs were revised based on EGLE comments in 2022 and 2023, and final ResAPs were submitted to EGLE on September 1, 2023 (Attachment 3). EGLE approved the five ResAPs on September 8, 2023 (Attachment 4). The contaminants identified on the POA I properties which pose an unacceptable risk to property occupants for the identified complete pathways include:
* Residential Direct Contact: o Arsenic o Various PNAs * Residential Soil Volatilization to Indoor Air: o Benzene o Ethylbenzene o Naphthalene o Phenanthrene o Tetrachloroethylene o Mercury All compliance and mitigating factors will be

addressed in accordance with the approved ResAPs. This will involve installing a vapor barrier with active SSDS beneath the building structures; installing hard paved surfaces to cover the ground surface and prevent exposure and contact to remaining contaminants; installing a demarcation layer and a minimum of 6 inches of clean engineered fill and topsoil in areas not covered by hard surface cover to indicate when fill soils are present (this engineered fill will be planted with grass and/or other landscape plants); preparing a long term Operation and Maintenance Plan for the buildings, which will identify potential exposure routes and methods for the prevention of exposure. Surveys for lead-based paint, asbestos-containing materials (ACM), and radon were not performed because there are no existing structures on site. Therefore, lead-based paint and ACM in building materials are not a concern. The project site is in Wayne County which is designated as Zone 2 for radon gas hazards by the U.S. EPA. According to EGLE 10-24% of homes tested in Wayne County have a radon level equal to or greater than the U.S. EPA action level of 4 pCi/L (Attachment 5). No further assessment is required for this project.

Supporting documentation

[Att 5 - Radon Map.pdf](#)

[Att 4 ResAP Approval Letters 9-8-23.pdf](#)

[Att 3 ResAPs - POA I - 9-1-23.pdf](#)

[Att 2 Phase II ESA Rpt - POA I 2-6-23.pdf](#)

[Att 1 Phase I ESA Rpt - POA I 10-12-22.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 <i>et seq.</i>); particularly section 7 (16 USC 1536).	50 CFR Part 402

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

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

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.

2. Are federally listed species or designated critical habitats present in the action area?

- ✓ No, the project will have No Effect due to the absence of federally listed species and designated critical habitat

Based on the response, the review is in compliance with this section. Document and upload all documents used to make your determination below. Documentation may include letters from the Services, species lists from the Services’ websites, surveys or other documents and analysis showing that there are no species in the action area.

Yes, there are federally listed species or designated critical habitats present in the action area.

Screen Summary**Compliance Determination**

Threatened and Endangered species listed by the U.S. Fish & Wildlife Service in Wayne County include the Eastern Massasauga rattlesnake, northern riffleshell, piping plover, red knot, eastern prairie fringed orchid, Indiana bat, and northern long eared bat. The project site does not include any suitable habitat for the identified species (Attachment 1 - Endangered Species List).

Supporting documentation

[Att 1 - Endangered Species.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

Yes

4. Based on the analysis, is the proposed HUD-assisted project located at or beyond the required separation distance from all covered tanks?

Yes

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

No

Screen Summary

Compliance Determination

The project consists of new construction that will result in an increase of residential density; therefore, the exemptions to 24 CFR 51C include activities that do not result in the increasing residential densities, converting the type of use of a building to habitation, or making a vacant building habitable are not applicable. The project does not involve explosive or flammable materials or operations. There is no visual evidence or indication of unobstructed or unshielded above ground storage tanks (fuel oil, gasoline, propane, etc.) or operations utilizing explosive/flammable material at or in close proximity to the property. The radius report for the Phase I ESA lists a couple of regulated ASTs within 1-mile. One site is in fact listed as closed because the AST has been removed. Two ASTs are listed at site J49 approximately 1/4 mile east of the project site. A review of the most recent aerial imagery on Google Earth and Google Maps shows that the tanks, which appear to be diesel tanks and are listed as 1,000-gallon capacity, are not within 1,000 feet of the project site. Based on the reported capacities and contents the Acceptable Separation Distance for these tanks is 277 feet (Attachment 1 - ASD Assessment). No other ASTs that would constitute a potential explosive or flammable hazard were identified on the aerial imagery, which show most of the area as residential homes. The project does not involve storage of explosive or flammable hazards and the surrounding area is primarily residential with no explosive or flammable hazards (Attachment 2 - Pipeline Map).

Supporting documentation

[Att 2 - Pipeline Map.pdf](#)

[Att 1 - ASD Assessment.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:

The project site consists of urban land; therefore, the project would not affect farmlands. According to the U.S. Department of Agriculture Natural Resources Conservation Services Resource Assessment Division Map for Michigan there are no protected farmlands in the City of Detroit (Attachment 1). The project site does not presently have any agricultural use.

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

The project site consists of urban land; therefore, the project would not affect farmlands. According to the U.S. Department of Agriculture Natural Resources Conservation Services Resource Assessment Division Map for Michigan there are no protected farmlands in the City of Detroit (Attachment 1 - Soil Survey and Classification). The project site does not presently have any agricultural use.

Supporting documentation

[Att 1- Soil Survey and Classification.pdf](#)

Are formal compliance steps or mitigation required?

Preserve-on-Ash-I

Detroit, MI

900000010339404

Yes

✓ 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:

- [Att 2 - Floodplain map.pdf](#)
- [Att 1 - FEMA Firmette.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**

The project involves new construction and is not located within a Special Flood Hazard Area as depicted on the Flood Insurance Rate Map panel 26163C0280E, effective February 2, 2012 (Attachments 1 and 2 - Floodplain Maps). The project would not involve either direct or indirect support of development in a floodplain.

Supporting documentation

[Att 2 - Floodplain map\(2\).pdf](#)

[Att 1 - FEMA 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) In progress
- ✓ Advisory Council on Historic Preservation In progress
- ✓ Indian Tribes, including Tribal Historic Preservation Officers (THPOs) or Native Hawaiian Organizations (NHOs)
- ✓ Anishinaabek Cultural Preservation Repatriation Completed

- ✓ Bay Mills Chippewa Indian Community Completed
- ✓ Forest County Potawatomi Community of Wisconsin Completed
- ✓ Grand Traverse Bay Band Ottawa, Chippewa Indians Completed
- ✓ Hannahville Indian Community Completed
- ✓ Keweenaw Bay Indian Community Completed
- ✓ Lac du Flambeau Lake Superior Chippewa Indians Completed
- ✓ Lac Vieux Desert Lake Superior Chippewa Indians Completed
- ✓ Little River Band of Ottawa Indians Completed
- ✓ Little Traverse Bay Bands of Odawa Indians Completed
- ✓ Match-E-Be-Nash-She-Wish Potawatomi Indians Completed
- ✓ Menominee Indian Tribe of Wisconsin Completed
- ✓ Miami Tribe of Oklahoma Completed
- ✓ Nottawaseppi Huron Band of the Potawatomi Indians Completed
- ✓ Pokagon Band of Potawatomi Indians Completed
- ✓ Saginaw Chippewa Indian Tribe Completed
- ✓ Sault Ste. Marie Tribe of Chippewa Indians Completed
- ✓ Seneca-Cayuga Nation Completed

✓ Other Consulting Parties

- ✓ City of Detroit HRD In progress
- ✓ EGLE In progress
- ✓ MSHDA In progress
- ✓ Wayne County In progress

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

Discussions with City of Detroit and Michigan SHPO

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:**

The Area of Potential Effects (APE) for the project was established in coordination with the City of Detroit (City) and was initially approved in December 2021. Formal APE maps were submitted to the City in association with a City HRD Section 106 Application package on December 2, 2022 (Attachment 1). The APE for the POA Project encompasses all ground-disturbance proposed by the project, as well as nearby areas that may be subject to indirect project-related effects. The APE considers the maximum horizontal and vertical extent of ground-disturbing activities associated with the POA Project, which includes the construction footprint, or a direct impact area, that measures approximately 11.60-acres in size. This direct impact area or Direct APE includes the five phases of the POA Project, including POA Phase I, POA Phase II, POA Phase III, The Preserve Estates, and the Community Empowerment Center (CEC). The APE also includes the adjacent parcels surrounding the direct impact area that may experience visual effects due to the proposed project (i.e., due to the height of the proposed buildings included in POA Phase I, POA Phase II, POA Phase III, The Preserve Estates, and the CEC). Thus, the total APE is approximately 37.62-acres and maps showing the APE are included in Attachment 1.

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
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Additional Notes:

GEI cultural resource specialists conducted a records search for the project area and nearby lands to identify the presence or absence of cultural resources, including Historic Properties, in accordance with Section 106 of the National Historic Preservation Act (NHPA), as

amended (Section 106). In addition, GEI completed fieldwork and additional research that was incorporated into an Architectural Resources Survey Report for architectural resources and an Archaeological Investigation Plan (AIP) for archaeological resources. GEI and Chronicle Heritage (formerly Commonwealth Heritage Group, LLC) subsequently completed the fieldwork described in the AIP between July 24, 2023 and August 17, 2023, and Chronicle Heritage prepared a report to outline the results. The results of the archaeological resources fieldwork are presented in an Archaeological Trenching Investigation Report dated October 2023. The findings and recommendations included in the various documents have all been developed to support a HRD Section 106 Application per City requirements, and the City HRD Section 106 Application package with supporting documentation can be found in Attachment 1 of this document. Based on information available from various databases and the Michigan State Historic Preservation Office (SHPO) files for archaeological and architectural resources, no known and previously recorded cultural resources are in the project area. Thus, the project will not result in effects to previously recorded cultural resources. However, buildings of historic age are known in the immediate vicinity of the project area that may be affected by the project and most of the project area has been identified as having a high sensitivity for historic age archaeological resources by a previous research study conducted in 1987. Other archaeological resources studies completed in 1998, 2015, and 2017 near the project area have also demonstrated this high sensitivity. As such, the project may result in effects to previously undocumented architectural and archaeological resources. To assess the potential for the project to affect undocumented architectural resources, an architectural resources survey was completed in 2022 and 24 architectural resources were inventoried and evaluated for National Register of Historic Places (NRHP) eligibility. None of these resources were found to have sufficient historical significance to be eligible for the NRHP under Criteria A, B, C, or D and the resources generally lacked integrity, often due to alterations. For these reasons, the 24 assessed historic age above-ground properties were recommended not eligible for the NRHP and none are considered Historic Properties under Section 106. The architectural resources survey report is included in Attachment 1. For archaeological resources, excavation methods were proposed to serve as a reasonable and good faith identification effort to support the Section 106 process. These excavation methods include an approximate 20 percent horizontal exposure sample of the Direct APE to aid in the identification of cultural resources which may be affected by the

project. The proposed field methods were initially reviewed by the City HRD and SHPO between April and June 2022. As a result of City and SHPO comments, an AIP was prepared and submitted to the City in October 2022 and an updated version was submitted to SHPO in early November 2022 (Attachment 1). This document was subsequently revised based on a series of City and SHPO reviews between November 2022 and May 2023. On June 1, 2023, GEI and Chronicle Heritage submitted a response letter to address SHPO's remaining questions on the AIP (Attachment 2) and on June 12, 2023, SHPO indicated that the AIP could be implemented for POA Phase I.

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:

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 fieldwork described in the AIP was completed between July 24, 2023 and August 17, 2023 and the results were incorporated into an Archaeological Trenching Investigation Report dated October 2023 (Attachment 3). Due to space limitations in HEROS for this question, a summary of the fieldwork and findings is included in an additional page, attached herein (refer to "Summary of Fieldwork and Findings"). The Section 106 consultation process was formally initiated via the submittal of a City HRD Section 106 Application package on December 2, 2022 (Attachment 1). The Section 106 consultation process is currently in progress and will occur between the City as the Responsible Entity (RE) and SHPO, pursuant to an existing Programmatic Agreement (PA) among SHPO, the City, and the Advisory Council on Historic Preservation (ACHP) for housing and community development programs funded by the U.S. Department of Housing and Urban Development (HUD). Based on the results of the cultural resources studies completed for the project to date, the City HRD issued a no adverse effect letter for POA Phase I dated December 15, 2023 (Attachment 4). In this letter, the City summarized the results of their consultation efforts with interested parties, including Tribal groups (Attachment 5). Responses were received from the Match-E-Be-Nash-She-Wish (Gun Lake) Band of Pottawatomi Indians, Nottawaseppi Huron Band of the Potawatomi, Miami Tribe of Oklahoma, and The Pokagon Band of Potawatomi Indians, Michigan and Indiana (Attachment 6). This consultation concluded with no objections to the proposed activities related to the undertaking. In the event of an unanticipated discovery, Tribal Consultation would be reinitiated under the direction of the unanticipated discoveries plan for the POA Project. The findings of the architectural resources survey completed in 2022 were also reiterated in the letter, where no above ground Historic Properties were identified in the APE. The letter further summarized the results of the archaeological trenching investigation completed for POA Phase I in 2023 and the results of their consultation with SHPO regarding archaeological resources. The archaeological trenching investigation identified 19 new archaeological sites (20WN1245 through 20WN1263) and all of these sites were recommended eligible for the NRHP. In addition, no further archaeological fieldwork was recommended for POA Phase I because subsequent fieldwork was unlikely to yield additional information. SHPO concurred with these findings in a letter dated December 13, 2023 (Attachment 7). In the response, SHPO indicated that they had reviewed the archaeological trenching investigation for POA Phase I and stated that the project would result in no adverse effect (36 CFR 800.5(b)) on the 19 newly identified archaeological sites. Further, SHPO agreed that the 19

newly recorded archaeological sites appeared to meet the criteria for listing in the NRHP and that no further archaeological fieldwork was needed for POA Phase I. Finally, SHPO indicated that the newly identified sites constituted an archaeological district and that additional consultation with SHPO for future phases of the POA Project should address district boundaries and the cumulative effects of the POA Project. In consideration of the above listed consultation and identification efforts, POA Phase I was given a No Adverse Effect determination (36 CFR Part 800.5(b)) on properties that are listed or eligible for listing in the NRHP. Further, each future phase of the POA Project will require additional Section 106 review. The SHPO letter is included in Attachment 7 and the City letter is in Attachment 4.

Does the No Adverse Effect finding contain conditions?

Yes (check all that apply)

Avoidance

Modification of project

Other

Describe conditions here:

The objects collected during the trenching investigation will be donated to Wayne State University (WSU). Further, each future phase of the POA Project would require additional Section 106 review.

No

Adverse Effect

Screen Summary

Compliance Determination

Based on Section 106 consultation the project will have No Adverse Effect on historic properties. Conditions: Other. Upon satisfactory implementation of the conditions, which should be monitored, the project is in compliance with Section 106.

Supporting documentation

[Att 2 - AIP_SHPO RTC Letter_060123.pdf](#)

[Att 7 - SHPO Response ER22-685 NAE 12-13-23.pdf](#)

[Att 4 - POAI NAE Section 106 Letter 12-15-23.pdf](#)

[Att 6 - THPO Response Letters.pdf](#)

[Att 5 - THPO 11-07-2022 Coordination Letter.pdf](#)

[Att 3 - TrenchingReport_FullAppen_20231102.pdf](#)

[Att 1 - POA Project Section 106 Application 120222.pdf](#)

[Summary of Fieldwork and Findings.docx](#)

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))

Indicate noise level here: 65

Based on the response, the review is in compliance with this section. Document and upload noise analysis, including noise level and data used to complete the analysis below.

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))

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: 65

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

Screen Summary

Compliance Determination

HUD Noise Standards - Fishbeck conducted an online noise assessment for the property as required by MSHDA in 2021 when the POA I project was first proposed (66 dB) and again in 2023 (65 dB). One airport and two busy highways (I 75 and I 96) that bend around the project site were identified within the applicable search distances. The closest railroad is more than 3,000 feet south of the project and, according to Federal Railroad Administration data, does not appear to be in use and is not expected to contribute to the noise level at the project site. Coleman A. Young

Airport is located approximately 5.4 miles northeast of the project site. The most recent Airport Master Record for Coleman A. Young Airport shows that the site still does not meet the threshold for noise mitigation. I 75 and I 96 are approximately 1,500 feet south and 2,000 feet west, respectively, of the project site. This portion of the interstate is recessed, which provides some noise attenuation. When the DNL was first calculated in 2021, the sound level was 66 dB or Normally Unacceptable. However, the calculation was re-done in 2023 and the sound level was 65 dB or Acceptable. Both calculations are included because the datasets were slightly different. For the 2021 calculation of 66 dB, there was a separate calculation made that accounted for a "barrier" that acted as noise attenuation between the project site and the highways. That "barrier" is the elevation differential between the recessed highway and the project site. Using HUD's Barrier Performance Module, a noise attenuation of about 7.6 dB was calculated, which can be subtracted from the calculated sound level of 66 dB (and 65 dB), which results in an effective sound level of 58.4 dB (and 57.4 dB). Therefore, with the noise attenuation from the barrier, the resulting sound level is in the Acceptable range, and STraCAT calculations are not necessary. No mitigation is required for noise levels at or below 65 dB (Attachment 1 - Noise Assessment). Construction Noise - City of Detroit prohibits the use of certain equipment between 10:00pm and 7:00am within or next to areas zoned residential. Construction noise is not anticipated to affect indoor uses associated with the nearest sensitive receptors because the nearest such site is the Burton International Academy east of the project site. The remainder of the surrounding area is a mix of residences and vacant lots. Operation Noise - The new residential and mixed-use structures are not anticipated to introduce new permanent noise sources which would interfere with surrounding residential uses.

Supporting documentation

[Att 1 - Noise Assessment.pdf](#)

Are formal compliance steps or mitigation required?

Yes

✓ No

Sole Source Aquifers

General requirements	Legislation	Regulation
<p>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.</p>	<p>Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300f et seq., and 21 U.S.C. 349)</p>	<p>40 CFR Part 149</p>

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 U.S. EPA designated sole-source aquifers in Michigan (Attachment 1 - SSA Map). The proposed site is not located within a sole-source aquifer watershed and would not affect a sole-source aquifer or negatively impact the water quality or any aquifers in the area.

Supporting documentation

[Att 1- Michigan Sole Source Aquifer Map.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

The project site is not located near or within a wetland area (Attachment 1 - NWI Map). Therefore, the project would not affect wetland or riparian areas.

Supporting documentation

[Att 1 - NWI Map.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

No Wild and Scenic Rivers are located within the City of Detroit or Wayne County (Attachment 1 - Wild and Scenic Rivers). The nearest designated river is the Pere Marquette which is approximately 170 miles northwest of the site.

Supporting documentation

[Att 1 - 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

No adverse environmental impacts were identified in the project's total environmental review. The project is in compliance with Executive Order 12898. The proportion of the population below poverty level in the census tract for the project site is similar to neighboring tracts but greater than the proportion in Wayne County overall. The median income in the census tract for the project site is similar to the median income for neighboring tracts and lower than the median income for Wayne County. The unemployment rate in the area around the project is similar to that of the City and higher than the County unemployment rate (Attachment 1 - EJ Documentation).

Supporting documentation

[Att 1 - EJ Documentation.pdf](#)

Are formal compliance steps or mitigation required?

Yes

✓ No



**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: Preserve-on-Ash-I

HEROS Number: 900000010339404

Project Location: Ash Street, Detroit, MI 48208

Additional Location Information:

The proposed project POA I is located in North Corktown, Detroit, Michigan between 14th Street and 16th Street, north and south of Ash Street. Specific parcels include the following: * Parcel 10005256-9, located at 3309 14th Street * Parcel 10005433-7, located at 3314 15th Street * Parcel 10005260-1, located at 3107 14th Street * Parcel 10006018-22, located at 3316 16th Street * Parcel 10005816-34, located at 3325 15th Street

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

POA I is the first housing phase of the City of Detroit's neighborhood revitalization plan, known as the Greater Corktown Neighborhood Framework Plan. This phase commences the housing plan for this revitalization plan, which involves new construction of over 800 affordable housing units. The City of Detroit received a \$30M HUD CNI grant to support implementation of this revitalization plan. The City also created a joint venture between The Community Builders, Inc., and American Community Developers, who serve as the Housing Implementation Entity (HIE) for this HUD CNI grant award. TCB also serves as the People Implementation Entity (PIE) for the grant and will be the owner, property manager, and supportive service provider for POA I. The Preserve on Ash I ("POA I") is the first phase of a multiphase housing development plan in the North Corktown neighborhood. The POA I site is bounded by Martin Luther King Jr. Boulevard to the north, 14th Street to the east, Butternut Street to the south, and 16th Street to the west. POA I includes acquisition and new construction of 5 buildings totaling 87,555 SF, including 5,865 SF commercial space and 69 mixed income housing units, on approximately 2.33-acres of land currently owned by the City of Detroit. This Project serves a range of household incomes with 15 units (22%) restricted to 30% or less of AMI with project based rental subsidy, 33 units (48%) restricted to less than 60% AMI, and 21 (30%) market rate units. A description of each building is listed below. For additional information, refer to the attached site plan.

Building L: The largest multi-family building located at the northwest corner of 14th and Ash Street. This building is 44,370 SF including 4,698 SF of commercial space with 32 units total comprised of 15 1-bedroom units (averaging 624 SF) and 17 2-bedroom units (averaging 897 SF). Building H: This building is 9,420 SF with 1,167 SF of commercial space and is located at the southwest corner of 14th and Ash Street, across the street from building L. Building H contains 7 total units, with 3 1-bedroom units (averaging 641 SF), 3 2-bedroom units (averaging 854 SF), and 1 3-bedroom unit (averaging 1,290 SF). Buildings C1, C2, & C3:

Preserve-on-Ash-I

Detroit, MI

900000010339404

There are 3 identical buildings C1, C2, and C3 that are each 11,255 SF with no commercial space located on the north side of Ash Street, adjacent to one another and west of building L. Buildings C1, C2, and C3 contain 10 units within each building (30 units total). Each C building has 5 1-bedroom units (averaging 626 SF), 2 2-bedroom units (averaging 875 SF), and 3 3-bedroom units (averaging 1,188 SF). The majority of the resident building amenities are in Building L. It contains a package room with a package locker system, bike storage room, tenant storage room, resident lounge, property management, maintenance, and supportive service offices, and outdoor patio area. There are 47 onsite parking spaces for POA I residents and there is ample unrestricted on street parking surrounding the site on a first come first served basis. This review is for \$1,723,753.00 in CDBG funding (\$215,651.98 2022, \$1,210,533.00 in 2023 and \$297,568.02 in 2024) and \$2,771,417 in CNI funding.

Funding Information

Grant Number	HUD Program	Program Name	
B22MC260006	Community Planning and Development (CPD)	Community Development Block Grants (CDBG) (Entitlement)	\$215,651.98
B23MC260006	Community Planning and Development (CPD)	Community Development Block Grants (CDBG) (Entitlement)	\$1,210,533.00
B24MC260006	Community Planning and Development (CPD)	Community Development Block Grants (CDBG) (Entitlement)	\$297,568.02
MI5F536CNG120	Public Housing	Choice Neighborhoods	\$2,771,417.00

Estimated Total HUD Funded Amount: \$3,287,294.00

Estimated Total Project Cost [24 CFR 58.2 (a) (5)]: \$37,416,704.00

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
Historic Preservation	The objects collected during the trenching investigation will be donated to Wayne State University (WSU). Further, each future phase of the POA Project would require additional Section 106 review.
Contamination and Toxic Substances	Vapor intrusion will be mitigated with installation of SSDs and contaminated soil will be covered in place in accordance with EGLE approved Response Activity Plans.
Permits, reviews, and approvals	None obtained at this time. Project is currently pending building permit approval.

Project Mitigation Plan

01/09/2024 11:24

Page 2 of 3

Preserve-on-Ash-I

Detroit, MI

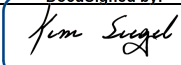
900000010339404

Contamination and Toxic Substances - Refer to attached Mitigation Plan. Specifications for the implementation of these plans are being provided to the contractor. Installation activities will be overseen by an environmental professional. This work will be performed at the time of construction of the buildings and other site improvements. A long-term Operation and Maintenance Plan will be prepared for the buildings, which will identify potential exposure routes and methods for the prevention of exposure. Historic Preservation - Refer to attached Mitigation Plan.


[Mitigation Plan.pdf](#)

Determination:

<input checked="" type="checkbox"/>	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
<input type="checkbox"/>	Finding of Significant Impact

Preparer Signature:  **Date:** 1/9/2024
DocuSigned by: 8390B097C3434FC...

Name / Title/ Organization: Kim Siegel, City of Detroit / / DETROIT
DocuSigned by:

Certifying Officer Signature:  **Date:** 1/9/2024
E17650515DAF4C9...

Name/ Title: Julie Schneider, Director, Housing and Revitalization Department

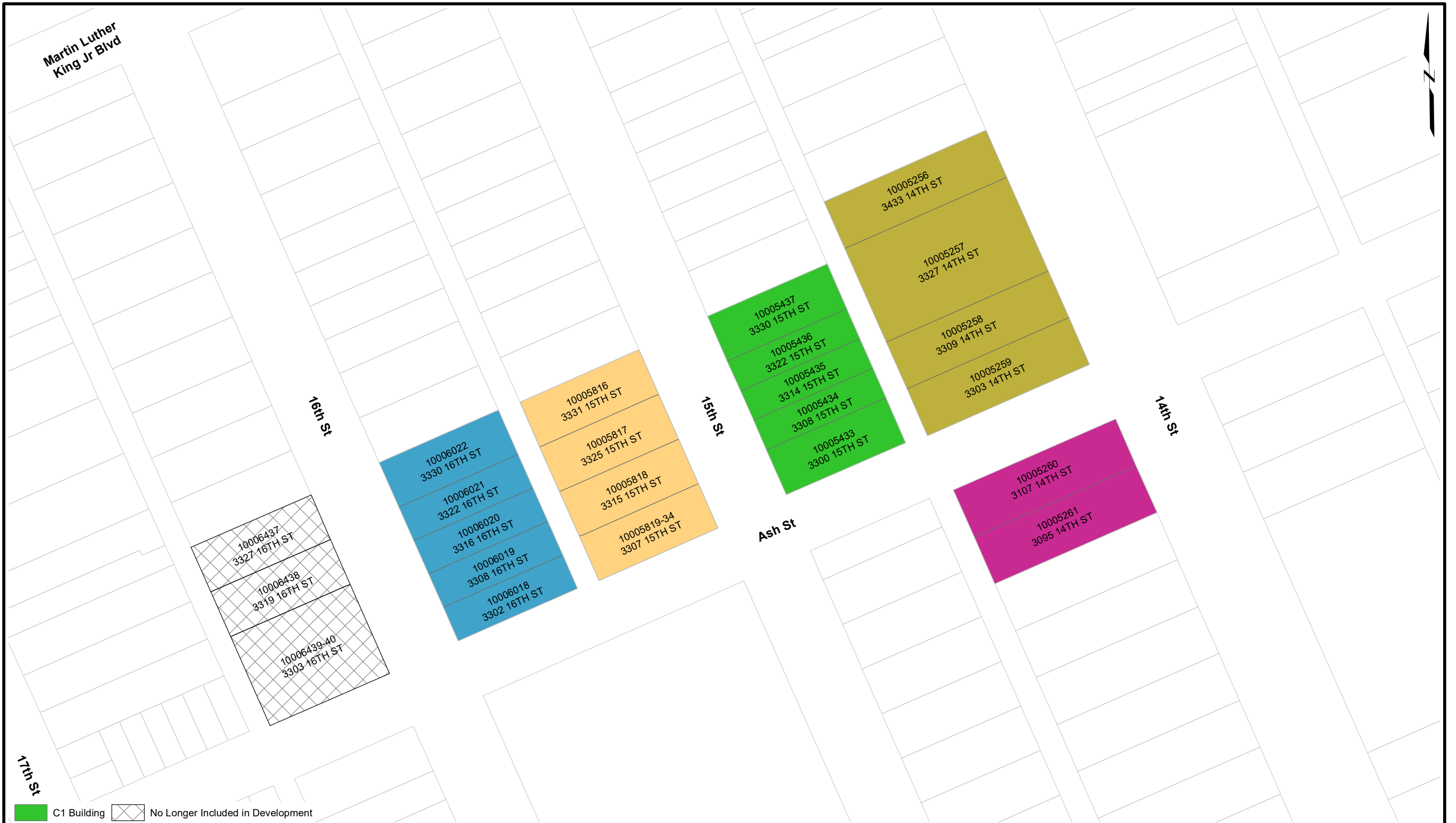
This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environment Review Record (ERR) for the activity / project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

MITIGATION PLAN
Preserve on Ash I (POA I)
GEI Consultants, Inc.
January 2024

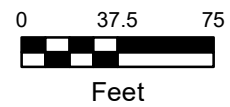
Response Activity or Continuing Obligation	Required Activities	Party Responsible for Completing Activity	Timing of Activity	Estimated Cost	Required Follow-up or Reporting
ResAP – Clean Fill	The fill material brought to the site will be documented as clean by analytical results from samples collected from the site of origin documenting that the material does not contain volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), or metals at concentrations above the applicable generic direct contact criteria.	Contractor	During Construction	\$576,675	Include results in DDCC report.
Documentation of Due Care Compliance	<p>A. Complete a DDCC report and submit to the City of Detroit Environmental Review Officer for review prior to submitting to EGLE. Engineering controls will require an Operations and Maintenance plan.</p> <p>B. Additional requirements such as a Restrictive Covenants and/or a recorded Notice to Title may be requested depending on site conditions.</p>	Consultant	During Construction	\$20,000	Provide report to HRD’s ER Team
ResAP – Vapor Mitigation	Vapor intrusion will be mitigated with installation of an active vapor mitigation system (AVMS) in accordance with EGLE approved Response Activity Plans. Response Activity Plans have additional detail regarding the Mitigation Plan. The AVMS will be installed in each building and consist of a vapor barrier with active sub-slab depressurization system (SSDS) beneath the building structure. The SSDS will consist of a porous, crushed stone layer with sub-slab vent piping connected to the vapor collection and exhaust riser extending above the roof. Specifications for the implementation of these plans will be provided to the Contractor, and installation will be overseen by	Contractor, Consultant	During Construction	\$225,000 for installation and construction testing	Construction Testing and Verification to EGLE in DCCC

MITIGATION PLAN
Preserve on Ash I (POA I)
GEI Consultants, Inc.
January 2024

Response Activity or Continuing Obligation	Required Activities	Party Responsible for Completing Activity	Timing of Activity	Estimated Cost	Required Follow-up or Reporting
	the environmental Consultant. This work will be performed at the time of construction of the buildings and other site improvements.				
Long-term Inspection and O&M Plan	A long-term Operation and Maintenance Plan will be prepared for the buildings. This plan will identify potential exposure routes, methods for the prevention of exposure, inspection frequency, and methods for repair of remedies to maintain exposure barriers.	Consultant, Building Management	Post Construction	\$2,000 annually for inspection, repair costs dependent on required repairs	Periodic Inspection of exposure prevention measures. Reporting maintained on-site.
Section 106 – No Adverse Effects Requirements	The objects collected during the trenching investigation will be donated to Wayne State University (WSU).	Consultant	Prior to Construction	N/A	Submit objects to WSU. Notify Preservation Specialist
Section 106 – Unanticipated Discoveries Plan	Once construction has started, the City of Detroit’s Unanticipated Discoveries Plan shall be followed for the duration of the project.	Construction Crew, Foremen, Developer	During Construction	N/A	As required in the City of Detroit’s Unanticipated Discoveries Plan, depending on the type of unanticipated discovery. Notify Preservation Specialist



- C1 Building
- C2 Building
- C3 Building
- H Building
- L Building
- No Longer Included in Development
- Parcel Boundary



SOURCE:
Wayne County GIS Parcel Data 2015

Phase II Environmental Site Investigation
 Preserve on Ash, Phase I
 Detroit, Wayne County, Michigan

The Community Builders, Inc.
 1846 Michigan Ave, Detroit, MI 48216

GEI Consultants

Project 2005092

POA I
 SITE PLAN

February 2023

Fig. 2

- OWNER THE PRESERVE ON ASH I, LDHA, LLC
736 OAK ST
COLUMBUS, OH 43205
380.235.7050
- CIVIL ENGINEER SPALDING DEDECKER
15 E BALTIMORE AVE
DETROIT, MI 48202
313.305.9120
- MECHANICAL/ELECTRICAL ENGINEER STRATEGIC ENERGY SOLUTIONS
4000 W 11 MILE RD.
BERKLEY, MI 48072
248.399.1900
- STRUCTURAL ENGINEER RESURGENT ENGINEERING
28 WEST ADAMS AVENUE, SUITE 1710
DETROIT, MI 48203
313.315.3290
- SECURITY/LOW VOLTAGE SAFER PLACES
25 WAREHAM ST, SUITE 2-26
MIDDLEBORO, MA 02346
508.947.8000
- IRRIGATION GRABER IRRIGATION
22218 COTTON ROAD
CHESTERFIELD MI 48047
586.615.4893

Client
The Community Builders
 736 Oak Street
 Columbus, OH 43205



PERMIT	11/17/2022
PRICING / PERMIT	07/22/2022

Project
THE PRESERVE ON ASH I
 14th & Ash, Detroit, MI 48208

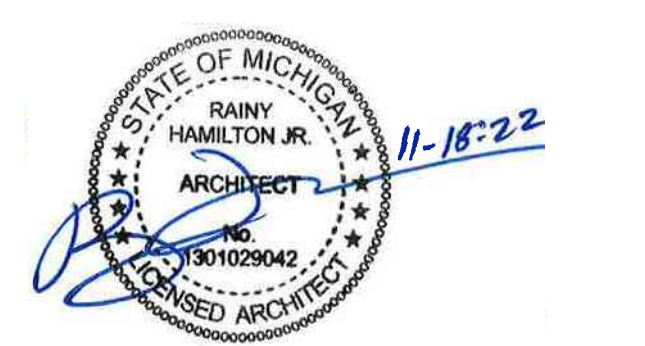
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Project Number: 2020044.01

Drawn By: HAA Approved By: HAA

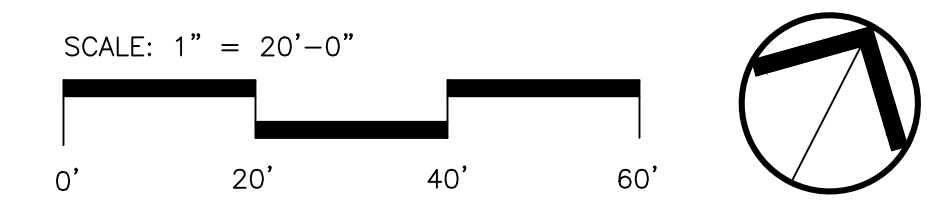
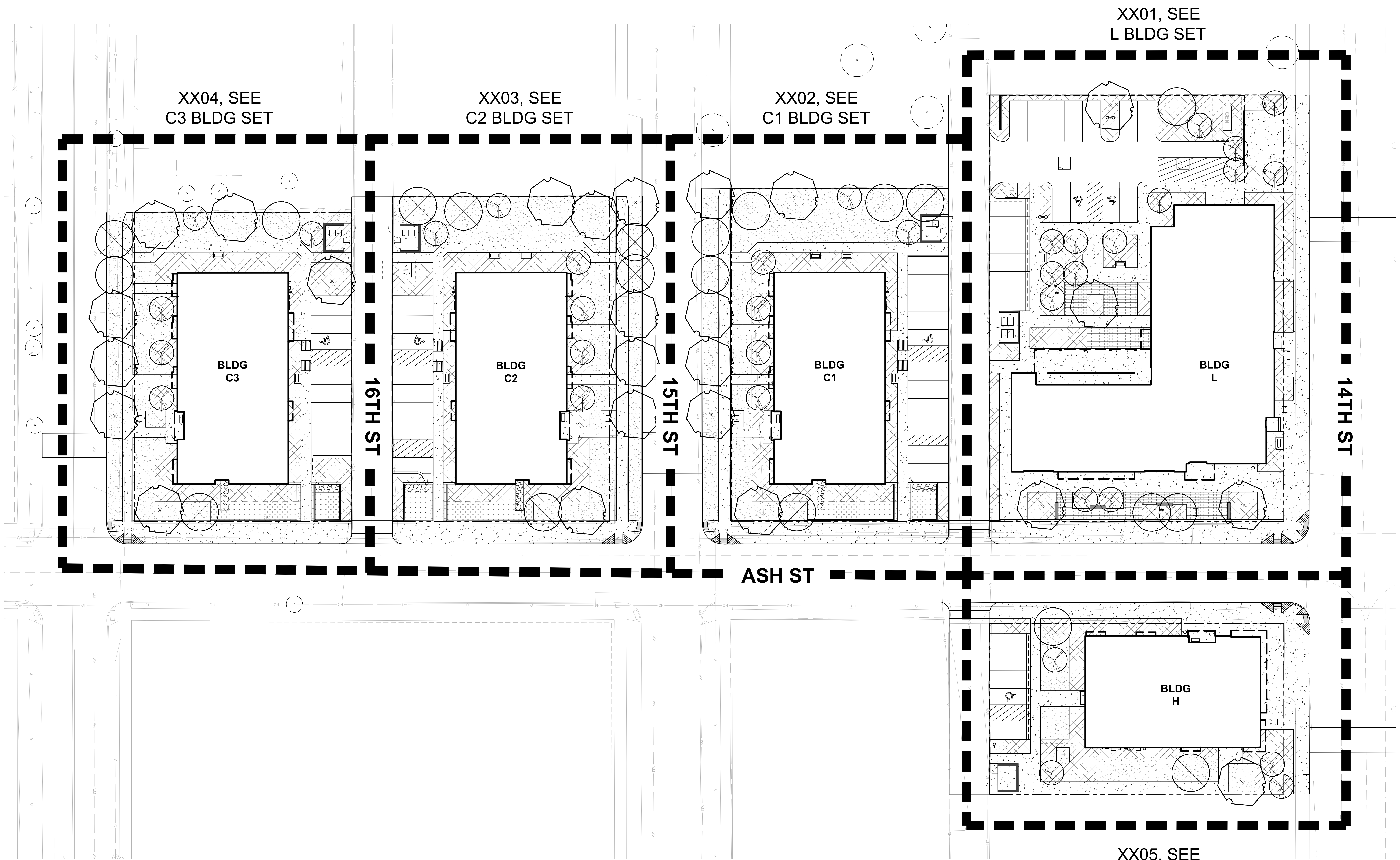
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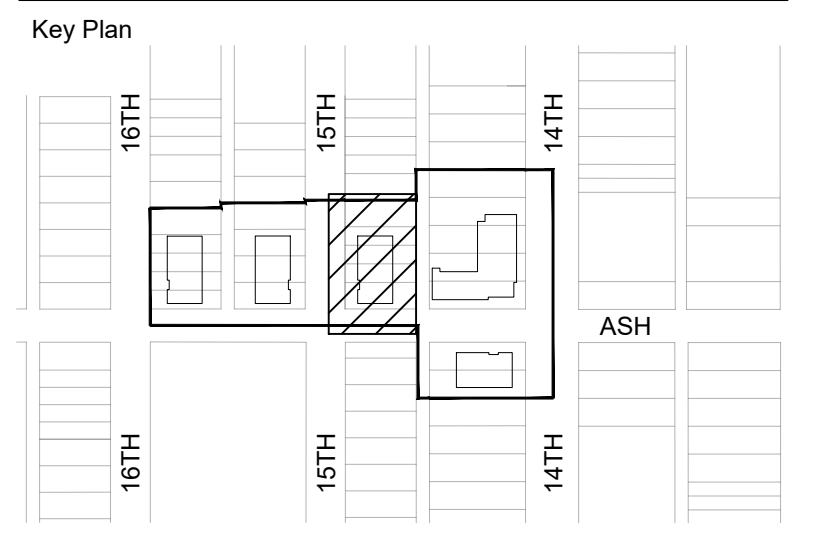
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OWNER	THE PRESERVE ON ASH I, LDHA, LLC 736 OAK ST COLUMBUS, OH 43205 380.235.7050
CIVIL ENGINEER	SPALDING DEDECKER 15 E BALTIMORE AVE DETROIT, MI 48202 313.305.9120
MECHANICAL/ELECTRICAL ENGINEER	STRATEGIC ENERGY SOLUTIONS 4000 W 11 MILE RD. BERKLEY, MI 48072 248.399.1900
STRUCTURAL ENGINEER	RESURGENT ENGINEERING 28 WEST ADAMS AVENUE, SUITE 1710 DETROIT, MI 48226 313.315.3290
SECURITY/LOW VOLTAGE	SAFER PLACES 25 WAREHAM ST, SUITE 2-26 MIDDLEBORO, MA 02346 508.947.8000
IRRIGATION	GRABER IRRIGATION 29219 COTTON ROAD CHESTERFIELD MI 48047 586.615.4893

Client
The Community Builders

736 Oak Street
Columbus, OH 43205



PRICING / PERMIT 07/22/2022

Project
THE PRESERVE ON ASH I
14th & Ash, Detroit, MI 48208

Drawing Title
MATERIALS PLAN - BUILDING C1

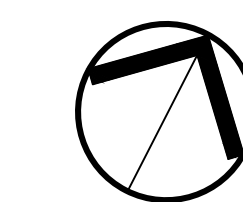
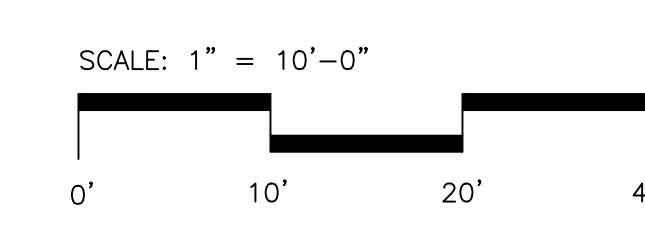
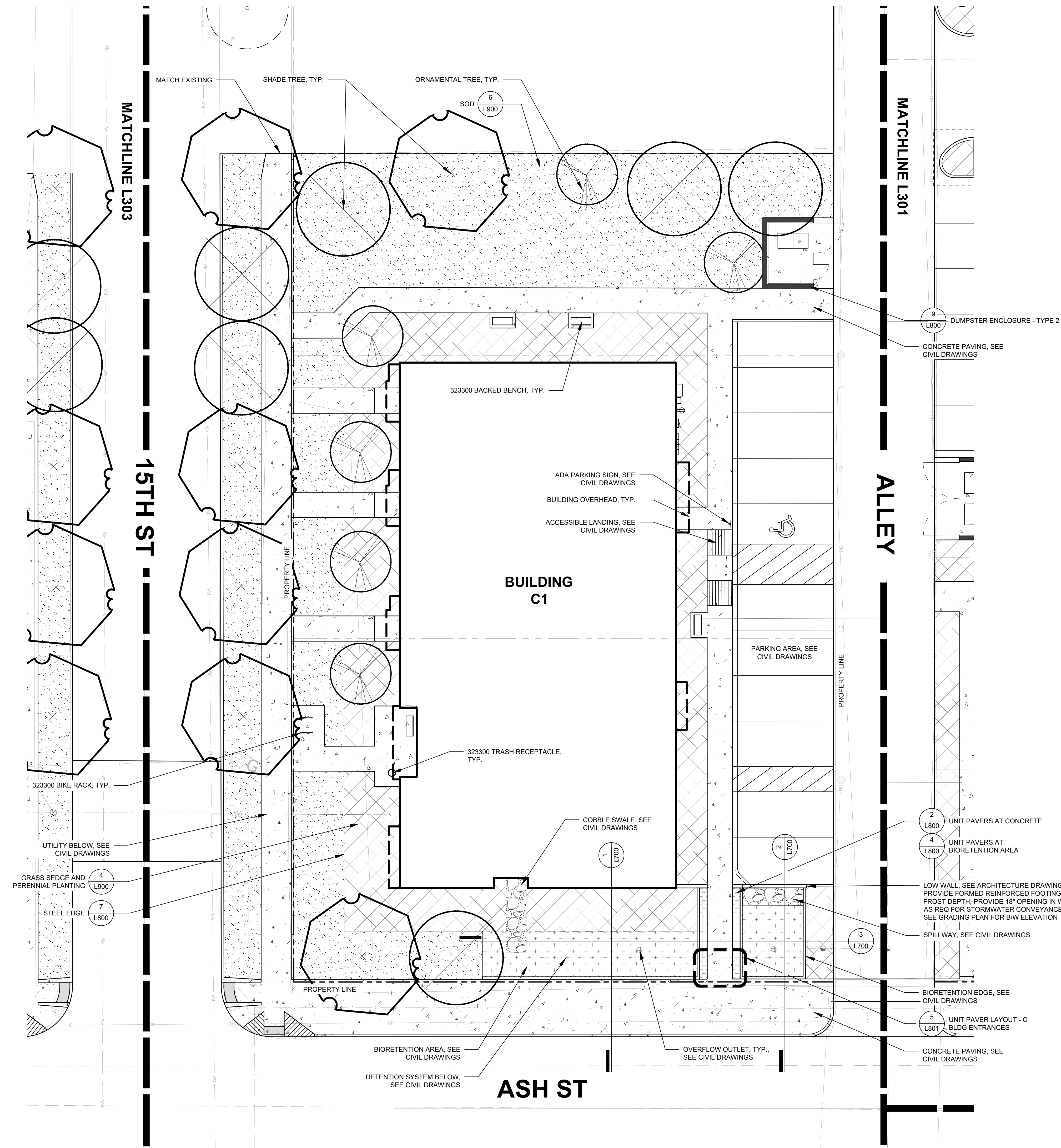
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L302

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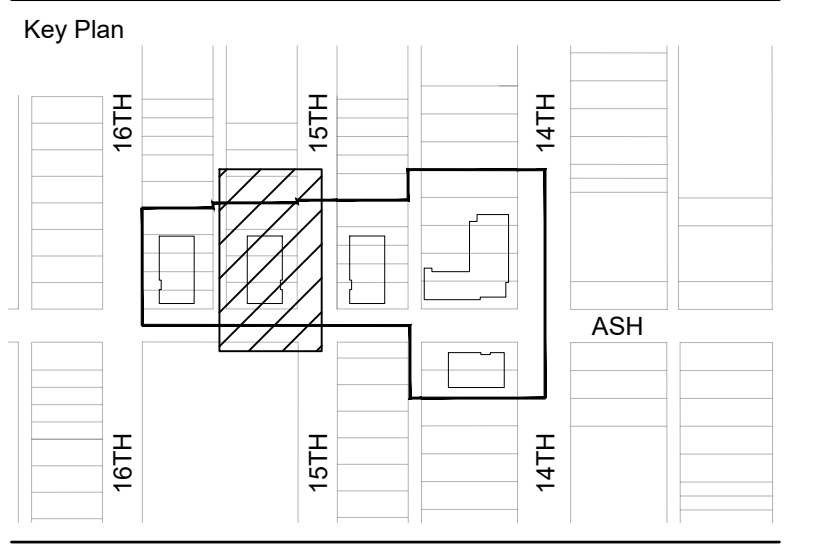
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- PROJECT LIMITS
- PROPERTY LINE
- CONCRETE PAVEMENT
- UNIT PAVERS
- BITUMINOUS PAVEMENT
- FROST-FREE FOOTING
- BIORETENTION AREA
- SOD AREA
- LANDSCAPE AREA
- EXPANSION JOINT
- FENCE LINE
- PROPOSED POLE LIGHT
- FIRE HYDRANT
- CATCH BASIN
- MANHOLE
- EXISTING TREE
- NEW SHADE TREE
- NEW ORNAMENTAL TREE



NOT FOR CONSTRUCTION

OWNER	THE PRESERVE ON ASH I, LDHA, LLC 736 OAK ST COLUMBUS, OH 43205 380.235.7050
CIVIL ENGINEER	SPALDING DEDECKER 15 E BALTIMORE AVE DETROIT, MI 48202 313.305.9120
MECHANICAL/ELECTRICAL ENGINEER	STRATEGIC ENERGY SOLUTIONS 4000 W 11 MILE RD. BERKLEY, MI 48072 248.399.1900
STRUCTURAL ENGINEER	RESURGENT ENGINEERING 28 WEST ADAMS AVENUE, SUITE 1710 DETROIT, MI 48203 313.315.3290
SECURITY/LOW VOLTAGE	SAFER PLACES 25 WAREHAM ST, SUITE 2-26 MIDDLEBORO, MA 02346 508.947.8000
IRRIGATION	GRABER IRRIGATION 22218 COTTON ROAD CHESTERFIELD MI 48047 586.615.4893

Client
The Community Builders
736 Oak Street
Columbus, OH 43205



PRICING / PERMIT 07/22/2022

Project
THE PRESERVE ON ASH I
14th & Ash, Detroit, MI 48208

Drawing Title
MATERIALS PLAN - BUILDING C2

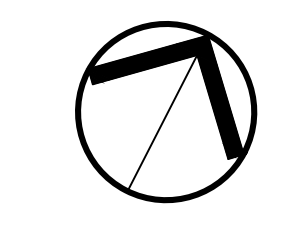
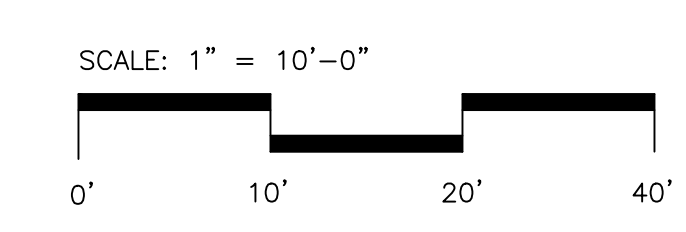
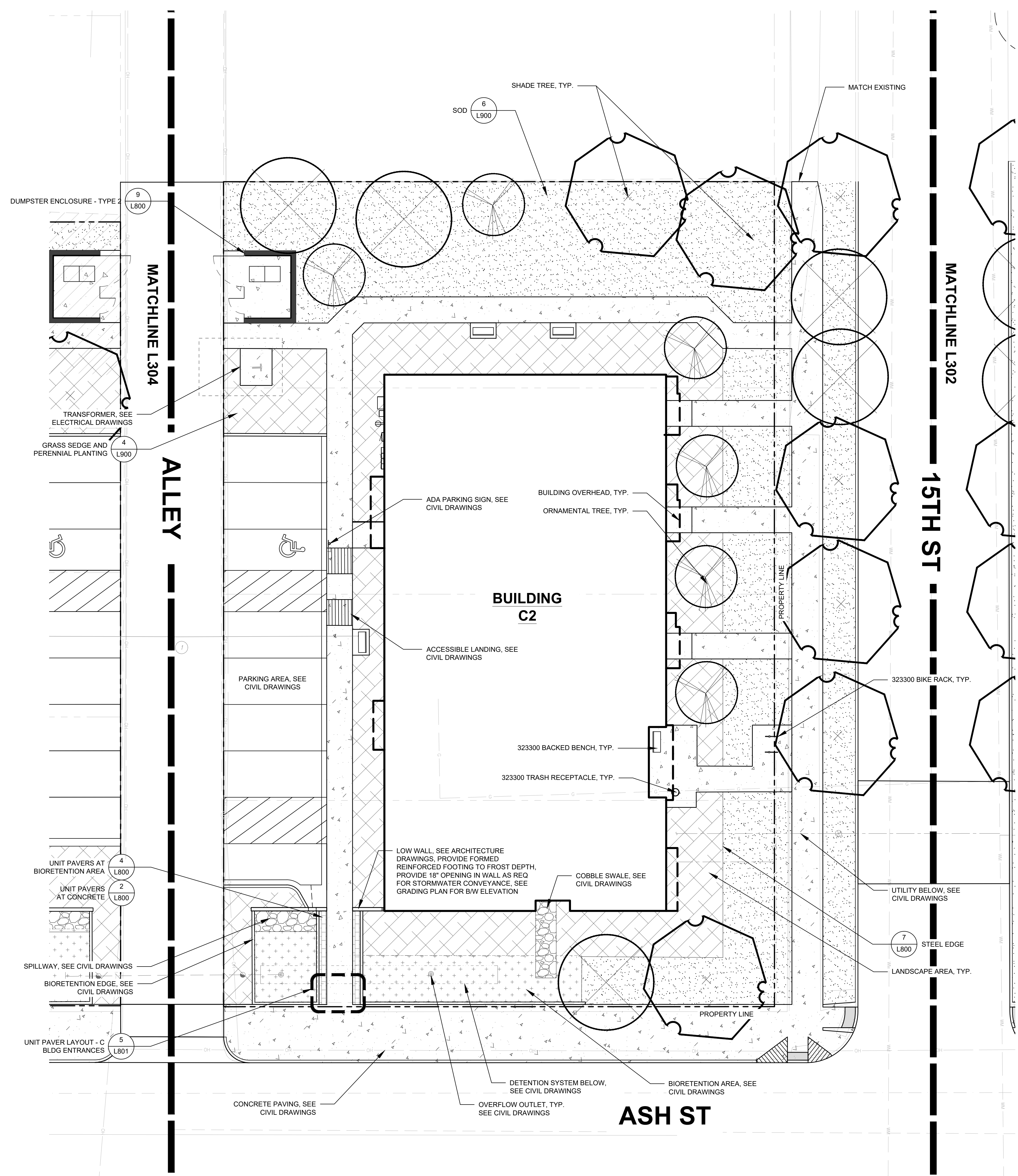
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L303

LEGEND

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- PROJECT LIMITS
- PROPERTY LINE
- CONCRETE PAVEMENT
- UNIT PAVERS
- BITUMINOUS PAVEMENT
- FROST-FREE FOOTING
- BIORETENTION AREA
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- MANHOLE
- EXISTING TREE
- NEW SHADE TREE
- NEW ORNAMENTAL TREE

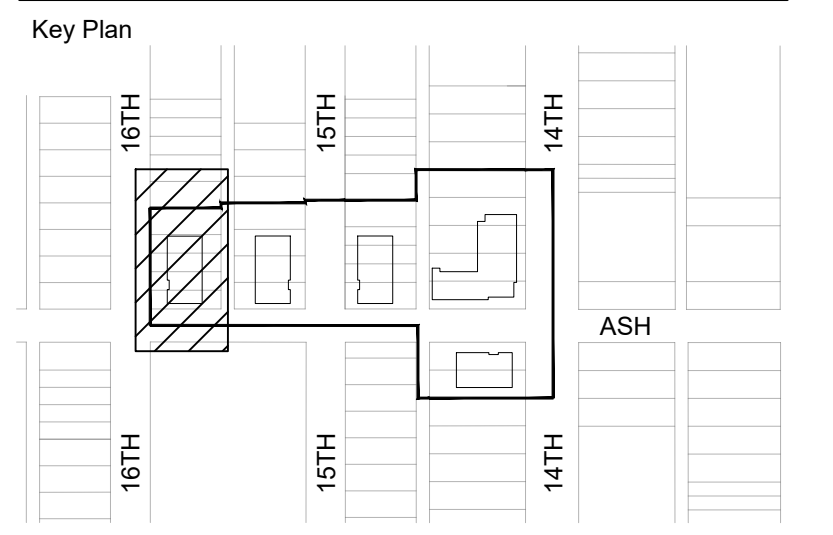


NOT FOR CONSTRUCTION

OWNER	THE PRESERVE ON ASH I, LDHA, LLC 736 OAK ST COLUMBUS, OH 43205 380.235.7050
CIVIL ENGINEER	SPALDING DEDECKER 15 E BALTIMORE AVE DETROIT, MI 48202 313.305.9120
MECHANICAL/ELECTRICAL ENGINEER	STRATEGIC ENERGY SOLUTIONS 4000 W 11 MILE RD. BERKLEY, MI 48072 248.399.1900
STRUCTURAL ENGINEER	RESURGENT ENGINEERING 28 WEST ADAMS AVENUE, SUITE 1710 DETROIT, MI 48226 313.315.3290
SECURITY/LOW VOLTAGE	SAFER PLACES 25 WAREHAM ST, SUITE 2-26 MIDDLEBORO, MA 02346 508.947.8000
IRRIGATION	GRABER IRRIGATION 22218 COTTON ROAD CHESTERFIELD MI 48047 586.615.4893

Client
The Community Builders

736 Oak Street
Columbus, OH 43205



PRICING / PERMIT 07/22/2022

Project
THE PRESERVE ON ASH I
14th & Ash, Detroit, MI 48208




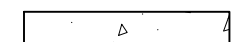
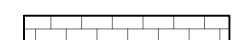

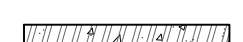
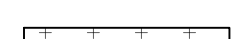
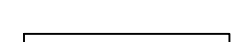










Drawing Title
MATERIALS PLAN - BUILDING C3

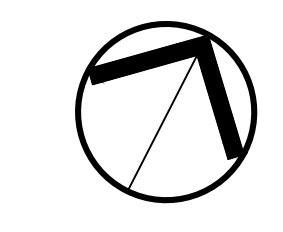
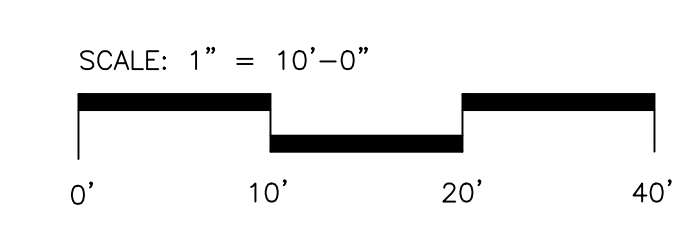
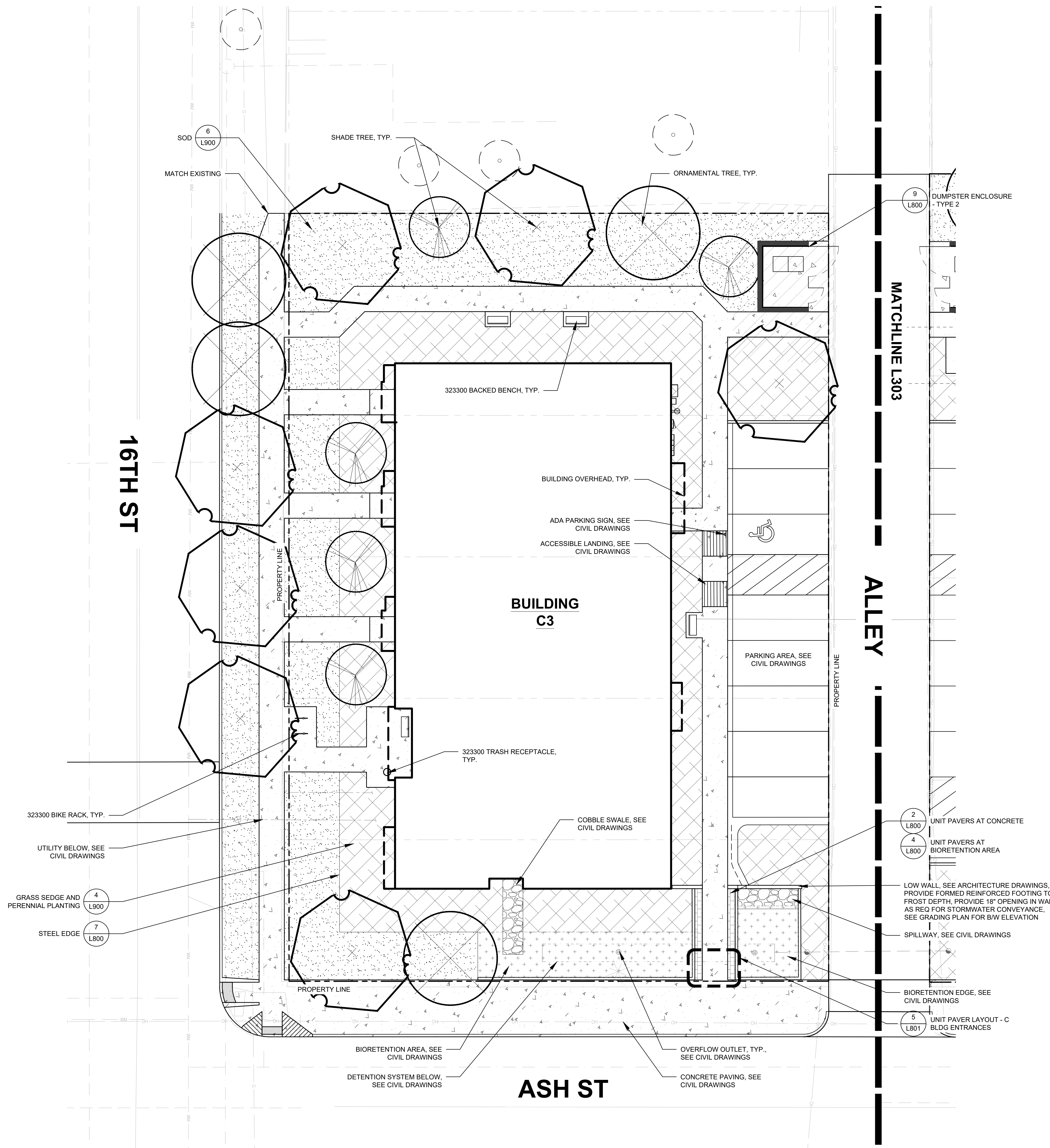
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L304

LEGEND

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-  PROJECT LIMITS
-  PROPERTY LINE
-  CONCRETE PAVEMENT
-  UNIT PAVERS
-  BITUMINOUS PAVEMENT
-  FROST-FREE FOOTING
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-  EXISTING TREE
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-  NEW ORNAMENTAL TREE



NOT FOR CONSTRUCTION

OWNER	THE PRESERVE ON ASH I, LDHA, LLC 736 OAK ST COLUMBUS, OH 43205 380.235.7050
CIVIL ENGINEER	SPALDING DEDECKER 15 E BALTIMORE AVE DETROIT, MI 48202 313.305.9120
MECHANICAL/ELECTRICAL ENGINEER	STRATEGIC ENERGY SOLUTIONS 4000 W 11 MILE RD. BERKLEY, MI 48072 248.399.1900
STRUCTURAL ENGINEER	RESURGENT ENGINEERING 28 WEST ADAMS AVENUE, SUITE 1710 DETROIT, MI 48209 313.315.3290
SECURITY/LOW VOLTAGE	SAFER PLACES 25 WAREHAM ST, SUITE 2-26 MIDDLEBORO, MA 02346 508.947.8000
IRRIGATION	GRABER IRRIGATION 22218 COTTON ROAD CHESTERFIELD MI 48047 586.615.4893

Client
The Community Builders

736 Oak Street
Columbus, OH 43205






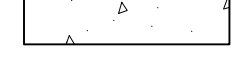
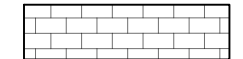




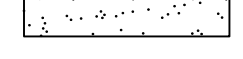








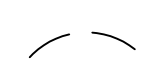
PRICING / PERMIT 07/22/2022

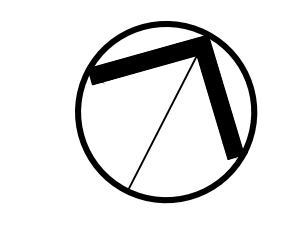
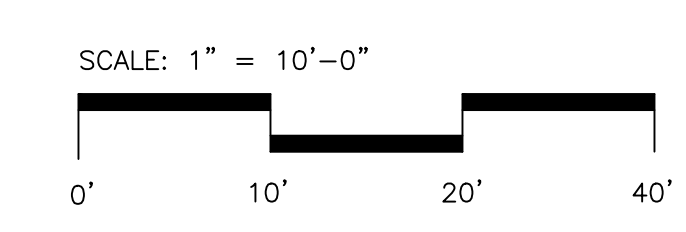
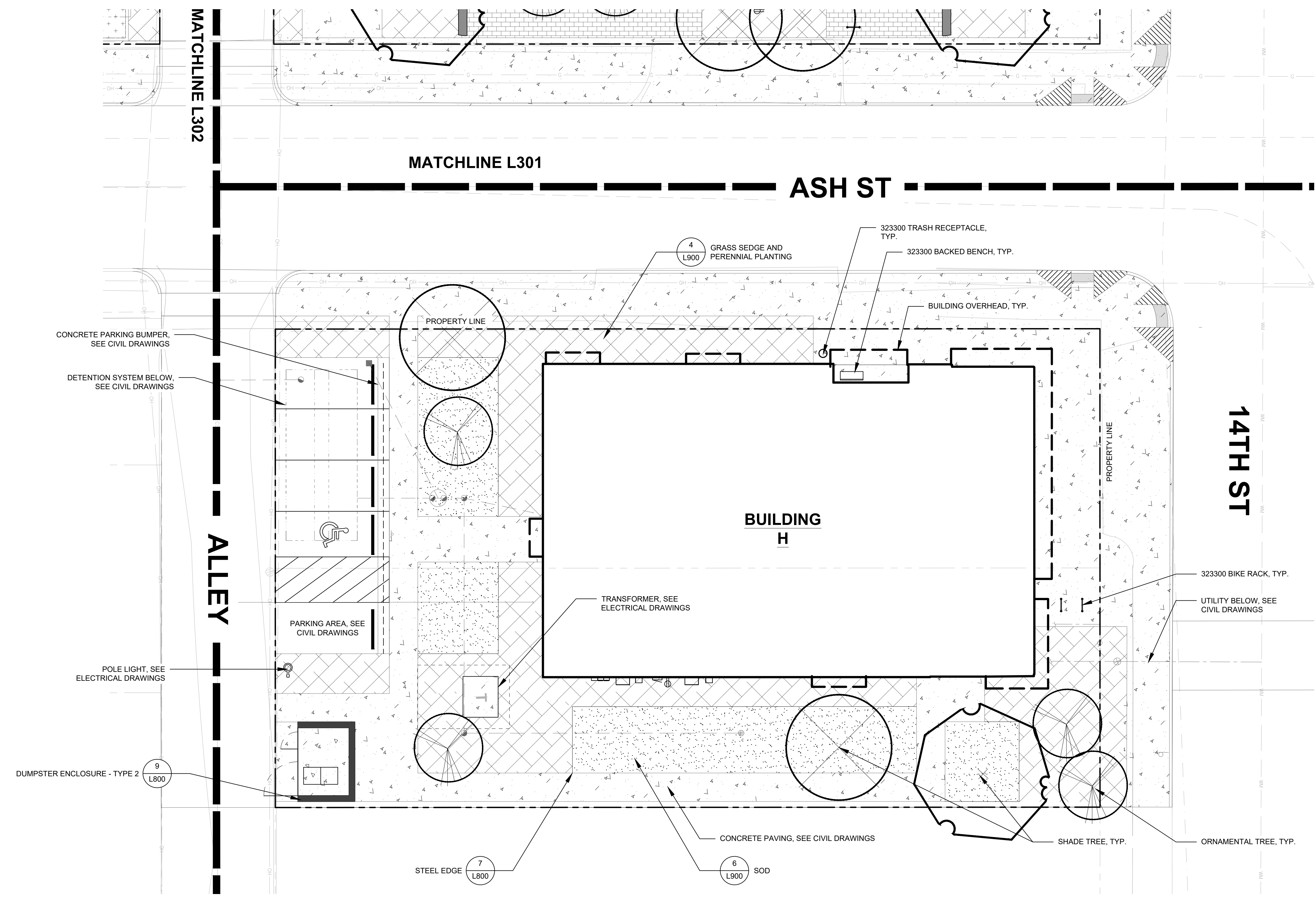
Project
THE PRESERVE ON ASH I
14th & Ash, Detroit, MI 48208

Drawing Title
MATERIALS PLAN - BUILDING H

Project Number: 2020044.01
Drawn By: HAA Approved By: HAA
Scale: As shown on plan
Seal:

LEGEND

-  MATCHLINE
-  PROJECT LIMITS
-  PROPERTY LINE
-  CONCRETE PAVEMENT
-  UNIT PAVERS
-  BITUMINOUS PAVEMENT
-  FROST-FREE FOOTING
-  BIORETENTION AREA
-  SOD AREA
-  LANDSCAPE AREA
-  EXPANSION JOINT
-  FENCE LINE
-  PROPOSED POLE LIGHT
-  FIRE HYDRANT
-  CATCH BASIN
-  MANHOLE
-  EXISTING TREE
-  NEW SHADE TREE
-  NEW ORNAMENTAL TREE



NOT FOR CONSTRUCTION

Signature: _____
Drawing No: _____

L305

OWNER	THE PRESERVE ON ASH I, LDHA, LLC 736 OAK ST COLUMBUS, OH 43205 380.235.7050
CIVIL ENGINEER	SPALDING DEDECKER 15 E BALTIMORE AVE DETROIT, MI 48202 313.305.9120
MECHANICAL/ELECTRICAL ENGINEER	STRATEGIC ENERGY SOLUTIONS 4000 W 11 MILE RD. BERKLEY, MI 48072 248.399.1900
STRUCTURAL ENGINEER	RESURGENT ENGINEERING 28 WEST ADAMS AVENUE, SUITE 1710 DETROIT, MI 48209 313.315.3290
SECURITY/LOW VOLTAGE	SAFER PLACES 25 WAREHAM ST, SUITE 2-26 MIDDLEBORO, MA 02346 508.947.8000
IRRIGATION	GRABER IRRIGATION 22218 COTTON ROAD CHESTERFIELD MI 48047 586.615.4893

Client
The Community Builders

736 Oak Street
Columbus, OH 43205

Key Plan



PRICING / PERMIT 07/22/2022

Project
THE PRESERVE ON ASH I
14th & Ash, Detroit, MI 48208

Drawing Title
MATERIALS PLAN - BUILDING L

Project Number: 2020044.01

Drawn By: HAA Approved By: HAA

Scale: As shown on plan

Seal:

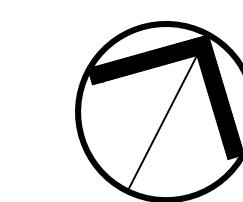
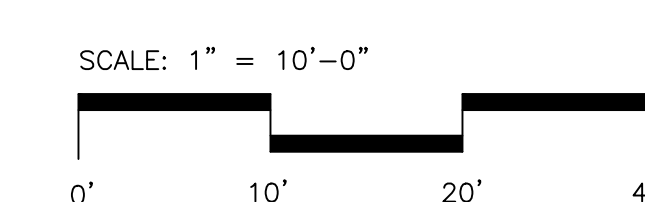
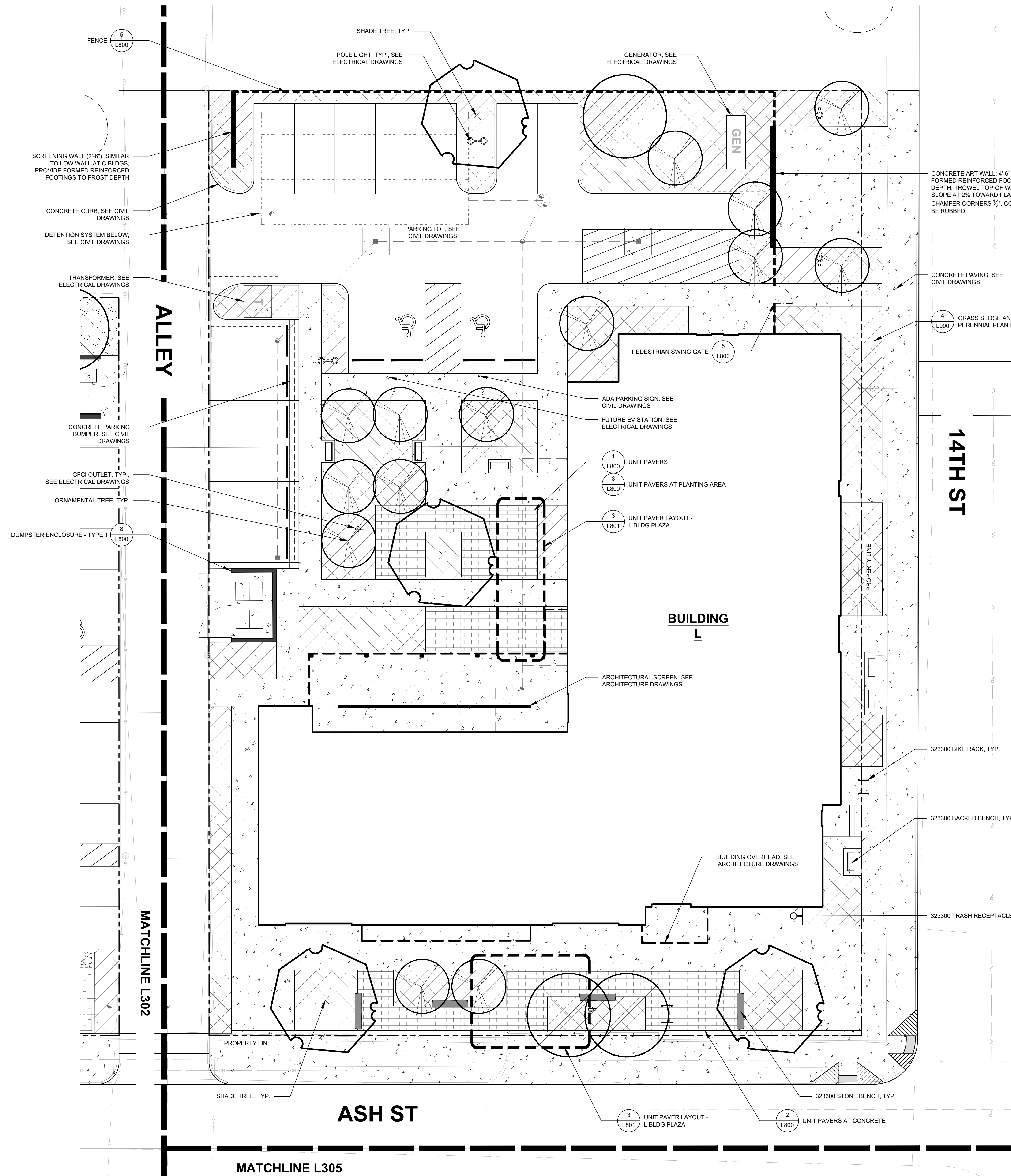
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Drawing No:

L301

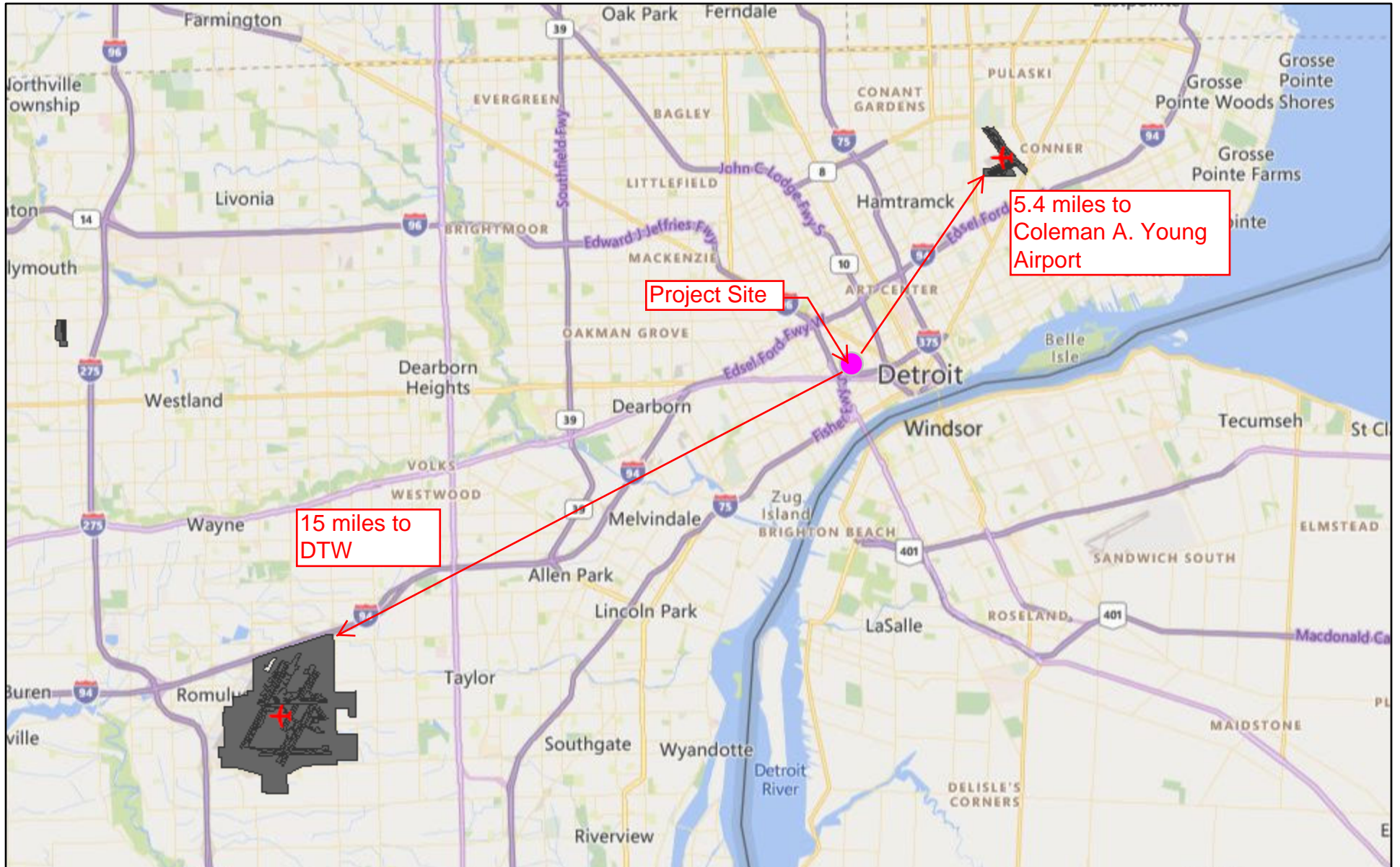
LEGEND

- MATCHLINE
- PROJECT LIMITS
- PROPERTY LINE
- CONCRETE PAVEMENT
- UNIT PAVERS
- BITUMINOUS PAVEMENT
- FROST-FREE FOOTING
- BIORETENTION AREA
- SOD AREA
- LANDSCAPE AREA
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- FENCE LINE
- PROPOSED POLE LIGHT
- FIRE HYDRANT
- CATCH BASIN
- MANHOLE
- EXISTING TREE
- NEW SHADE TREE
- NEW ORNAMENTAL TREE



NOT FOR CONSTRUCTION

Airport Map



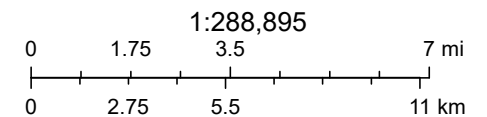
January 20, 2021

● Project 1

■ Airport Polygons

✈ Airport Points

verified no change
11-28-22



Clear Zones (CZ) and Accident Potential Zones (APZ)

Checklist for HUD or Responsible Entity

General requirements	Legislation	Regulation
Promote compatible land uses around civil airports and military airfields	Section 2 of the Housing Act of 1949 as amended, 42 U.S.C 1331, affirmed by Section 2 of the Housing and Urban Development Act of 1969, P.L. No 90-448; Section 7(d) of the Dept HUD Act of 1965, 42 U.S.C. 3535 (d).	24 CFR Part 51 Subpart D 32 CFR Part 256

1. Does the project include new construction, major rehabilitation, or any other activity which significantly prolongs the physical or economic life of existing facilities?

No: STOP here. The project is not subject to the regulations. Record a description of your project and your determination.

Yes: PROCEED to #2

2. Is the Project located within 3000 feet of a civil airport or within 15,000 feet of a military airfield?

The regulations only apply to military and civil primary and commercial service airports. The Federal Aviation Administration updates the list of applicable airports annually:
http://www.faa.gov/airports_airtraffic/airports/planning_capacity/passenger_allcargo_stats/passenger

No: STOP here. The project is not within a Clear Zone (also known as Runway Protection Zone) or Accident Potential Zone. Maintain a list of airports considered and the distance from your project to the covered airport. Record your determination.

Yes: PROCEED to #3

3. Is the Project in the Clear Zone or Accident Potential Zone?

Contact the airport operator and obtain written documentation of the Clear Zone (also known as Runway Protection Zone) and for military airfields, the Accident Potential Zone, and a determination of whether your project is in the APZ or CZ.

No: STOP here. Maintain the written documentation from the airport operator. Identify the location of your project in relation to the clear zone. Record your determination that the project is not in a CZ or APZ.

Yes Project is in an Accident Potential Zone: PROCEED TO #4

Yes Project is in a Clear Zone: PROCEED TO #5

4. For Accident Potential Zones at Military Airfields, does the project change the use of a facility so that it becomes one which is no longer acceptable in accordance with Department of Defense standards (Please see 32 CFR Part 256 for *Land Use Compatibility Guidelines for Accident Potential Zones*), significantly increase the density or number of people at the site, or introduces explosive, flammable or toxic materials to the area?

No: STOP here. Record your determination that the project fits under the DoD Land Use Compatibility Guidelines. Include any correspondence with the Military Airfield.

Yes: **The project cannot be assisted with HUD funds. STOP HERE.**

5. For Airport Clear Zones, will the project frequently be used or occupied by people?

Yes: **The project cannot be assisted with HUD funds. STOP HERE.**

No: Obtain written assurance from the airport operator to the effect that there are no plans to purchase the land involved with the project as a portion of a Runway Clear Zone or Clear Zone acquisition program. Maintain copies of all of the documents you have used to make your determination

DISCLAIMER: This document is intended as a tool to help Region X HUD grantees and HUD staff complete environmental requirements. This document is subject to change. This is not a policy statement. Legislation and Regulations take precedence over any information found in this document.

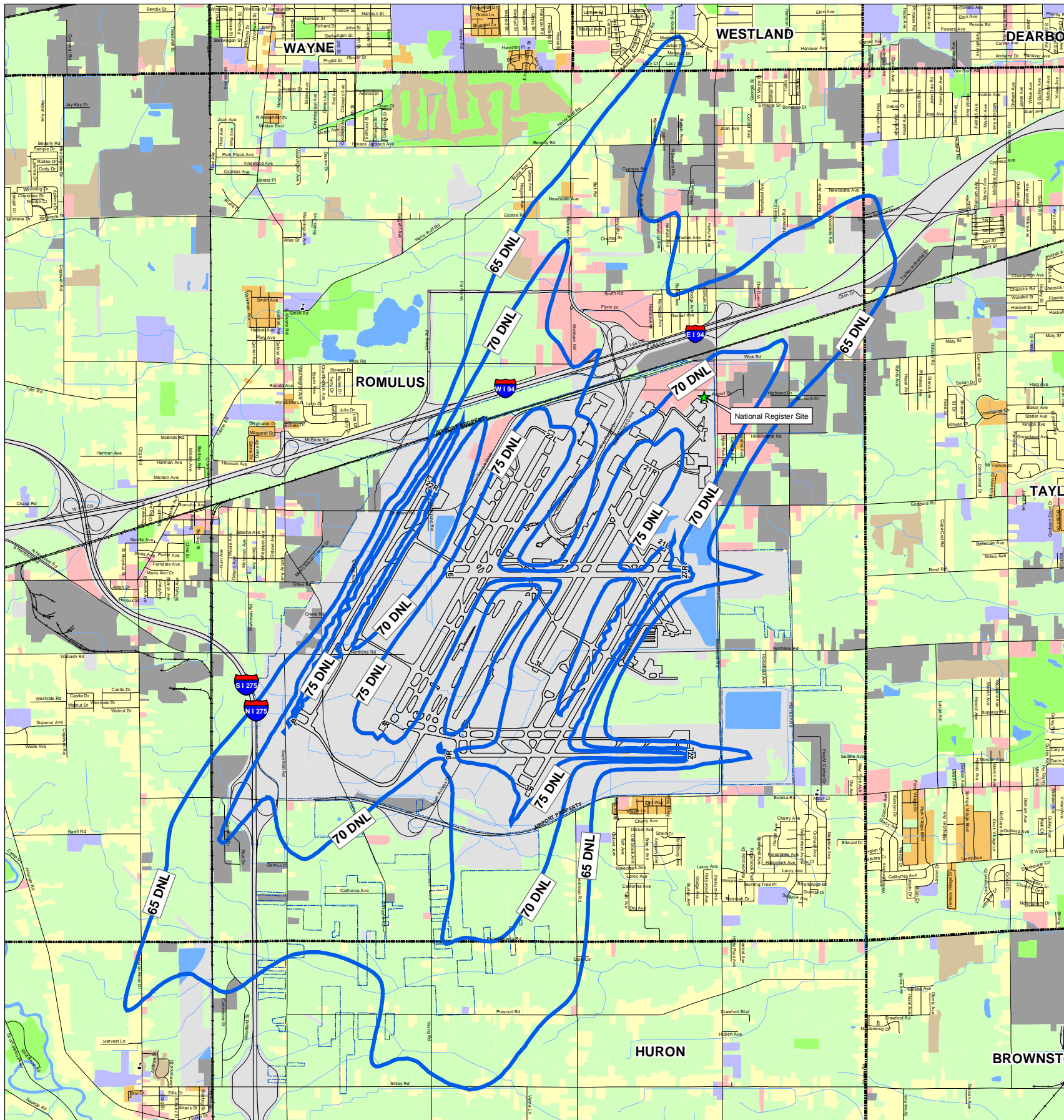


Figure D25 Existing (2004) Noise Exposure Map

Land Use Legend

- Single-family residential
- Residential areas with 25% or more vacant land
- Multiple-family residential
- Commercial and office
- Industrial
- Institutional
- Transportation, communication, and utility
- Under development
- Cultural, outdoor recreation, and cemetery
- Woodland and wetland
- Active agriculture
- Extractive and barren
- Grassland, and shrub
- Vacant nonresidential
- Water
- City Limits Boundary
- Schools

The 65 DNL contour contains approximately 9,475 acres, 750 residential structures and 1,400 people.

The 70 DNL contour contains approximately 4,505 acres, 30 residential structures and 40 people.

The 75 DNL contour contains approximately 1,580 acres, no residential structures and no people.

Planning jurisdictions are shown on the map.

Noise measurement sites and flight tracks are depicted on the Noise Measurement Sites and Flight Tracks Maps.

Residential land use, as defined by FAR Part 150, is an incompatible use without proper sound attenuation within the 65 DNL or greater contour.

The Noise Exposure Maps and accompanying documentation for the Noise Exposure Map for Detroit Metropolitan Wayne County Airport, submitted in accordance with FAR Part 150 with the best available information, are hereby certified as true and complete to the best of my knowledge and belief.

In addition, it is hereby certified that the public was afforded the opportunity to review and comment on the document and its contents.

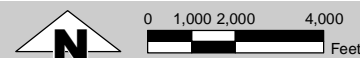
Signed *Steve Robinson* Date *3-6-06*

	Existing (2004)	
	Population	Housing
65-70 DNL		
Huron Township	160	60
Romulus	1,060	490
Taylor	10	10
Westland	110	50
Subtotal	1,340	610
70-75 DNL		
Romulus	40	20
Subtotal	40	20
65 DNL & Greater		
Huron Township	160	60
Romulus	1,100	510
Taylor	10	10
Westland	110	50
Subtotal	1,380	630
60 DNL & Greater*		
Dearborn Heights	1,100	360
Huron Twp.	2,460	920
Inkster	4,420	1,870
Romulus	4,340	1,810
Sumpter Twp.	40	10
Taylor	3,860	1,500
Westland	2,970	1,250
Total	19,190	7,720

Source: 2000 US Census Numbers rounded to the nearest 10 - for digits less than 5, rounded to 10.
 Note: no residential uses are located in the 75 DNL and greater contours.
 * includes the 65 DNL & Greater

Based on 522,641 operations.

March 1, 2006

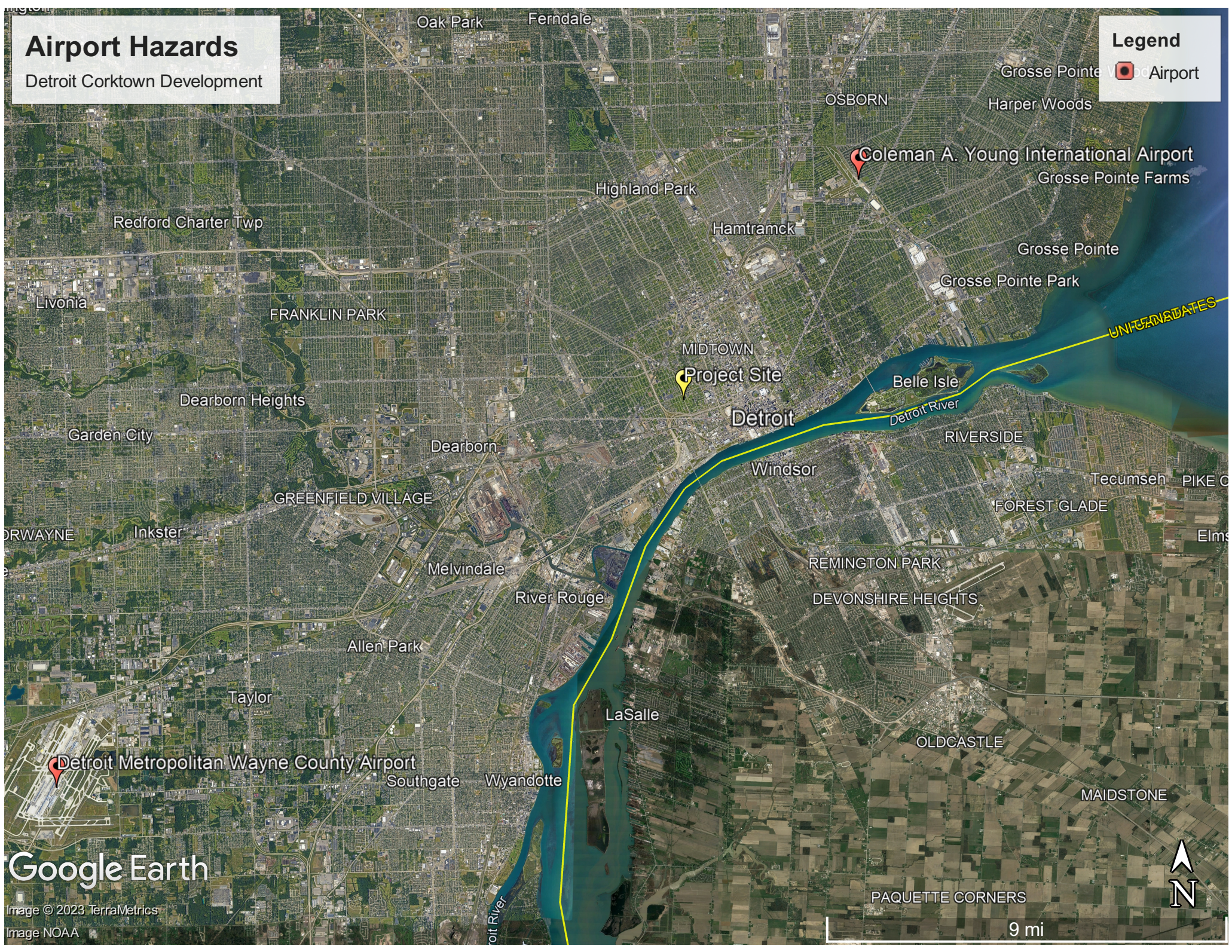


Source: Michigan Department of Natural Resources, SEMCOG

Airport Hazards

Detroit Corktown Development

Legend

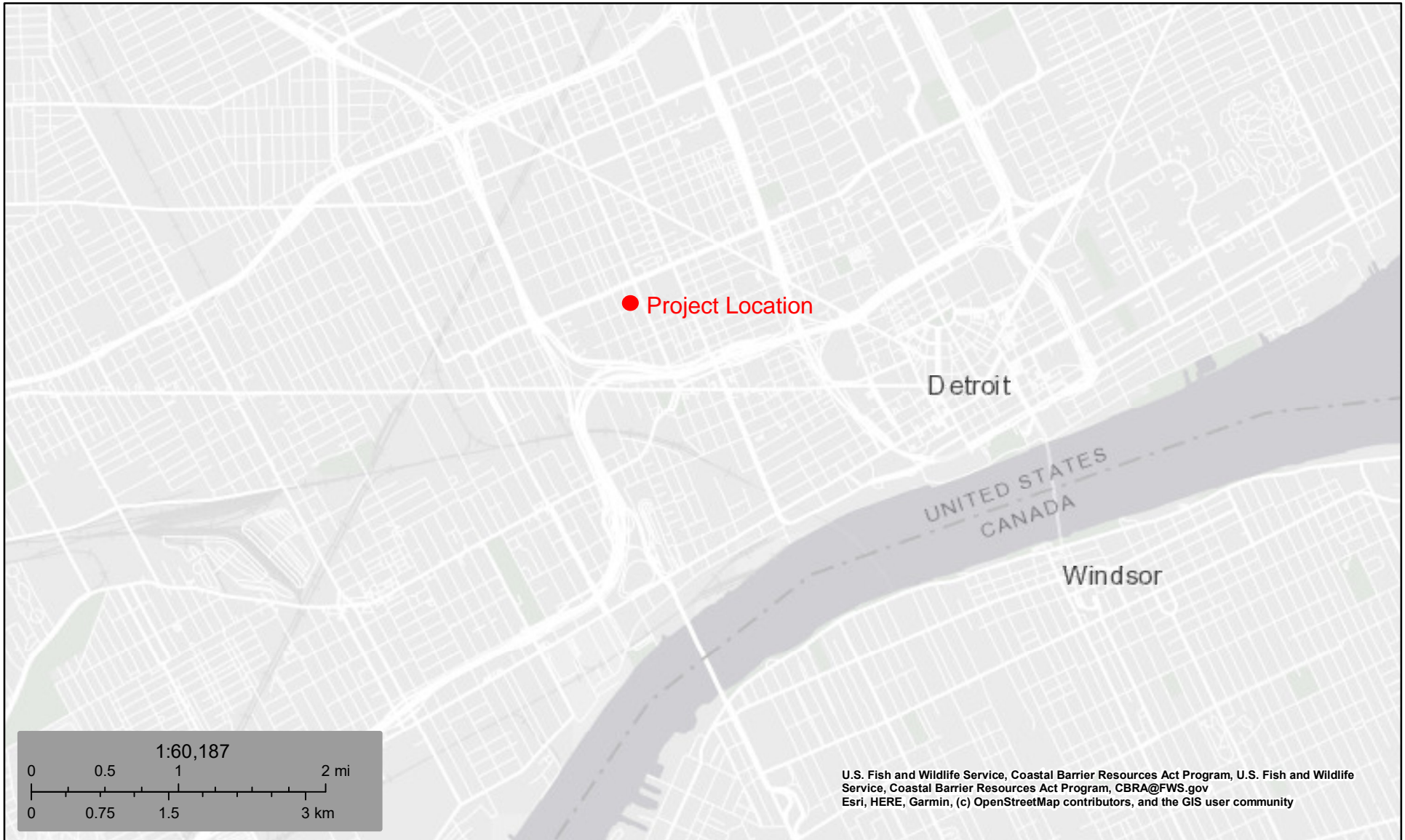


Google Earth

Image © 2023 TerraMetrics
Image NOAA

PAQUETTE CORNERS

9 mi



July 20, 2023

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/library/collections/official-coastal-barrier-resources-system-maps>. All CBRS related data should be used in accordance with the layer metadata found on the CBRS Mapper website.

CBRS Units

[Green box] Otherwise Protected Area

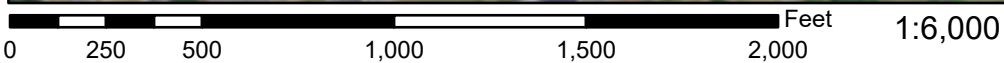
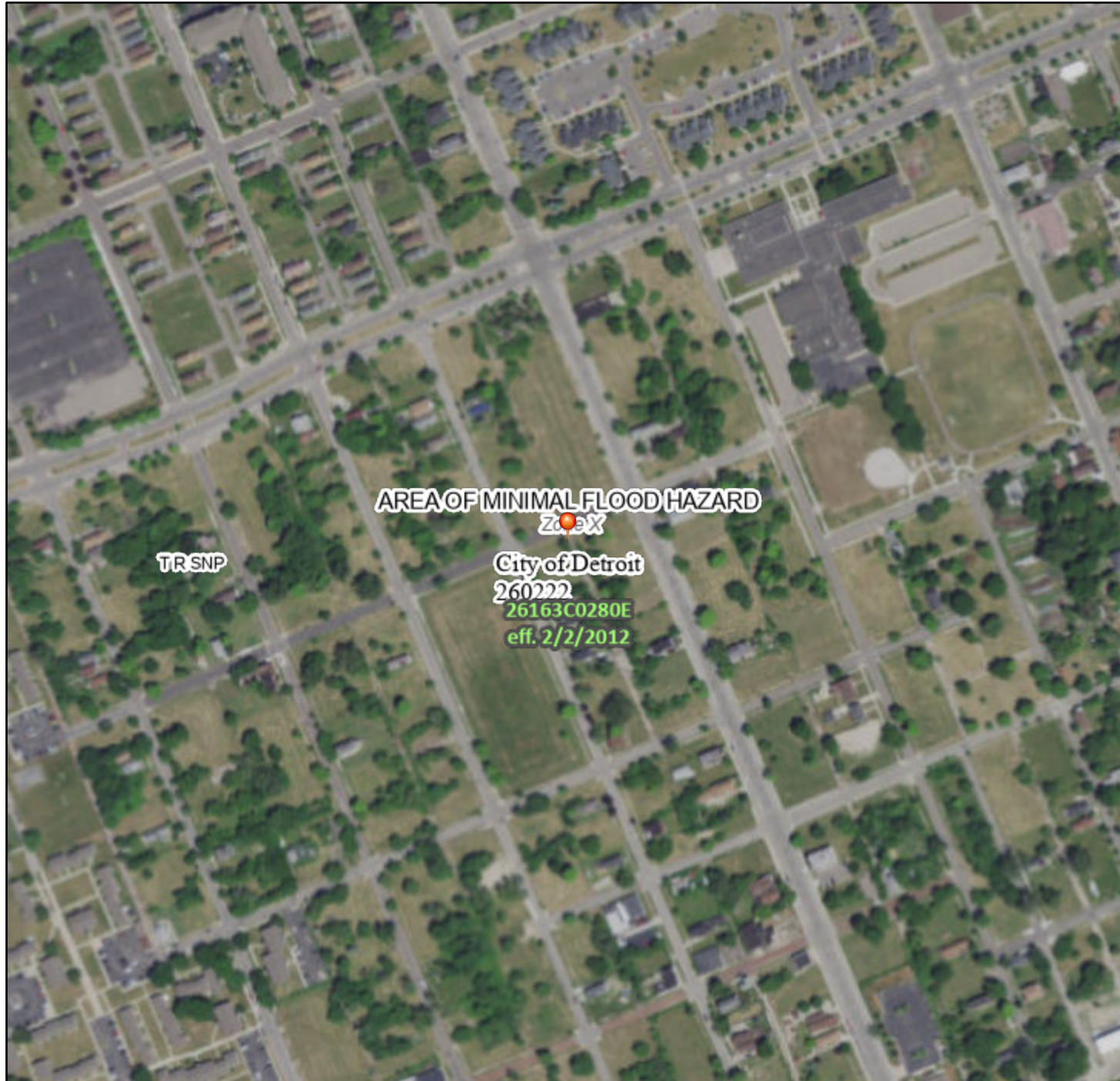
The CBRS Buffer Zone represents the area immediately adjacent to the CBRS boundary where users are advised to contact the Service for an official determination (<https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation>) as to whether the property or project site is located "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

National Flood Hazard Layer FIRMMette



83°5'9"W 42°20'28"N



83°4'32"W 42°20'1"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)
<i>Zone A, V, A99</i> |
| | | With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> |
| | | 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 <i>Zone X</i> |
| | | Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> |
| | | Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i> |
| | | Area with Flood Risk due to Levee <i>Zone D</i> |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> |
| | | Effective LOMRs |
| GENERAL STRUCTURES | | Area of Undetermined Flood Hazard <i>Zone D</i> |
| | | 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 |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| | | Jurisdiction Boundary |
| MAP PANELS | | Coastal Transect Baseline |
| | | Profile Baseline |
| | | Hydrographic Feature |
| | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |
| | | 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 **7/20/2023 at 3:09 PM** 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.

Corktown Phase 1 floodplain map

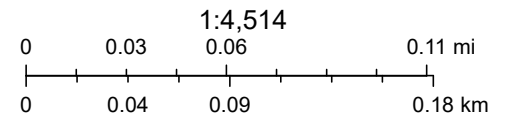


January 7, 2021

verified no change 11/28/2022
and 8/21/2023

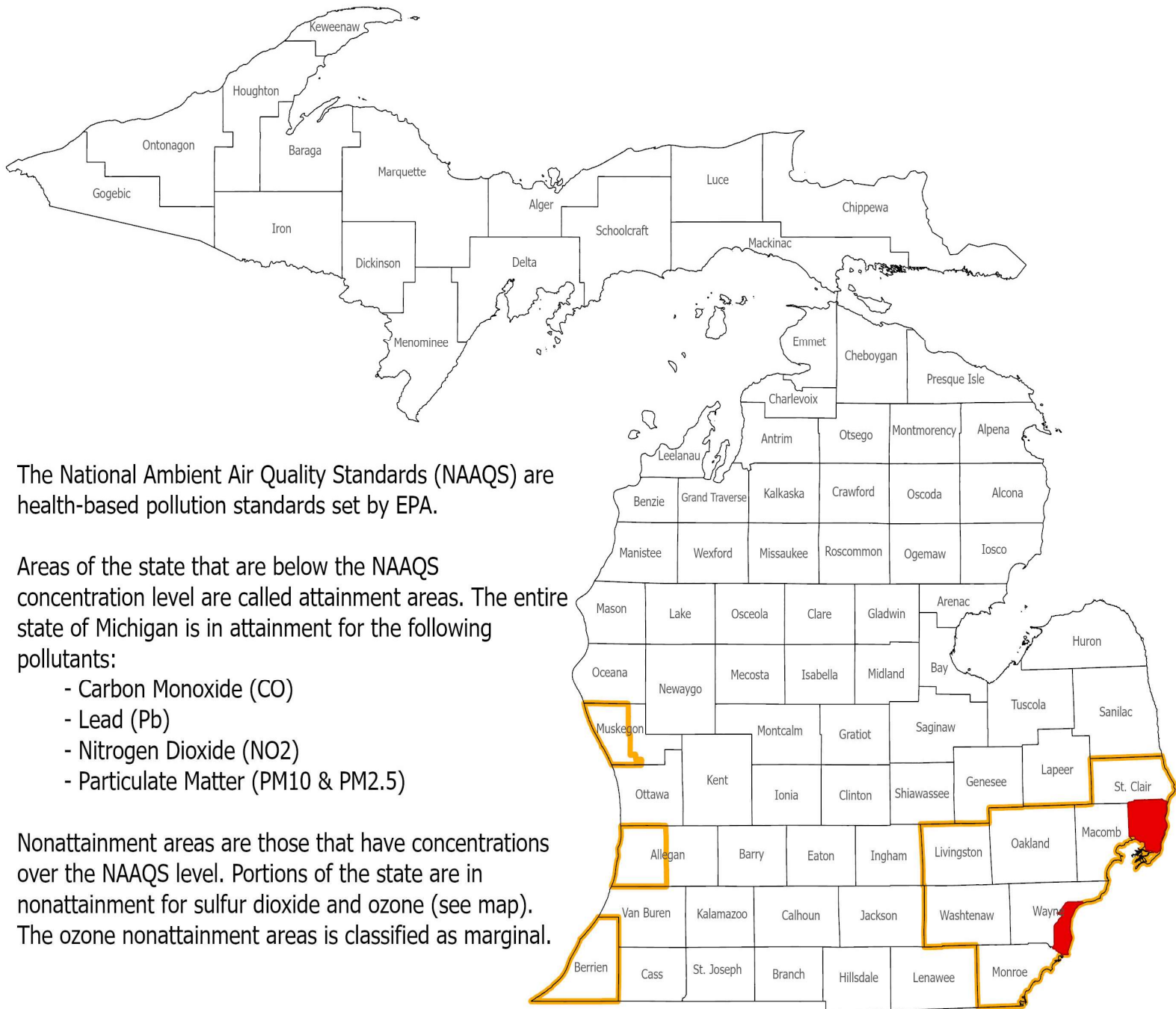
Flood Hazard Zones

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard



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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 & PM_{2.5})

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.

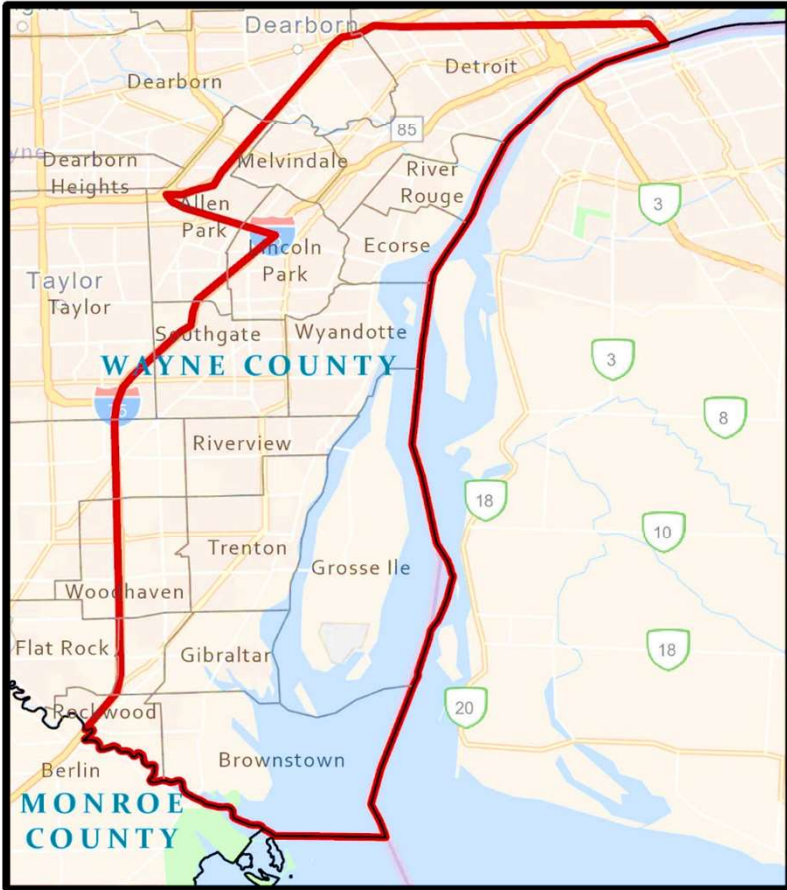
Updated February 5, 2021

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

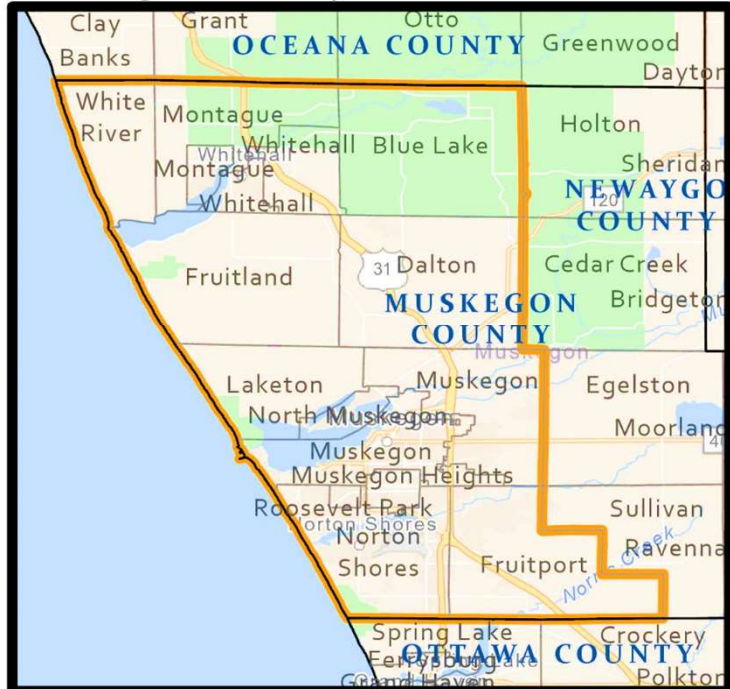


Ozone Nonattainment Areas

Allegan County Area



Muskegon County Area





You are here: EPA Home > Green Book > >National Area and County-Level Multi-Pollutant Information >Michigan Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Michigan Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of July 31, 2023

Listed by County, NAAQS, Area. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

* The 1997 Primary Annual PM-2.5 NAAQS (level of 15 µg/m³) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

Change the State:

MICHIGAN

Important Notes

Download National Dataset: dbf | xls | Data dictionary (PDF)

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/County FIPS Codes
MICHIGAN								
Allegan County	1-Hour Ozone (1979)-NAAQS revoked	Allegan County, MI	929394959697989900	01/16/2001	Incomplete Data	Whole	111,408	26/005
Allegan County	8-Hour Ozone (1997)-NAAQS revoked	Allegan County, MI	040506070809	09/24/2010	Former Subpart 1	Whole	111,408	26/005
Allegan County	8-Hour Ozone (2015)	Allegan County, MI	181920212223	//	Moderate	Part	46,615	26/005
Bay County	1-Hour Ozone (1979)-NAAQS revoked	Saginaw-Bay City-Midland, MI	929394959697989900	01/16/2001	Incomplete Data	Whole	107,771	26/017
Benzie County	8-Hour Ozone (1997)-NAAQS revoked	Benzie County, MI	040506	05/16/2007	Former Subpart 1	Whole	17,525	26/019
Berrien County	8-Hour Ozone (1997)-NAAQS revoked	Benton Harbor, MI	040506	05/16/2007	Former Subpart 1	Whole	156,813	26/021

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Berrien County	8-Hour Ozone (2015)	Berrien County, MI	181920212223	//	Moderate	Whole	156,813	26/021
Calhoun County	8-Hour Ozone (1997)-NAAQS revoked	Kalamazoo-Battle Creek, MI	040506	05/16/2007	Former Subpart 1	Whole	136,146	26/025
Cass County	8-Hour Ozone (1997)-NAAQS revoked	Cass County, MI	040506	05/16/2007	Marginal	Whole	52,293	26/027
Clinton County	8-Hour Ozone (1997)-NAAQS revoked	Lansing-East Lansing, MI	040506	05/16/2007	Former Subpart 1	Whole	75,382	26/037
Eaton County	8-Hour Ozone (1997)-NAAQS revoked	Lansing-East Lansing, MI	040506	05/16/2007	Former Subpart 1	Whole	107,759	26/045
Genesee County	1-Hour Ozone (1979)-NAAQS revoked	Flint, MI	929394959697989900	01/16/2001	Section 185A	Whole	425,790	26/049
Genesee County	8-Hour Ozone (1997)-NAAQS revoked	Flint, MI	040506	05/16/2007	Former Subpart 1	Whole	425,790	26/049
Huron County	8-Hour Ozone (1997)-NAAQS revoked	Huron County, MI	040506	05/16/2007	Former Subpart 1	Whole	33,118	26/063
Ingham County	8-Hour Ozone (1997)-NAAQS revoked	Lansing-East Lansing, MI	040506	05/16/2007	Former Subpart 1	Whole	280,895	26/065
Ionia County	Lead (2008)	Belding, MI	111213141516	07/31/2017		Part	1,890	26/067

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Kalamazoo County	8-Hour Ozone (1997)-NAAQS revoked	Kalamazoo-Battle Creek, MI	040506	05/16/2007	Former Subpart 1	Whole	250,331	26/077
Kent County	1-Hour Ozone (1979)-NAAQS revoked	Grand Rapids, MI	92939495	06/21/1996	Moderate	Whole	602,622	26/081
Kent County	8-Hour Ozone (1997)-NAAQS revoked	Grand Rapids, MI	040506	05/16/2007	Former Subpart 1	Whole	602,622	26/081
Lapeer County	8-Hour Ozone (1997)-NAAQS revoked	Flint, MI	040506	05/16/2007	Former Subpart 1	Whole	88,319	26/087
Lenawee County	8-Hour Ozone (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0405060708	06/29/2009	Marginal	Whole	99,892	26/091
Livingston County	1-Hour Ozone (1979)-NAAQS revoked	Detroit-Ann Arbor, MI	929394	04/06/1995	Moderate	Whole	180,967	26/093
Livingston County	8-Hour Ozone (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0405060708	06/29/2009	Marginal	Whole	180,967	26/093
Livingston County	8-Hour Ozone (2015)	Detroit, MI		05/19/2023	Moderate	Whole	180,967	26/093
Livingston County	PM-2.5 (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0506070809101112	08/29/2013 *	Former Subpart 1	Whole	180,967	26/093
Livingston County	PM-2.5 (2006)	Detroit-Ann Arbor, MI	09101112	08/29/2013	Former Subpart 1	Whole	180,967	26/093
Macomb County	1-Hour Ozone (1979)-NAAQS revoked	Detroit-Ann Arbor, MI	929394	04/06/1995	Moderate	Whole	840,978	26/099

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Macomb County	8-Hour Ozone (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0405060708	06/29/2009	Marginal	Whole	840,978	26/099
Macomb County	8-Hour Ozone (2015)	Detroit, MI	1819202122	05/19/2023	Moderate	Whole	840,978	26/099
Macomb County	Carbon Monoxide (1971)	Detroit, MI	92939495969798	08/30/1999	Not Classified	Part	295,428	26/099
Macomb County	PM-2.5 (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0506070809101112	08/29/2013 *	Former Subpart 1	Whole	840,978	26/099
Macomb County	PM-2.5 (2006)	Detroit-Ann Arbor, MI	09101112	08/29/2013	Former Subpart 1	Whole	840,978	26/099
Mason County	8-Hour Ozone (1997)-NAAQS revoked	Mason County, MI	040506	05/16/2007	Former Subpart 1	Whole	28,705	26/105
Midland County	1-Hour Ozone (1979)-NAAQS revoked	Saginaw-Bay City-Midland, MI	929394959697989900	01/16/2001	Incomplete Data	Whole	83,629	26/111
Monroe County	1-Hour Ozone (1979)-NAAQS revoked	Detroit-Ann Arbor, MI	929394	04/06/1995	Moderate	Whole	152,021	26/115
Monroe County	8-Hour Ozone (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0405060708	06/29/2009	Marginal	Whole	152,021	26/115
Monroe County	8-Hour Ozone (2015)	Detroit, MI	1819202122	05/19/2023	Moderate	Whole	152,021	26/115
Monroe County	PM-2.5 (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0506070809101112	08/29/2013 *	Former Subpart 1	Whole	152,021	26/115
Monroe County	PM-2.5 (2006)	Detroit-Ann Arbor, MI	09101112	08/29/2013	Former Subpart 1	Whole	152,021	26/115

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Muskegon County	1-Hour Ozone (1979)-NAAQS revoked	Muskegon, MI	9293949596979899	10/18/2000	Moderate	Whole	172,188	26/121
Muskegon County	8-Hour Ozone (1997)-NAAQS revoked	Muskegon, MI	040506	05/16/2007	Marginal	Whole	172,188	26/121
Muskegon County	8-Hour Ozone (2015)	Muskegon County, MI	181920212223	//	Moderate	Part	146,852	26/121
Oakland County	1-Hour Ozone (1979)-NAAQS revoked	Detroit-Ann Arbor, MI	929394	04/06/1995	Moderate	Whole	1,202,362	26/125
Oakland County	8-Hour Ozone (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0405060708	06/29/2009	Marginal	Whole	1,202,362	26/125
Oakland County	8-Hour Ozone (2015)	Detroit, MI	1819202122	05/19/2023	Moderate	Whole	1,202,362	26/125
Oakland County	Carbon Monoxide (1971)	Detroit, MI	92939495969798	08/30/1999	Not Classified	Part	435,027	26/125
Oakland County	PM-2.5 (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0506070809101112	08/29/2013 *	Former Subpart 1	Whole	1,202,362	26/125
Oakland County	PM-2.5 (2006)	Detroit-Ann Arbor, MI	09101112	08/29/2013	Former Subpart 1	Whole	1,202,362	26/125
Ottawa County	1-Hour Ozone (1979)-NAAQS revoked	Grand Rapids, MI	92939495	06/21/1996	Moderate	Whole	263,801	26/139
Ottawa County	8-Hour Ozone (1997)-NAAQS revoked	Grand Rapids, MI	040506	05/16/2007	Former Subpart 1	Whole	263,801	26/139

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Saginaw County	1-Hour Ozone (1979)-NAAQS revoked	Saginaw-Bay City-Midland, MI	929394959697989900	01/16/2001	Incomplete Data	Whole	200,169	26/145
St. Clair County	1-Hour Ozone (1979)-NAAQS revoked	Detroit-Ann Arbor, MI	929394	04/06/1995	Moderate	Whole	163,040	26/147
St. Clair County	8-Hour Ozone (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0405060708	06/29/2009	Marginal	Whole	163,040	26/147
St. Clair County	8-Hour Ozone (2015)	Detroit, MI	1819202122	05/19/2023	Moderate	Whole	163,040	26/147
St. Clair County	PM-2.5 (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0506070809101112	08/29/2013 *	Former Subpart 1	Whole	163,040	26/147
St. Clair County	PM-2.5 (2006)	Detroit-Ann Arbor, MI	09101112	08/29/2013	Former Subpart 1	Whole	163,040	26/147
St. Clair County	Sulfur Dioxide (2010)	St. Clair, MI	1617181920212223	//		Part	52,102	26/147
Van Buren County	8-Hour Ozone (1997)-NAAQS revoked	Kalamazoo-Battle Creek, MI	040506	05/16/2007	Former Subpart 1	Whole	76,258	26/159
Washtenaw County	1-Hour Ozone (1979)-NAAQS revoked	Detroit-Ann Arbor, MI	929394	04/06/1995	Moderate	Whole	344,791	26/161
Washtenaw County	8-Hour Ozone (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0405060708	06/29/2009	Marginal	Whole	344,791	26/161
Washtenaw County	8-Hour Ozone (2015)	Detroit, MI	1819202122	05/19/2023	Moderate	Whole	344,791	26/161
Washtenaw County	PM-2.5 (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0506070809101112	08/29/2013 *	Former Subpart 1	Whole	344,791	26/161

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Washtenaw County	PM-2.5 (2006)	Detroit-Ann Arbor, MI	09101112	08/29/2013	Former Subpart 1	Whole	344,791	26/161
Wayne County	1-Hour Ozone (1979)-NAAQS revoked	Detroit-Ann Arbor, MI	929394	04/06/1995	Moderate	Whole	1,820,584	26/163
Wayne County	8-Hour Ozone (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0405060708	06/29/2009	Marginal	Whole	1,820,584	26/163
Wayne County	8-Hour Ozone (2015)	Detroit, MI	1819202122	05/19/2023	Moderate	Whole	1,820,584	26/163
Wayne County	Carbon Monoxide (1971)	Detroit, MI	92939495969798	08/30/1999	Not Classified	Part	651,784	26/163
Wayne County	PM-10 (1987)	Wayne County, MI	92939495	10/04/1996	Moderate	Part	713,777	26/163
Wayne County	PM-2.5 (1997)-NAAQS revoked	Detroit-Ann Arbor, MI	0506070809101112	08/29/2013 *	Former Subpart 1	Whole	1,820,584	26/163
Wayne County	PM-2.5 (2006)	Detroit-Ann Arbor, MI	09101112	08/29/2013	Former Subpart 1	Whole	1,820,584	26/163
Wayne County	Sulfur Dioxide (2010)	Detroit, MI	1314151617181920212223	//		Part	254,079	26/163

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40 CFR 93.153(b)(1) - For purposes of paragraph (b) of this section the following rates apply in nonattainment areas (NAA's):	
	Tons/year
Ozone (VOC's or NOx):	
Serious NAA's	50
Severe NAA's	25
Extreme NAAs	10
Other ozone NAA's outside an ozone transport region:	100
Other ozone NAA's inside an ozone transport region:	
VOC	50
NOx	100
Carbon Monoxide: All maintenance areas	100
SO ₂ or NO ₂ : All NAA's	100
PM ₁₀ :	
Moderate NAA's	100
Serious NAA's	70
PM _{2.5} (direct emissions, SO ₂ , NOx, VOC, and Ammonia):	
Moderate NAA's	100
Serious NAA's	70
Pb: All NAA's	25

40 CFR 93.153(b)(2) - For purposes of paragraph (b) of this section the following rates apply in maintenance areas:	
	Tons/year
Ozone (NO _x), SO ₂ or NO ₂ :	
All maintenance areas	100
Ozone (VOC's)	
Maintenance areas inside an ozone transport region	50
Maintenance areas outside an ozone transport region	100
Carbon monoxide: All maintenance areas	100
PM ₁₀ : All maintenance areas	100
PM _{2.5} (direct emissions, SO ₂ , NO _x , VOC, and Ammonia)	100
All maintenance areas	100
Pb: All maintenance areas	25

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FACT SHEET

FINAL RULE: IMPLEMENTATION OF THE 2015 NATIONAL AMBIENT AIR QUALITY STANDARDS FOR OZONE: NONATTAINMENT AREA CLASSIFICATIONS APPROACH

ACTION

- On March 1, 2018, the U.S. Environmental Protection Agency issued final requirements that would apply to state, local, and tribal air agencies for implementing the 2015 National Ambient Air Quality Standards (NAAQS) for ground-level ozone. The EPA revised both the health-based and welfare-based standards for ozone on October 1, 2015.
- These requirements apply to states and tribes with nonattainment areas.
- Ozone nonattainment areas are classified by the severity of their air quality problem based on air quality monitoring data, with classifications ranging from “Marginal” to “Extreme.” In this final rule, EPA is establishing the:
 - air quality thresholds that define each of the five Clean Air Act (CAA) classifications for areas designated nonattainment for the 2015 ozone NAAQS; and
 - attainment deadline associated with each classification.
- The nonattainment area classification thresholds for the 2015 ozone NAAQS rely upon the “percent-above-the-standard” (PATS) methodology used to establish area classification thresholds for the 1997 and 2008 8-hour ozone standards. This approach is based on the classification thresholds established for the ozone standard in effect at the time of the 1990 CAA amendments. The final air quality thresholds for the 2015 ozone NAAQS for each classification are:
 - Marginal – from 71 ppb up to 81 ppb
 - Moderate – from 81 ppb up to 93 ppb
 - Serious – from 93 ppb up to 105 ppb
 - Severe – from 105 ppb up to 163 ppb
 - Extreme – from 163 ppb
- The EPA also is setting maximum attainment dates for each nonattainment area classification consistent with the regulatory approach used for both the 1997 and 2008 ozone standards. The maximum attainment dates for each classification under the 2015 ozone standards will be:
 - Marginal - 3 years from effective date of designation;
 - Moderate - 6 years from effective date of designation;
 - Serious - 9 years from effective date of designation;
 - Severe - 15 years (or 17 years) from effective date of designation; and
 - Extreme - 20 years from effective date of designation.

BACKGROUND

- Ozone is formed from NO_x and VOC in the presence of sunlight. Cars, trucks, buses, engines, industries, power plants and products, such as solvents and paints are among the major manmade sources of ozone-forming emissions. Exposure to ground-level ozone pollution is linked to a variety of significant health problems.

- Ozone levels are most commonly elevated in the warm summer months, when hot sunny days make it more likely that ozone will form. But this isn't always the case. In parts of the western United States with high levels of local VOC and NO_x emissions and unique meteorological conditions, ozone levels have been high when snow is on the ground.
- The CAA directs the EPA to set and review air quality standards for common pollutants known as "criteria pollutants," which the agency has identified based on their likelihood of harming public health and welfare. The EPA established air quality standards for ozone in 1979. The EPA subsequently revised the ozone standards in 1997, 2008 and 2015 based on the most recently available scientific studies at the time.
 - In October 2015, the EPA strengthened the ozone NAAQS from 75 parts per billion (ppb) to 70 ppb to ensure the protection of public health and welfare
- After the EPA establishes or revises an air quality standard, the agency follows a process by which states recommend area designations (*i.e.*, as nonattainment, attainment, or unclassifiable) to the EPA. The EPA then evaluates their recommendations and air quality data and other factors prior to making its proposed and final determinations regarding area designations.
- Implementation of the NAAQS is a shared responsibility of the EPA, states and tribes. This final rule interprets the requirements of the Clean Air Act (CAA) in a manner that ensures public health protection is achieved by meeting the 2015 ozone standards, while giving the EPA's partners flexibility to reduce administrative burdens, where possible.
- States, and in some cases local agencies or tribes, are the primary implementers of the NAAQS. They are responsible for developing and submitting to the EPA, implementation plans that meet the nonattainment planning requirements of the CAA. The EPA promulgates implementation rules to clarify its interpretation of applicable statutory provisions.

FOR MORE INFORMATION

- To download a copy of the final rule from the EPA website, go to "Regulatory Actions" at the following address: <https://www.epa.gov/ozone-pollution/implementation-2015-national-ambient-air-quality-standards-naaqs-ozone-state>
- Additional information on the ozone nonattainment areas is available on the EPA Green Book at <https://www.epa.gov/green-book/green-book-8-hour-ozone-2008-area-information>.
- For more information on the final rule, contact Robert Lingard at (919) 541-5272 or lingard.robert@epa.gov; or Butch Stackhouse at (919) 541-5208 or stackhouse.butch@epa.gov.



GRETCHEN WHITMER
GOVERNOR

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



PHILLIP D. ROOS
DIRECTOR

December 20, 2023

Kim Siegel, PMP
City of Detroit – Housing and Revitalization Department
Coleman A. Young Municipal Center
2 Woodward Avenue, Suite 908
Detroit, Michigan 48226

Via Email Only

Dear Kim Siegel:

Subject: Preserve on Ash I Project, North Corktown Neighborhood, Detroit, Michigan

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 ozone standard; and thus, general conformity must be evaluated when completing construction projects of a given size and scope. EGLE has completed the required SIP submittals for this area and on May 19, 2023, the United States Environmental Protection Agency (USEPA) redesignated the seven-county southeast Michigan area (including Wayne County) from nonattainment to attainment/maintenance. General conformity does, however, still require an evaluation during the maintenance period. For this evaluation, EGLE considered the following information from the 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 Preserve on Ash I Project, proposed to be completed with federal grant monies, including the new construction of five buildings with 69 mixed income housing units and 5,865 square feet of retail space. The project is located on approximately 2.33 acres of land between 14th Street and 16th Street, north and south of Ash Street, and is currently owned by the City of Detroit. The proposed project intends to replace vacant lots in the area to catalyze further development. The specific parcels include the following:

- 3314 15th Street (formerly 3300 15th Street, 3308 15th Street, 3314 15th Street, 3322 15th Street, and 3330 15th Street).
- 3325 15th Street (formerly 3331 15th Street, 3325 15th Street, 3315 15th Street, and 3307 15th Street).
- 3316 16th Street (formerly 3302 16th Street, 3308 16th Street, 3316 16th Street, 3322 16th Street, and 3330 16th Street).
- 3107 14th Street (formerly 3107 14th Street and 3095 14th Street).
- 3309 14th Street (formerly 3433 14th Street, 3327 14th Street, 3309 14th Street, and 3303 14th Street).

Kim Siegel
Page 2
December 20, 2023

Preserve on Ash I is the initial development phase of a comprehensive neighborhood revitalization plan. This phase serves to commence the development of over 800 affordable housing units as part of the Greater Corktown Neighborhood Framework Plan (Detroit 2020). The City of Detroit received a \$30 million dollar United States Department of Housing and Urban Development Choice Neighborhoods Initiative grant to implement this plan, which created a joint venture between The Community Builders, Inc., and American Community Developers. The project is expected to commence in April 2024 and will be completed in approximately 20 to 24 months.

In reviewing the *"Air Quality and Greenhouse Gas Study: Uptown Orange Apartments in Orange, California,"* dated December 2012, prepared for KTG 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 and duration of the Preserve on Ash I Project proposed for completion in Detroit, Michigan appears to be similar or smaller in scope 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
Environmental Quality Analyst
Air Quality Division

cc: Michael Leslie, USEPA Region 5
Ryan Hoffman, GEI

STATE COASTAL ZONE BOUNDARIES

February 9, 2012

STATE	DEFINITION OF STATE'S COASTAL ZONE (The seaward boundary of the Great Lake States is the U.S.-Canada International boundary, and for all other States is the 3 nautical mile territorial sea, except for those States marked with an asterisk (*))
ALABAMA	Alabama's coastal zone extends inland to the continuous 10-foot elevation contour in Baldwin and Mobile Counties.
ALASKA	As of July 1, 2011, Alaska no longer has a federally approved coastal management program or defined coastal zone and federal consistency does not apply to Alaska. Contact NOAA's Office of Ocean and Coastal Resource Management for additional information.
AMERICAN SAMOA	American Samoa's coastal zone is the entire Territory.
CALIFORNIA & BCDC	California's coastal zone generally extends 1,000 yards inland from the mean high tide line. In significant coastal estuarine habitat and recreational areas it extends inland to the first major ridgeline or 5 miles from the mean high tide line, whichever is less. In developed urban areas, the boundary is generally less than 1,000 yards. The coastal zone for the San Francisco Bay Conservation and Development Commission (BCDC) includes the open water, marshes and mudflats of greater San Francisco Bay, and areas 100 feet inland from the line of highest tidal action. The boundary also includes: the Suisun marsh and buffer zone; managed wetlands diked off from the Bay; and open waters diked off from the Bay and used in salt production.
CONNECTICUT	Connecticut's coastal zone has two tiers incorporated within the 36 coastal townships. The first tier is bounded by a continuous line delineated by a 1,000 foot linear setback measured from the mean high water mark in coastal waters; or a 1,000 foot linear setback measured from the inland boundary of state regulated tidal wetlands; or the continuous interior contour elevation of the one hundred year frequency coastal flood zone; whichever is farthest inland. The second tier is the area between the inland boundary of the 36 coastal communities and the inland boundary of the first tier.
DELAWARE	Delaware's coastal zone includes the whole state.
FLORIDA *	Florida's coastal zone is the entire State, but has two tiers. Local governments eligible to receive coastal management funds are limited to those Gulf and Atlantic coastal cities and counties which include or are contiguous to state water bodies where marine species of vegetation constitute the dominant plant community. Florida's seaward boundary in the Gulf of Mexico is 3 marine leagues (9 nautical miles) and is 3 nautical miles in the Atlantic.
GEORGIA	Georgia's coastal zone includes the 11 counties that border tidally-influenced waters or have economies that are closely tied to coastal resources.
GUAM	Guam's coastal zone is the entire Territory.
HAWAII	Hawaii's coastal zone is the entire state.

ILLINOIS	Illinois' coastal zone has two components. The Lakeshore Boundary is based on the Lake Michigan watershed and is generally parallel to the Lake Michigan shoreline. The Inland Waterway Boundary includes Inland Waterway Corridors, which are select segments of the Chicago River system (North Branch, South Branch, Main Branch and North Shore Channel) and select segments of the Little Calumet and Grand Calumet Rivers. The Inland Waterway Corridors consist of both the waterway and designated land area to either side of the waterway.
INDIANA	Indiana's coastal zone is based on watershed boundaries within coastal townships and the counties of Lake, Porter and LaPorte. To create an inland boundary that is identifiable in practical landmarks, the coastal zone boundary is described based on the U.S. Geological Survey Quadrangle maps and major roads for each county. The coastal zone boundary is located in the northern portions of Lake, Porter, and LaPorte Counties. At its widest extent, the boundary extends away from the shoreline 17 miles to the Crown Point area and at its narrowest point, less than 2 miles, just north of Hudson Lake in LaPorte County. See NOAA, <i>Indiana Lake Michigan Coastal Program and Final Environmental Impact Statement</i> , Appendix C (April 2002), to determine the precise coastal zone boundary in a particular area of the State.
LOUISIANA	Louisiana's coastal zone varies from 16 to 32 miles inland from the Gulf coast and generally follows the Intracoastal Waterway running from the Texas-Louisiana state line then follows highways through Vermilion, Iberia, and St. Mary parishes, then dipping southward following the natural ridges below Houma, then turning northward to take in Lake Pontchartrain and ending at the Mississippi-Louisiana border.
MAINE	Maine's coastal zone includes the inland line of coastal towns on tidewaters and all islands.
MARYLAND	Maryland's coastal zone extends to the inland boundary of the 16 counties bordering the Atlantic Ocean, the Chesapeake Bay, and the Potomac River (as far as the municipal limits of Washington, D.C), and includes Baltimore City and all local jurisdictions within the counties.
MASSACHUSETTS	Massachusetts' coastal zone extends 100 feet inland of specified major roads, RR tracks, or other visible right of ways which are located within a half mile of coastal waters or salt marshes. The coastal zone includes all islands, transitional and intertidal areas, and coastal wetlands and beaches. In instances where the road boundary excludes significant resource areas, the boundary line may depart from the road to encompass.
MICHIGAN	Michigan's coastal zone, generally, extends a minimum of 1,000 feet from the ordinary high water mark. The boundary extends further inland in some locations to encompass coastal lakes, rivermouths, and bays; floodplains; wetlands; dune areas; urban areas; and public park, recreation, and natural areas.
MINNESOTA	Minnesota's coastal zone is divided into three areas. The first includes the area of the St. Louis River in Carlton County, south of Duluth. The second is the city of Duluth and surrounding areas of urban growth and expansion to the north and west. The third is the region between the Duluth city limits north to the Canadian border, also known as the "North Shore," which includes portions of St. Louis, Lake, and Cook Counties. See NOAA, <i>Minnesota's Lake Superior Coastal Program Final Environmental Impact Statement</i> , Chapter One, (May 1999), to determine the precise coastal zone boundary in a particular area of the State.

MISSISSIPPI	Mississippi's coastal zone includes the 3 counties adjacent to the coast. The coastal zone includes these counties, as well as all adjacent coastal waters. Included in this definition are the barrier islands of the coast.
NEW HAMPSHIRE	New Hampshire's coastal zone is the 17 coastal municipalities.
NEW JERSEY	New Jersey's coastal zone recognizes four distinct regions of the State and treats them separately. From the New York border to the Raritan Bay, the boundary extends landward from mean high water to the first road or property line. From the Raritan Bay south along the Atlantic shoreline and up to the Delaware Memorial Bridge, the boundary extends from half a mile to 24 miles inland (1,376 square miles of land area). From the Delaware Memorial Bridge northward up the Delaware River to Trenton, the boundary extends landward to the first road inclusive of all wetlands. The fourth boundary serves a 31-mile square area in the northeast corner of the state bordering the Hudson river (New Jersey Meadowlands Commission).
NEW YORK	New York's coastal zone varies from region to region while incorporating the following conditions: The inland boundary is approximately 1,000 feet from the shoreline of the mainland. In urbanized and developed coastal locations the landward boundary is approximately 500 feet from the mainland's shoreline, or less than 500 feet where a roadway or railroad line runs parallel to the shoreline at a distance of under 500 feet and defines the boundary. In locations where major state-owned lands and facilities or electric power generating facilities abut the shoreline, the boundary extends inland to include them. In some areas, such as Long Island Sound and the Hudson River Valley, the boundary may extend inland up to 10,000 feet to encompass significant coastal resources, such as areas of exceptional scenic value, agricultural or recreational lands, and major tributaries and headlands.
NORTH CAROLINA	North Carolina's coastal zone includes the 20 counties that in whole or in part are adjacent to, adjoining, intersected by or bounded by the Atlantic Ocean or any coastal sound(s). Within this boundary, there are two tiers. The first tier is comprised of Areas of Environmental Concern (AEC) and is subject to more thorough regulatory controls. AECs include: coastal wetlands, estuarine waters, public trust areas, estuarine shorelines, ocean beaches, frontal dunes, ocean erosion areas, inlet lands, small surface water supply watersheds, public water supply well-fields, and fragile natural resource areas. The second tier includes land uses which have potential to affect coastal waters even though they are not located in AECs.
NORTHERN MARIANA ISLANDS	Northern Mariana Islands' coastal zone is the entire Commonwealth. (Note: a recent federal court decision ruled that the Commonwealth does not own the adjacent territorial sea. A consent decree allows the CNMI to manage the area.)
OHIO	Ohio's coastal zone includes portions of 9 counties bordering Lake Erie and its tributaries and varies depending on biophysical characteristics of various coastal regions— in the western part of the coast the boundary extends inland up to 15 miles along certain low lying wetland and floodplain areas; in most of the eastern part of the State, areas with high bluffs, the boundary extends inland for only about an eighth of a mile, with the exception of the Mentor Marsh area.
OREGON	Oregon's coastal zone extends inland to the crest of the coastal range, except for the following: along the Umpqua River, where it extends upstream to Scottsburg; along the Rogue River, where it extends upstream to Agness; and except in the Columbia River Basin, where it extends upstream to the downstream end of Puget Island.

PENNSYLVANIA	Pennsylvania's coastal zone along Lake Erie varies from 900 feet in urban areas to over 3 miles in more rural areas, and encompasses the floodplains of Lake Erie and tributary streams, bluff hazards recession areas, and coastal wetlands. The coastal zone along the Delaware River Estuary extends inland to 660 feet in urbanized areas, to 3.5 miles in rural areas, and includes floodplains of the Delaware and Schuylkill Rivers and their tributaries to the upper limit of tidal influence, and tidal and freshwater wetlands.
PUERTO RICO *	Puerto Rico's coastal zone, generally, extends 1,000 meters inland; however, it extends further inland in certain areas to include important coastal resources. Puerto Rico's seaward boundary is 3 marine leagues (9 nautical miles).
RHODE ISLAND	Rhode Island's coastal zone includes the whole state. However, the inland extent of the regulatory authority of the State's CZMA agency is 200 feet inland from any coastal feature, to watersheds, and to certain activities that occur anywhere within the State that include: power-generating plants; petroleum storage facilities; chemical or petroleum processing; minerals extraction; sewage treatment and disposal plants; solid waste disposal facilities; and, desalination plants.
SOUTH CAROLINA	South Carolina's coastal zone includes all lands and waters in the counties which contain any one or more of the critical areas (coastal waters, tidelands, beaches, and primary oceanfront sand dunes).
TEXAS *	Texas' coastal zone is generally the area seaward of the Texas coastal facility designation line which roughly follows roads that are parallel to coastal waters and wetlands generally within one mile of tidal rivers. The boundary encompasses all or portions of 18 coastal counties. Texas' seaward boundary is 3 marine leagues (9 nautical miles).
VIRGINIA	Virginia's coastal zone includes the 29 counties, 17 cities, and 42 incorporated towns of <i>Tidewater Virginia</i> , including the Atlantic Coast watershed and portions of the Chesapeake Bay and Albemarle-Pamlico Sound watersheds.
VIRGIN ISLANDS	Virgin Islands' coastal zone includes the entire territory.
WASHINGTON	Washington's coastal zone is the 15 coastal counties that front saltwater.
WISCONSIN	Wisconsin's coastal zone is the 15 counties that front Lake Superior, Lake Michigan, or Green Bay.

Coastal Zone Boundary Maps

If you would like assistance with these maps, please contact Ginny Berry, Coastal Management Unit, Field Operations Support Section, Water Resources Division (WRD), at BerryV@Michigan.gov or 517-284-5052 or Matt Warner, Coastal Management Unit, Field Operations Support Section, WRD, at WarnerM1@Michigan.gov or 517-388-5195.

Map listing - click the county name to go to those maps

[Alcona](#)

- Alcona and Haynes Townships
- Harrisville and Greenbush Townships

[Alger](#)

- Burt Township
- Grand Island and Munising Townships, City of Munising
- Onota and Au Train Townships

[Allegan](#)

- Ganges and Casco Townships
- Laketown, Saugatuck and Manlius Townships and South Haven

[Alpena](#)

- Alpena Township and City of Alpena
- Alpena and Sanborn Townships

[Antrim](#)

- Banks and Torch Lake Townships
- Milton and Elk Rapids Townships

[Arenac](#)

- Standish, Arenac and Au Gres Townships
- Whitney, Sims and Au Gres Townships

[Baraga](#)

- Arvon Township
- Baraga and L'Anse Townships

[Bay](#)

- Bangor, Hampton, Merritt, Portsmouth and Frankenlust Townships, Bay City and Essexville
- Bangor, Kawkawlin and Fraser Townships
- Pinconning Township

[Benzie](#)

- Crystal Lake, Gilmore and Blaine Townships and City of Frankfort
- Lake Township



Berrien

- Hagar, Benton and St. Joseph Townships and Benton Harbor and St. Joseph
- Lincoln and Lake Townships and the city of Bridgman
- New Buffalo and Chikaming Townships and New Buffalo

Charlevoix

- Bay, Charlevoix and Hayes Townships
- Beaver Island Group
- Eveline, South Arm, East Jordan, Evangeline and Wilson Townships and Boyne City
- Norwood Township

Cheboygan

- Benton Township and City of Cheboygan
- Mackinaw, Hebron and Beaugrand Townships

Chippewa

- Bay Mills Township
- Bruce and Soo (Nebbish Island) Townships
- Bay Mills, Superior and Soo Townships and Sault Ste. Marie
- Drummond Township
- Detour and Raber Townships
- Pickford and Raber Townships
- Sugar Island Township
- Whitefish Township

Delta

- Brampton, Escanaba and Wells Townships, Gladstone and Escanaba
- Ensign, Bay De Noc and Masonville Townships
- Fairbanks Township
- Ford River Township
- Garden and Nahma Townships

Emmet

- Readmond and Friendship Townships
- Wawatam, Bliss and Cross Village Townships
- West Traverse, Little Traverse, Bear Creek and Resort Townships, Petoskey and Harbor Springs

Gogebic

- Ironwood (East) and Wakefield Townships
- Ironwood (West) Township

Grand Traverse

- Acme, East Bay and Garfield Townships and Traverse City
- Peninsula Township

Houghton

- Hancock and Calumet Townships
- Portage, Chassell and South part of Torch Lake Townships
- Stanton Township
- Schoolcraft, Osceola, Franklin, Portage and North part of Torch Lake Townships

Huron

- Fair Haven and Sebewaing Townships
- Sand Beach and Sherman Townships and Harbor Beach
- Huron, Gore and Rubicon Townships

- Lake, Caseville and McKinley Townships
- Pte. Aux Barques, Port Austin and Hume Townships

losco

- Baldwin, Tawas, Alabaster Townships and East Tawas and Tawas City
- Oscoda and Au Sable Townships

Keweenaw - mainland

- Allouez and Houghton Townships
- Eagle Harbor Township
- Grant Township
- Sherman Township

Keweenaw – Isle Royal

- Eagle Harbor Townships
- Houghton Townships

Leelanau

- Bingham and Elmwood Townships
- Leland, Leelanau and Suttons Bay Townships
- Cleveland, Glen Arbor and Empire Townships

Luce

- McMillan Township (eastern part)
- McMillan Township (western part)

Mackinac

- Bois Blanc Township
- Clark Township
- Garfield Township
- Hendricks and Hudson Townships
- Moran Township
- Marquette and St. Ignace Townships
- Newton Township

Macomb

- Chesterfield, Harrison, Clinton, and Lake Townships, Mt. Clemens and St. Clair Shores

Manistee

- Arcadia and Onekama Townships
- Filer, Manistee and Stronach Townships and Manistee

Marquette

- Marquette, Sands and Chocolay Townships
- Powell Township

Mason

- Grant, Hamlin and Victory Townships
- Pere Marquette, Amber, Riverton and Summit Townships and Ludington

Menominee

- Cedarville Township
- Ingallston Township
- Menominee Township and Menominee

Monroe

- Berlin, Frenchtown and Monroe Townships
- Erie, LaSalle and Monroe Townships

Muskegon

- Muskegon, Laketon and Fruitport Townships, the "Muskegons" and Norton Shores
- White River, Montague, Whitehall and Fruitland Townships, Montague and Whitehall

Oceana

- Benona and Clay Banks Townships
- Pentwater and Golden Townships

Ontonagon

- Bohemia and Ontonagon (east part) Townships
- Carp Lake Township
- Ontonagon (west part) Township

Ottawa

- Port Sheldon, Holland and Park Townships, Zeeland and Holland
- Spring Lake and Grand Haven Townships, Ferrysburg and Grand Haven

Presque Isle

- Bearinger and Ocqueoc Townships
- Presque Isle, Krakow and Pulawski Townships
- Rogers and Belknap Townships

Saginaw

- Kochville, Zilwaukee, Carrollton and Buena Vista Townships

Sanilac

- Delaware, Forest and Sanilac Townships
- Sanilac, Lexington and Worth Townships

Schoolcraft

- Mueller and Doyle Townships
- Manistique and Thompson Townships

St. Clair

- Burtchville and Fort Gratiot Townships and the city of Port Huron
- East China, Cottrellville, Clay and Ira Townships, Algonac and Marine-City
- St. Clair and East China Townships, Port Huron, Marysville and St. Clair

Tuscola

- Akron and Wisner Townships

Van Buren

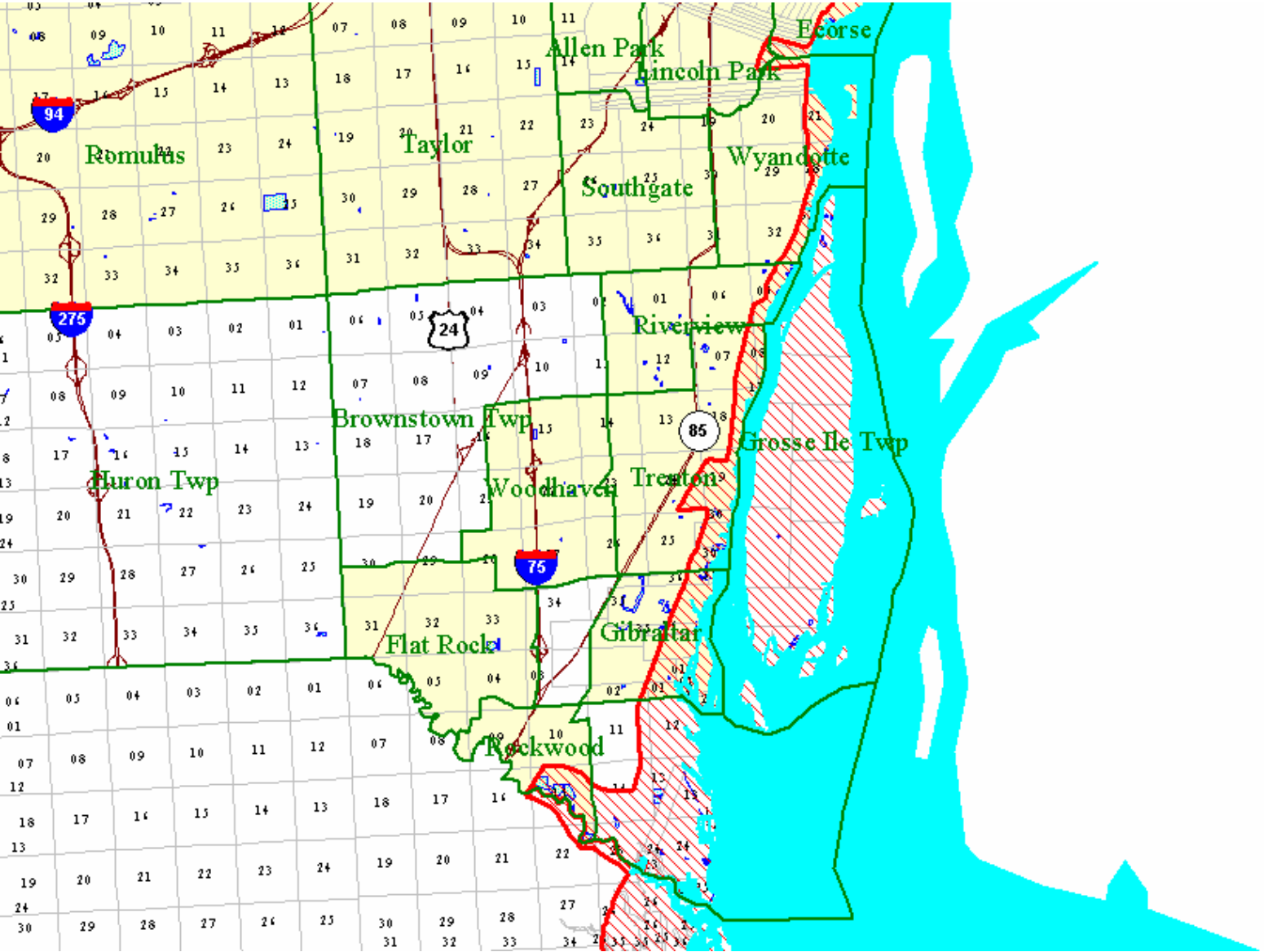
- South Haven and Covert Townships and South Haven

Wayne

- Brownstown and Grosse Ile Townships, Ecorse, Lincoln Park, Wyandotte, Riverview, Trenton, Rockwood and Gibraltar
- The "Grosse Points", Detroit and River Rouge

Wayne County
Ecorse, Lincoln Park, Wyandotte and Riverview, T3S R11E
Trenton, T4S R11E
Rockwood, Gibraltar and Brownstown Township T5S R10E

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



Wayne County
Grosse Pointe Township, Grosse Pointe Woods, Grosse Pointe Farms
Grosse Pointe, Grosse Pointe Park, and Detroit, T1S R14E
Detroit, T1S R14E, T2S R13E, and T2S 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**.





GRETCHEN WHITMER
GOVERNOR

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



PHILLIP D. ROOS
DIRECTOR

September 8, 2023

VIA EMAIL

Meghan Kaple
The Preserve on Ash I, LDHA, LLC
c/o The Community Builders, Inc.
736 Oak Street
Columbus, Ohio 43205

Dear Meghan:

SUBJECT: Notice of Approval of Response Activity Plan to Comply with 20107a(1)(b)
C1 Building, 3314 15th Street, Detroit, Wayne County, Michigan
Property Tax ID Number: 10005433-7
Facility/Site ID Number: 82008897

The Department of Environment, Great Lakes, and Energy (EGLE), Remediation and Redevelopment Division (RRD), has reviewed the Response Activity Plan to comply with Section 20107a(1)(b) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). The Response Activity Plan outlines the response activities to be undertaken at the property identified as C1 Building, 3314 15th Street, Detroit, Wayne County, Michigan. It was submitted by Allan Blaske, GEI Consultants of Michigan, P.C. on the behalf of Meghan Kaple, The Preserve on Ash I, LDHA, LLC, and was received by EGLE on July 24, 2023. The Response Activity Plan was submitted pursuant to Section 20114b of the NREPA and based upon representations and information contained in the submittal, the Response Activity Plan is approved.

This approval is specific to Section 8.0 of the Response Activity Plan to comply with Section 20107a(1)(b) of the NREPA to address unacceptable exposures via the direct contact and volatilization to indoor air pathways and is based upon the representations and information contained in the submittal; therefore, EGLE expresses no opinion as to whether other conditions that may exist will be adequately addressed by the response activities that are proposed in the plan.

EGLE has the following comments/recommendations related to the proposed response activities:

1. Appendix F details that sub-slab vapor samples will be collected after the first-floor slab has been installed and the building HVAC system is operational, and that samples will be completed up to four quarters. If this sampling will be utilized to demonstrate that the active vapor mitigation system (AVMS) is not necessary, please conduct the vapor sampling in accordance with EGLE's

current guidance, especially as it relates to acute toxicants (e.g. PCE). Please see the Acute Addendum in EGLE's VI Guidance Document for more sampling information.

Additionally, if vapor sampling results in exceedances of Site-Specific Volatilization to Indoor Air Criteria, the AVMS should be immediately commissioned and operated until sufficient data indicates the AVMS is no longer needed.

It is highly recommended that the owner/operator work closely with EGLE staff to determine the appropriate system downtime prior to collecting a representative sub-slab vapor sample.

2. The proposed AVMS commissioning schedule deviates from the draft EGLE guidance *Active Vapor Mitigation Systems Table of Contents*. This deviation is supported by the addition of telemetry in the system design. Sufficient documentation should be provided with the Documentation of Due Care Compliance (DDCC) report (e.g. measurements/data collected during system start up) to confirm that the proposed telemetry is appropriate and will detect/alarm if the performance metric is not continually met all monitoring locations.
3. A notice of the presence of dermal contact exposure barriers will be provided to Lessees at the property within their respective lease agreements. Please add language to this notice regarding the presence of a vapor mitigation system and any required restrictions. Documentation of these notices should be included in the DDCC report.
4. During redevelopment activities requiring the management/relocation of onsite soils (e.g. earthwork balancing), compliance with *Section 20120c Relocation of contaminated soil* is required and should be appropriately documented in the DDCC report.

The owner and operator of this property may also have responsibility under applicable state and federal laws, including but not limited to, Part 201, Environmental Remediation; Part 111, Hazardous Waste Management; Part 211, Underground Storage Tank Regulations; Part 213, Leaking Underground Storage Tanks; Part 615, Supervisor of Wells, of the NREPA; and the Michigan Fire Prevention Code, 1941 PA 207, as amended.

This approval is pursuant to the applicable requirements of the NREPA. The Michigan State Housing Development Authority (MSHDA) may have additional site selection requirements beyond the NREPA statutory obligations for site characterization and remedial actions or response activities necessary to prevent, minimize, or mitigate injury to the public health, safety, or welfare, or to the environment.

If you should have further questions or concerns, please contact Jay Eichberger, RRD, Brownfield Assessment and Redevelopment Section, at 616-446-4043 or by email at EichbergerJ@Michigan.gov.

Sincerely,

A handwritten signature in black ink that reads "Carrie A. Geyer". The signature is written in a cursive style with a large, flowing "C" and "G".

Carrie Geyer
Manager
Brownfield Assessment and Redevelopment
Section
Remediation and Redevelopment Division
GeyerC1@Michigan.gov

cc: Allan Blaske, GEI
Paul Owens, EGLE
Dan Gough, EGLE
Jarrett McFeters, EGLE



GRETCHEN WHITMER
GOVERNOR

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



PHILLIP D. ROOS
DIRECTOR

September 8, 2023

VIA EMAIL

Meghan Kaple
The Preserve on Ash I, LDHA, LLC
c/o The Community Builders, Inc.
736 Oak Street
Columbus, Ohio 43205

Dear Meghan:

SUBJECT: Notice of Approval of Response Activity Plan to Comply with 20107a(1)(b)
L Building, 3309 14th Street, Detroit, Wayne County, Michigan
Property Tax ID Number: 10005256-9
Facility/Site ID Number: 82008896

The Department of Environment, Great Lakes, and Energy (EGLE), Remediation and Redevelopment Division (RRD), has reviewed the Response Activity Plan to comply with Section 20107a(1)(b) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). The Response Activity Plan outlines the response activities to be undertaken at the property identified as L Building, 3309 14th Street, Detroit, Wayne County, Michigan. It was submitted by Allan Blaske, GEI Consultants of Michigan, P.C. on the behalf of Meghan Kaple, The Preserve on Ash I, LDHA, LLC, and was received by EGLE on July 14, 2023. The Response Activity Plan was submitted pursuant to Section 20114b of the NREPA and based upon representations and information contained in the submittal, the Response Activity Plan is approved.

This approval is specific to Section 8.0 of the Response Activity Plan to comply with Section 20107a(1)(b) of the NREPA to address unacceptable exposures via the direct contact and volatilization to indoor air pathways and is based upon the representations and information contained in the submittal; therefore, EGLE expresses no opinion as to whether other conditions that may exist will be adequately addressed by the response activities that are proposed in the plan.

EGLE has the following comments/recommendations related to the proposed response activities:

1. Appendix F details that sub-slab vapor samples will be collected after the first-floor slab has been installed and the building HVAC system is operational, and that samples will be completed up to four quarters. If this sampling will be utilized to demonstrate that the active vapor mitigation system (AVMS) is not necessary, please conduct the vapor sampling in accordance with EGLE's

current guidance, especially as it relates to acute toxicants (e.g. PCE). Please see the Acute Addendum in EGLE's VI Guidance Document for more sampling information.

Additionally, if vapor sampling results in exceedances of Site-Specific Volatilization to Indoor Air Criteria, the AVMS should be immediately commissioned and operated until sufficient data indicates the AVMS is no longer needed.

It is highly recommended that the owner/operator work closely with EGLE staff to determine the appropriate system downtime prior to collecting a representative sub-slab vapor sample.

2. The proposed AVMS commissioning schedule deviates from the draft EGLE guidance *Active Vapor Mitigation Systems Table of Contents*. This deviation is supported by the addition of telemetry in the system design. Sufficient documentation should be provided with the Documentation of Due Care Compliance (DDCC) report (e.g. measurements/data collected during system start up) to confirm that the proposed telemetry is appropriate and will detect/alarm if the performance metric is not continually met all monitoring locations.
3. Appendix F, Drawing VM L-1 depicts the proposed sub-slab monitoring points. It is recommended that another monitoring point be added near the elevator shaft to confirm that the pressure field extension (PFE) is present beneath the shaft.
4. A notice of the presence of dermal contact exposure barriers will be provided to Lessees at the property within their respective lease agreements. Please add language to this notice regarding the presence of a vapor mitigation system and any required restrictions. Documentation of these notices should be included in the DDCC report.
5. During redevelopment activities requiring the management/relocation of onsite soils (e.g. earthwork balancing), compliance with *Section 20120c Relocation of contaminated soil* is required and should be appropriately documented in the DDCC report.

The owner and operator of this property may also have responsibility under applicable state and federal laws, including but not limited to, Part 201, Environmental Remediation; Part 111, Hazardous Waste Management; Part 211, Underground Storage Tank Regulations; Part 213, Leaking Underground Storage Tanks; Part 615, Supervisor of Wells, of the NREPA; and the Michigan Fire Prevention Code, 1941 PA 207, as amended.

This approval is pursuant to the applicable requirements of the NREPA. The Michigan State Housing Development Authority (MSHDA) may have additional site selection

requirements beyond the NREPA statutory obligations for site characterization and remedial actions or response activities necessary to prevent, minimize, or mitigate injury to the public health, safety, or welfare, or to the environment.

If you should have further questions or concerns, please contact Jay Eichberger, RRD, Brownfield Assessment and Redevelopment Section, at 616-446-4043 or by email at EichbergerJ@Michigan.gov.

Sincerely,

A handwritten signature in black ink that reads "Carrie A. Geyer". The signature is fluid and cursive, with the first name being the most prominent.

Carrie Geyer
Manager
Brownfield Assessment and Redevelopment
Section
Remediation and Redevelopment Division
GeyerC1@Michigan.gov

cc: Allan Blaske, GEI
Paul Owens, EGLE
Dan Gough, EGLE
Jarrett McFeters, EGLE



GRETCHEN WHITMER
GOVERNOR

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



PHILLIP D. ROOS
DIRECTOR

September 8, 2023

VIA EMAIL

Meghan Kaple
The Preserve on Ash I, LDHA, LLC
c/o The Community Builders, Inc.
736 Oak Street
Columbus, Ohio 43205

Dear Meghan:

SUBJECT: Notice of Approval of Response Activity Plan to Comply with 20107a(1)(b)
H Building, 3107 14th Street, Detroit, Wayne County, Michigan
Property Tax ID Number: 10005260-1
Facility/Site ID Number: 82008898

The Department of Environment, Great Lakes, and Energy (EGLE), Remediation and Redevelopment Division (RRD), has reviewed the Response Activity Plan to comply with Section 20107a(1)(b) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). The Response Activity Plan outlines the response activities to be undertaken at the property identified as H Building, 3107 14th Street, Detroit, Wayne County, Michigan. It was submitted by Allan Blaske, GEI Consultants of Michigan, P.C. on the behalf of Meghan Kaple, The Preserve on Ash I, LDHA, LLC, and was received by EGLE on July 14, 2023. The Response Activity Plan was submitted pursuant to Section 20114b of the NREPA and based upon representations and information contained in the submittal, the Response Activity Plan is approved.

This approval is specific to Section 8.0 of the Response Activity Plan to comply with Section 20107a(1)(b) of the NREPA to address unacceptable exposures via the direct contact and volatilization to indoor air pathways and is based upon the representations and information contained in the submittal; therefore, EGLE expresses no opinion as to whether other conditions that may exist will be adequately addressed by the response activities that are proposed in the plan.

EGLE has the following comments/recommendations related to the proposed response activities:

1. Appendix F details that sub-slab vapor samples will be collected after the first-floor slab has been installed and the building HVAC system is operational, and that samples will be completed up to four quarters. If this sampling will be utilized to demonstrate that the active vapor mitigation system (AVMS) is not necessary, please conduct the vapor sampling in accordance with EGLE's

current guidance, especially as it relates to acute toxicants (e.g. PCE). Please see the Acute Addendum in EGLE's VI Guidance Document for more sampling information.

Additionally, if vapor sampling results in exceedances of Site-Specific Volatilization to Indoor Air Criteria, the AVMS should be immediately commissioned and operated until sufficient data indicates the AVMS is no longer needed.

It is highly recommended that the owner/operator work closely with EGLE staff to determine the appropriate system downtime prior to collecting a representative sub-slab vapor sample.

2. The proposed AVMS commissioning schedule deviates from the draft EGLE guidance *Active Vapor Mitigation Systems Table of Contents*. This deviation is supported by the addition of telemetry in the system design. Sufficient documentation should be provided with the Documentation of Due Care Compliance (DDCC) report (e.g. measurements/data collected during system start up) to confirm that the proposed telemetry is appropriate and will detect/alarm if the performance metric is not continually met all monitoring locations.
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If you should have further questions or concerns, please contact Jay Eichberger, RRD, Brownfield Assessment and Redevelopment Section, at 616-446-4043 or by email at EichbergerJ@Michigan.gov.

Sincerely,

A handwritten signature in black ink that reads "Carrie A. Geyer". The signature is fluid and cursive, with the first name "Carrie" being the most prominent part.

Carrie Geyer
Manager
Brownfield Assessment and Redevelopment
Section
Remediation and Redevelopment Division
GeyerC1@Michigan.gov

cc: Allan Blaske, GEI
Paul Owens, EGLE
Dan Gough, EGLE
Jarrett McFeters, EGLE



GRETCHEN WHITMER
GOVERNOR

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



PHILLIP D. ROOS
DIRECTOR

September 8, 2023

VIA EMAIL

Meghan Kaple
The Preserve on Ash I, LDHA, LLC
c/o The Community Builders, Inc.
736 Oak Street
Columbus, Ohio 43205

Dear Meghan:

SUBJECT: Notice of Approval of Response Activity Plan to Comply with 20107a(1)(b)
C3 Building, 3316 16th Street, Detroit, Wayne County, Michigan
Property Tax ID Number: 10006018-22
Facility/Site ID Number: 82008899

The Department of Environment, Great Lakes, and Energy (EGLE), Remediation and Redevelopment Division (RRD), has reviewed the Response Activity Plan to comply with Section 20107a(1)(b) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). The Response Activity Plan outlines the response activities to be undertaken at the property identified as C3 Building, 3316 16th Street, Detroit, Wayne County, Michigan. It was submitted by Allan Blaske, GEI Consultants of Michigan, P.C. on the behalf of Meghan Kaple, The Preserve on Ash I, LDHA, LLC, and received by EGLE on July 24, 2023. The Response Activity Plan was submitted pursuant to Section 20114b of the NREPA and based upon representations and information contained in the submittal, the Response Activity Plan is approved.

This approval is specific to Section 8.0 of the Response Activity Plan to comply with Section 20107a(1)(b) of the NREPA to address unacceptable exposures via the direct contact and volatilization to indoor air pathways and is based upon the representations and information contained in the submittal; therefore, EGLE expresses no opinion as to whether other conditions that may exist will be adequately addressed by the response activities that are proposed in the plan.

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1. Appendix F details that sub-slab vapor samples will be collected after the first-floor slab has been installed and the building HVAC system is operational, and that samples will be completed up to four quarters. If this sampling will be utilized to demonstrate that the active vapor mitigation system (AVMS) is not necessary, please conduct the vapor sampling in accordance with EGLE's

current guidance, especially as it relates to acute toxicants (e.g. PCE). Please see the Acute Addendum in EGLE's VI Guidance Document for more sampling information.

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It is highly recommended that the owner/operator work closely with EGLE staff to determine the appropriate system downtime prior to collecting a representative sub-slab vapor sample.

2. The proposed AVMS commissioning schedule deviates from the draft EGLE guidance *Active Vapor Mitigation Systems Table of Contents*. This deviation is supported by the addition of telemetry in the system design. Sufficient documentation should be provided with the Documentation of Due Care Compliance (DDCC) report (e.g. measurements/data collected during system start up) to confirm that the proposed telemetry is appropriate and will detect/alarm if the performance metric is not continually met all monitoring locations.
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Sincerely,

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Carrie Geyer
Manager
Brownfield Assessment and Redevelopment
Section
Remediation and Redevelopment Division
GeyerC1@Michigan.gov

cc: Allan Blaske, GEI
Paul Owens, EGLE
Dan Gough, EGLE
Jarrett McFeters, EGLE



GRETCHEN WHITMER
GOVERNOR

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



PHILLIP D. ROOS
DIRECTOR

September 8, 2023

VIA EMAIL

Meghan Kaple
The Preserve on Ash I, LDHA, LLC
c/o The Community Builders, Inc.
736 Oak Street
Columbus, Ohio 43205

Dear Meghan:

SUBJECT: Notice of Approval of Response Activity Plan to Comply with 20107a(1)(b)
C2 Building, 3325 15th Street, Detroit, Wayne County, Michigan
Property Tax ID Number: 10005816-34
Facility/Site ID Number: 82008900

The Department of Environment, Great Lakes, and Energy (EGLE), Remediation and Redevelopment Division (RRD), has reviewed the Response Activity Plan to comply with Section 20107a(1)(b) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). The Response Activity Plan outlines the response activities to be undertaken at the property identified as C2 Building, 3325 15th Street, Detroit, Wayne County, Michigan. It was submitted by Allan Blaske, GEI Consultants of Michigan, P.C. on the behalf of Meghan Kaple, The Preserve on Ash I, LDHA, LLC, and was received by EGLE on July 24, 2023. The Response Activity Plan was submitted pursuant to Section 20114b of the NREPA and based upon representations and information contained in the submittal, the Response Activity Plan is approved.

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3. A notice of the presence of dermal contact exposure barriers will be provided to Lessees at the property within their respective lease agreements. Please add language to this notice regarding the presence of a vapor mitigation system and any required restrictions. Documentation of these notices should be included in the DDCC report.
4. During redevelopment activities requiring the management/relocation of onsite soils (e.g. earthwork balancing), compliance with *Section 20120c Relocation of contaminated soil* is required and should be appropriately documented in the DDCC report.

The owner and operator of this property may also have responsibility under applicable state and federal laws, including but not limited to, Part 201, Environmental Remediation; Part 111, Hazardous Waste Management; Part 211, Underground Storage Tank Regulations; Part 213, Leaking Underground Storage Tanks; Part 615, Supervisor of Wells, of the NREPA; and the Michigan Fire Prevention Code, 1941 PA 207, as amended.

This approval is pursuant to the applicable requirements of the NREPA. The Michigan State Housing Development Authority (MSHDA) may have additional site selection requirements beyond the NREPA statutory obligations for site characterization and remedial actions or response activities necessary to prevent, minimize, or mitigate injury to the public health, safety, or welfare, or to the environment.

If you should have further questions or concerns, please contact Jay Eichberger, RRD, Brownfield Assessment and Redevelopment Section, at 616-446-4043 or by email at EichbergerJ@Michigan.gov.

Sincerely,

A handwritten signature in black ink that reads "Carrie A. Geyer". The signature is written in a cursive style with a large, flowing "C" and "G".

Carrie Geyer
Manager
Brownfield Assessment and Redevelopment
Section
Remediation and Redevelopment Division
GeyerC1@Michigan.gov

cc: Allan Blaske, GEI
Paul Owens, EGLE
Dan Gough, EGLE
Jarrett McFeters, EGLE

Michigan

Federally-listed Endangered and Threatened Species

Updated October 2018

SPECIES	STATUS	COUNTIES	HABITAT
MAMMALS			
Canada lynx (<i>Lynx canadensis</i>)	Threatened	Current distribution: A Canada lynx was recently documented in the Upper Peninsula. The counties listed here have the highest potential for Lynx presence: Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon, Schoolcraft.	Northern forests
Gray wolf <i>Canis lupus</i>	Endangered	Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon, Schoolcraft	Northern forested areas
Indiana bat (<i>Myotis sodalis</i>)	Endangered	Allegan, Barry, Bay, Benzie, Berrien, Branch, Calhoun, Cass, Clinton, Eaton, Genesee, Gratiot, Hillsdale, Ingham, Ionia, Jackson, Kalamazoo, Kent, Lapeer, Leelanau, Lenawee, Livingston, Macomb, Manistee, Mason, Monroe, Montcalm, Muskegon, Oakland, Oceana, Ottawa, Saginaw, St. Joseph, Sanilac, Shiawassee, St. Clair, Tuscola, Van Buren, Washtenaw, and Wayne	Summer habitat includes small to medium river and stream corridors with well developed riparian woods; woodlots within 1 to 3 miles of small to medium rivers and streams; and upland forests. Caves and mines as hibernacula.
Northern long-eared bat <i>Myotis septentrionalis</i>	Threatened	Statewide	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
BIRDS			
Kirtland's warbler <i>Setophaga kirtlandii</i>	Endangered	Alcona, Alger, Antrim, Baraga, Chippewa, Clare, Crawford, Delta, Grand Traverse, Iosco, Kalkaska, Luce, Marquette, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle, Roscommon, Schoolcraft	Breeding in young jack pine
Piping plover (<i>Chradrius melodus</i>)	Endangered	Alger, Alpena, Benzie, Berrien, Charlevoix, Cheboygan, Chippewa, Delta, Emmet, Leelanau, Luce, Mackinac, Manistee, Mason, Muskegon, Presque Isle, Schoolcraft	Beaches along shorelines of the Great Lakes
Piping plover (<i>Chradrius melodus</i>)	Critical Habitat	Alger, Benzie, Charlevoix, Cheboygan, Chippewa, Emmet, Iosco, Leelanau, Luce, Mackinac, Mason, Muskegon, Presque Isle, Schoolcraft	Beaches along shorelines of the Great Lakes

SPECIES	STATUS	COUNTIES	HABITAT
Rufa Red knot (<i>Calidris canutus rufa</i>)	Threatened	<p>Only actions that occur along coastal areas during the Red Knot migratory window of MAY 1 - SEPTEMBER 30 for the following counties:</p> <p>Alcona, Alger, Allegan, Alpena, Antrim, Arenac, Baraga, Bay, Benzie, Berrien, Charlevoix, Cheboygan, Chippewa, Delta, Emmet, Gogebic, Grand Traverse, Houghton, Huron, Iosco, Keweenaw, Leelanau, Luce, Mackinac, Macomb, Manistee, Marquette, Mason, Menominee, Monroe, Muskegon, Oceana, Ontonagon, Ottawa, Presque Isle, Sanilac, Schoolcraft, St. Clair, Tuscola, Van Buren, Wayne</p> <p>Only actions that occur in large wetland complexes during the Red knot migratory window of MAY 1 - SEPTEMBER 30 for the following counties:</p> <p>Midland, Saginaw, Shiawassee</p>	Coastal areas and large wetland complexes
Whooping crane ** (<i>Grus americanus</i>)	Non-essential experimental population	Allegan, Barry, Berrien, Jackson, Kent, Lenawee, Macomb, Oceana, Ottawa	Open wetlands and lakeshores
REPTILES			
Copperbelly water snake (<i>Nerodia erythrogaster neglecta</i>)	Threatened	Branch, Calhoun, Cass, Eaton, Hillsdale, St. Joseph	Wooded and permanently wet areas such as oxbows, sloughs, brushy ditches and floodplain woods
Eastern massasauga (<i>Sistrurus catenatus</i>)	Threatened	Alcona, Allegan, Alpena, Antrim, Arenac, Barry, Berrien, Branch, Calhoun, Cass, Cheboygan, Clare, Clinton, Crawford, Eaton, Emmett, Genesee, Grand Traverse, Hillsdale, Huron, Ingham, Ionia, Iosco, Jackson, Kalamazoo, Kalkaska, Kent, Lake, Lapeer, Lenawee, Livingston, Mackinac, Macomb, Manistee, Mason, Missaukee, Montcalm, Montmorency, Muskegon, Newaygo, Oakland, Oscoda, Presque Isle, Saginaw, St. Joseph, Shiawassee, Van Buren, Washtenaw, Wayne	Graminoid dominated plant communities (fens, sedge meadows, peatlands, wet prairies) open woodlands and shrublands
INSECTS			
Hine's emerald dragonfly (<i>Somatochlora hineana</i>)	Endangered	Alcona, Alpena, Mackinac, Menominee, Presque Isle	Spring fed wetlands, wet meadows and marshes; calcareous streams & associated wetlands overlying dolomite bedrock
Hungerford's crawling water beetle (<i>Brychius hungerfordi</i>)	Endangered	Charlevoix, Cheboygan, Crawford, Emmet, Montmorency, Oscoda, Otsego, Presque Isle	Cool riffles of clean, slightly alkaline streams; known to occur in five streams in northern Michigan.
Karner blue butterfly (<i>Lycaeides melissa samuelis</i>)	Endangered	Allegan, Ionia, Kent, Lake, Mason, Mecosta, Monroe, Montcalm, Muskegon, Newaygo, Oceana	Pine barrens and oak savannas on sandy soils and containing wild lupines (<i>Lupinus perennis</i>), the only known food plant of larvae.
Mitchell's satyr (<i>Neonympha mitchellii mitchellii</i>)	Endangered	Barry, Berrien, Branch, Cass, Jackson, Kalamazoo, St. Joseph, Van Buren, Washtenaw	Fens; wetlands characterized by calcareous soils which are fed by carbonate-rich water from seeps and springs

SPECIES	STATUS	COUNTIES	HABITAT
Poweshiek skipperling (<i>Oarisma poweshiek</i>)	Endangered Critical Habitat	Hillsdale, Jackson, Lenawee, Livingston, Oakland, and Washtenaw Maps of proposed critical habitat in Michigan at www.fws.gov/midwest/angered/insects/posk/fcHmaps/poskchMI.pdf	Wet prairie and fens
MUSSELS			
Clubshell (<i>Pleurobema clava</i>)	Endangered	Hillsdale	Found in coarse sand and gravel areas of runs and riffles within streams and small rivers
Northern riffleshell (<i>Epioblasma torulosa rangiana</i>)	Endangered	Monroe, Sanilac, Wayne	Large streams and small rivers in firm sand of riffle areas; also occurs in Lake Erie
Rayed Bean (<i>Villosa fabalis</i>)	Endangered	Oakland, St. Clair	Belle, Black, Clinton and Pine Rivers
Snuffbox (<i>Epioblasma triquetra</i>)	Endangered	Gratiot, Ionia, Kent, Livingston, Oakland, St. Clair, Washtenaw	Small to medium-sized creeks in areas with a swift current and some larger rivers
PLANTS			
American hart's tongue fern (<i>Asplenium scolopendrium</i> var. <i>americanum</i> = <i>Phyllitis japonica</i> ssp. <i>a.</i>)	Threatened	Chippewa, Mackinac	Cool limestone sinkholes in mature hardwood forest
Dwarf lake iris (<i>Iris lacustris</i>)	Threatened	Alpena, Charlevoix, Cheboygan, Chippewa, Delta, Emmet, Mackinac, Menominee, Presque Isle, Schoolcraft	Partially shaded sandy-gravelly soils on lakeshores
Eastern prairie fringed orchid (<i>Plantathera leucophaea</i>)	Threatened	Bay, Cheboygan, Clinton, Eaton, Genesee, Gratiot, Huron, Livingston, Monroe, Saginaw, St. Clair, St. Joseph, Tuscola, Washtenaw, Wayne	Mesic to wet prairies and meadows
Houghton's goldenrod (<i>Solidago houghtonii</i>)	Threatened	Charlevoix, Cheboygan, Chippewa, Crawford, Emmet, Kalkaska, Mackinac, Presque Isle, Schoolcraft	Sandy flats along Great Lakes shores
Lakeside daisy (<i>Hymenoxys acaulis</i> var. <i>glabra</i>)	Threatened	Mackinac	Dry, rocky prairie grassland underlain by limestone
Michigan monkey-flower (<i>Mimulus michiganensis</i>)	Endangered	Benzie, Charlevoix, Cheboygan, Emmet, Leelanau, Mackinac	Soils saturated with cold flowing spring water; found along seepages, streams and lakeshores
Pitcher's thistle (<i>Cirsium pitcheri</i>)	Threatened	Alcona, Alger, Allegan, Alpena, Antrim, Arenac, Benzie, Berrien, Charlevoix, Cheboygan, Chippewa, Delta, Emmet, Grand Traverse, Huron, Iosco, Leelanau, Mackinac, Manistee, Mason, Muskegon, Oceana, Ottawa, Presque Isle, Schoolcraft, Van Buren	Stabilized dunes and blowout areas

SPECIES	STATUS	COUNTIES	HABITAT
Small whorled pogonia <i>(Isotria medeoloides)</i>	Threatened	Berrien	Dry woodland; upland sites in mixed forests (second or third growth stage)

Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft² - hr - people and 10,000 BTU/ft² - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
Is the container under pressure?	Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Does the container hold a cryogenic liquified gas?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Is the container diked?	Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
What is the volume (gal) of the container?	<input type="text" value="1000"/>
What is the Diked Area Length (ft)?	<input type="text"/>
What is the Diked Area Width (ft)?	<input type="text"/>
<input type="button" value="Calculate Acceptable Separation Distance"/>	
Diked Area (sqft)	<input type="text"/>
ASD for Blast Over Pressure (ASDBOP)	<input type="text"/>
ASD for Thermal Radiation for People (ASDPPU)	<input type="text" value="276.57"/>
ASD for Thermal Radiation for Buildings (ASDBPU)	<input type="text" value="50.28"/>
ASD for Thermal Radiation for People (ASDPNPD)	<input type="text"/>
ASD for Thermal Radiation for Buildings (ASDBNPD)	<input type="text"/>

Providing Feedback & Corrections

After using the ASD Assessment Tool following the directions in this User Guide, users are encouraged to provide feedback on how the ASD Assessment Tool may be improved. Users are also encouraged to send comments or corrections for the improvement of the tool.

Please send comments or other input using the **Contact Us** (<https://www.hudexchange.info/contact-us/>) form.

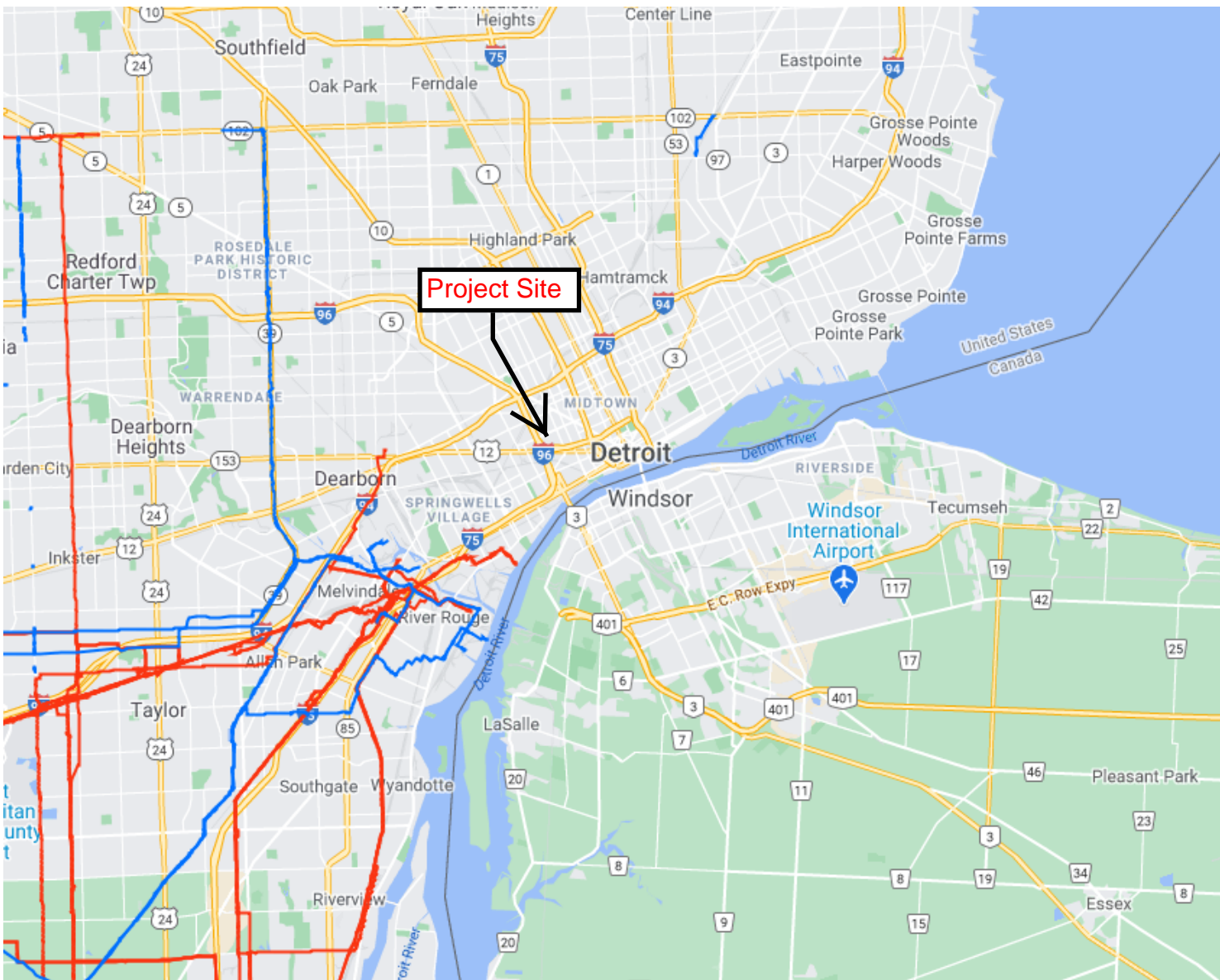
Related Information

- [ASD User Guide \(/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/\)](/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- [ASD Flow Chart \(/resource/3840/acceptable-separation-distance-asd-flowchart/\)](/resource/3840/acceptable-separation-distance-asd-flowchart/)

NATIONAL PIPELINE MAPPING SYSTEM

Legend

- Gas Transmission Pipelines
- Hazardous Liquid Pipelines



Pipelines depicted on this map represent gas transmission and hazardous liquid lines only. Gas gathering and gas distribution systems are not represented.

This map should never be used as a substitute for contacting a one-call center prior to excavation activities. Please call 811 before any digging occurs.

Questions regarding this map or its contents can be directed to npms@dot.gov.

Projection: Geographic

Datum: NAD83

Map produced by the Public Viewer application at www.npms.phmsa.dot.gov

Date Printed: Jan 20, 2021



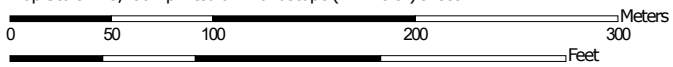
verified no change
11-28-22

Farmland Classification—Wayne County, Michigan
(Corktown Phase 1 soils)



Soil Map may not be valid at this scale.

Map Scale: 1:3,730 if printed on A landscape (11" x 8.5") sheet.



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



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey


verified no change
11-28-22 and
8/21/2023

1/7/2021
Page 1 of 5

Farmland Classification—Wayne County, Michigan
(Corktown Phase 1 soils)









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

Farmland Classification—Wayne County, Michigan
(Corktown Phase 1 soils)

	Prime farmland if subsoiled, completely removing the root inhibiting soil layer		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 reclaimed of excess salts and sodium		Farmland of unique importance		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		Farmland of statewide importance, if irrigated and drained		Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season		Not prime farmland		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, if irrigated and 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		Prime farmland if drained		Prime farmland if irrigated and reclaimed of excess salts and sodium
	Farmland of statewide importance		Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if warm enough		Prime farmland if protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance
	Farmland of statewide importance, if drained		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 thawed		Prime farmland if irrigated		Farmland of statewide importance, if drained
	Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season				Farmland of local importance		Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
	Farmland of statewide importance, if irrigated				Farmland of local importance, if irrigated		Prime farmland if irrigated and drained		Farmland of statewide importance, if irrigated
							Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season		

Farmland Classification—Wayne County, Michigan
(Corktown Phase 1 soils)

	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 reclaimed of excess salts and sodium		Farmland of unique importance	The soil surveys that comprise your AOI were mapped at 1:12,000.
	Farmland of statewide importance, if irrigated and drained		Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season		Not rated or not available	
	Farmland of statewide importance, if irrigated and 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	Water Features		<div style="border: 1px solid black; padding: 5px;"> <p>Warning: Soil Map may not be valid at this scale.</p> <p>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.</p> </div>
	Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if warm enough	Transportation		
	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 thawed		Rails	
			Farmland of local importance		Interstate Highways	
			Farmland of local importance, if irrigated		US Routes	
					Major Roads	
					Local Roads	
				Background		
					Aerial Photography	
					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.	

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BntuaB	Blount-Urban land complex, 0 to 4 percent slopes	Not prime farmland	6.2	20.4%
MidaaA	Midtown gravelly-artifactual sandy loam, 0 to 2 percent slopes	Not prime farmland	1.9	6.2%
ShbuaB	Shebeon-Urban land complex, 0 to 4 percent slopes	Not prime farmland	22.4	73.4%
Totals for Area of Interest			30.5	100.0%

Description

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.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower



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

Phone: 313.224.6380
Fax: 313.224.1629
www.detroitmi.gov

December 15, 2023

Penny Dwoinen
City of Detroit Housing & Revitalization Department
Coleman A. Young Municipal Center
2 Woodward Avenue, Suite 908
Detroit, MI 48226

RE: Section 106 Review of the HUD CHOICE Funded Preserve on Ash I (POA I) Project, Located in North Corktown, the City of Detroit, Wayne County, Michigan

Dear Mrs. Dwoinen,

Under the authority of the National Historic Preservation Act (NHPA) of 1966, as amended, and the “Programmatic Agreement between the Michigan State Historic Preservation Office and the City of Detroit, Michigan...,” dated December 21, 2022, the City of Detroit has reviewed the above-cited project and has determined it to be an undertaking as defined by 36 CFR 800.16(y).

The Choice Neighborhood Initiative Preserve on Ash Project (POA) project includes POA Phase I, POA Phase II, POA Phase III, The Preserve Estates, and the Community Empowerment Center (CEC). The POA project consists of comprehensive neighborhood revitalization including the construction of a combination of townhouses, single-family residences, a mix of multi-family buildings, and the CEC, which is an Early Childhood Development Center. The proposed POA Project is generally bounded by Martin Luther King Boulevard to the north, Vermont Street to the east, Temple Street to the south, and 17th Street to the west and covers 11.6 acres. Due to the size and nature of this project, fieldwork to further examine the potential for affecting historic archaeological resources for future project phases will be divided into multiple phases.

A survey of above ground resources titled *Architectural Resources Survey Report for the Preserve on Ash (POA) Project, North Corktown Neighborhood, City of Detroit, Wayne County, Michigan*, evaluated the project APE and determined no historic above ground resources were extant with the entire Preserve on Ash Project APE. Due to the size and nature of this project, fieldwork to further examine the potential for affecting historic archaeological resources has been divided into multiple phases. As these phases are finalized, development plans will be generated, and the Direct APE may be further refined.

POA Phase I, or POA I, is the initial development phase which serves to commence the development of 841 affordable housing units over nine housing projects through the Greater Corktown Neighborhood Planning Framework Study (Detroit 2020). POA I will include five apartment buildings for a total of 69 mixed income housing units on approximately 2.33-acres of assembled fee simple lots concentrated in the North Corktown Neighborhood. POA I is located between 14th Street and 16th Street, north and south of Ash Street.



Per Stipulation VI of Programmatic Agreement (PA), the proposed undertaking (qualified for) review by SHPO's archaeologist. Consultation on the content of the proposed phased archaeology study plan extended from April 2022 to June 2023. On June 12, 2023, SHPO archaeologist Amy Krull indicated SHPO was satisfied with the study plan provided to address the first phase of archaeology fieldwork for POA I.

Commonwealth Heritage Group, LLC (Commonwealth) conducted mechanical archaeological trenching for GEI Consultants, Inc. between July 24, 2023, and August 17, 2023. Commonwealth excavated 36 exploratory archaeological trenches. As a result of this investigation, Commonwealth recorded 197 archaeological features, including 42 foundation walls, 40 buried abandoned utility pipes, 23 structural footings, 23 basement pits, limited artifact concentrations, a midden, and other feature types; recovered 1,650 artifacts; and identified 19 new archaeological sites, 20WN1245 through 20WN1263. Artifacts recovered from these sites, the vast majority of which were mixed together in the highly disturbed surface horizons, reflect the entire period from the late nineteenth century to today. Related artifacts are to be donated to the Wayne State University Grosscup Museum.

The consultant recommends all 19 sites as eligible for the National Register of Historic Places (NRHP) under Criterion D. Artifacts and the other data collected during fieldwork have the potential to provide additional information about North Corktown during the 19th and 20th centuries. The archaeological consultant documented that the physical locations of these sites have been exhausted of further research potential, and subsequent archaeological fieldwork at these sites is unlikely to yield additional information.

In a letter dated December 13, 2023, SHPO archaeologist provided a determination of no adverse effect and agreed with the report finding that no further archaeological fieldwork is needed for the POA I portion of the proposed Preserve on Ash project. The 19 newly identified sites constitute an archaeological district, and additional consultation with SHPO for future phases of the POA development should address district boundaries and the cumulative effects of the Preserve on Ash long terms plans.

The Housing & Revitalization Department has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. On 11/7/2022, a request for Tribal Consultation was submitted to the following Tribes:

- Bay Mills Indian Community
- Forest County Potawatomi Community of Wisconsin
- Grand Traverse Band of Ottawa & Chippewa Indians
- Hannahville Indian Community
- Ketegitigaaning Ojibwe Nation/Lac Vieux Desert Band of Lake Superior Chippewa Indians
- Keweenaw Bay Indian Community of the Lake Superior Band of Chippewa Indians
- Lac du Flambeau Band of Lake Superior Chippewa Indians
- Little River Band of Ottawa Indians
- Little Traverse Bay Bands of Odawa Indians



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

Menominee Indian Tribe of Wisconsin
Match-E-Be-Nash-She-Wish (Gun Lake) Band of Pottawatomi Indians
Miami Tribe of Oklahoma
Michigan Anishinaabek Cultural Preservation and Repatriation Alliance
Nottawaseppi Huron Band of the Potawatomi
Pokagon Band of Potawatomi Indians, Michigan and Indiana
Saginaw Chippewa Indian Tribe of Michigan
Sault Ste. Marie Tribe of Chippewa Indians
Seneca Cayuga Nation

Responses were received from the Match-E-Be-Nash-She-Wish (Gun Lake) Band of Pottawatomi Indians, Nottawaseppi Huron Band of the Potawatomi, Miami Tribe of Oklahoma, and The Pokagon Band of Potawatomi Indians, Michigan and Indiana. This consultation concluded with no objections to the proposed activities related to this undertaking. In the event of an unanticipated discovery, Tribal Consultation will be reinitiated under the direction of the unanticipated discoveries plan for this project.

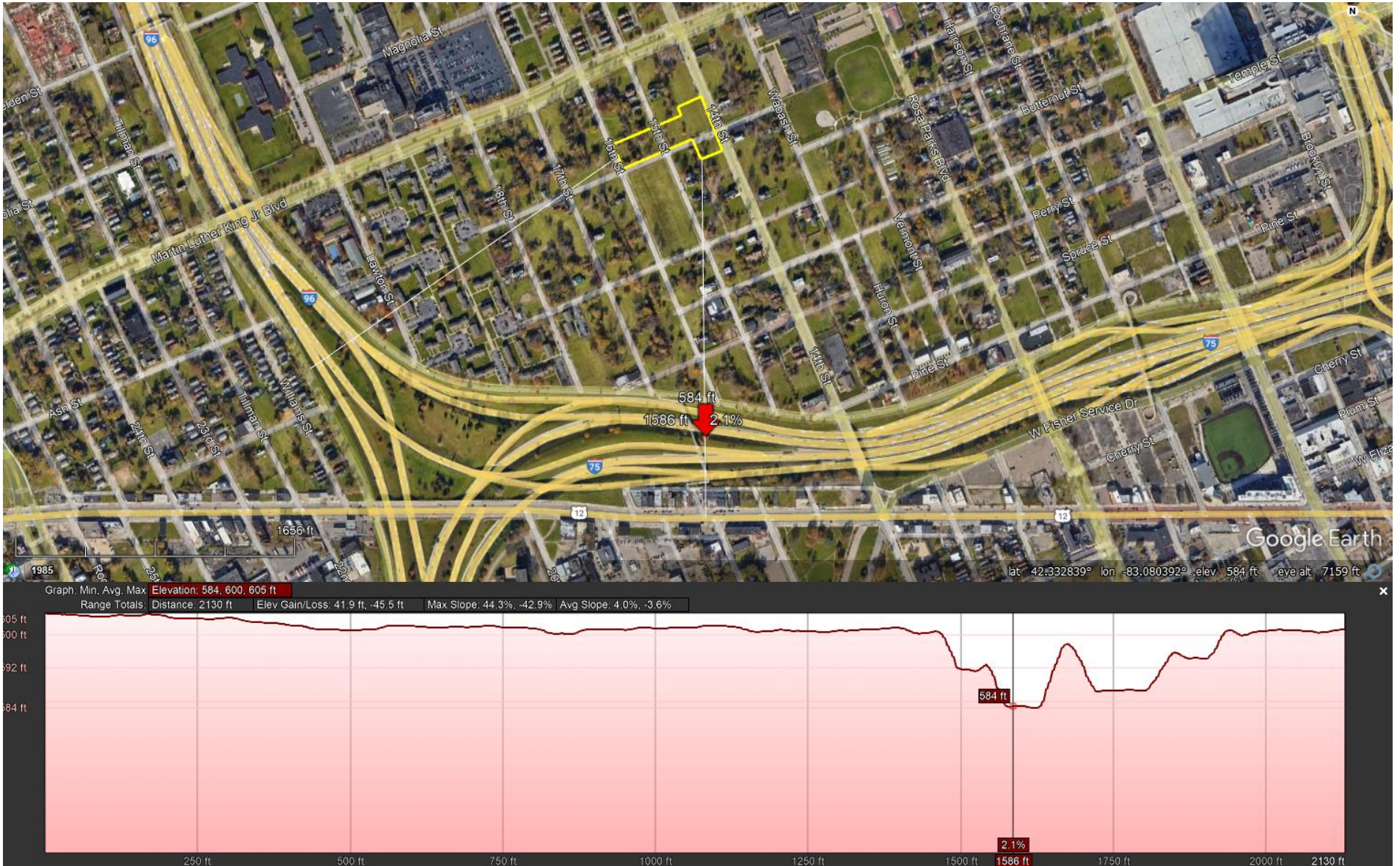
POA I has been given a **No Adverse Effect** determination (Federal Regulations 36 CFR Part 800.5(b)) on properties that are listed or eligible for listing in the National Register of Historic Places. Each future phase of the Preserve on Ash Project will require additional Section 106 Review. If you have any questions, you may contact the Preservation Specialist at Ciavattone@detroitmi.gov.

Sincerely,

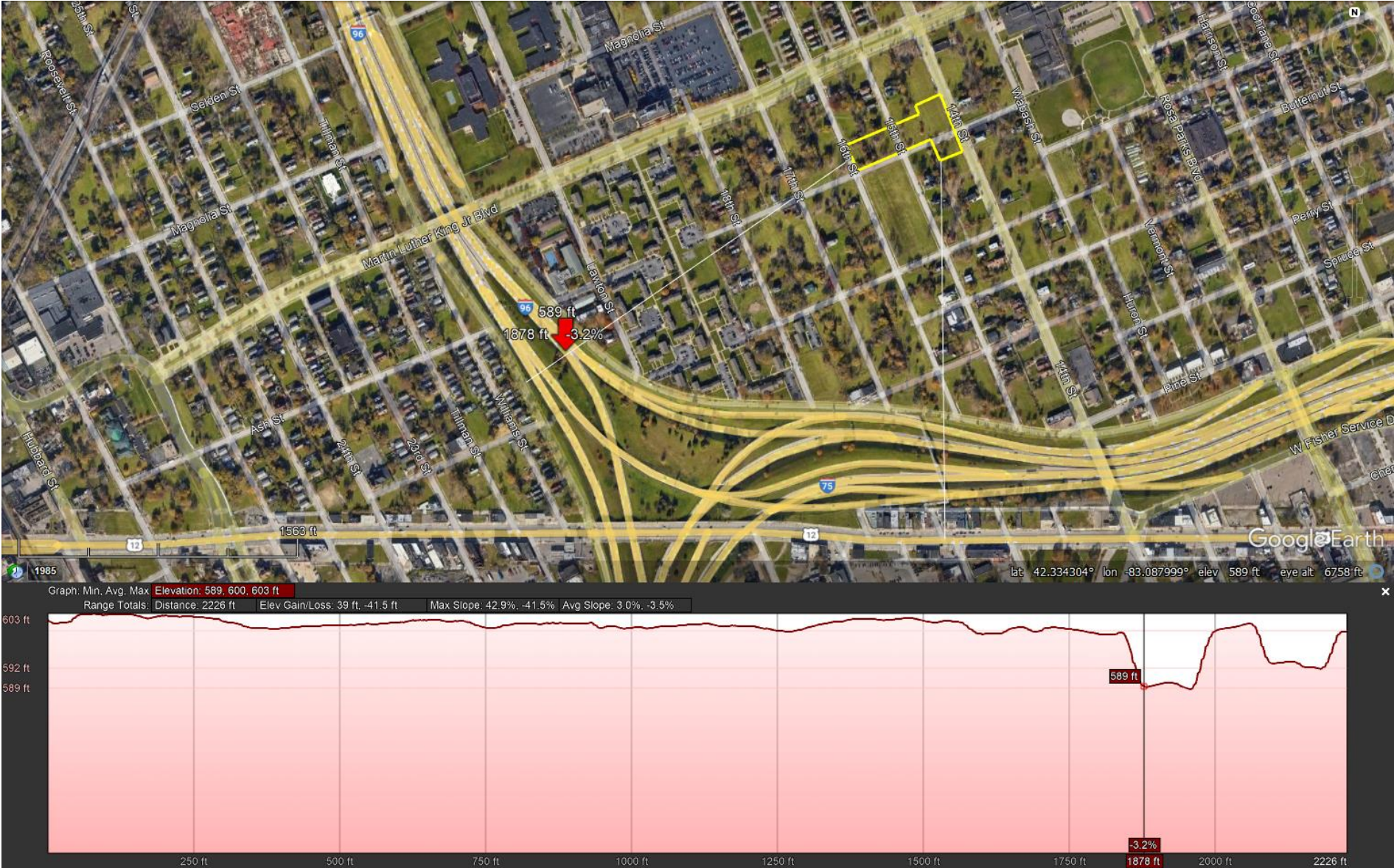
A handwritten signature in blue ink that reads "Tiffany Ciavattone".

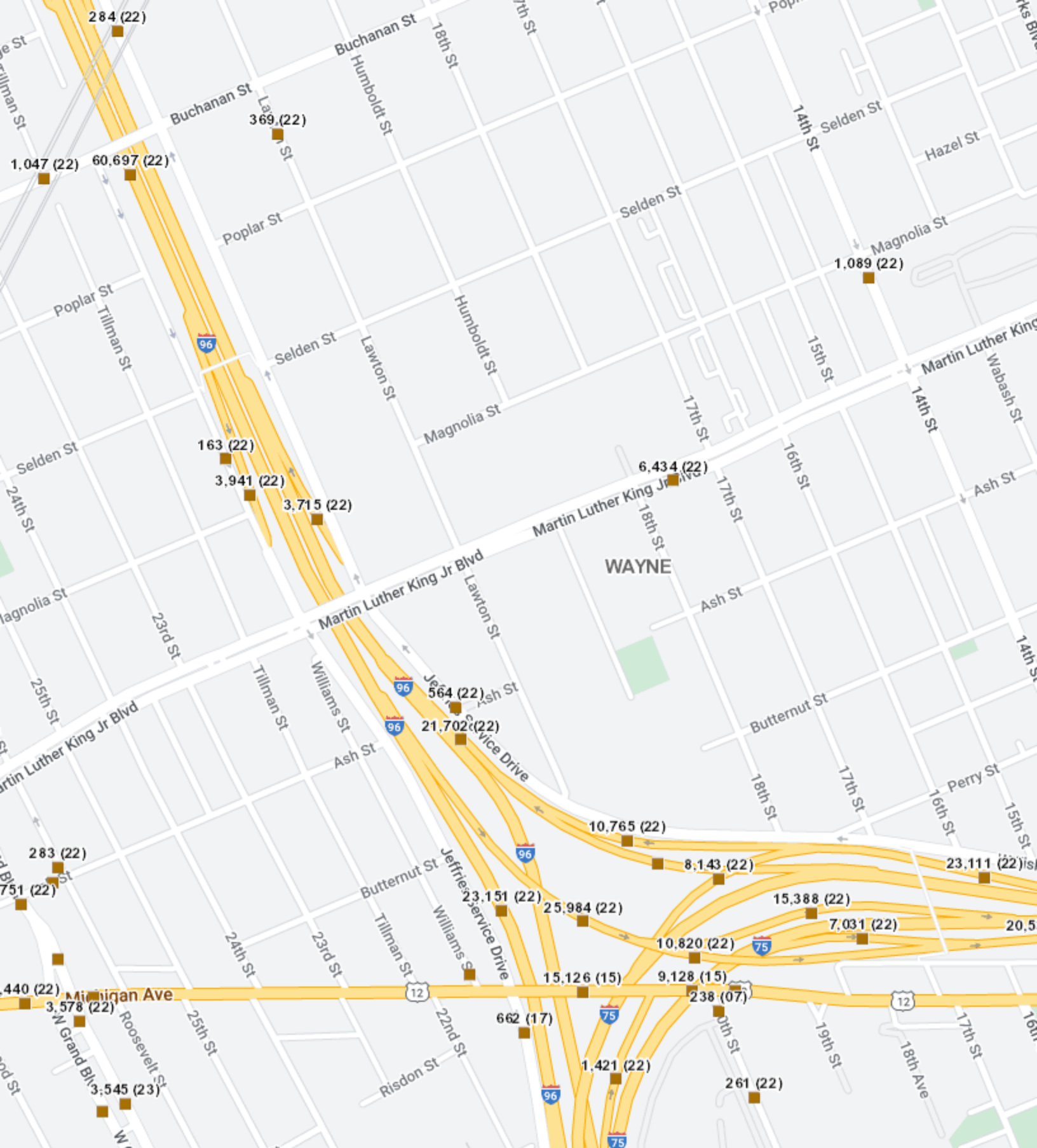
Tiffany Ciavattone
Preservation Specialist
City of Detroit
Housing & Revitalization Department

Phase 1 noise assessment north-south profile



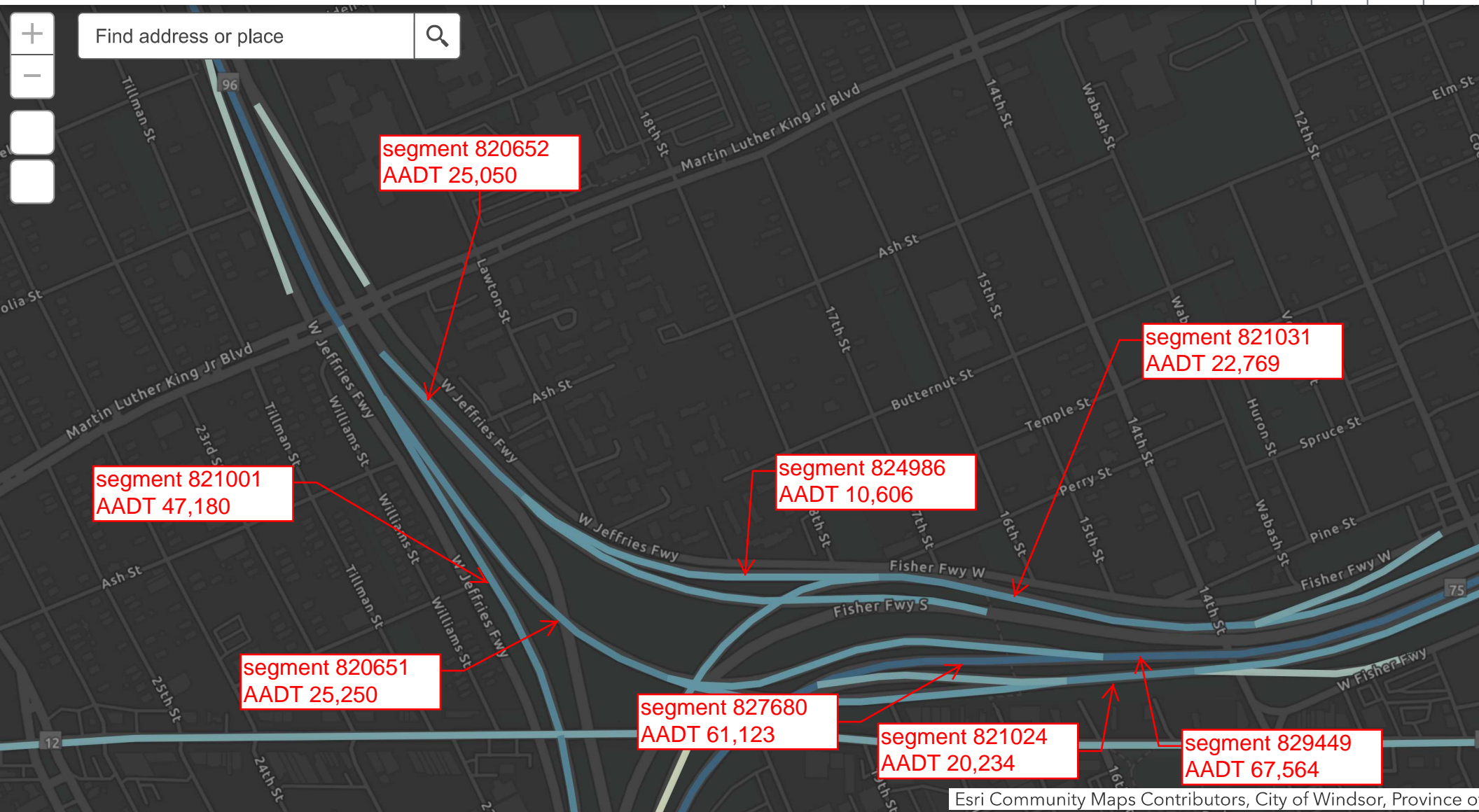
Phase I noise assessment west-east profile







Map navigation controls: zoom in (+), zoom out (-), and a search bar with the text "Find address or place" and a magnifying glass icon.



Esri Community Maps Contributors, City of Windsor, Province of Ontario

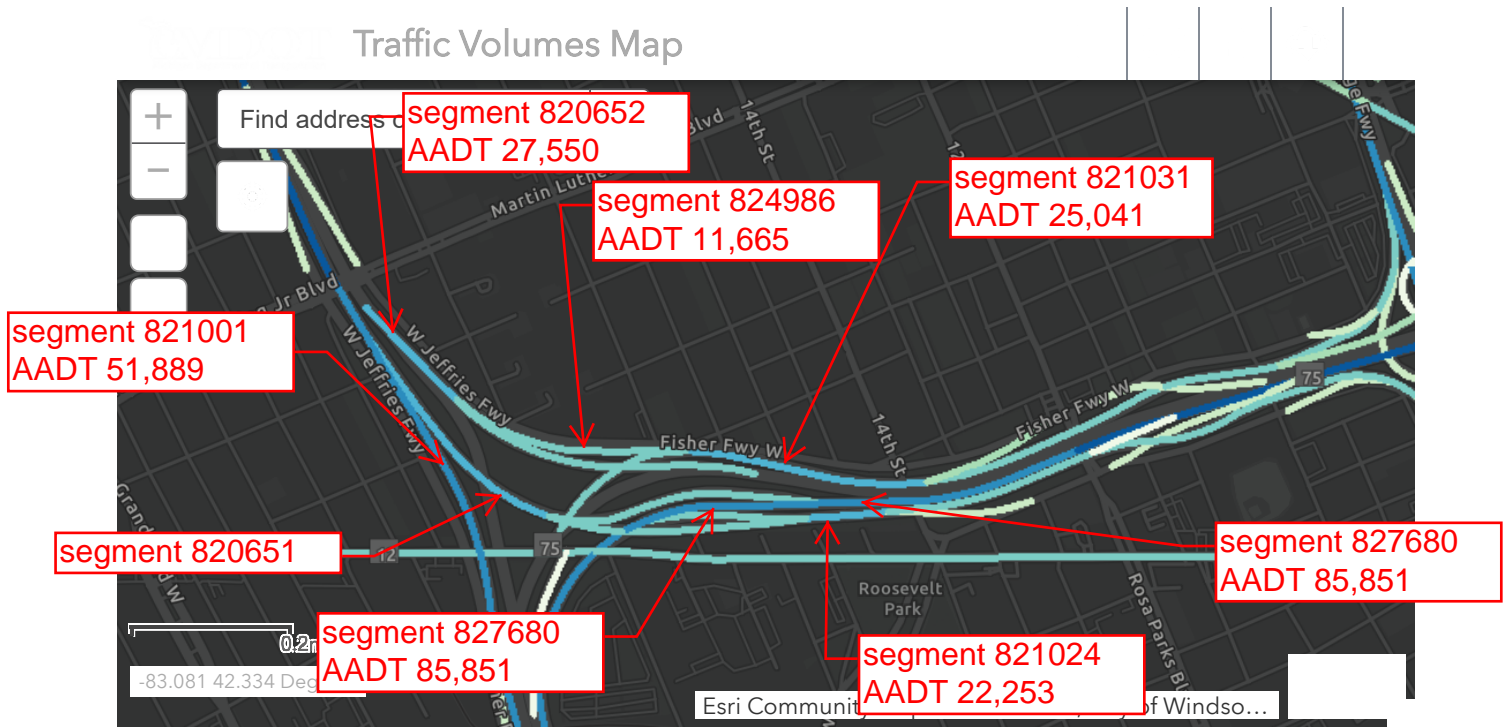




MDOT / MAPS

Annual Average Daily Traffic (AADT) Map

Traffic Volumes Map



[Open map in new window](#)

Annual Average Daily Traffic (AADT) is an estimated mean daily traffic volume. Commercial Annual Average Daily Traffic (CAADT) is an estimated mean daily commercial traffic volume. Traffic counts are taken throughout the year on the Trunkline and Non-trunkline federal-aid (NTFA) routes throughout Michigan using continuous count sites and short count sites. MDOT actively works with cities, counties, Metropolitan Planning Organizations (MPOs), Regional Planning Associations (RPAs), and MDOT to collect and analyze traffic count data. The AADTs are reported annually to the Federal Highway Administration (FHWA) as part of the Highway Performance Monitoring System (HPMS).

- [View the ADT Map Archives](#)
- [View Traffic Counts & ADT Reports](#)
- [AADT CAADT Download](#)

[Home \(/\)](#) > [Programs \(/programs/\)](#) > [Environmental Review \(/programs/environmental-review/\)](#) > [DNL Calculator](#)

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	North Corktown Phase 1
Record Date	01/20/2021
User's Name	Envirologic - Brad Yocum

Road # 1 Name:	I-96 WB/I-75 SB
-----------------------	-----------------

Road #1

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	1400	1400	1400
Distance to Stop Sign			
Average Speed	75	65	65

Average Daily Trips (ADT)	25000	500	2500
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	53	44	57
Calculate Road #1 DNL	59	Reset	

Road # 2 Name: I-96 EB/I-75 NB

Road #2

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	1680	1680	1680
Distance to Stop Sign			
Average Speed	75	65	65
Average Daily Trips (ADT)	75282	1718	8900
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	56	49	62
Calculate Road #2 DNL	63	Reset	

Road # 3 Name: EB I-96 to SB I-75

Road #3

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	2000	2000	2000
Distance to Stop Sign			

Average Speed	<input type="text" value="75"/>	<input type="text" value="65"/>	<input type="text" value="65"/>
Average Daily Trips (ADT)	<input type="text" value="45760"/>	<input type="text" value="1040"/>	<input type="text" value="5200"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text" value="0"/>
Vehicle DNL	<input type="text" value="53"/>	<input type="text" value="45"/>	<input type="text" value="58"/>
<input type="button" value="Calculate Road #3 DNL"/>	<input type="text" value="60"/>	<input type="button" value="Reset"/>	

Road # 4 Name:

Road #4

Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	<input type="text" value="1750"/>	<input type="text" value="1750"/>	<input type="text" value="1750"/>
Distance to Stop Sign	<input type="text"/>	<input type="text"/>	<input type="text"/>
Average Speed	<input type="text" value="75"/>	<input type="text" value="65"/>	<input type="text" value="65"/>
Average Daily Trips (ADT)	<input type="text" value="24244"/>	<input type="text" value="551"/>	<input type="text" value="2755"/>
Night Fraction of ADT	<input type="text" value="15"/>	<input type="text" value="15"/>	<input type="text" value="15"/>
Road Gradient (%)	<input type="text"/>	<input type="text"/>	<input type="text" value="0"/>
Vehicle DNL	<input type="text" value="51"/>	<input type="text" value="43"/>	<input type="text" value="56"/>
<input type="button" value="Calculate Road #4 DNL"/>	<input type="text" value="58"/>	<input type="button" value="Reset"/>	

Airport Noise Level

Loud Impulse Sounds? Yes No

Combined DNL for all Road and Rail sources	66
Combined DNL including Airport	66
Site DNL with Loud Impulse Sound	

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 \(/resource/3822/day-night-noise-level-assessment-tool-user-guide/\)](/resource/3822/day-night-noise-level-assessment-tool-user-guide/)

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

[Home \(/\)](#) > [Programs \(/programs/\)](#) > [Environmental Review \(/programs/environmental-review/\)](#) > DNL Calculator

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

North Corktown

Record Date

08/22/2023

User's Name

P. Jackson - Fishbeck

Road # 1 Name:

I-75

Road #1

Vehicle Type

Cars

Medium Trucks

Heavy Trucks

Effective Distance

1500

1500

1500

Distance to Stop Sign

Average Speed

75

65

65

Average Daily Trips (ADT)

64026

3462

7221

Night Fraction of ADT

15

15

15

Road Gradient (%)

0

Vehicle DNL

56

52

62

Calculate Road #1 DNL

63

Reset

Road # 2 Name:

I-96

Road #2

Vehicle Type

Cars

Medium Trucks

Heavy Trucks

Effective Distance	2000	2000	2000
Distance to Stop Sign			
Average Speed	75	65	65
Average Daily Trips (ADT)	52928	1295	6474
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	54	46	59
Calculate Road #2 DNL	60	Reset	

Airport Noise Level

Loud Impulse Sounds? Yes No

Combined DNL for all Road and Rail sources

Combined DNL including Airport

Site DNL with Loud Impulse Sound

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/>)

[Home \(/\)](#) > [Programs \(/programs/\)](#) > [Environmental Review \(/programs/environmental-review/\)](#) > BPM Calculator

Barrier Performance Module

This module provides to the user a measure on the barrier's effectiveness on noise reduction. A list of the input/output variables and their definitions, as well as illustrations of different scenarios are provided.

Calculator

[View Day/Night Noise Level Calculator \(/programs/environmental-review/dnl-calculator/\)](#)

[View Descriptions of the Input/Output variables.](#)

Note: Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the Input and Output variables with the mouse.

WARNING: If there is direct line-of-sight between the Source and the Observer, the module will report erroneous attenuation. "Direct line-of-sight" means if the 5' tall Observer can see the noise Source (cars, trucks, trains, etc.) over the Barrier (wall, hill/excavation, building, etc.), the current version of Barrier Performance Module will not accurately calculate the attenuation provided. In this instance, there is unlikely to be any appreciable attenuation.

Note: Barrier height must block the line of sight

Input Data

H	<input type="text" value="601"/>	R ¹	<input type="text" value="134"/>
S	<input type="text" value="584"/>	D ¹	<input type="text" value="1366"/>
O	<input type="text" value="619"/>	α	<input type="text" value="180"/>

Output Data

h	<input type="text" value="14"/>	R	<input type="text" value="134"/>
D	<input type="text" value="1366"/>	FS	<input type="text" value="7.6115"/>

Reduction From Barrier (dB):

Note: If you have separate Road and Rail DNL values, please enter the values below to calculate the new combined Road/Rail DNL :

Road DNL:

66

Rail DNL:

Combined Road/Rail DNL with Barrier Reduction:

58.3885

Input/Output Variables

Input Variables

The following variables and definitions from the barrier being assessed are the input required for the web-based barrier performance module:

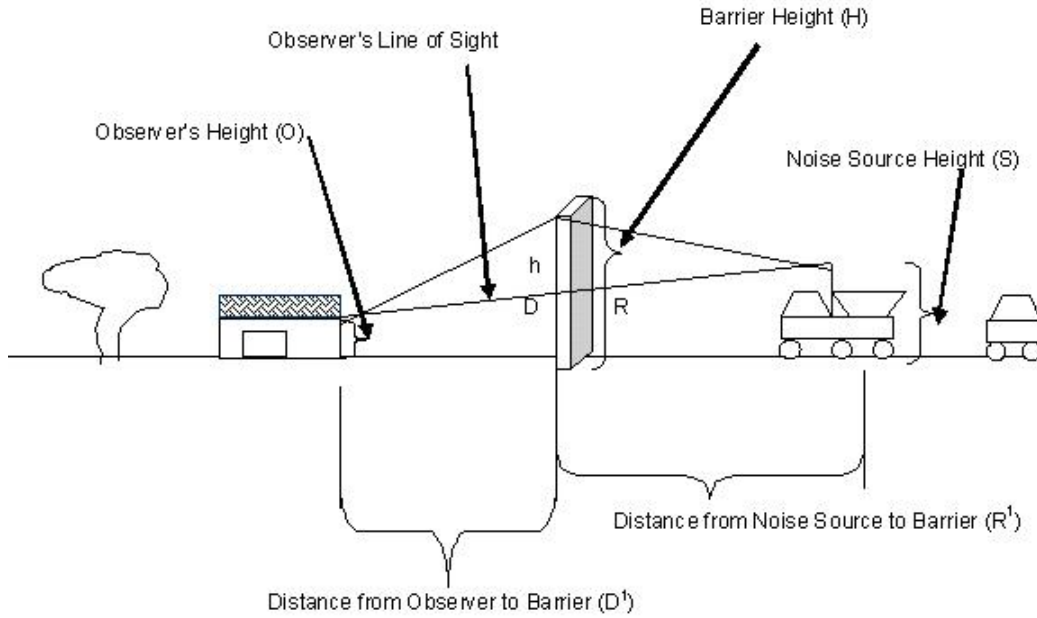
- H = Barrier Height
- S = Noise Source Height
- O = Observer Height (known as the receiver)
- R^1 = Distance from Noise Source to Barrier
- D^1 = Distance from the Observer to the Barrier
- α = Line of sight angle between the Observer and the Noise Source, subtended by the barrier at observer's location

Output Variables

Definitions of the output variables from the mitigation module of the Day/Night Noise Level Assessment Tools as part of the Assessment Tools for Environmental Compliance:

- h = The shortest distance from the barrier top to the line of sight from the Noise source to the Observer.
- R = Slant distance along the line of sight from the Barrier to the Noise Source
- D = Slant distance along the line of sight from the Barrier to the Observer

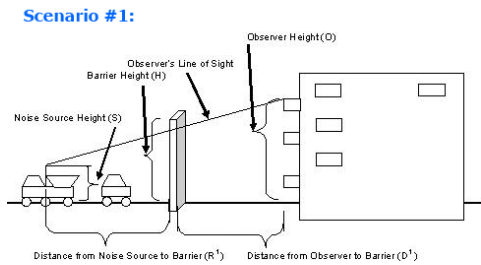
The "actual barrier performance for barriers of finite length" is noted on the worksheets(in the Guidebook) as **FS**.



Barrier Implementation Scenarios

Locate the cursor on the following thumbnails to enlarge the respective scenario as implementation examples of the barrier performance module.

Scenario #1:



Noise receiver at a higher elevation than the noise source and a man-made noise barrier in between the receiver and the source.

Noise receiver at a higher elevation than the noise source and a man-made noise barrier in between the receiver and the source.

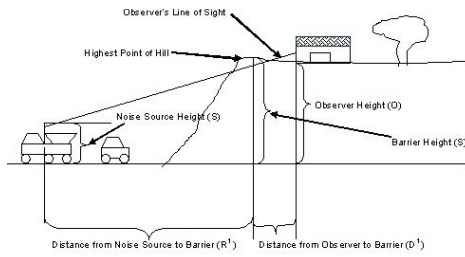
(<https://www.hudexchange.info/resources/documents/Barrier-Performance-Module-Barrier-Implementation-Scenario-1.gif>)

view larger version of image (/resource/3841/barrier-performance-module-bpm-barrier-implementation-scenarios/)

Scenario #2:

Noise receiver at a higher elevation than the noise source and a natural barrier (hill) between the receiver and the source.

Scenario #2:



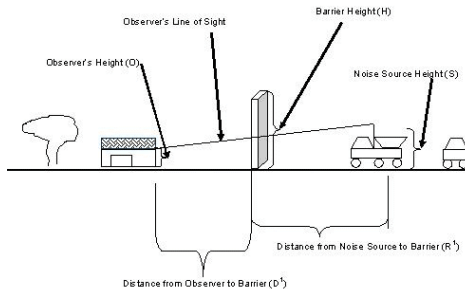
Noise receiver at a higher elevation than the noise source and a natural barrier (hill) between the receiver and the source.

(<https://www.hudexchange.info/resources/documents/Barrier-Performance-Module-Barrier-Implementation-Scenario-2.gif>)

view larger version of image (/resource/3841/barrier-performance-module-bpm-barrier-implementation-scenarios/)

Scenario #3:

Scenario #3:



Noise receiver at almost the same elevation of the noise source and a man-made noise barrier between the receiver and the source.

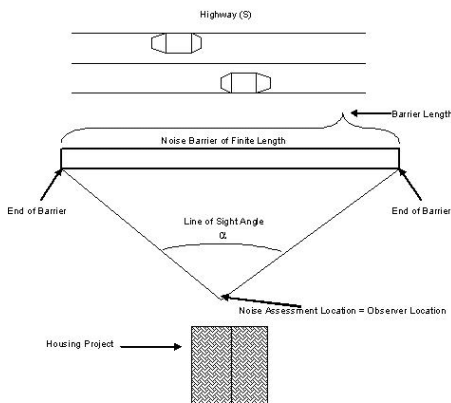
Noise receiver at almost the same elevation of the noise source and a man-made noise barrier between the receiver and the source.

(<https://www.hudexchange.info/resources/documents/Barrier-Performance-Module-Barrier-Implementation-Scenario-3.gif>)

view larger version of image (/resource/3841/barrier-performance-module-bpm-barrier-implementation-scenarios/)

Scenario #4:

Scenario #4:



A noise barrier of finite length between a noise source and a receiver. This top view illustrates the angle α , subtended by the barrier at the observer's location.

A noise barrier of finite length between a noise source and a receiver. This top view illustrates the angle α , subtended by the barrier at the observer's location.

(<https://www.hudexchange.info/resources/documents/Barrier-Performance-Module-Barrier-Implementation-Scenario-4.gif>)

view larger version of image (/resource/3841/barrier-performance-module-bpm-barrier-implementation-scenarios/)

implementation-scenarios/)

Contents

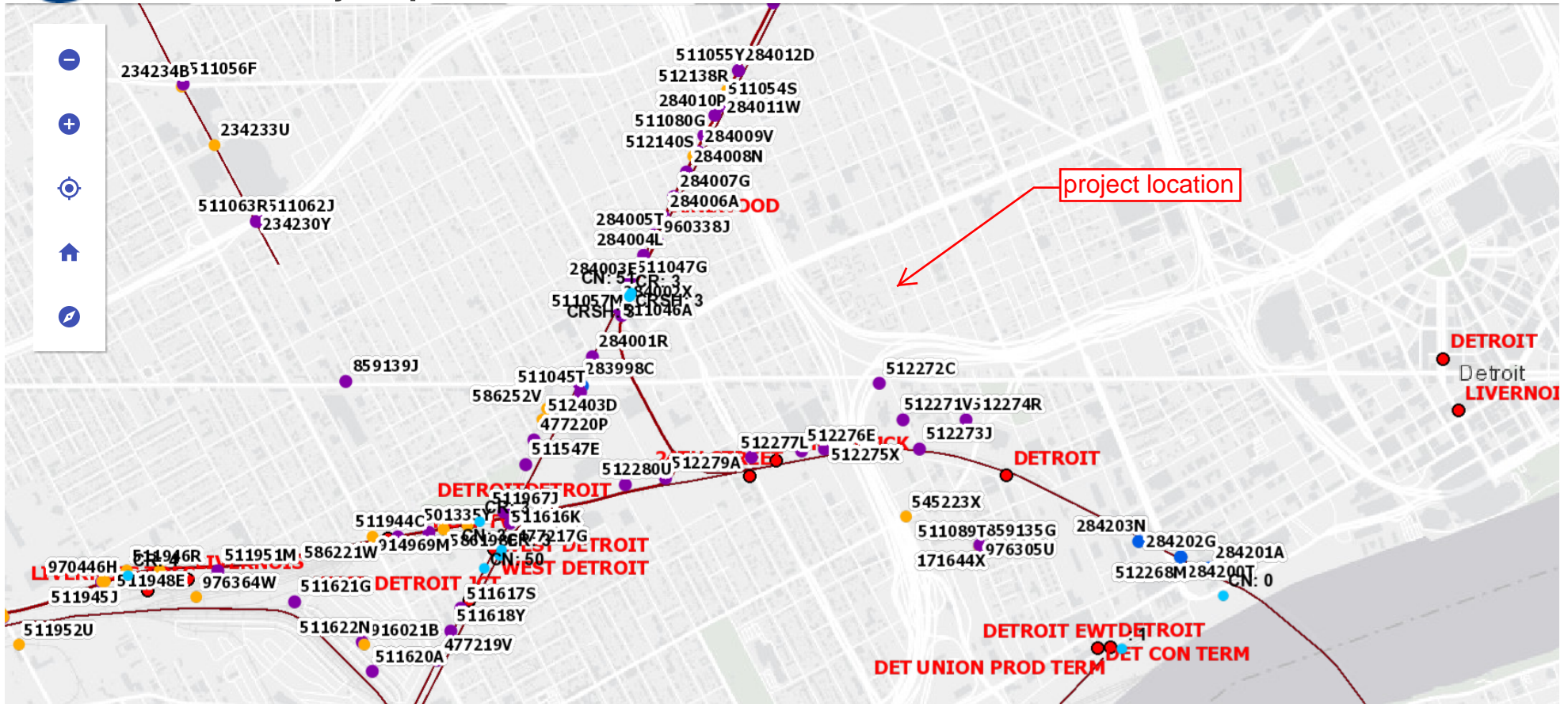
Calculator

Input/Output Variables

Barrier Implementation Scenarios



FRA - Safety Map



Find address or place




Airport Noise Worksheet

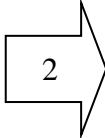
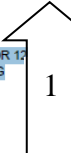
Use this worksheet to identify information needed to evaluate a site's exposure to aircraft noise.

Name and Location of Project: **Ash and 14th St., Detroit, MI** Date: **12/07/22**
Name of Airport: **Coleman A. Young** Person completing worksheet: **Brad Yocum / Envirollogic Airport**

1. Determine if the proposed site/project is within 15 miles of a civil or military airport.
 - No. Attach a map identifying the location of the proposed project site and the location of any airports. This worksheet is not required.
 - Yes. Attach a map identifying the location of the proposed project site and the location of any airports. Continue

2. Determine the number of operations at the airport by:
 - Going to: <http://www.gcr1.com/5010web/>
 - Type in the name of the city press search
 - Find your airport.
 - Open the report under "Print 5010"
 - Complete section 3 below by using the information found in the report (see arrow #1 in the example below)

 <p>U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION</p>	<p>AIRPORT MASTER RECORD</p>	<p>PRINT DATE: 10/30/2012 AFD EFF 09/20/2012 Form Approved OMB 2120-0015</p>
<p>> 1 ASSOC CITY: KENAI 4 STATE: AK LOC ID: ENA FAA SITE NR: 50410.*A > 2 AIRPORT NAME: KENAI MUNI 5 COUNTY: KENAI-COOK INLET AK 3 CBD TO AIRPORT (NM): 00 N 6 REGION/ADO: AAL/NONE 7 SECT AERO CHT: ANCHORAGE</p>		
<p>GENERAL SERVICES BASED AIRCRAFT</p>		
<p>10 OWNERSHIP: PU 11 OWNER: CITY OF KENAI 12 ADDRESS: 210 FIDALGO ST KENAI, AK 99611 13 PHONE NR: 907-283-7951 14 MANAGER: MARY BONDURANT 15 ADDRESS: 305 N WILLOW SUITE 200 KENAI, AK 99611 16 PHONE NR: 907-283-7951 > 17 ATTENDANCE SCHEDULE: ALL MON-FRI 0800-1700</p> <p>18 AIRPORT USE: PUBLIC 19 ARPT LAT: 60-34-23.9044N ESTIMATED 20 ARPT LONG: 151-14-41.2000W 21 ARPT ELEV: 99.0 SURVEYED 22 ACREAGE: 1200 23 RIGHT TRAFFIC: 01L, 19W > 24 NON-COMM LANDING: NO</p>	<p>70 FUEL: 100LL A 71 AIRFRAME RPRS: MINOR 72 PWR PLANT RPRS: MINOR 73 BOTTLE OXYGEN: NONE 74 BULK OXYGEN: NONE 75 TSNT STORAGE: TIE 76 OTHER SERVICES: CARGO, CHTR, INSTR, RNTL</p> <p>FACILITIES 80 ARPT BCN: CG 81 ARPT LGT SKED: SEE RMK 82 UNICOM: 83 WIND INDICATOR: YES-L 84 SEGMENTED CIRCLE: YES 85 CONTROL TWR: YES 86 FSS: KENAI 87 FSS ON ARPT: YES 88 FSS PHONE NR: 800-478-3576</p>	<p>90 SINGLE ENG: 54 91 MULTI ENG: 7 92 JET: 0 TOTAL: 61</p> <p>93 HELICOPTERS: 0 94 GLIDERS: 0 95 MILITARY: 0 96 ULTRA-LIGHT: 0</p> <p>OPERATIONS 100 AIR CARRIER: 1,045 102 AIR TAXI: 23,263 103 G A LOCAL: 6,326 104 G A ITNRNT: 6,429 105 MILITARY: 3,115 TOTAL: 40,178</p> <p>OPERATIONS FOR 12 MONTHS ENDING 12/01/2011</p>

3. Determine if the annual number of operations for air carriers #100, air taxis #102, military #105, and general aviation #103 plus #104 exceeds thresholds.

Annual air carrier operations	<u>47</u>	Is this 9000 or more	Yes ___ No <u>X</u>
Annual air taxi operations	<u>1,069</u>	Is this 18,000 or more	Yes ___ No <u>X</u>
Annual military operations	<u>190</u>	Is this 18,000 or more	Yes ___ No <u>X</u>
Annual general aviation operations	<u>31,659</u>	Is this 72000 or more	Yes ___ No <u>X</u>

1. If you answer “No” on each of the questions above, it is assumed that the noise attributed to the airplanes will not extend beyond the boundaries of the airport. Maintain the documentation in your Environmental Review Record. You are finished with the evaluation of airport noise for this airport. If you have marked any question in #3 with “Yes,” continue to 5.
2. Contact the airport manager, (see arrow #2 above) and ask them if the airport has noise contour maps. Are contour maps available?
 - Yes. Locate your project on the noise contour map. If there are no roads or railroads that are being considered for noise, utilize the information from the contour map to determine if the site is acceptable. If roads or railroads are being considered input the information obtained from the airport noise contours, along with the road and railroad information in the HUD [Noise Assessment Guidelines](#) (NAG) or the online tool at <https://www.hudexchange.info/environmental-review/dnl-calculator>.
 - No. Construct the approximate DNL contours by using the guidance on page 52 and 53 of the [NAG](#). You will need to obtain the following information from the airport: 1). The number of nighttime jet operations (10pm to 7 am) 2). The number of daytime jet operations (7 am to 10 pm) 3). The flight paths of the major runways. 4). Any available information about expected changes in airport traffic (e.g. will the number of operations increase or decrease in the next 10 to 15 years).

Contact your HUD Representative if you need assistance

Paperwork Reduction Act Statement

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0015. Public reporting for this collection of information is estimated to be approximately 60 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, completing and reviewing the collection of information. All responses to this collection of information are mandatory per 49 USC 329(b) and U.S. Code Title 49 Section 47130. The data is critical to aviation safety and will be published in flight information handbooks and charts for pilot use. The data is also necessary for airspace studies conducted under 49 USC 329(b). The data is public in nature and is the agency's source for the information used in aeronautical charts and flight information publications. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

OMB CONTROL NUMBER: 2120-0015
EXPIRATION DATE: 4/30/2023



> 1 ASSOC CITY: DETROIT 4 STATE: MI LOC ID: DET FAA SITE NR: 09725.*A
> 2 AIRPORT NAME: COLEMAN A YOUNG MUNI 5 COUNTY: WAYNE, MI
3 CBD TO AIRPORT (NM): 5 NE 6 REGION/ADO: AGL /DET 7 SECT AERO CHT: DETROIT

GENERAL

10 OWNERSHIP: PUBLIC
> 11 OWNER: CITY OF DETROIT
> 12 ADDRESS: 11499 CONNER ST
DETROIT, MI 48213-1234
> 13 PHONE NR: 313-628-2144
> 14 MANAGER: JASON WATT
> 15 ADDRESS: 11499 CONNER ST
DETROIT, MI 48213-1234

> 16 PHONE NR: 313-628-2144

> 17 ATTENDANCE SCHEDULE:
MONTHS DAYS HOURS
ALL ALL ALL

18 AIRPORT USE: PUBLIC
19 ARPT LAT: 42-24-33.579N ESTIMATED
20 ARPT LONG: 83-0-36.626W
21 ARPT ELEV: 625.8 SURVEYED
22 ACREAGE: 264
> 23 RIGHT TRAFFIC: NO
> 24 NON-COMM LANDING: YES
25 NPIAS/FED AGREEMENTS: NGY
> 26 FAR 139 INDEX: /

SERVICES

> 70 FUEL: 100LL A
> 71 AIRFRAME RPRS:
> 72 PWR PLANT RPRS:
> 73 BOTTLE OXYGEN: HIGH
> 74 BULK OXYGEN: HIGH/LOW
75 TSNT STORAGE: HGR
76 OTHER SERVICES: AFRT,AMB,BCHGR,
CARGO,CHTR,GLD

BASED AIRCRAFT

90 SINGLE ENG: 53
91 MULTI ENG: 9
92 JET: 9
93 HELICOPTERS: 2
TOTAL: 73
94 GLIDERS: 0
95 MILITARY: 0
96 ULTRA-LIGHT: 1

FACILITIES

> 80 ARPT BCN: CG
> 81 ARPT LGT SKED: SS-SR
BCN LGT SKED:
> 82 UNICOM: 122.950
> 83 WIND INDICATOR: YES-L
84 SEGMENTED CIRCLE: NONE
85 CONTROL TWR: YES
86 FSS: LANSING
87 FSS ON ARPT: NO
88 FSS PHONE NR:
89 TOLL FREE NR: 1-800-WX-BRIEF

OPERATIONS

100 AIR CARRIER: 4
102 AIR TAXI: 2,114
103 G A LOCAL: 15,736
104 G A ITRNRT: 16,149
105 MILITARY: 180
TOTAL: 34,183
OPERATIONS FOR 12
MONTHS ENDING 12/31/2018

RUNWAY DATA

	07/25	15/33
> 30 RUNWAY IDENT:	3,712	5,092
> 31 LENGTH:	100	100
> 32 WIDTH:	ASPH-F	ASPH-F
> 33 SURF TYPE-COND:		GRVD
> 34 SURF TREATMENT:	12.5	75.0
35 GROSS WT: S		135.0
36 (IN THSDS) D		
37 2D		
38 2D/2DS		
> 39 PCN:	////	////

LIGHTING/APCH AIDS

	07/25	15/33
> 40 EDGE INTENSITY:	MED	HIGH
> 42 RWY MARK TYPE-COND:	BSC- G / BSC- G	PIR- G / PIR- G
> 43 VGS:	/ P4L	V4R / P4L
44 THR CROSSING HGT:	/ 52	57 / 49
45 VISUAL GLIDE ANGLE:	/ 3.00	3.00 / 3.00
> 46 CNTRLN-TDZ:	N - N / N - N	- N / - N
> 47 RVR-RVV:	- N / - N	- / -
> 48 REIL:	N / N	Y / Y
> 49 APCH LIGHTS:	/	/

OBSTRUCTION DATA

	07/25	15/33
50 FAR 77 CATEGORY:	A(V) / A(V)	PIR / PIR
> 51 DISPLACED THR:	725 /	/
> 52 CTLG OBSTN:	RR / TREES	TREES / BRUSH
> 53 OBSTN MARKED/LGTD:	/	/
> 54 HGT ABOVE RWY END:	29 / 45	29 / 16
> 55 DIST FROM RWY END:	302 / 1,290	200 / 364
> 56 CNTRLN OFFSET:	20R / 0B	302R / 280L
57 OBSTN CLNC SLOPE:	3:1 / 24:1	0:1 / 10:1
58 CLOSE-IN OBSTN:	Y / N	Y / N

DECLARED DISTANCES

	07/25	15/33
> 60 TAKE OFF RUN AVBL (TORA):	/	/
> 61 TAKE OFF DIST AVBL (TODA):	/	/
> 62 ACLT STOP DIST AVBL (ASDA):	/	/
> 63 LNDG DIST AVBL (LDA):	/	/

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS:

- A 024 LNDG FEE FOR ACFT 6000 LBS OR MORE.
- A 043 RWY 33 U/S INDEFLY.
- A 057 RWY 07 APCH RATIO 23:1 TO DSPLCD THR, +80 FT TREES 1905 FT DIST.
- A 058 RWY 07 PIPE LN 200 FT FM THR, FENCE 88 FT FM THR, RAILROAD 0-200 FT FM THR.
- A 058 RWY 15 FENCE; TREES 0-200 FT FM THLD 350 FT R OF CNTRLN.
- A 070 FUEL SYS ICE INHIBITOR AVBL UPON REQ.
- A 110-001 LOAD/UNLOADING CLASS A XPLOS OR POISONS NOT PERMITTED, PPR FOR CLASS B & C XPLOS.

111 INSPECTOR: (S) 112 LAST INSP: 10/28/2019 113 LAST INFO REQ:



> 1 ASSOC CITY: DETROIT 4 STATE: MI LOC ID: DET FAA SITE NR: 09725.*A
> 2 AIRPORT NAME: COLEMAN A YOUNG MUNI 5 COUNTY: WAYNE, MI
3 CBD TO AIRPORT (NM): 5 NE 6 REGION/ADO: AGL /DET 7 SECT AERO CHT: DETROIT

GENERAL

10 OWNERSHIP: PUBLIC
> 11 OWNER: CITY OF DETROIT
> 12 ADDRESS: 11499 CONNER ST
DETROIT, MI 48213-1234
> 13 PHONE NR: 313-628-2144
> 14 MANAGER: JASON WATT
> 15 ADDRESS: 11499 CONNER ST
DETROIT, MI 48213-1234

> 16 PHONE NR: 313-628-2144

> 17 ATTENDANCE SCHEDULE:

MONTHS	DAYS	HOURS
ALL	ALL	ALL

18 AIRPORT USE: PUBLIC
19 ARPT LAT: 42-24-33.579N ESTIMATED
20 ARPT LONG: 83-0-36.626W
21 ARPT ELEV: 625.8 SURVEYED
22 ACREAGE: 264
> 23 RIGHT TRAFFIC: NO
> 24 NON-COMM LANDING: YES
25 NPIAS/FED AGREEMENTS: NGY
> 26 FAR 139 INDEX: /

SERVICES

> 70 FUEL: 100LL A
> 71 AIRFRAME RPRS:
> 72 PWR PLANT RPRS:
> 73 BOTTLE OXYGEN: HIGH
> 74 BULK OXYGEN: HIGH/LOW
75 TSNT STORAGE: HGR
76 OTHER SERVICES: AFRT,AMB,BCHGR,
CARGO,CHTR,GLD

BASED AIRCRAFT

90 SINGLE ENG:	53
91 MULTI ENG:	9
92 JET:	9
93 HELICOPTERS:	2
TOTAL:	73
94 GLIDERS:	0
95 MILITARY:	0
96 ULTRA-LIGHT:	1

FACILITIES

> 80 ARPT BCN: CG
> 81 ARPT LGT SKED: BCN LGT SKED: SS-SR
> 82 UNICOM: 122.950
> 83 WIND INDICATOR: YES-L
84 SEGMENTED CIRCLE: NONE
85 CONTROL TWR: YES
86 FSS: LANSING
87 FSS ON ARPT: NO
88 FSS PHONE NR:
89 TOLL FREE NR: 1-800-WX-BRIEF

OPERATIONS

100 AIR CARRIER:	4
102 AIR TAXI:	2,114
103 G A LOCAL:	15,736
104 G A ITRNRT:	16,149
105 MILITARY:	180
TOTAL:	34,183

OPERATIONS FOR 12
MONTHS ENDING 12/31/2018

RUNWAY DATA

> 30 RUNWAY IDENT:
> 31 LENGTH:
> 32 WIDTH:
> 33 SURF TYPE-COND:
> 34 SURF TREATMENT:
35 GROSS WT: S
36 (IN THSDS) D
37 2D
38 2D/2DS
> 39 PCN:

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:
> 42 RWY MARK TYPE-COND:
> 43 VGSi:
44 THR CROSSING HGT:
45 VISUAL GLIDE ANGLE:
> 46 CNTRLN-TDZ:
> 47 RVR-RVV:
> 48 REIL:
> 49 APCH LIGHTS:

OBSTRUCTION DATA

50 FAR 77 CATEGORY:
> 51 DISPLACED THR:
> 52 CTLG OBSTN:
> 53 OBSTN MARKED/LGTD:
> 54 HGT ABOVE RWY END:
> 55 DIST FROM RWY END:
> 56 CNTRLN OFFSET:
57 OBSTN CLNC SLOPE:
58 CLOSE-IN OBSTN:

DECLARED DISTANCES

> 60 TAKE OFF RUN AVBL (TORA):
> 61 TAKE OFF DIST AVBL (TODA):
> 62 ACLT STOP DIST AVBL (ASDA):
> 63 LNDG DIST AVBL (LDA):

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS:

A 110-002 DUE NOISE ABATEMENT RQRMTS JETS & ACFT OVER 12500 GWT MUST USE RY 15/33 EXCP WHEN WINDS EXCEED 25 KTS THEN RY 07/25 AVBL.
A 110-003 BIRDS ON & INVOF ARPT.
A 110-005 UNLIGHTED TWR 275 FT AGL 1 MILE WSW.

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DETROIT, MI 48213-1234

> 16 PHONE NR: 313-628-2144

> 17 ATTENDANCE SCHEDULE:
MONTHS DAYS HOURS
ALL ALL ALL

18 AIRPORT USE: PUBLIC
19 ARPT LAT: 42-24-33.579N ESTIMATED
20 ARPT LONG: 83-0-36.626W
21 ARPT ELEV: 625.8 SURVEYED
22 ACREAGE: 264
> 23 RIGHT TRAFFIC: NO
> 24 NON-COMM LANDING: YES
25 NPIAS/FED AGREEMENTS: YES / NGY
> 26 FAR 139 INDEX: /

SERVICES

> 70 FUEL: 100LL A
> 71 AIRFRAME RPRS:
> 72 PWR PLANT RPRS:
> 73 BOTTLE OXYGEN: HIGH
> 74 BULK OXYGEN: HIGH/LOW
75 TSNT STORAGE: HGR
76 OTHER SERVICES: AFRT,AMB,CARGO,
CHTR,GLD,INSTR

BASED AIRCRAFT

90 SINGLE ENG: 47
91 MULTI ENG: 7
92 JET: 5
93 HELICOPTERS: 5
TOTAL: 64
94 GLIDERS: 0
95 MILITARY: 0
96 ULTRA-LIGHT: 1

FACILITIES

> 80 ARPT BCN: WG
> 81 ARPT LGT SKED: BCN LGT SKED: SS-SR
> 82 UNICOM: 122.950
> 83 WIND INDICATOR: YES-L
84 SEGMENTED CIRCLE: NONE
85 CONTROL TWR: YES
86 FSS: LANSING
87 FSS ON ARPT: NO
88 FSS PHONE NR:
89 TOLL FREE NR: 1-800-WX-BRIEF

OPERATIONS

100 AIR CARRIER: 47
102 AIR TAXI: 1,069
103 G A LOCAL: 9,979
104 G A ITRNNT: 21,680
105 MILITARY: 190
TOTAL: 32,965

OPERATIONS FOR 12 MONTHS ENDING 12/31/2021

RUNWAY DATA

> 30 RUNWAY IDENT:		15/33	07/25
> 31 LENGTH:		5,092	3,712
> 32 WIDTH:		100	100
> 33 SURF TYPE-COND:		ASPH-G	ASPH-G
> 34 SURF TREATMENT:		GRVD	NONE
35 GROSS WT: S		75.0	12.5
36 (IN THSDS) D		135.0	
37 2D			
38 2D/2DS			

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:	HIGH	MED
> 42 RWY MARK TYPE-COND:	PIR- G / PIR- G	BSC- G / BSC- G
> 43 VGSI:	V4R / P4L	/ P4L
44 THR CROSSING HGT:	57 / 49	/ 52
45 VISUAL GLIDE ANGLE:	3.00 / 3.00	/ 3.00
> 46 CNTRLN-TDZ:	- N / - N	N - N / N - N
> 47 RVR-RVV:	- / -	- N / - N
> 48 REIL:	Y / Y	N / N
> 49 APCH LIGHTS:	/	/

OBSTRUCTION DATA

50 FAR 77 CATEGORY:	PIR / PIR	A(V) / A(V)
> 51 DISPLACED THR:	/	725 /
> 52 CTLG OBSTN:	TREES / TREES	TREES /
> 53 OBSTN MARKED/LGTD:	/	/
> 54 HGT ABOVE RWY END:	11 / 44	35 /
> 55 DIST FROM RWY END:	228 / 1,007	314 / 0
> 56 CNTRLN OFFSET:	242R / 350L	0B /
57 OBSTN CLNC SLOPE:	2:1 / 18:1	3:1 / 20:1
58 CLOSE-IN OBSTN:	N / N	Y / N

DECLARED DISTANCES

> 60 TAKE OFF RUN AVBL (TORA):	/	/
> 61 TAKE OFF DIST AVBL (TODA):	/	/
> 62 ACLT STOP DIST AVBL (ASDA):	/	/
> 63 LNDG DIST AVBL (LDA):	/	/

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> 110 REMARKS:

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- A 043 RWY 33 PAPI UNUSBL BYD 9 DEGS RIGHT OF CNTRLN.
- A 057 RWY 07 APCH RATIO 20:1 TO DTHR.
- A 058 RWY 07 TREES & BRUSH, 90 FT DIST; FENCE, 88 FT DIST; RLRD, 0-200 FT DIST.
- A 070 FUEL SYS ICE INHIBITOR AVBL UPON REQ.
- A 110-001 LOAD/UNLOADING CLASS A XPLOS OR POISONS NOT PERMITTED, PPR FOR CLASS B & C XPLOS.
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 > 16 PHONE NR: 313-628-2144
 > 17 ATTENDANCE SCHEDULE:

MONTHS	DAYS	HOURS
ALL	ALL	ALL

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 25 NPIAS/FED AGREEMENTS: YES / NGY
 > 26 FAR 139 INDEX: /

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 75 TSNT STORAGE: HGR
 76 OTHER SERVICES: AFRT,AMB,CARGO,
 CHTR,GLD,INSTR

BASED AIRCRAFT

90 SINGLE ENG:	47
91 MULTI ENG:	7
92 JET:	5
93 HELICOPTERS:	5
TOTAL:	64
94 GLIDERS:	0
95 MILITARY:	0
96 ULTRA-LIGHT:	1

FACILITIES

> 80 ARPT BCN: WG
 > 81 ARPT LGT SKED: BCN LGT SKED: SS-SR
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 > 83 WIND INDICATOR: YES-L
 84 SEGMENTED CIRCLE: NONE
 85 CONTROL TWR: YES
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105 MILITARY:	190
TOTAL:	32,965

OPERATIONS FOR 12
 MONTHS ENDING 12/31/2021

RUNWAY DATA

> 30 RUNWAY IDENT:
 > 31 LENGTH:
 > 32 WIDTH:
 > 33 SURF TYPE-COND:
 > 34 SURF TREATMENT:
 35 GROSS WT: S
 36 (IN THSDS) D
 37 2D
 38 2D/2DS
 > 39 PCN / PCR:

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:
 > 42 RWY MARK TYPE-COND:
 > 43 VGSi:
 44 THR CROSSING HGT:
 45 VISUAL GLIDE ANGLE:
 > 46 CNTRLN-TDZ:
 > 47 RVR-RVV:
 > 48 REIL:
 > 49 APCH LIGHTS:

OBSTRUCTION DATA

50 FAR 77 CATEGORY:
 > 51 DISPLACED THR:
 > 52 CTLG OBSTN:
 > 53 OBSTN MARKED/LGTD:
 > 54 HGT ABOVE RWY END:
 > 55 DIST FROM RWY END:
 > 56 CNTRLN OFFSET:
 57 OBSTN CLNC SLOPE:
 58 CLOSE-IN OBSTN:

DECLARED DISTANCES

> 60 TAKE OFF RUN AVBL (TORA):
 > 61 TAKE OFF DIST AVBL (TODA):
 > 62 ACLT STOP DIST AVBL (ASDA):
 > 63 LNDG DIST AVBL (LDA):

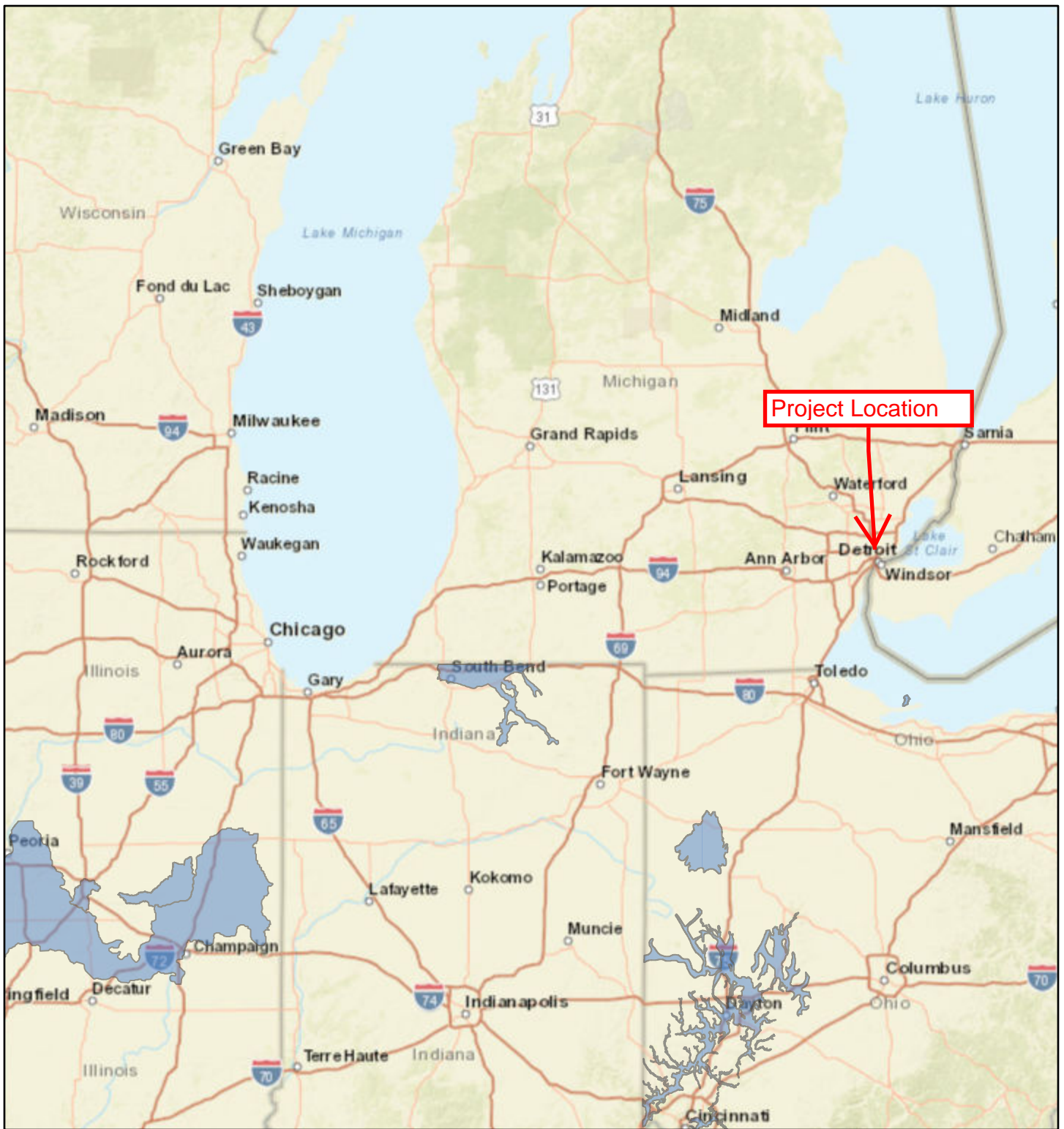
(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS:

A 110-003 LRG BIRDS ON & INVOLF ARPT.
 A 110-005 UNLIGHTED TWR 275 FT AGL 1 MILE WSW.

111 INSPECTOR: (S) 112 LAST INSP: 10/17/2022 113 LAST INFO RES:

ArcGIS Web AppBuilder

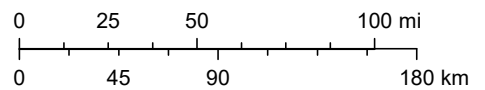


11/28/2022, 11:25:00 AM

 Sole_Source_Aquifers

verified no change
11-28-2022 and 8/21/23

1:4,622,324



Esri, HERE, Garmin, NGA, USGS, NPS



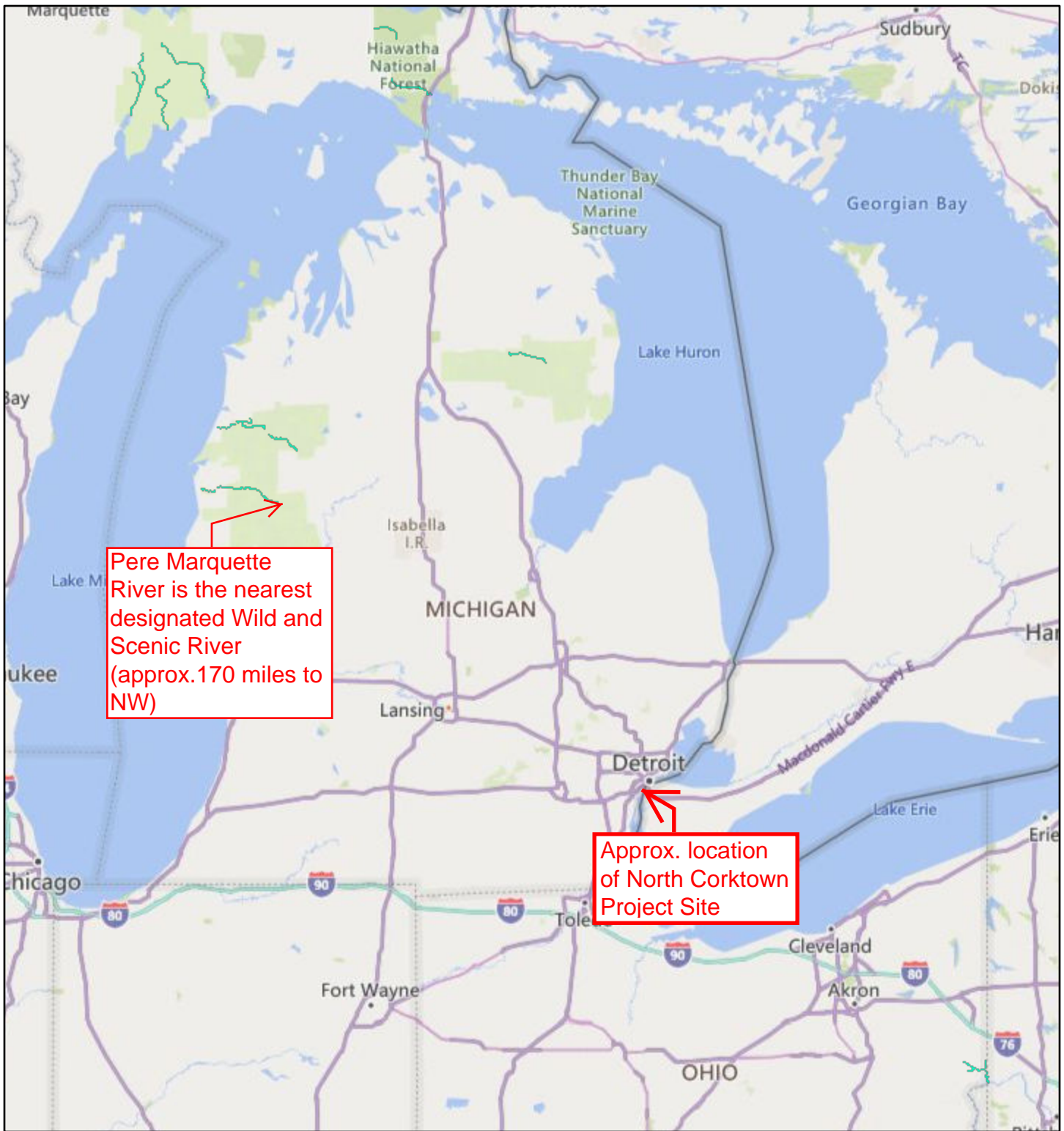
September 16, 2023

Wetlands

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

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Wild & Scenic Rivers

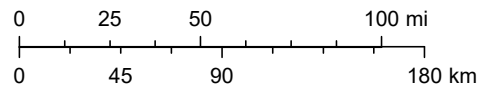


January 19, 2021

— Wild and Scenic Rivers

verified no change
11/28/2022 and
8/21/2023

1:4,622,324



Location: User-specified point center at 42.337591, -83.080089
 Ring (buffer): 1-miles radius
 Description: Corktown POA I

Summary of ACS Estimates		2016 - 2020
Population		10,768
Population Density (per sq. mile)		3,507
People of Color Population		8,459
% People of Color Population		79%
Households		5,393
Housing Units		6,516
Housing Units Built Before 1950		2,694
Per Capita Income		24,468
Land Area (sq. miles) (Source: SF1)		3.07
% Land Area		98%
Water Area (sq. miles) (Source: SF1)		0.05
% Water Area		2%

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	10,768	100%	373
Population Reporting One Race	10,484	97%	1,059
White	2,684	25%	280
Black	7,278	68%	345
American Indian	15	0%	40
Asian	143	1%	101
Pacific Islander	1	0%	11
Some Other Race	364	3%	282
Population Reporting Two or More Races	283	3%	139
Total Hispanic Population	1,002	9%	245
Total Non-Hispanic Population	9,766		
White Alone	2,309	21%	280
Black Alone	7,083	66%	345
American Indian Alone	7	0%	40
Non-Hispanic Asian Alone	143	1%	101
Pacific Islander Alone	0	0%	11
Other Race Alone	89	1%	273
Two or More Races Alone	136	1%	91
Population by Sex			
Male	5,016	47%	304
Female	5,752	53%	282
Population by Age			
Age 0-4	620	6%	148
Age 0-17	2,165	20%	167
Age 18+	8,603	80%	317
Age 65+	1,650	15%	193

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020

Location: User-specified point center at 42.337591, -83.080089
 Ring (buffer): 1-miles radius
 Description: Corktown POA I

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	7,632	100%	328
Less than 9th Grade	438	6%	179
9th - 12th Grade, No Diploma	954	13%	131
High School Graduate	1,829	24%	148
Some College, No Degree	1,774	23%	266
Associate Degree	668	9%	152
Bachelor's Degree or more	1,969	26%	237
Population Age 5+ Years by Ability to Speak English			
Total	10,148	100%	358
Speak only English	9,476	93%	325
Non-English at Home ¹⁺²⁺³⁺⁴	672	7%	181
¹ Speak English "very well"	493	5%	102
² Speak English "well"	113	1%	85
³ Speak English "not well"	61	1%	83
⁴ Speak English "not at all"	6	0%	25
³⁺⁴ Speak English "less than well"	67	1%	83
²⁺³⁺⁴ Speak English "less than very well"	179	2%	118
Linguistically Isolated Households*			
Total	94	100%	49
Speak Spanish	63	67%	48
Speak Other Indo-European Languages	0	0%	11
Speak Asian-Pacific Island Languages	9	10%	26
Speak Other Languages	22	24%	14
Households by Household Income			
Household Income Base	5,393	100%	267
< \$15,000	1,836	34%	183
\$15,000 - \$25,000	981	18%	119
\$25,000 - \$50,000	1,140	21%	263
\$50,000 - \$75,000	431	8%	103
\$75,000 +	1,005	19%	163
Occupied Housing Units by Tenure			
Total	5,393	100%	267
Owner Occupied	1,566	29%	180
Renter Occupied	3,826	71%	283
Employed Population Age 16+ Years			
Total	8,789	100%	328
In Labor Force	4,901	56%	279
Civilian Unemployed in Labor Force	584	7%	71
Not In Labor Force	3,888	44%	232

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of anyrace.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)

*Households in which no one 14 and over speaks English "very well" or speaks English only.

Location: User-specified point center at 42.337591, -83.080089

Ring (buffer): 1-miles radius

Description: Corktown POA I

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	11,594	100%	454
English	11,017	95%	454
Spanish	287	2%	78
French, Haitian, or Cajun	0	0%	59
German or other West Germanic	34	0%	29
Russian, Polish, or Other Slavic	7	0%	14
Other Indo-European	99	1%	79
Korean	28	0%	42
Chinese (including Mandarin, Cantonese)	36	0%	36
Vietnamese	22	0%	61
Tagalog (including Filipino)	0	0%	11
Other Asian and Pacific Island	13	0%	14
Arabic	44	0%	21
Other and Unspecified	8	0%	11
Total Non-English	578	5%	642

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020.
*Population by Language Spoken at Home is available at the census tract summary level and up.

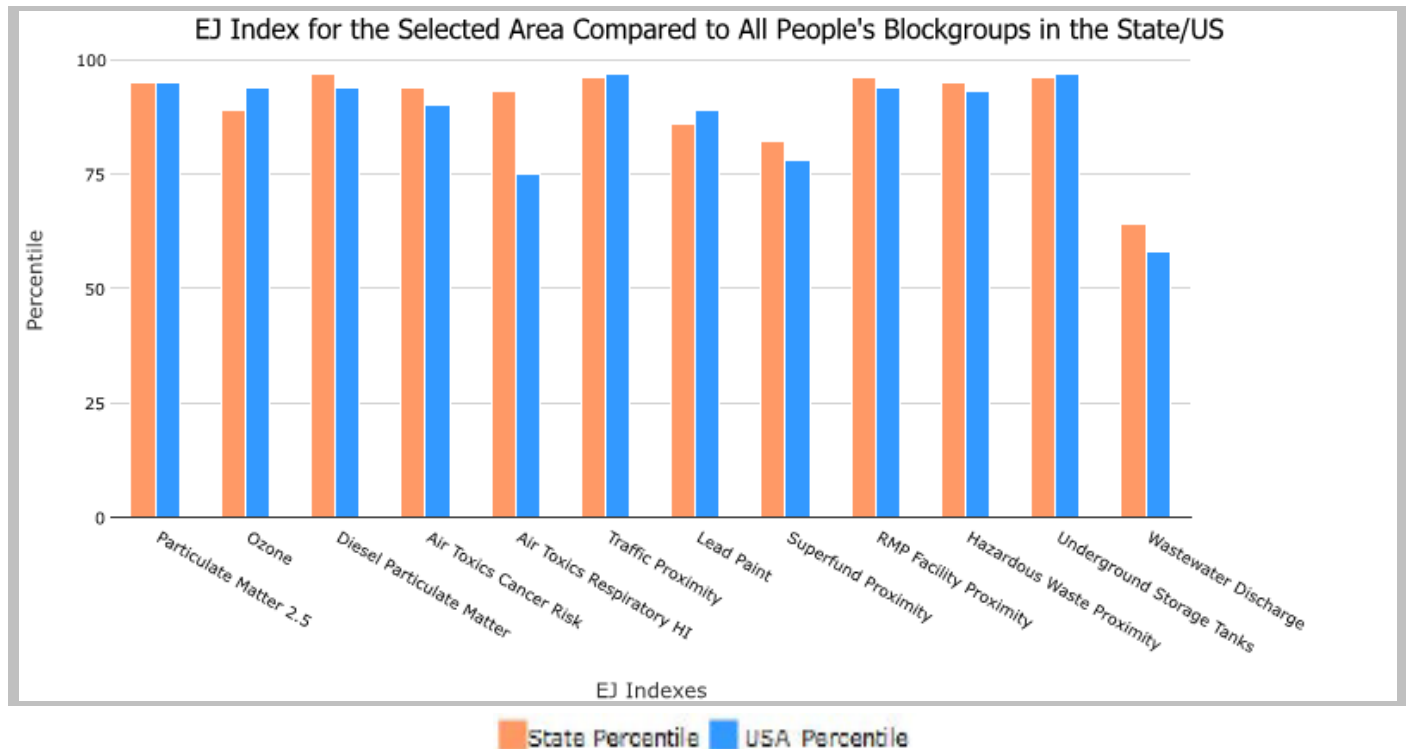
1 mile Ring Centered at 42.337591,-83.080089, MICHIGAN, EPA Region 5

Approximate Population: 10,768

Input Area (sq. miles): 3.14

Corktown POA I (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
EJ Index for Particulate Matter 2.5	95	95
EJ Index for Ozone	89	94
EJ Index for Diesel Particulate Matter*	97	94
EJ Index for Air Toxics Cancer Risk*	94	90
EJ Index for Air Toxics Respiratory HI*	93	75
EJ Index for Traffic Proximity	96	97
EJ Index for Lead Paint	86	89
EJ Index for Superfund Proximity	82	78
EJ Index for RMP Facility Proximity	96	94
EJ Index for Hazardous Waste Proximity	95	93
EJ Index for Underground Storage Tanks	96	97
EJ Index for Wastewater Discharge	64	58



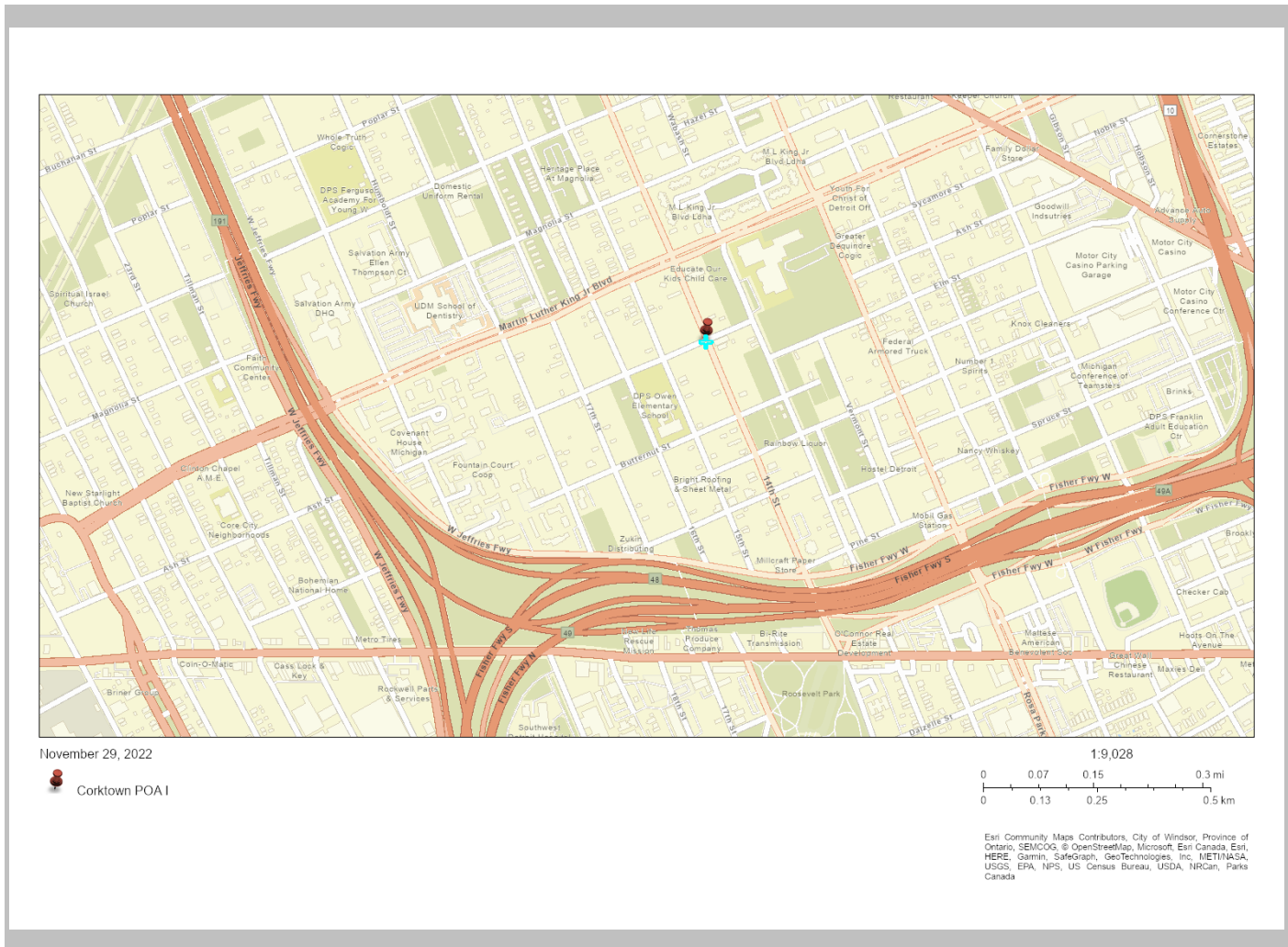
This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective 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.

1 mile Ring Centered at 42.337591,-83.080089, MICHIGAN, EPA Region 5

Approximate Population: 10,768

Input Area (sq. miles): 3.14

Corktown POA I (The study area contains 1 blockgroup(s) with zero population.)



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJScreen Report (Version 2.1)

1 mile Ring Centered at 42.337591,-83.080089, MICHIGAN, EPA Region 5

Approximate Population: 10,768

Input Area (sq. miles): 3.14

Corktown POA I (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	Value	State Avg.	%ile in State	USA Avg.	%ile in USA
Pollution and Sources					
Particulate Matter 2.5 ($\mu\text{g}/\text{m}^3$)	10.2	8.73	99	8.67	87
Ozone (ppb)	44.7	43.8	53	42.5	73
Diesel Particulate Matter* ($\mu\text{g}/\text{m}^3$)	0.452	0.211	99	0.294	80-90th
Air Toxics Cancer Risk* (lifetime risk per million)	30	23	99	28	80-90th
Air Toxics Respiratory HI*	0.3	0.25	99	0.36	<50th
Traffic Proximity (daily traffic count/distance to road)	4000	910	96	760	96
Lead Paint (% Pre-1960 Housing)	0.47	0.37	64	0.27	71
Superfund Proximity (site count/km distance)	0.048	0.15	37	0.13	42
RMP Facility Proximity (facility count/km distance)	1.6	0.54	91	0.77	86
Hazardous Waste Proximity (facility count/km distance)	3	1.1	89	2.2	78
Underground Storage Tanks (count/km ²)	34	8	96	3.9	98
Wastewater Discharge (toxicity-weighted concentration/m distance)	3.4E-05	0.45	24	12	24
Socioeconomic Indicators					
Demographic Index	71%	28%	92	35%	90
People of Color	79%	26%	90	40%	83
Low Income	63%	31%	89	30%	90
Unemployment Rate	12%	6%	85	5%	86
Limited English Speaking Households	2%	2%	78	5%	61
Less Than High School Education	18%	9%	87	12%	77
Under Age 5	6%	6%	60	6%	57
Over Age 64	15%	17%	45	16%	50

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's 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

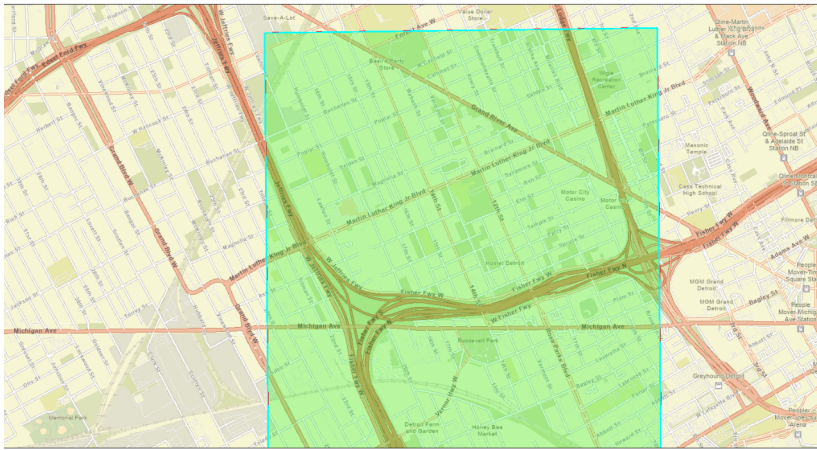
EJScreen is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. 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. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJScreen outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

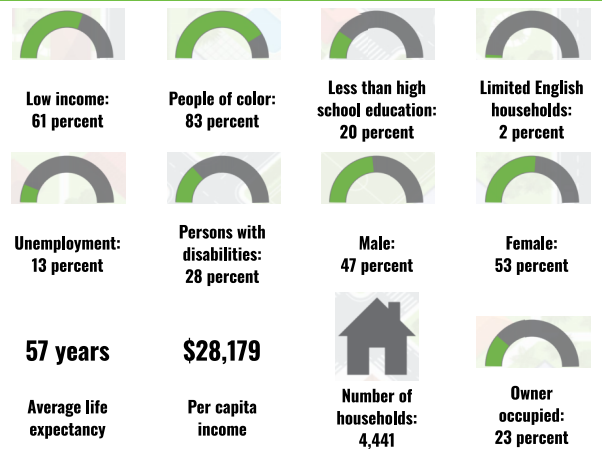
Detroit, MI

the User Specified Area
Population: 9,315
Area in square miles: 2.70



Jan 22, 2023
Project 1
1:18,056
0 0.15 0.3 0.45 0.6 mi
0 0.25 0.5 1 km
EPA Community Maps Contributors: City of Windsor, Province of Ontario, Esri, Canada, Esri, HERE, Garmin, Swisstopo, DeLorme, GeoTechnique, Intermap, Inc., Swisstopo, Esri, NPS, US Census Bureau, NOAA, NRC, Esri, Canada

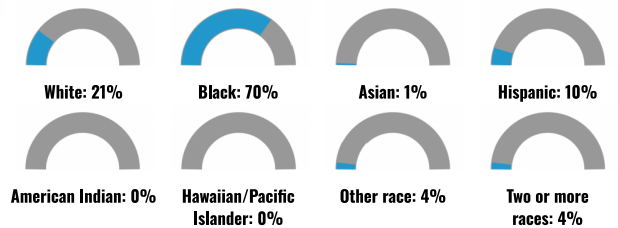
COMMUNITY INFORMATION



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	94%
Spanish	4%
Total Non-English	6%

BREAKDOWN BY RACE



BREAKDOWN BY AGE



LIMITED ENGLISH SPEAKING BREAKDOWN



Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

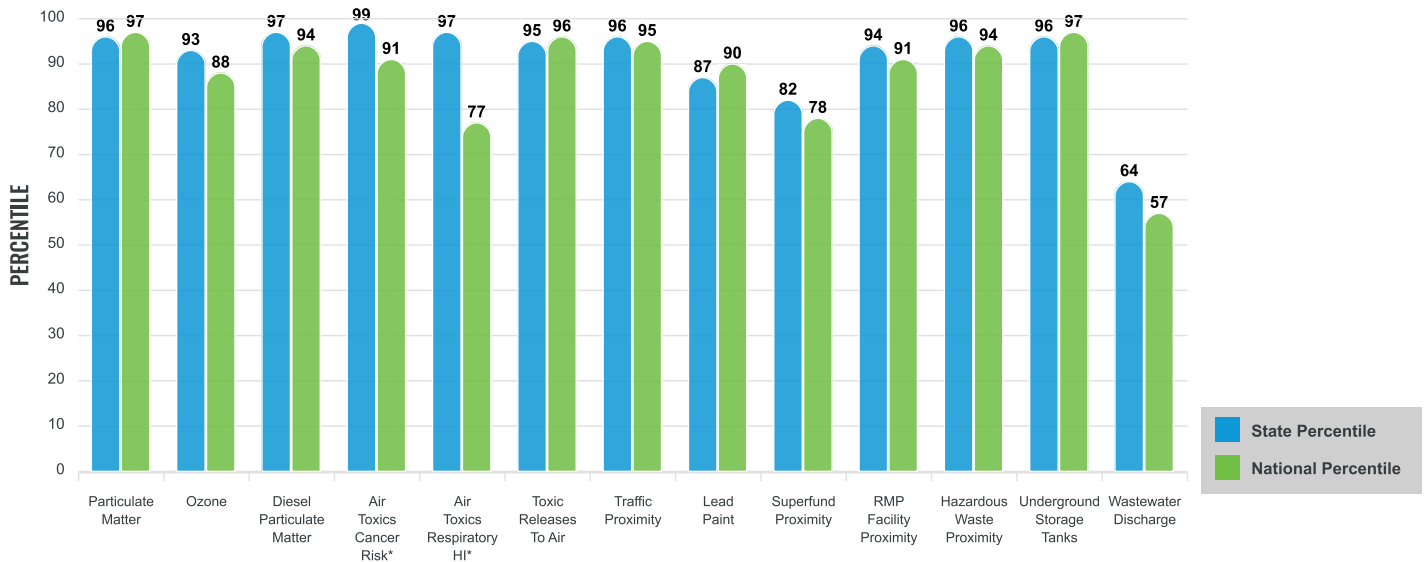
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

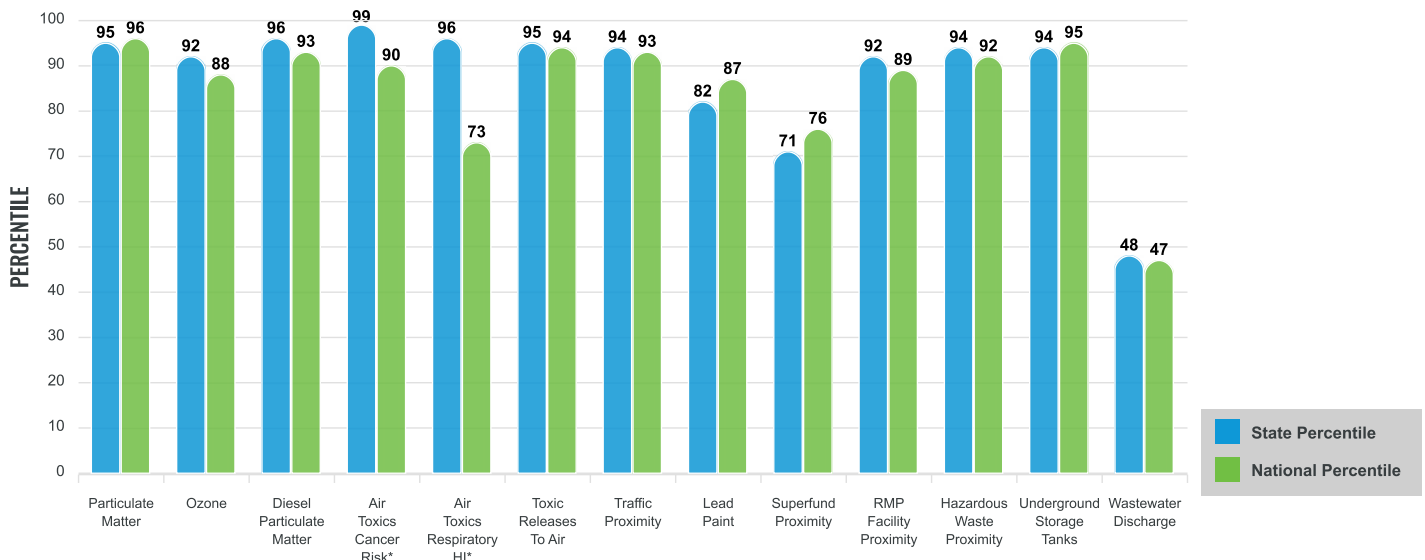
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for the User Specified Area

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter ($\mu\text{g}/\text{m}^3$)	10.6	8.51	99	8.08	97
Ozone (ppb)	62.6	60	73	61.6	61
Diesel Particulate Matter ($\mu\text{g}/\text{m}^3$)	0.388	0.183	99	0.261	82
Air Toxics Cancer Risk* (lifetime risk per million)	30	19	14	25	5
Air Toxics Respiratory HI*	0.3	0.2	11	0.31	4
Toxic Releases to Air	5,300	2,500	92	4,600	86
Traffic Proximity (daily traffic count/distance to road)	540	120	96	210	91
Lead Paint (% Pre-1960 Housing)	0.47	0.38	64	0.3	71
Superfund Proximity (site count/km distance)	0.048	0.15	36	0.13	42
RMP Facility Proximity (facility count/km distance)	0.42	0.31	79	0.43	73
Hazardous Waste Proximity (facility count/km distance)	2.9	1.1	90	1.9	80
Underground Storage Tanks (count/km ²)	34	8	96	3.9	98
Wastewater Discharge (toxicity-weighted concentration/m distance)	2.5E-05	0.13	22	22	22
SOCIOECONOMIC INDICATORS					
Demographic Index	72%	28%	93	35%	91
Supplemental Demographic Index	24%	14%	90	14%	87
People of Color	83%	26%	91	39%	84
Low Income	61%	31%	89	31%	89
Unemployment Rate	13%	7%	85	6%	87
Limited English Speaking Households	2%	2%	81	5%	64
Less Than High School Education	20%	9%	90	12%	81
Under Age 5	7%	5%	69	6%	66
Over Age 64	15%	18%	44	17%	49
Low Life Expectancy	15%	20%	8	20%	13

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's 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/naps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	0
Water Dischargers	0
Air Pollution	3
Brownfields	18
Toxic Release Inventory	4

Other community features within defined area:

Schools	4
Hospitals	3
Places of Worship	7

Other environmental data:

Air Non-attainment	Yes
Impaired Waters	No

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community	Yes
Selected location contains an EPA IRA disadvantaged community	Yes

Report for the User Specified Area

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	15%	20%	8	20%	13
Heart Disease	8.6	6.6	88	6.1	89
Asthma	15.8	11.6	94	10	99
Cancer	5.2	6.6	14	6.1	27
Persons with Disabilities	24.9%	14.6%	94	13.4%	95

CLIMATE INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	2%	7%	27	12%	25
Wildfire Risk	0%	0%	0	14%	0

CRITICAL SERVICE GAPS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	20%	14%	75	14%	74
Lack of Health Insurance	7%	5%	72	9%	50
Housing Burden	Yes	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Footnotes

Report for the User Specified Area

Percent Unemployed



11/29/2022

Percent Unemployed in Civilian labor force

0 – 0

> 0 – 2.8

> 2.8 – 5.38

> 5.38 – 9.5

> 9.5 – 100



Corktown POA I

1:36,112

0 0.23 0.45 0.9 mi

0 0.35 0.7 1.4 km

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

3300 15th Street

Jeffries, (/MI/Detroit/Jeffries) Detroit (/MI/Detroit), 48208

Commute to **Downtown Detroit** (/compare#edit-commutes)

6 min 19 min 12 min 37 min

Favorite

Map

Nearby Apartments (/apartments/search/3300-15th-st-detroit-mi-48208)

More about 3300 15th Street (<https://www.redfin.com/MI/Detroit/3300-18th-St-48208/home/113399080>).

Walk Score

52

Somewhat Walkable

Some errands can be accomplished on foot.

Transit Score

42

Some Transit

A few nearby public transportation options.

Bike Score

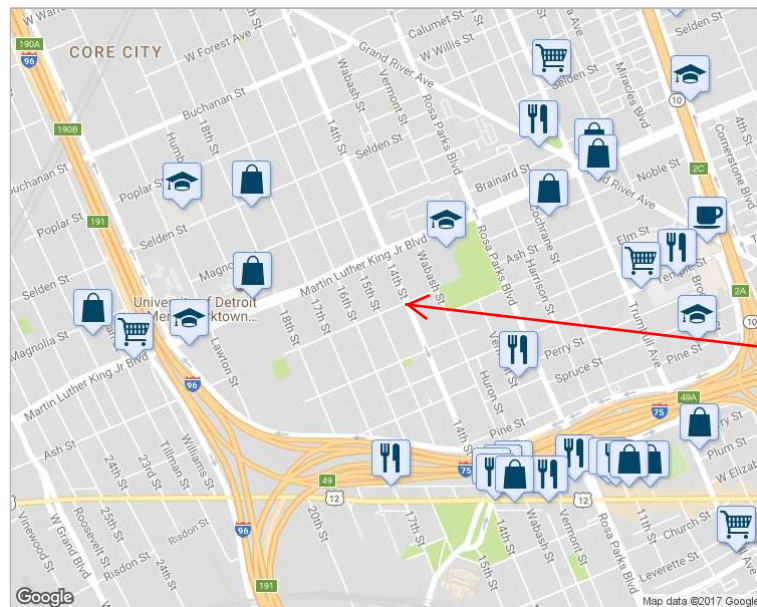
85

Very Bikeable

Biking is convenient for most trips.

About your score

Add scores to your site (</professional/badges.php?address=3300 15th Street Detroit, MI 48208>).



Approximate location of North Corktown project

About this Location





Google Report a problem (https://www.google.com/local/imagery/report/?cb_client=apiv3&image_key=!1e2!2sVI0LLG2X9hyz7JfSmA00Qw&cbp=1,311.269,,0.014,0&hl=en-US)
(https://maps.google.com/maps/@42.337406,-83.0808222,0a,73.2y,311.27h,90t/data=!3m4!1e1!3m2!1sVI0LLG2X9hyz7JfSmA00Qw!2e0?source=apiv3)

3300 15th Street has a Walk Score of 52 out of 100. This location is Somewhat Walkable so some errands can be accomplished on foot.

This location is in the Jeffries neighborhood in Detroit. Nearby parks include Roosevelt Park, Macomb Park and Scripps Park.



Some Transit

3300 15th Street has some transit which means a few nearby public transportation options. Car sharing is available from Zipcar.

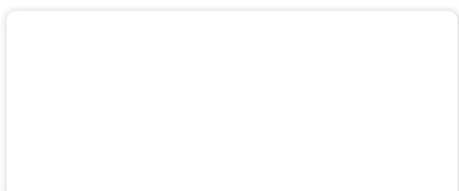
Rail lines:

DPM Detroit People Mover 1.5 mi

More ▼

Jeffries Detroit Apartments for Rent

View all Jeffries apartments (</apartments/search/MI/Detroit/Jeffries>) on a map.



\$1,620

Sheridan Court Apartments 304...
1 bed Walk Score 94



from **\$1,550**

Willis Apartments 2 (/score/the...
1 bed Walk Score 93



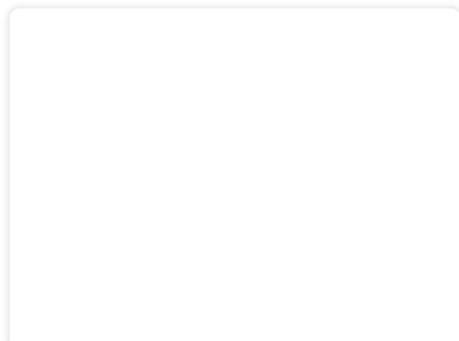
from **\$1,050**

The Union At Midtown (/score/t...
1 bed Walk Score 94

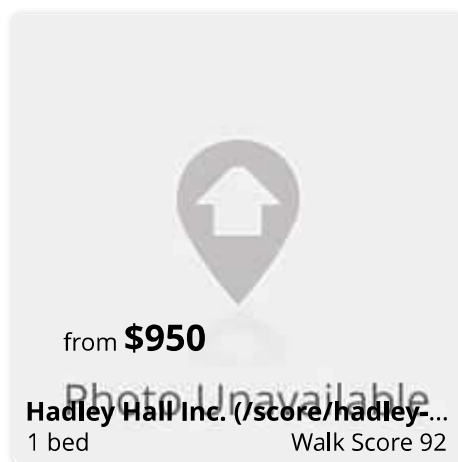


from **\$1,175**

University Club (/score/universi...
1 bed Walk Score 93



\$1,200
3410 Rosa Parks Boulevard (/sc...
2 bed Walk Score 59



Jeffries Neighborhood

3300 15th Street is in the Jeffries neighborhood. Jeffries is the 5th most walkable neighborhood in **Detroit** (</MI/Detroit>) with a neighborhood Walk Score of 64.

Moving to Detroit from another city? View our [moving to Detroit guide \(/moving/to-detroit\)](/moving/to-detroit).

[Learn More About Jeffries \(/MI/Detroit/Jeffries\)](/MI/Detroit/Jeffries)

[Learn More About Detroit \(/MI/Detroit\)](/MI/Detroit)

[United States \(/cities-and-neighborhoods/\)](/cities-and-neighborhoods/) [Michigan \(/MI/\)](/MI/) [Detroit \(/MI/Detroit/\)](/MI/Detroit/) **[Jeffries \(/MI/Detroit/Jeffries\)](/MI/Detroit/Jeffries/)**

Walk Score (/

**Professional
(/professional/)**

About (/about.shtml)

Walk Score Widget (/professional/walk-score-widget.php)

How It Works (/how-it-works/)

Walk Score APIs (/professional/walk-score-apis.php)

Press (/press/)

Data Services (/professional/research.php)

Terms & Privacy (/terms-of-use.shtml)

Real Estate Professionals (/professional/real-estate-professionals.php)

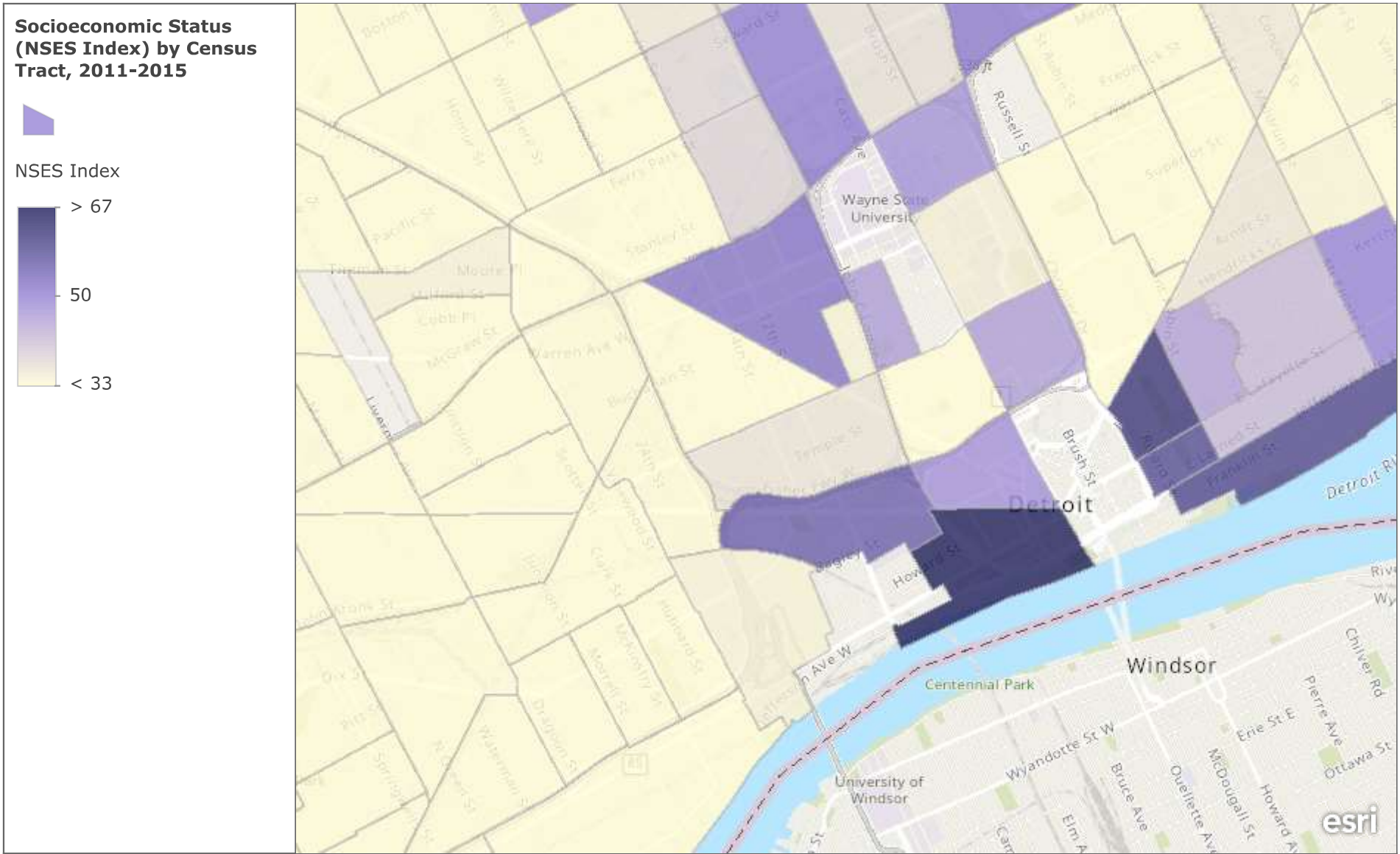
Feedback (/contact)

Walkability Research (/professional/walkability-research.php)

Badges (/professional/badges.php)

If you are using a screen reader or having trouble reading this website, please call Walk Score customer service at (253) 256-1634.

Socioeconomic Status (NSES Index) by Census Tract, 2011-2015



This layer shows the socioeconomic status of each census tract. Data come from the US Census Bureau's 2011-2015 American Community Survey.

Esri, NASA, NGA, USGS, FEMA | City of Windsor, Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

2022 FFIEC Geocode Census Report

Address: Selected Tract

MSA: 19804 - DETROIT-DEARBORN-LIVONIA, MI

State: 26 -

County: 163 - WAYNE COUNTY

Tract Code: 5215.00

Summary Census Demographic Information

Tract Income Level	Moderate
Underserved or Distressed Tract	No
2022 FFIEC Estimated MSA/MD/non-MSA/MD Median Family Income	\$72,800
2022 Estimated Tract Median Family Income	\$48,630
2010 Tract Median Family Income	\$42,686
Tract Median Family Income %	66.80
Tract Population	1354
Tract Minority %	82.05
Tract Minority Population	1111
Owner-Occupied Units	221
1- to 4- Family Units	551

Census Income Information

Tract Income Level	Moderate
2010 MSA/MD/statewide non-MSA/MD Median Family Income	\$63,896
2022 FFIEC Estimated MSA/MD/non-MSA/MD Median Family Income	\$72,800
% below Poverty Line	29.88
Tract Median Family Income %	66.80
2010 Tract Median Family Income	\$42,686
2022 Estimated Tract Median Family Income	\$48,630
2010 Tract Median Household Income	\$36,406

Census Population Information

Tract Population	1354
Tract Minority %	82.05
Number of Families	249
Number of Households	631
Non-Hispanic White Population	243
Tract Minority Population	1111
American Indian Population	0
Asian/Hawaiian/Pacific Islander Population	3
Black Population	890
Hispanic Population	113
Other/Two or More Races Population	15

Census Housing Information

Total Housing Units	821
1- to 4- Family Units	551
Median House Age (Years)	53
Owner-Occupied Units	221
Renter Occupied Units	410
Owner Occupied 1- to 4- Family Units	221
Inside Principal City?	YES
Vacant Units	190



2023 FFIEC Geocode Census Report

Address: Selected Tract
MSA: 19804 - DETROIT-DEARBORN-LIVONIA, MI
State: 26 -
County: 163 - WAYNE COUNTY
Tract Code: 5215.00

Summary Census Demographic Information

Tract Income Level	Moderate
Underserved or Distressed Tract	No
2023 FFIEC Estimated MSA/MD/non-MSA/MD Median Family Income	\$77,100
2023 Estimated Tract Median Family Income	\$51,503
2020 Tract Median Family Income	\$42,686
Tract Median Family Income %	66.80
Tract Population	1354
Tract Minority %	82.05
Tract Minority Population	1111
Owner-Occupied Units	221
1- to 4- Family Units	551

Census Income Information

Tract Income Level	Moderate
2020 MSA/MD/statewide non-MSA/MD Median Family Income	\$63,896
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Black Population	890
Hispanic Population	113
Other/Two or More Races Population	105

Census Housing Information

Total Housing Units	821
1- to 4- Family Units	551
Median House Age (Years)	53
Owner-Occupied Units	221
Renter Occupied Units	410
Owner Occupied 1- to 4- Family Units	221
Inside Principal City?	YES
Vacant Units	190

Location: User-specified polygonal location
 Ring (buffer): 0-miles radius
 Description:

Summary		Census 2010
Population		905
Population Density (per sq. mile)		4,467
People of Color Population		837
% People of Color Population		0.924594563654328%
Households		361
Housing Units		425
Land Area (sq. miles)		0.20
% Land Area		1%
Water Area (sq. miles)		0.00
% Water Area		0%

Population by Race	Number	Percent
Total	905	-----
Population Reporting One Race	880	0.972607537144054%
White	76	.0842511910990615%
Black	784	0.865925953177231%
American Indian	3	.0304915921993073%
Asian	1	.0010734410128462%
Pacific Islander	0	0%
Some Other Race	17	.0183077926349855%
Population Reporting Two or More Races	25	.0273924628559457%
Total Hispanic Population	36	.0394862118422868%
Total Non-Hispanic Population	869	0.960513788157713%
White Alone	68	.0754054363456724%
Black Alone	778	.860011291086834%
American Indian Alone	1	.0161865291185463%
Non-Hispanic Asian Alone	1	.0010734410128462%
Pacific Islander Alone	0	0%
Other Race Alone	1	.0124972853330468%
Two or More Races Alone	19	.0211552382672008%

Population by Sex	Number	Percent
Male	390	0.431343720162926%
Female	515	0.568656279837074%

Population by Age	Number	Percent
Age 0-4	66	0.730568092626501%
Age 0-17	236	.260622123383897%
Age 18+	669	.739377876616103%
Age 65+	99	.109095545461149%

Households by Tenure	Number	Percent
Total	361	
Owner Occupied	61	.167922232823995%
Renter Occupied	300	.832077767176005%

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
Source: U.S. Census Bureau, Census 2010 Summary File 1.



QuickFacts Wayne County, Michigan; Michigan; Detroit city, Michigan

QuickFacts provides statistics for all states and counties, and for cities and towns with a *population of 5,000 or more*.

Table

All Topics	Wayne County, Michigan	Michigan	Detroit city, Michigan
Population Estimates, July 1, 2022, (V2022)	△ 1,757,043	△ 10,034,113	△ 620,376
PEOPLE			
Population			
Population Estimates, July 1, 2022, (V2022)	△ 1,757,043	△ 10,034,113	△ 620,376
Population estimates base, April 1, 2020, (V2022)	△ 1,793,549	△ 10,077,325	△ 639,115
Population, percent change - April 1, 2020 (estimates base) to July 1, 2022, (V2022)	△ -2.0%	△ -0.4%	△ -2.9%
Population, Census, April 1, 2020	1,793,561	10,077,331	639,111
Population, Census, April 1, 2010	1,820,584	9,883,640	713,777
Age and Sex			
Persons under 5 years, percent	△ 6.3%	△ 5.3%	△ 7.1%
Persons under 18 years, percent	△ 23.4%	△ 21.0%	△ 24.9%
Persons 65 years and over, percent	△ 16.6%	△ 18.7%	△ 14.1%
Female persons, percent	△ 51.5%	△ 50.3%	△ 52.5%
Race and Hispanic Origin			
White alone, percent	△ 54.6%	△ 78.8%	△ 12.9%
Black or African American alone, percent (a)	△ 38.3%	△ 14.1%	△ 77.9%
American Indian and Alaska Native alone, percent (a)	△ 0.5%	△ 0.7%	△ 0.4%
Asian alone, percent (a)	△ 3.7%	△ 3.5%	△ 1.6%
Native Hawaiian and Other Pacific Islander alone, percent (a)	△ Z	△ Z	△ 0.0%
Two or More Races, percent	△ 2.9%	△ 2.8%	△ 3.3%
Hispanic or Latino, percent (b)	△ 6.6%	△ 5.7%	△ 7.8%
White alone, not Hispanic or Latino, percent	△ 49.0%	△ 74.0%	△ 10.1%
Population Characteristics			
Veterans, 2017-2021	75,594	516,924	23,823
Foreign born persons, percent, 2017-2021	9.4%	6.9%	5.7%
Housing			
Housing units, July 1, 2022, (V2022)	790,946	4,611,660	X
Owner-occupied housing unit rate, 2017-2021	63.4%	72.2%	48.3%
Median value of owner-occupied housing units, 2017-2021	\$136,200	\$172,100	\$57,700
Median selected monthly owner costs -with a mortgage, 2017-2021	\$1,377	\$1,374	\$1,125
Median selected monthly owner costs -without a mortgage, 2017-2021	\$533	\$520	\$465
Median gross rent, 2017-2021	\$951	\$946	\$899
Building permits, 2022	2,381	21,983 ¹	X
Families & Living Arrangements			
Households, 2017-2021	685,635	3,976,729	250,096
Persons per household, 2017-2021	2.58	2.48	2.53
Living in same house 1 year ago, percent of persons age 1 year+, 2017-2021	88.7%	87.3%	87.4%
Language other than English spoken at home, percent of persons age 5 years+, 2017-2021	15.3%	9.9%	10.8%
Computer and Internet Use			
Households with a computer, percent, 2017-2021	91.2%	92.4%	87.6%
Households with a broadband Internet subscription, percent, 2017-2021	83.3%	86.4%	76.0%
Education			
High school graduate or higher, percent of persons age 25 years+, 2017-2021	87.6%	91.6%	
Bachelor's degree or higher, percent of persons age 25 years+, 2017-2021	25.8%	30.6%	

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Health			
With a disability, under age 65 years, percent, 2017-2021	11.7%	10.1%	15.7%
Persons without health insurance, under age 65 years, percent	△ 6.6%	△ 6.0%	△ 9.0%
Economy			
In civilian labor force, total, percent of population age 16 years+, 2017-2021	59.2%	61.5%	54.3%
In civilian labor force, female, percent of population age 16 years+, 2017-2021	55.3%	57.4%	53.2%
Total accommodation and food services sales, 2017 (\$1,000) (c)	5,250,790	23,056,352	2,729,569
Total health care and social assistance receipts/revenue, 2017 (\$1,000) (c)	14,321,600	74,194,505	7,484,820
Total transportation and warehousing receipts/revenue, 2017 (\$1,000) (c)	11,438,064	25,019,797	1,188,024
Total retail sales, 2017 (\$1,000) (c)	21,293,284	143,437,054	3,564,708
Total retail sales per capita, 2017 (c)	\$12,113	\$14,377	\$5,281
Transportation			
Mean travel time to work (minutes), workers age 16 years+, 2017-2021	25.2	24.5	25.7
Income & Poverty			
Median household income (in 2021 dollars), 2017-2021	\$52,830	\$63,202	\$34,762
Per capita income in past 12 months (in 2021 dollars), 2017-2021	\$29,953	\$34,768	\$20,780
Persons in poverty, percent	△ 19.6%	△ 13.1%	△ 31.8%

BUSINESSES

Businesses			
Total employer establishments, 2021	33,056	224,676	X
Total employment, 2021	623,212	3,768,321	X
Total annual payroll, 2021 (\$1,000)	40,927,242	216,772,518	X
Total employment, percent change, 2020-2021	-6.9%	-5.8%	X
Total nonemployer establishments, 2020	136,830	738,884	X
All employer firms, Reference year 2017	26,195	165,460	6,869
Men-owned employer firms, Reference year 2017	16,838	106,137	4,153
Women-owned employer firms, Reference year 2017	4,623	29,706	1,094
Minority-owned employer firms, Reference year 2017	3,284	13,091	1,205
Nonminority-owned employer firms, Reference year 2017	20,348	141,153	4,516
Veteran-owned employer firms, Reference year 2017	1,031	8,714	232
Nonveteran-owned employer firms, Reference year 2017	22,303	142,782	5,419

GEOGRAPHY

Geography			
Population per square mile, 2020	2,931.4	178.0	4,606.8
Population per square mile, 2010	2,974.4	174.8	5,144.3
Land area in square miles, 2020	611.84	56,608.22	138.73
Land area in square miles, 2010	612.08	56,538.90	138.75
FIPS Code	26163	26	2622000


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


[About datasets used in this table](#)

Value Notes

- I. Includes data not distributed by county.

 Estimates are not comparable to other geographic levels due to methodology differences that may exist between different data sources.

Some estimates presented here come from sample data, and thus have sampling errors that may render some apparent differences between geographies statistically indistinguishable.] Click the Quick Info  icon to the left of each row in T learn about sampling error.

In Vintage 2022, as a result of the formal request from the state, Connecticut transitioned from eight counties to nine planning regions. For more details, please see the Vintage 2022 release notes available here: [Release Notes](#).

The vintage year (e.g., V2022) refers to the final year of the series (2020 thru 2022). Different vintage years of estimates are not comparable.

Users should exercise caution when comparing 2017-2021 ACS 5-year estimates to other ACS estimates. For more information, please visit the [2021 5-year ACS Comparison Guidance](#) page.

Fact Notes

- (a) Includes persons reporting only one race
- (b) Hispanics may be of any race, so also are included in applicable race categories
- (c) Economic Census - Puerto Rico data are not comparable to U.S. Economic Census data

Value Flags

- D** Suppressed to avoid disclosure of confidential information
- F** Fewer than 25 firms
- FN** Footnote on this item in place of data
- NA** Not available
- S** Suppressed; does not meet publication standards
- X** Not applicable
- Z** Value greater than zero but less than half unit of measure shown
- Either no or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest or upper interval of an open end
- N** Data for this geographic area cannot be displayed because the number of sample cases is too small.

QuickFacts data are derived from: Population Estimates, American Community Survey, Census of Population and Housing, Current Population Survey, Small Area Health Insurance Estimates, Small Area Income and Poverty Estimates, State Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

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Consulting
Engineers and
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Subsurface Exploration and Geotechnical Engineering Report The Preserve on Ash I Detroit, Michigan

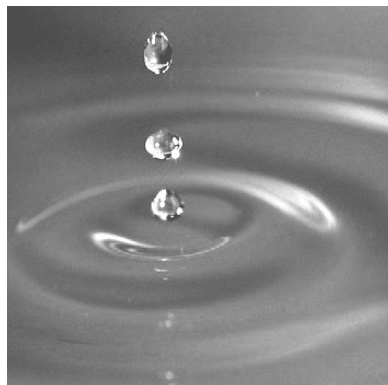
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March 17, 2021
Project 2005092



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1. Boring Location Plan

Appendices

- A. Boring Logs
- B. Geotechnical Laboratory Results

1. Introduction

1.1 Background

The Community Builders (TCB) engaged GEI Consultants, Inc. (GEI) to perform a subsurface exploration at The Preserve on Ash I in Detroit, Michigan and provide geotechnical recommendations for the proposed development. From the conceptual plans provided, we understand that the development will consist of townhomes to five story residential buildings. It is not currently known whether the buildings will contain basements. Further the loading of the proposed structures has been assumed and is not currently available.

1.2 Scope

Our scope of work consisted of the following tasks:

1. Coordinate the drilling and public utility location.
2. Drill twenty-seven (27) geotechnical soil borings.
3. Provide full-time personnel to coordinate drilling and utility location activities, observe the drilling, and classify soil samples in accordance with ASTM D2488 (Visual-Manual Procedures).
4. Perform geotechnical laboratory testing on representative samples.
5. Perform geotechnical engineering analyses.
6. Prepare this report to present our preliminary recommendations for foundation design and construction.

2. Project and Site Information

2.1 Site Description

The project site is composed of multiple lots covering several existing city blocks. At some lots, there are existing residential buildings and many lots are currently vacant.

A site topographic survey has not yet been provided. Specific elevations are not provided in this report. However, in general the site is generally flat. The project site and soil boring locations are shown in Figure 1.

2.2 Project Description

From the information that has been provided, we anticipate that the structures are planned to be 2 story townhomes to 3 to 5 story multi-family structures. It is not known if the proposed structures will contain basements. Structural loads have not been provided, but we anticipate that maximum foundation loads will be 450 to 500 kips. We estimate that the maximum column loads for the townhomes will be 10 to 20 kips.

The design recommendations presented herein are based on the maximum estimated building loads outlined above. When specific building designs and structural loads are available, we should review them and update this report, as appropriate. Reviewing and updating our foundation recommendations once additional structural loading is known will be particularly important for this project due to the somewhat unique soil conditions which are susceptible to long term settlement under certain loading conditions.

3. Subsurface Exploration and Testing

3.1 Geotechnical Exploration

GEI's geotechnical exploration program consisted of twenty-seven (27) soil borings designated B-101 through B-127.

The soil borings were conducted by DLZ, Inc. (DLZ) between January 11 and January 18, 2021. A plan showing the location of the borings is included as Figure 1. Borehole logs with soil descriptions are included in Appendix A.

DLZ utilized a truck-mounted CME 55 drill rig equipped with hollow stem auger drilling equipment. Soil cuttings were placed along with bentonite back into the borehole. The borings extended approximately 9.5 to 42 feet below the ground surface (bgs).

Representative soil samples were obtained by means of the split-barrel sampling procedure in accordance with ASTM Specification D1586. A 2-inch outside diameter, split-barrel sampler is driven into the soil a distance of 18 to 24 inches by a 140-pound automatic hammer falling 30 inches. The number of blows required to drive the sampler through the second and third six-inch interval is termed the Standard Penetration Test (SPT) N-value. N-values can be used as a qualitative indication of the in-place relative density of cohesionless soils and the consistency of cohesive soils. This indication is qualitative, since many factors can significantly affect the standard penetration resistance value and prevent a direct correlation among drill crews, drill rigs, drilling procedures and hammer-rod-sampler assemblies.

In addition, several samples were obtained by 3-inch diameter Shelby tubes to obtain a relatively undisturbed sample for further testing in the laboratory. Sampling was performed in accordance with ASTM D1587.

3.2 Geotechnical Laboratory Testing

GEI performed visual classification of the soil samples in accordance with ASTM D2488 (Visual-Manual Procedures). Representative split-spoon samples were selected and sent to DLZ of Columbus, OH for geotechnical index testing that include water content determination (ASTM D2974), Atterberg Limits (ASTM D4318), unconfined compressive strength testing, and undrained-unconsolidated triaxial test. The laboratory test results are included in Appendix B.

4. Subsurface Characterization

4.1 Geology

Based on available geologic references, the upper 90-150 feet consists of a thick sequence of River Rouge till (RRT) resting either directly on bedrock, or on a dense glacial drift unit. The RRT consists primarily of unstratified, highly compacted, calcareous, clayey soil containing gravel of variable sizes and shapes. The upper 10 to 15 feet is often pale yellowish-brown, dry and firm where oxidation has occurred in the shallow surface and becomes light gray to gray, moist and softer with depth. This exploration program was performed within man-made fill materials and the RRT. The bottom of the RRT was not encountered in this exploration.

4.2 Subsurface Conditions

4.2.1 Soil Conditions

The subsurface conditions encountered in boreholes B-101 through B-127 are described below. The subsurface profile has been divided into three (3) primary soil layers as described below and as shown. For detailed descriptions of soil samples refer to the borehole logs in Appendix A.

- **Layer I – Fill**

This layer consisted of pavement, topsoil and lean CLAY fill. Debris, including concrete, asphalt and brick fragments were present in the FILL layer. The Fill generally appeared to consist of reworked natural soils mixed with some construction debris. This layer was found to extend to approximately 2 to 8 feet below the ground surface in the borings.

- **Layer IIa – Upper RRT**

The Upper River Rouge till (RRT) consisted of lean CLAY (CL) with varying amounts of sand and gravel within the clay matrix. This layer was light brown to brown with gray. The consistency of this layer was generally stiff to hard. SPT N-values typically ranged from 10 to 25 blows per foot (bpf). In the borings, this layer was found to extend to approximately 15 to 20 feet below the ground surface.

- **Layer IIb – Lower RRT**

The upper RRT transitioned into the lower RRT. The lower unit is generally characterized by the same soil type as the upper unit. However, the color is gray as a

result of not having been oxidized. Additionally, the consistency of the soil is generally softer and is typically soft to stiff. SPT N-values typically ranged from 2 to 6 bpf. This layer was encountered below Layer IIa to the termination of the borings.

4.2.2 Groundwater Conditions

The borings generally encountered groundwater near the transition between the Upper and Lower RRT units at 14 to 18 feet below the ground surface. GEI believes that the groundwater elevations encountered during the subsurface investigation are representative of in-situ conditions at the time of the exploration. A preliminary design groundwater elevation of 12 feet below the ground surface is recommended to allow for some variability in water levels over time. Fluctuations in the level of the groundwater may occur due to variations in season, rainfall, temperature, and other factors not evident at the time observations were made and reported herein. Recommendations for groundwater control during construction are presented in Section 6 of this report.

5. Geotechnical Recommendations

Fill soil was encountered to a depth between 2 to 8 feet at the boring locations performed at the site. The placement of the Fill soils is undocumented and is variable in terms of consistency and composition. In general, placing shallow foundations directly on the Fill soils without some form of ground improvement is not recommended due to the potential for excessive total and differential settlement. However, shallow foundations bearing directly on native lean CLAY is feasible depending on foundation loads. The depth to the native bearing soils generally ranges from 2 to 8 feet below current ground surface.

We have provided foundation design recommendations assuming that the finished floor elevation (FFE) will be at or near the existing ground surface or if a 10 to 12-foot-deep basement is included.

5.1 Foundation Recommendations

Existing fill materials were encountered in all borings extending 2 to 8 feet below the local existing site grades. This material is not considered suitable for foundation support and it should be removed from foundation areas and be replaced with engineered fill.

Overexcavation to remove unsuitable materials at foundation locations should extend outward 8 inches for every foot below the design bearing level. The foundations could then be extended to bear on the very stiff to hard lean clay at the deeper level, or the excavation could be backfilled back up to design footing elevation with engineered fill or lean concrete.

Backfill placed beneath footings should consist of a well-graded granular material, containing less than 12% by weight passing the No. 200 (0.075 mm) sieve. This material should be placed in thin lifts not exceeding 9 inches in loose thickness, and it should be compacted to a minimum of 95% of its maximum dry density as determined by the modified Proctor test (ASTM D 1557). Thinner lifts should be used where material is compacted with light or walk-behind equipment. If flowable fill or lean concrete with a minimum unconfined compressive strength of 500 psi is utilized as backfill, the footing excavation does not need to be extended beyond the edges of the footing.

Due to the presence of a relatively soft, compressible layer at depth, we are providing different options in the table below regarding design bearing pressure and footing depth. Footings bearing on stiff to hard upper clay crust and/or new engineered fill may be designed using the maximum net allowable soil bearing pressures shown below.

As can be seen in the table below, if basements are constructed, the estimated foundation settlement for each loading case decreases fairly significantly. This is a result of a balance between removing the soil overburden and replacing it with the lower net pressure from the

building. The total settlement is shown for various cases. The differential settlement varies but can be estimated to be approximately 1/2 of the total settlement. The individual allowable bearing pressure and settlement estimates should be re-evaluated when building plans near finalization.

Table 1: Allowable bearing capacity and settlement of spread footing foundations

<i>Max Foundation Load (kips)</i>	<i>Allow Bearing Pressure (psf)</i>	<i>Max Footing Size</i>	<i>Basement?</i>	<i>Est. Total Settlement (inch)</i>
500	3,000	13 ft x 13 ft	No	1-1/2 to 2
500	3,000	13 ft x 13 ft	Yes	1/3 to 2/3
500	2,000	16 ft x 16 ft	No	1-1/2 to 1-3/4
300	3,000	10 ft x 10 ft	No	1-1/3 to 1-2/3
300	3,000	10 ft x 10 ft	Yes	1/3 to 2/3
300	2,000	12.5 ft x 12.5 ft	No	1-1/3 to 1-2/3
150	3,000	7.5 ft x 7.5 ft	No	1 to 1-1/3
150	2,000	9 ft x 9 ft	No	1 to 1-1/4

Footings placed in unheated areas should be embedded a minimum of 42 inches below finished grade to provide for adequate frost protection. Individual column footings should have a minimum width of 30 inches, and continuous wall footings should have a minimum width of 18 inches to prevent disproportionately small footing sizes.

In addition, we recommend that the following criteria be used for the design of these foundations.

- The top of all footings should be at least 6 inches below the bottom of the overlying floor slabs.
- Spacing between footings shall be at least 1.5 times the width of the larger foundation to minimize any reduction in bearing capacity due to overlapping zones of influence.
- An allowable coefficient of friction of 0.30 is recommended for sliding.
- Maintain positive drainage away from the structure to prevent water from infiltrating under footings. Tie all roof gutters and leaders into a storm water drainage system for drainage away from the structure. Do not allow stormwater from the roof area to drain directly onto pavement areas or into permeable areas adjacent to the structure.

5.2 Slab Recommendations

All existing foundations, slabs, pavement, and utilities should be removed from the proposed slab-on-grade areas within 2 feet of the proposed subgrade. Following the removal of

surface materials, the exposed slab-on-grade subgrade should be proofrolled using a vibratory roller or a fully loaded tandem-axle dump truck having a gross weight of 20 tons. Proofrolling should be observed by a geotechnical engineer or qualified representative from GEI. Any areas which are observed to be loose or disturbed, or have excessive deflection during the proofrolling operation, should be carefully trimmed and replaced with new engineered fill.

Imported fill should consist of a well-graded granular material, containing less than 15% by weight passing the No. 200 (0.075 mm) sieve. This material should be placed in thin lifts not exceeding 9 inches in loose thickness, and it should be compacted to a minimum of 95% of its maximum dry density as determined by the Modified Proctor test (ASTM D 1557). Periodic density testing should be performed on any fill to document that compaction placement requirements have been met.

We recommend that at least 6 inches of compacted granular base course, with less than 12% passing the No. 200 sieve, be placed beneath the floor slab in all areas to provide improved subgrade support and provide a capillary break.

The modulus of subgrade reaction is dependent upon the nature of the soils supporting the slab and the provided thickness as tabulated below.

Table 2: Modulus of subgrade reaction for slab-on-grade

<i>Subgrade Material</i>	<i>Thickness</i>	<i>Modulus, k</i>
New Granular Fill	6 in	65 pci
	12 in	100 pci
	24 in	175 pci

The use of a vapor retarder should be considered beneath concrete slabs on grade that will be covered with wood, tile, carpet or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder.

Floor slabs on grade should be isolated from foundations to permit relative displacement without cracking. Slabs should be sufficiently thick, and be provided with adequate reinforcing and jointing, to control minor slab cracking.

5.3 Permanent Below Grade Walls

Permanent reinforced concrete walls, such as elevator pits or detention vaults, that extend below grade should be designed to support unbalanced earth, water, and lateral pressures due to exterior surcharges. Taking into consideration the variation of the soil profile on the perimeter walls, the lateral pressure due to unbalanced soil and water can be approximated as:

Table 3: Equivalent fluid pressure for design of permanent below grade (non-yielding) walls

<i>Elevation</i>	<i>Mechanism</i>	<i>Equivalent Fluid Pressure</i>
Above Water Table	Soil	60 psf/ft
Below Water Table	Soil + Water	90 psf/ft

Water Table at 14 feet below ground surface

Any surcharge loads (due to adjacent roadways, crane pads, or floor slabs) or foundation pressures, within the area that projects upward from the base of the cut on a 45 degree angle should be included as additional lateral pressures on the retention system. A uniform surcharge of 250 psf (or an equivalent 2 feet of soil) should be applied to the ground surface to represent construction equipment or traffic loading. The lateral forces on the wall due to surcharges should be determined using an at-rest earth pressure coefficient, K_0 , equal to 0.5.

Any shallow foundations adjacent to below grade walls should be included as localized surcharges. The stress beneath the footings should be assumed to extend outward and downward from the edges of the footings at a 2 vertical to 1 horizontal slope. The lateral pressure on the wall should be determined using an at-rest earth pressure coefficient, $K_0 = 0.5$, or:

$$p_{ftg} = K_0 q_{ftg} \frac{BL}{(B+z)(L+z)}$$

Where: K_0 = Coefficient of at-rest earth pressure ($K_0 = 0.5$)
 q_{ftg} = Bearing pressure beneath footing
 B = Width of footing
 L = Length of footing
 z = Depth below footing bearing level

Excavations which extend below the water table will require sump pumps with drainage trenches to provide a stable subgrade for construction. All formed walls should have external waterproofing. No exterior drainage is required for walls properly waterproofed and designed for the above-referenced earth pressures.

5.4 Sub-Drainage System

A properly designed subsurface under drainage system should be provided for lower level slabs. The system should include a minimum 8-inch thickness of clean, free-draining granular base beneath the slabs. The natural, crushed stone should be compacted to a relative density no less than 90% of its maximum dry density defined by the Modified Proctor test (ASTM D 1557). Due to the risk of long-term degradation, crushed concrete is not recommended for use as the material around the underdrain.

New perforated or slotted plastic drain lines should be installed around the interior perimeter of the basement, around the interior perimeter of any provided core mat, and on 50-foot centers beneath the slab interior. All drain pipes should be buried and surrounded in a minimum of 3 inches of crushed stone. The perforated or slotted openings in the drain pipes should be sized to prevent intrusion of the granular subbase materials into the drain. Drain lines do not have to be pitched to drain.

Water inflow rates will vary depending primarily on the amount of surface water infiltration since the groundwater level (as observed in the borings) is estimated to be near or below the anticipated slab levels.

The sump pump system, including any provisions for back-up or redundant equipment, should be designed with ample factor of safety (*e.g.*, 4 to 5 on volumetric inflow) to manage water infiltration during and after construction.

5.5 Seismic Site Class and Liquefaction Potential

The deepest boreholes extended to a maximum depth of 42 feet bgs, less than the 100-ft depth typically required for site classification. However, the typical soil profile in the area and the subsurface information collected from nearby sites may be used to assess the geologic conditions prevailing in the immediate vicinity for soils from 50 feet to 100 feet bgs. The deeper soils appear to be a continuation of Layer IIb lower RRT, consisting of primarily soft to medium lean CLAY.

Design parameters for the project site were determined in accordance with Standard 9 of ASCE 7-16: *Minimum Design Loads for Buildings and Other Structures*. Due to the limited depth of exploration, both ASCE and IBC limit the Site Classification to D.

Liquefaction of the soils at the site during an earthquake event are unlikely due to the high percentage of fines (silt and clay) and relative density of the cohesionless soils present near the groundwater table.

Table 4: Seismic parameters

<i>Description</i>	<i>Type</i>	<i>Value</i>
Site Classification	Stiff Soil	D
Risk Category		II
Seismic Design Category (SDC)	SDC	B
MCE _R Ground Motion (0.2 Sec Period)	S _S	0.103
MCE _R Ground Motion (1 Sec Period)	S ₁	0.046
MCE _G Peak Ground Acceleration	PGA	0.051

5.6 New Utilities

Due to the presence of uncontrolled Fill between the curb and the building footprint, GEI recommends that trenches for new utilities outside of the building footprint be undercut by 1

foot and backfilled with compacted structural fill to reduce potential settlement. If utilities are to be installed within the backfill, undercutting is not required.

5.1 Temporary Support of Excavation (SOE)

Temporary SOE is required for vertical excavations deeper than 4 feet to support the cut face. Temporary walls should be designed to withstand lateral earth pressures and surcharge loads from construction staging, equipment, stockpiles, and adjacent traffic loads.

Based on the existing grades and the estimated lowest level of the structure, cut heights up to 10 to 14 feet are expected. A SOE system consisting of cantilevered soldier piles and lagging is therefore feasible, unless the SOE design is governed by more stringent requirements. Alternatively, a braced SOE system consisting of soldier piles and rakers with heel blocks can be used.

5.2 Pavement Areas

All existing slab, pavement, utilities, and existing foundation structures should be removed from the proposed pavement-on-grade areas within 2 feet of the proposed pavement-on-grade subgrade. In addition, all loose, soft or otherwise unsuitable materials should be removed from the pavement-on-grade areas.

Following stripping, the exposed should be proofrolled as described above for slabs-on-grade. Areas that experience pumping or rutting under the proofroll should be undercut and be replaced with new engineered fill.

Pavement subgrades should be positively drained. Sub-drainage should be provided at any low areas and along the edges of pavements where irrigated landscape areas slope toward the pavement to reduce the accumulation of free water within the aggregate base course, which results in subgrade softening, higher deflections under load and accelerated pavement deterioration. Around storm inlets or catch basins, we recommend installing subsurface finger drains to allow any water to drain out of the base course which may otherwise collect in low areas. Positive pavement base course and subgrade drainage will extend the useful life of the pavement.

If we are provided with specific information regarding anticipated vehicle types, axle loads and traffic volumes, we can design a pavement section as an additional item.

6. Construction Considerations

The primary purpose of this section of the report is to comment on items related to excavation, foundation construction, backfill placement, and related geotechnical aspects of the proposed construction.

6.1 Excavation Recommendations

Excavations may be required to remove the fill material and for foundations. Based on the subsurface investigation program, we believe it is feasible to remove the overburden soils using conventional heavy earthmoving equipment in proper working condition. Soil slopes and exposed soil surfaces will be subject to degradation through weathering and will require treatment to maintain stability.

Temporary construction excavations above the water table that are less than 5 feet in depth may be constructed with 1.5 Horizontal to 1 Vertical (1.5H:1V) side slopes in soil, unless otherwise noted. Localized instabilities in such excavations may occur due to the possibility of loose Fill material.

In such areas, the excavation sides should be sloped at an inclination of 2H:1V, or flatter. Side slopes should be protected from excessive disturbance and surface water runoff. All excavations should be performed in accordance with local, state, and federal regulations, including current OSHA excavation safety standards.

6.2 Surface Drainage

Surface drainage should be maintained throughout the site and channeled to appropriate drainage facilities. All ground surfaces immediately adjacent to structures should slope away at a grade of 5 percent from the structure foundations. Ponding of surface water should not be allowed, especially adjacent to pavements and structures. Subgrade soils below footings or slabs that become saturated must be removed as directed by GEI.

6.3 Subgrade Preparation and Backfill Placement

The subgrade should be stripped of all vegetation, existing Fill, and soft or otherwise unsuitable soils such as high plasticity soils with a LL greater than 40 and a PI greater than 20 to a depth of two feet below the structural element. Disposal of any on-site debris should be performed in accordance with local, state, and Federal regulations.

Existing utilities that are not planned to be reused should be removed, along with any unsuitable backfill materials. Care should be taken during site grading operations to avoid damaging any utilities that are to remain in service.

Imported soil backfill at the site should consist of granular material complying with ASTM D-2487 soil classification groups GP, GM, GC, SM, SC, SW and SP and should be well-graded. Clayey silt and silty sand with high fines content or material with a Liquid Limit greater than 40 percent and Plasticity Index greater than 20 percent are not acceptable for reuse as backfill within the building footprint.

GEI recommends that all backfill beneath structures be placed in uniform, horizontal lifts and compacted to at least 95% of the maximum laboratory dry density as determined by ASTM D1557 (Modified Proctor). Fill should be compacted at moisture content within $\pm 2\%$ of optimum. Fill placed within the building footprint should be placed in horizontal, eight-inch maximum loose lifts.

Placement and compaction of all backfill materials should be monitored and tested by a GEI representative. GEI recommends that all fill placement be tested in accordance with ASTM D6938 (Nuclear Methods) to verify the density, degree of compaction, and moisture content of the fill. The specifications should call for frequent testing on placed and compacted fill. If any portion of the fill fails to meet the compaction requirements, the area should be reworked, recompacted, and retested until the specified compaction is achieved.

The soils at the site may be frost-susceptible. Therefore, if construction is performed during freezing weather, special precautions will be required to prevent the subgrade soils from freezing. All subgrades should be free of frost before placement of concrete. Frost-susceptible soils that have frozen should be removed and replaced with compacted structural fill. Soil placed as fill should be free of frost, as should the ground on which it is placed. If concrete is poured on grade and left exposed during the winter, precautions should be taken to prevent freezing of the underlying soil.

Any loose or disturbed soil should be removed from the bottom of the excavation, and the subgrade should be compacted with a vibrator compactor weighing at least 200 pounds. If compaction begins to cause the subgrade to “pump” or become unstable, the material should be removed and replaced with approved structural backfill.

6.4 Construction Observations

We recommend that GEI be retained to perform construction observations during subgrade preparation and installation of temporary SOE due to the natural variations in bearing conditions that may be encountered during the foundation construction activities. The field engineer will perform observations to verify that the conditions exposed during construction are consistent with the findings of this investigation. We recommend GEI be on-site full time to observe subgrade soils, perform testing of structural fill, to monitor the installation of temporary SOE.

Specific items that should be monitored include: foundation bearing surfaces, placement of backfill and compaction, and installation of temporary SOE. To document the construction

activities, the GEI field representative will prepare daily field reports describing observations.

6.5 Instrumentation and Monitoring

GEI recommends that The Community Builders retain an instrumentation contractor to perform optical survey monitoring of the support of excavation system and any existing structures that might be affected by the excavation. If a sloped excavation is selected to install the footings, it is recommended that survey monitoring and pre and postcondition surveys of the existing structures should also be performed. GEI would be happy to provide these services, if requested.

7. Limitations

This report was prepared for the exclusive use of The Community Builders. Modifications to the information contained herein may be required if there are any changes in the nature, design, or location of the proposed development.

Our professional services for this project have been performed in accordance with generally accepted engineering practices. No warranty, either express or implied, is made.

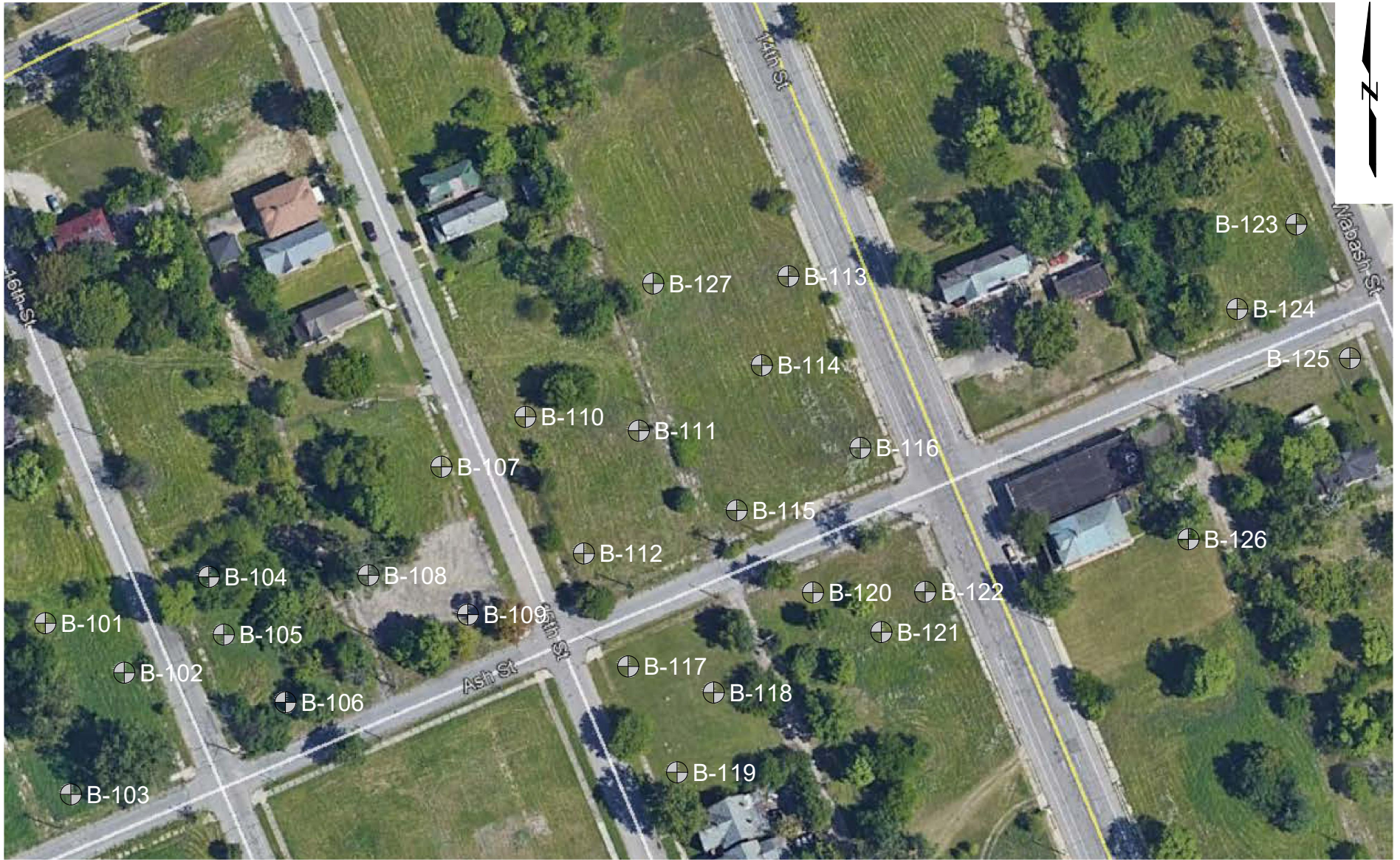
The information contained in this report is based in part on the data obtained from the subsurface explorations. The nature and extent of variations between explorations may not become evident until construction. If variations from the anticipated conditions are encountered, it may be necessary to revise the information contained in this report. It is recommended that GEI be engaged to make site visits during construction to check that the subsurface conditions exposed during construction are in general conformance with the results of the testing and ascertain that the work is being performed in compliance with the contract documents.

It was not part of our scope to explore for or research the locations of buried utilities or other buried structures at the site. Before construction of foundations for the proposed structure, a diligent effort should be made to determine the presence and location of any buried structures including utilities. This effort should include a thorough review of available drawings and other records of the site use and facilities. If the presence of such structures is determined to be likely, GEI should be notified so that we may review and revise our recommendations, if appropriate.

Our professional services for this project have been performed in accordance with generally accepted engineering practices; no warranty, expressed or implied, is made.

Figures

Boring Location Plan



LEGEND:

⊕ B-101 SOIL BORING LOCATION

NOTES:

1. DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Ash I Development
Detroit, Michigan

The Community Builders
Columbus, OH



Project 2005092

BORING LOCATION DIAGRAM

March 2021

Appendix A

Boring Logs



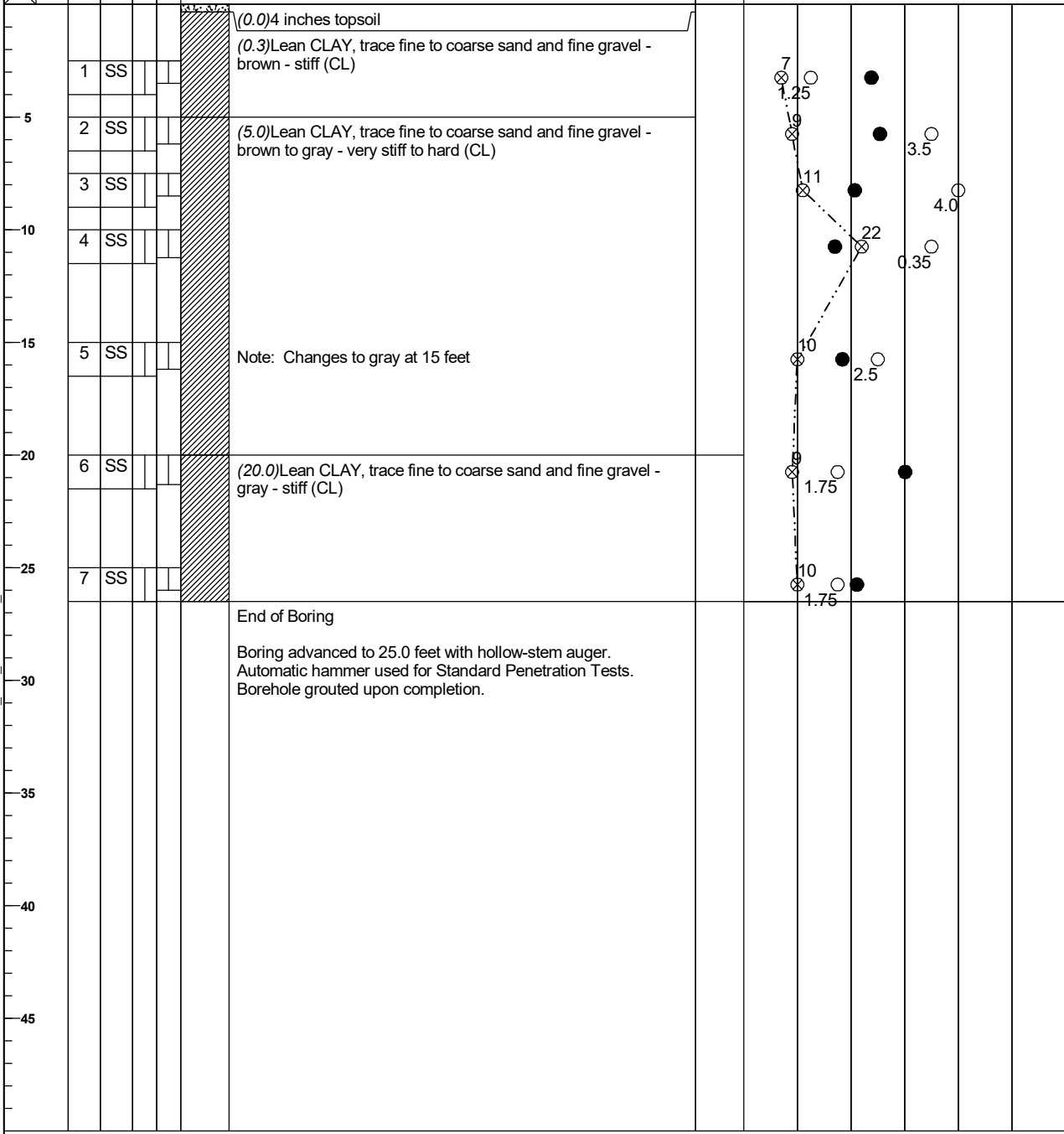
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-101**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNITS DRY WT. LBS/FT ³	○ UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²)
					DESCRIPTION OF MATERIAL		1 2 3 4 5
							PLASTIC LIMIT (%) WATER CONTENT (%) LIQUID LIMIT (%)
SURFACE ELEVATION					⊗ STANDARD PENETRATION (BLOWS/FT)	10 20 30 40 50 60	



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 16.0 ft. WS	BORING STARTED	GEI OFFICE	
	1/11/2021	Plymouth, MI	
NORTHING	BORING COMPLETED	ENTERED BY	APPROVED BY
	1/11/2021	LJE	RCR
EASTING	RIG/FOREMAN	GEI PROJECT NO.	PAGE NO.
	CME-55 / Zach	2005092	1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT_3/16/21



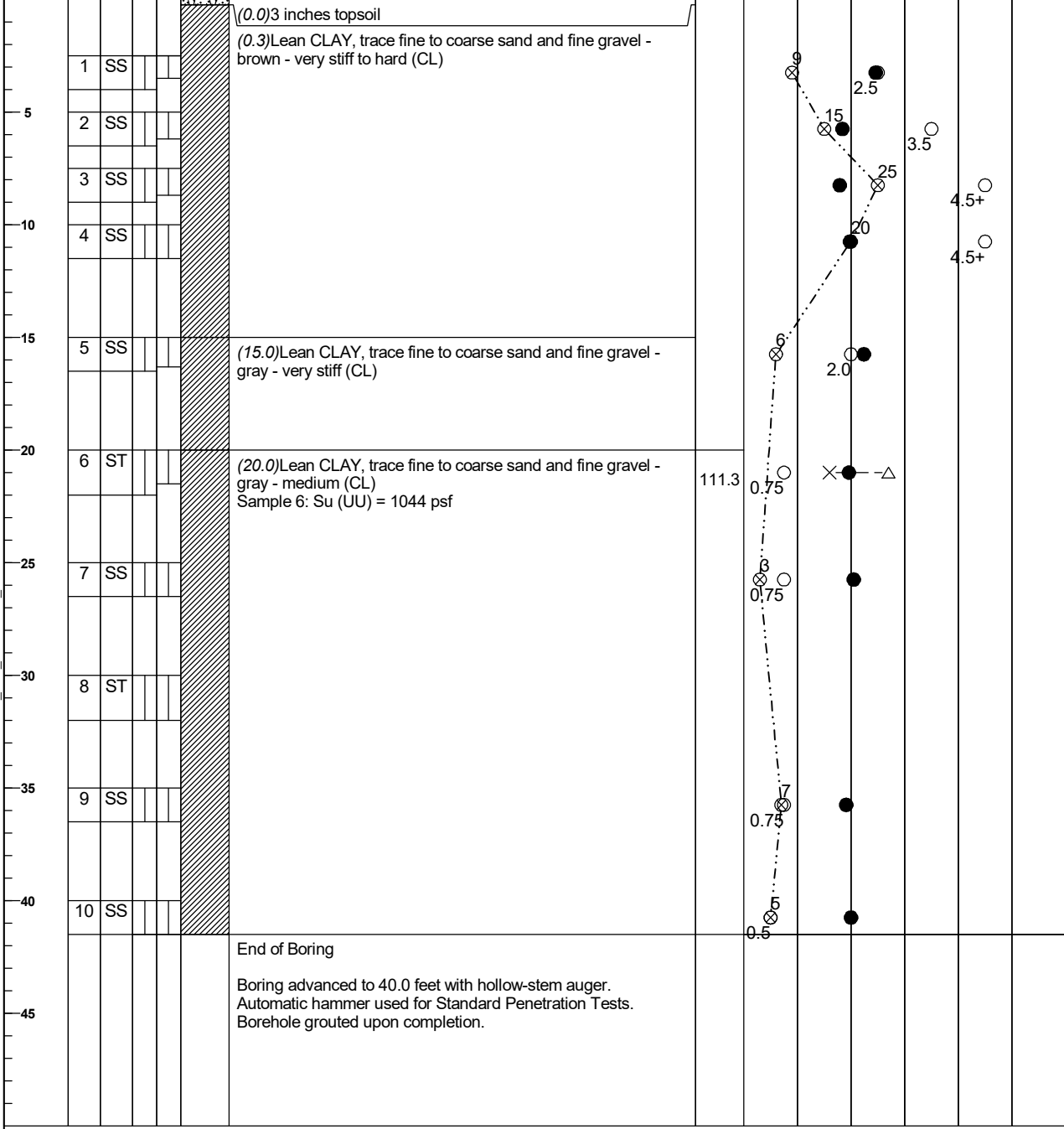
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-102**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5			
					DESCRIPTION OF MATERIAL		PLASTIC LIMIT (%)	WATER CONTENT (%)	LIQUID LIMIT (%)
							10	20	30
SURFACE ELEVATION					UNIT DRY WT. LBS/FT ³	STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60			



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS	BORING STARTED	1/11/2021	GEI OFFICE	
	BORING COMPLETED	1/11/2021	Plymouth, MI	
NORTHING	EASTING	RIG/FOREMAN	ENTERED BY	APPROVED BY
		CME-55 / Zach	LJE	RCR
		GEI PROJECT NO.	PAGE NO. 1 OF 1	
		2005092		

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21



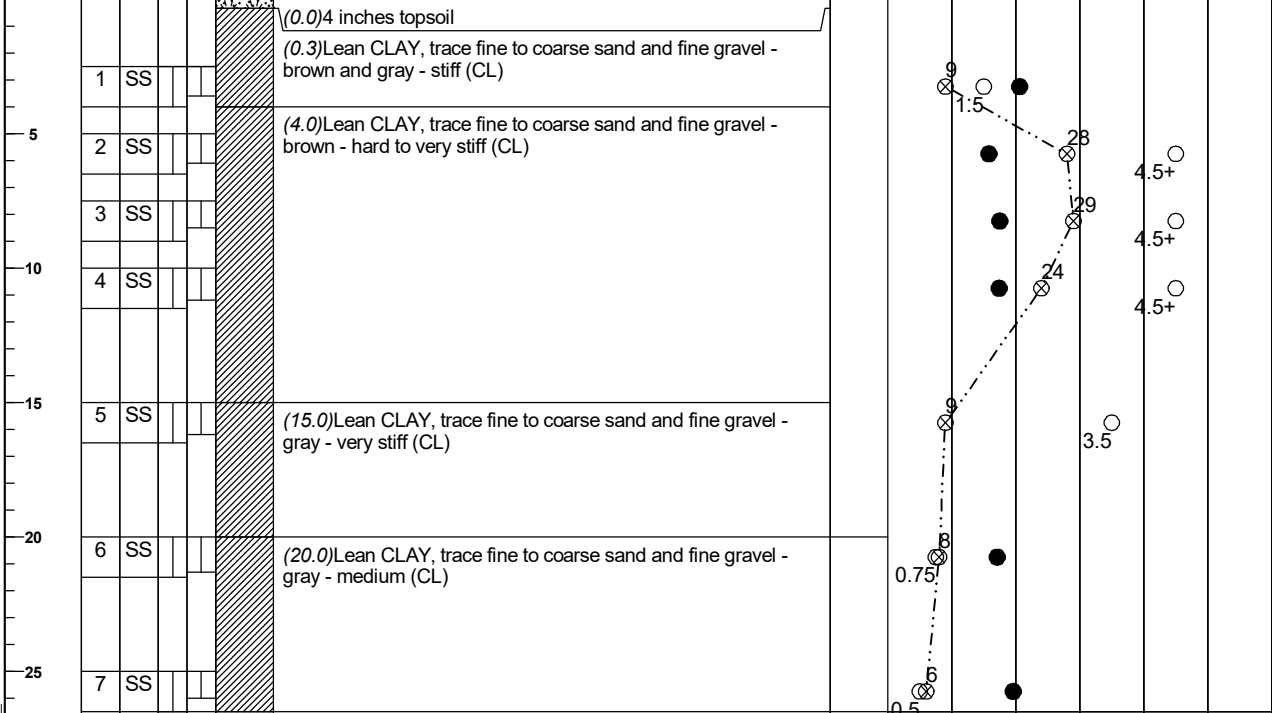
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-103**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5			
					DESCRIPTION OF MATERIAL		PLASTIC LIMIT (%) 10 20 30 40 50	WATER CONTENT (%) X	LIQUID LIMIT (%) Δ
					SURFACE ELEVATION		⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60		



MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 16.0 ft. WS		BORING STARTED 1/11/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/11/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1



CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-104**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINE COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5			
					DESCRIPTION OF MATERIAL		PLASTIC LIMIT (%) 10 20 30 40 50	WATER CONTENT (%) X	LIQUID LIMIT (%) Δ
					SURFACE ELEVATION		⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60		

5	1	SS			(0.0) Fill: Lean CLAY with sand - black - stiff (CL)	6					
	2	SS			(4.0) Lean CLAY, trace fine to coarse sand and fine gravel - reddish brown and gray - very stiff (CL)	19	2.0				
	3	SS			(7.5) Lean CLAY, trace fine to coarse sand and fine gravel - brown - hard to very stiff (CL)	15					
10	4	SS					14			4.5+	
	5	SS			(15.0) Lean CLAY, trace fine to coarse sand and fine gravel - gray - very stiff (CL)	11	2.0		3.5		
20	6	SS			(20.0) Lean CLAY, trace fine to coarse sand and fine gravel - gray - medium (CL)	5	0.75				
25	7	SS				5	0.75				

End of Boring

Boring advanced to 25.0 feet with hollow-stem auger. Automatic hammer used for Standard Penetration Tests. Borehole grouted upon completion.

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS		BORING STARTED 1/12/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/12/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21



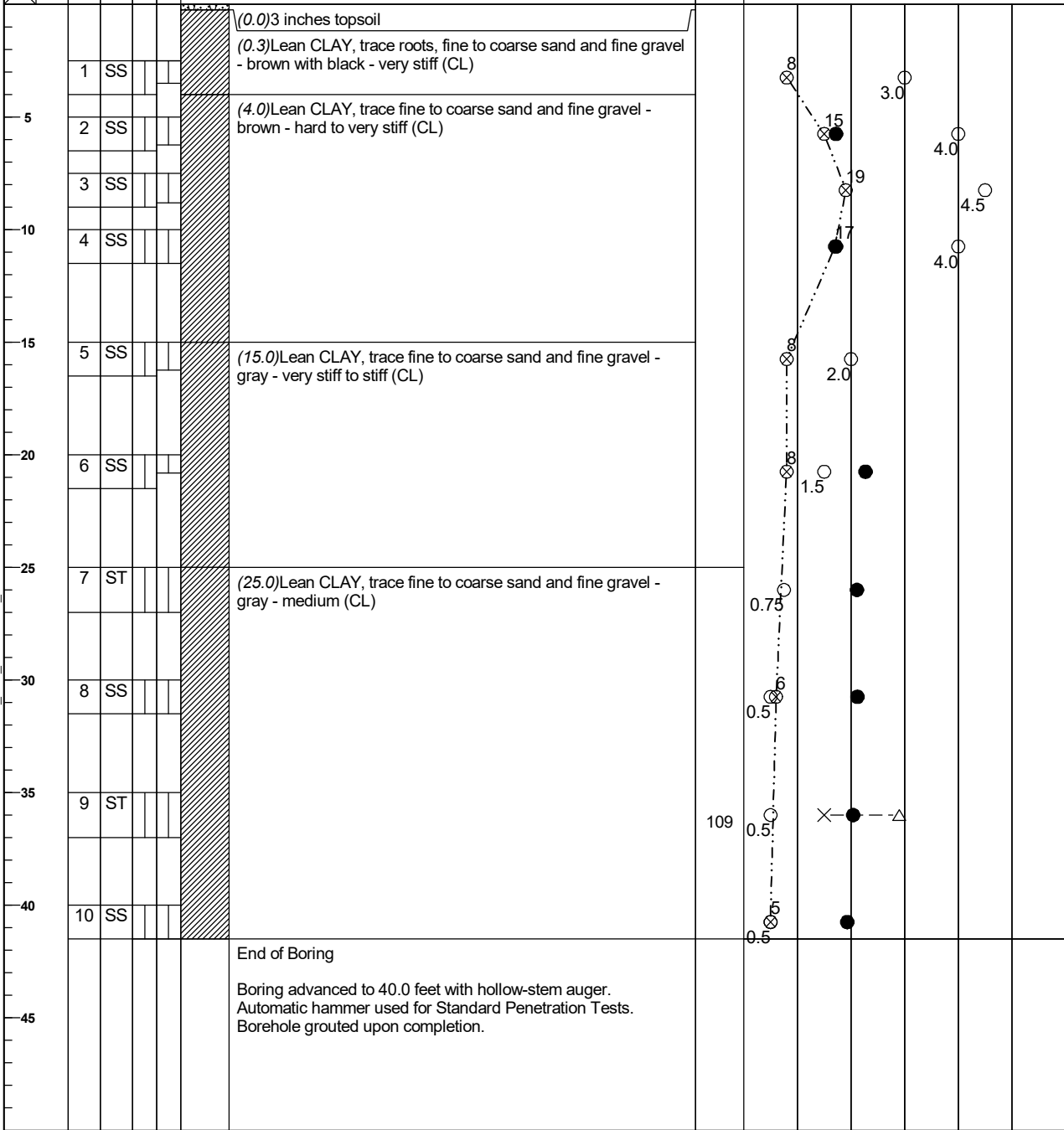
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-105**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNITS DRY WT. LBS/FT ³	○ UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²)
					DESCRIPTION OF MATERIAL		1 2 3 4 5
							PLASTIC LIMIT (%) WATER CONTENT (%) LIQUID LIMIT (%)
SURFACE ELEVATION					⊗ STANDARD PENETRATION (BLOWS/FT)	10 20 30 40 50 60	



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 16.0 ft. WS		BORING STARTED 1/12/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/12/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21



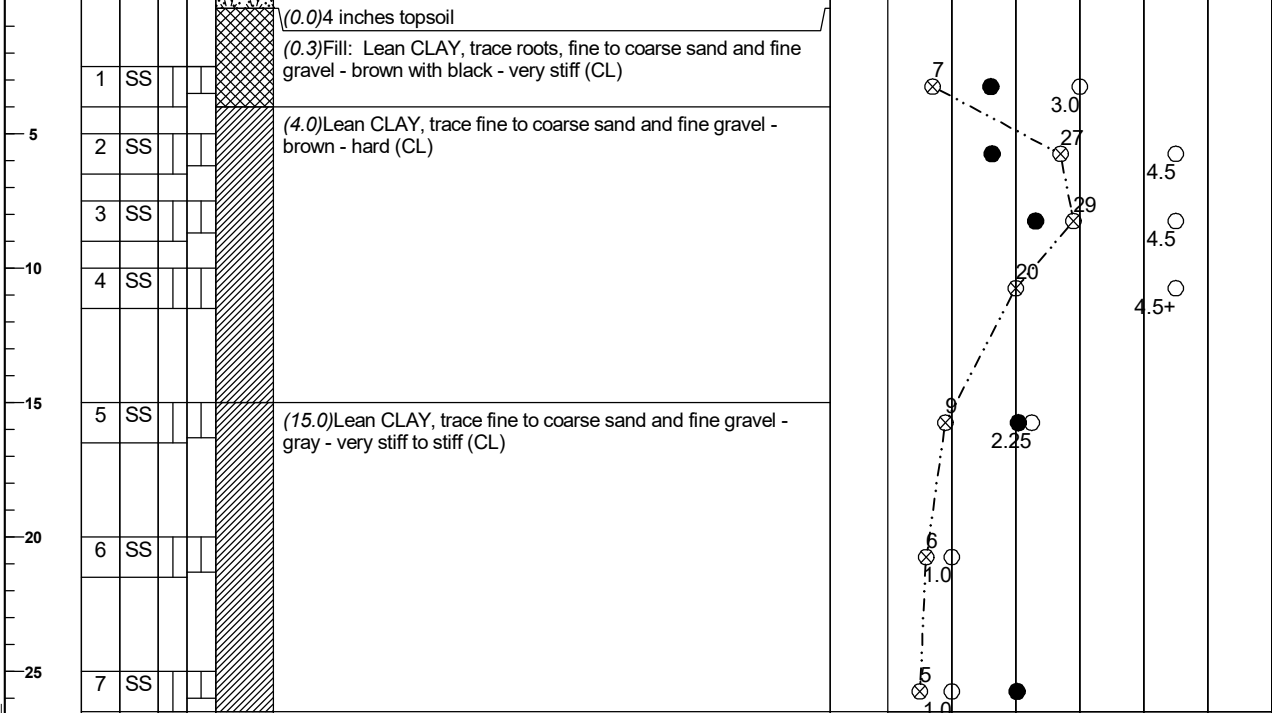
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-106**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5			
					DESCRIPTION OF MATERIAL		PLASTIC LIMIT (%) 10 20 30 40 50	WATER CONTENT (%) X	LIQUID LIMIT (%) Δ
					SURFACE ELEVATION		⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60		



End of Boring

Boring advanced to 25.0 feet with hollow-stem auger. Automatic hammer used for Standard Penetration Tests. Borehole grouted upon completion.

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS		BORING STARTED 1/12/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/12/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEI_MIDWEST_BETA.GDT 3/16/21



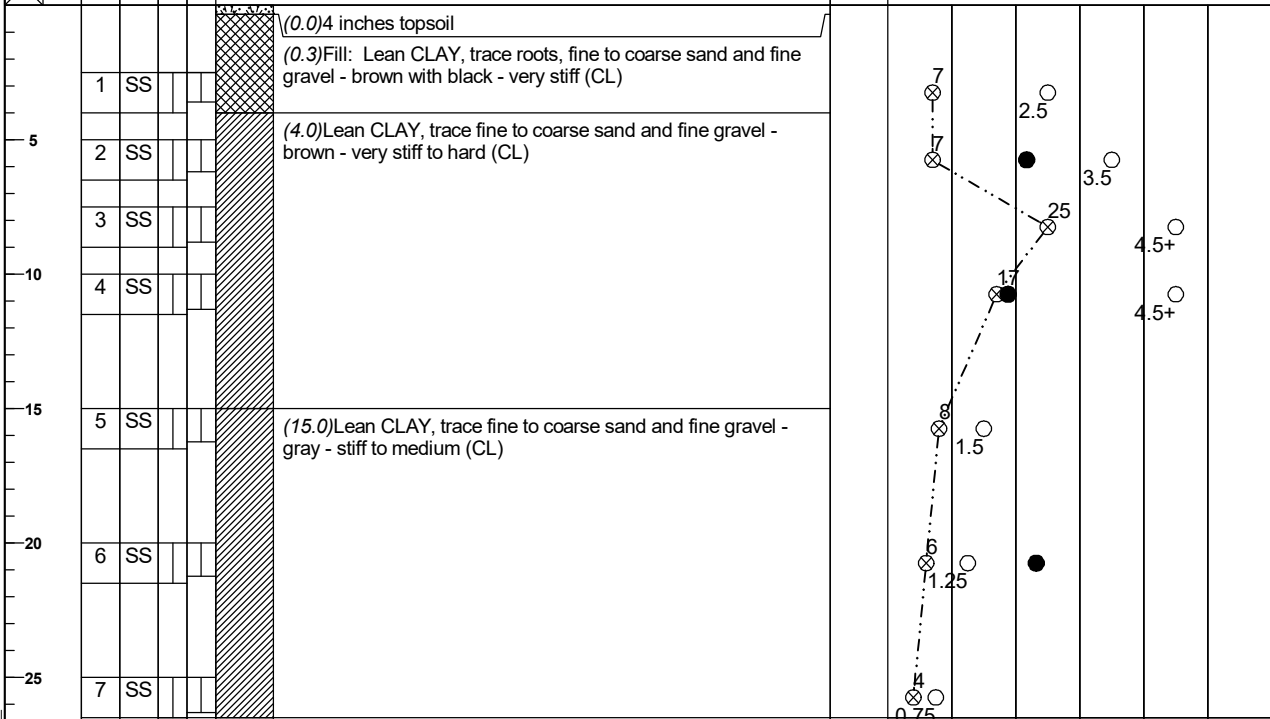
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-107**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5			
					DESCRIPTION OF MATERIAL		PLASTIC LIMIT (%) 10 20 30 40 50	WATER CONTENT (%) 10 20 30 40 50	LIQUID LIMIT (%) 10 20 30 40 50
					SURFACE ELEVATION		⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60		



End of Boring

Boring advanced to 25.0 feet with hollow-stem auger. Automatic hammer used for Standard Penetration Tests. Borehole grouted upon completion.

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS		BORING STARTED 1/12/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/12/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT_3/16/21



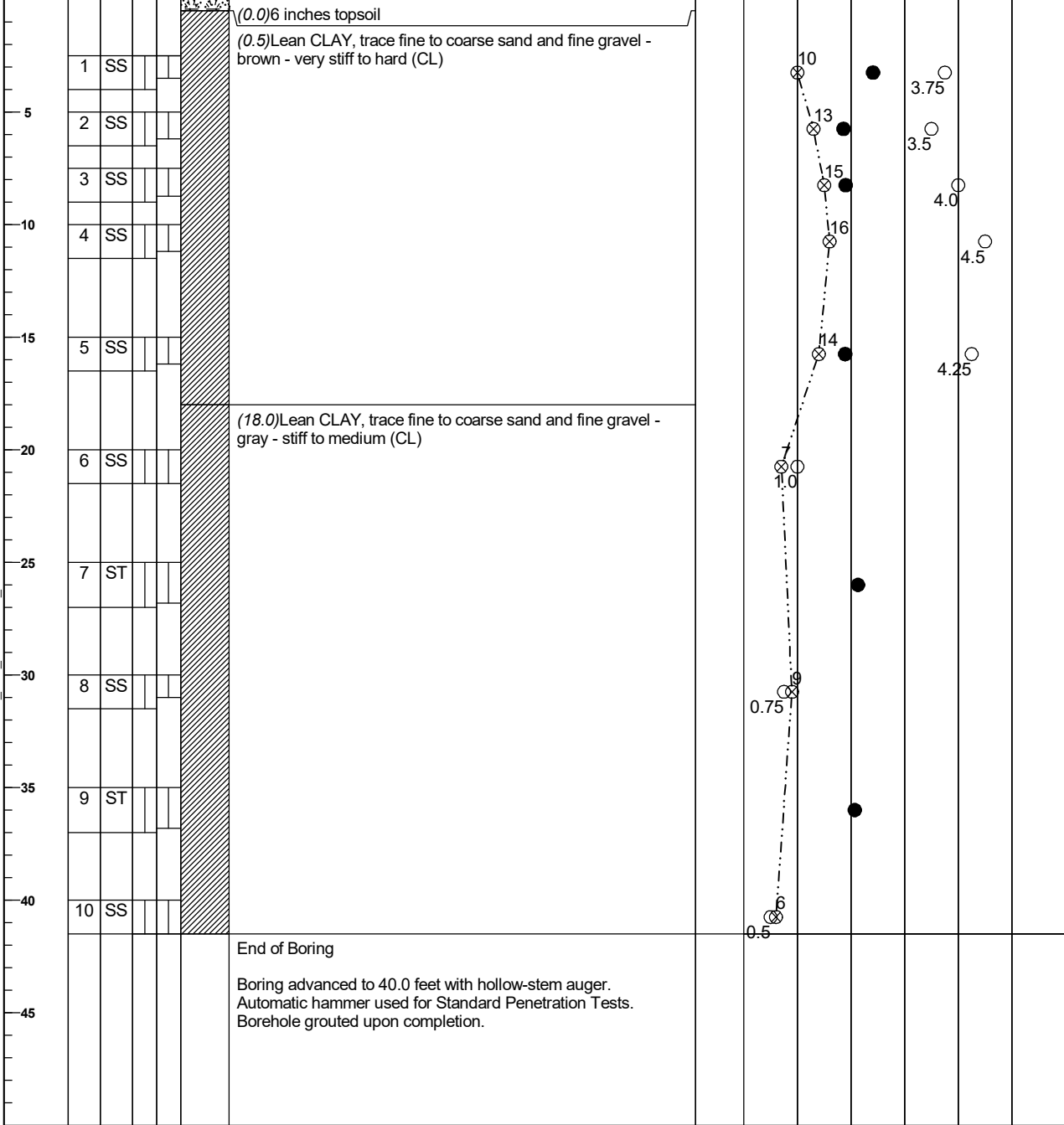
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-108**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5
					DESCRIPTION OF MATERIAL	
					SURFACE ELEVATION	UNIT DRY WT. LBS/FT ³
						⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 20.0 ft. WS	BORING STARTED 1/12/2021	GEI OFFICE Plymouth, MI	
	BORING COMPLETED 1/12/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092
		PAGE NO. 1 OF 1	

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21



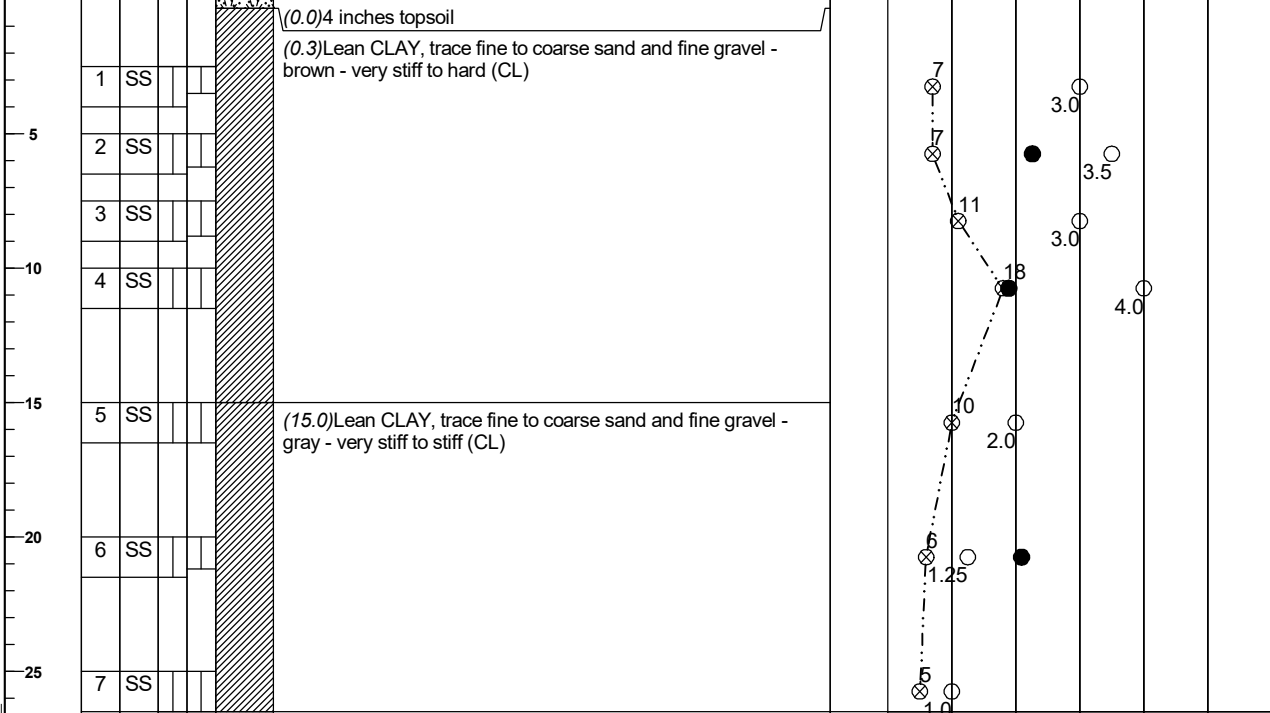
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-109**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5			
					DESCRIPTION OF MATERIAL		PLASTIC LIMIT (%) 10 20 30 40 50	WATER CONTENT (%) X	LIQUID LIMIT (%) Δ
					SURFACE ELEVATION		⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60		



End of Boring

Boring advanced to 25.0 feet with hollow-stem auger. Automatic hammer used for Standard Penetration Tests. Borehole grouted upon completion.

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 16.0 ft. WS		BORING STARTED 1/12/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/12/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21



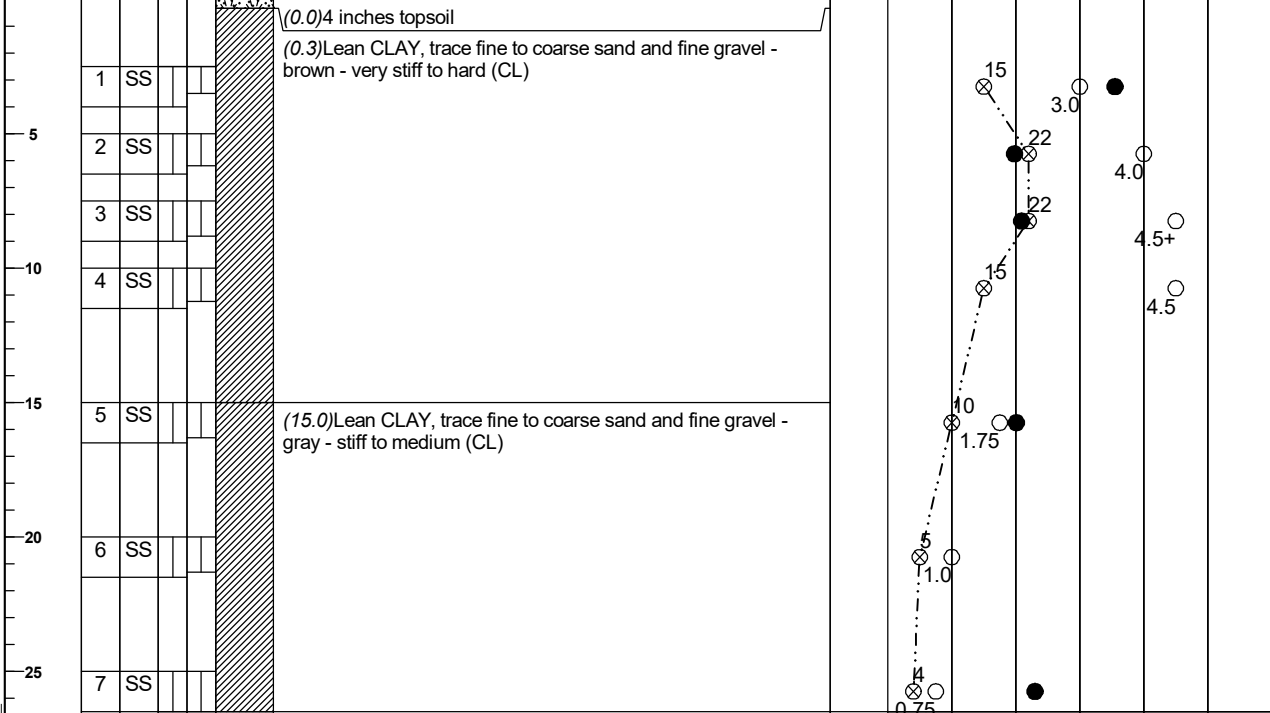
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-110**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5			
					DESCRIPTION OF MATERIAL		PLASTIC LIMIT (%)	WATER CONTENT (%)	LIQUID LIMIT (%)
							10	20	30
UNIT DRY WT. LBS/FT ³	SURFACE ELEVATION				STANDARD PENETRATION (BLOWS/FT)				
						10 20 30 40 50 60			



End of Boring

Boring advanced to 25.0 feet with hollow-stem auger. Automatic hammer used for Standard Penetration Tests. Borehole grouted upon completion.

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS

BORING STARTED **1/13/2021**

BORING COMPLETED **1/13/2021**

GEI OFFICE **Plymouth, MI**

ENTERED BY **LJE** APPROVED BY **RCR**

NORTHING EASTING

RIG/FOREMAN **CME-55 / Zach**

GEI PROJECT NO. **2005092**

PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEI_MIDWEST_BETA.GDT 3/16/21



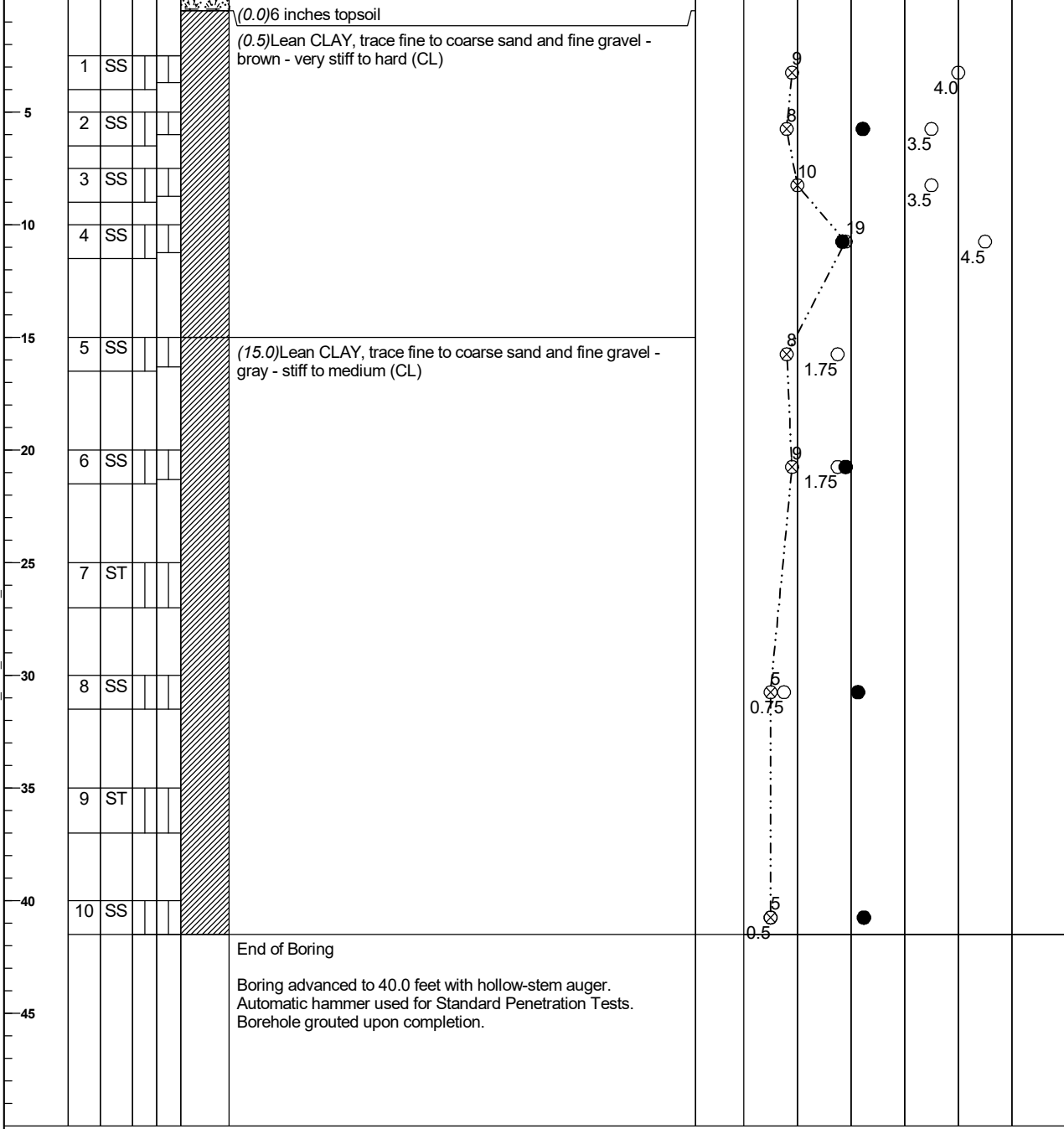
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-111**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5			
					DESCRIPTION OF MATERIAL		PLASTIC LIMIT (%) 10 20 30 40 50	WATER CONTENT (%) X	LIQUID LIMIT (%) Δ
					SURFACE ELEVATION		⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60		



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS	BORING STARTED	1/13/2021	GEI OFFICE	Plymouth, MI			
	BORING COMPLETED	1/13/2021	ENTERED BY	LJE	APPROVED BY	RCR	
NORTHING	EASTING	RIG/FOREMAN	CME-55 / Zach	GEI PROJECT NO.	2005092	PAGE NO.	1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT_3/16/21



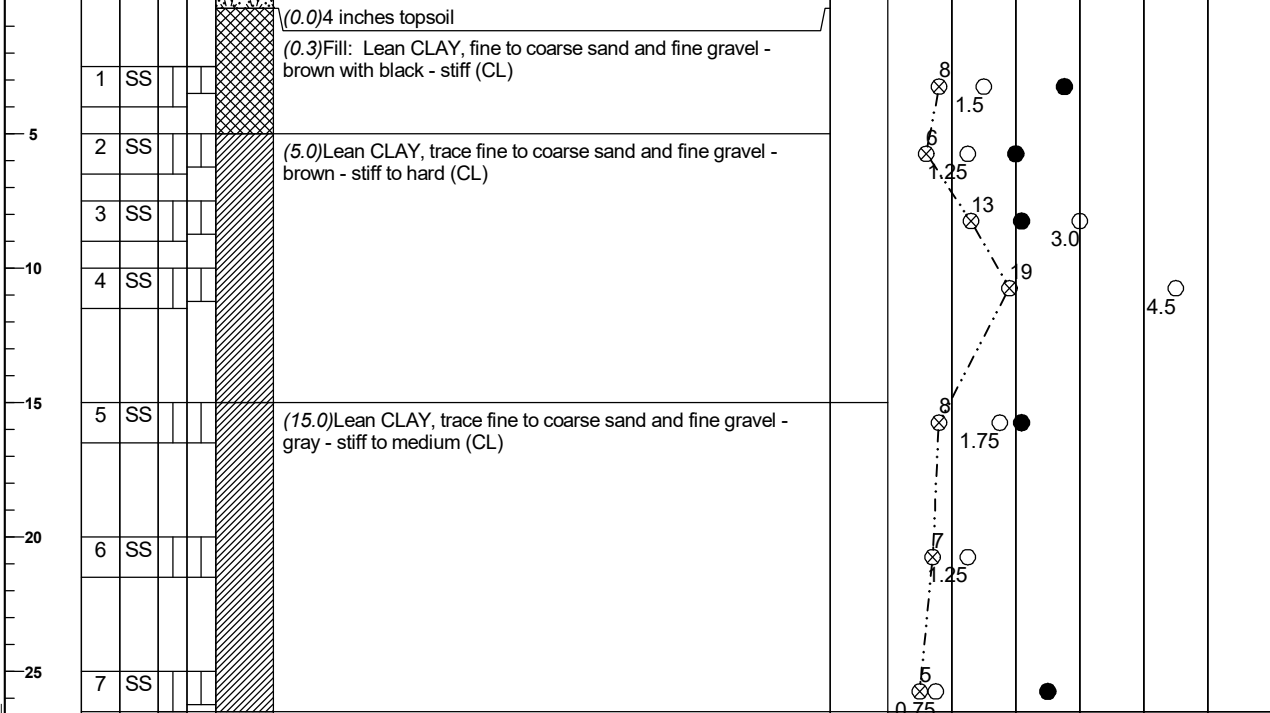
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-112**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5
					DESCRIPTION OF MATERIAL	
SURFACE ELEVATION					UNIT DRY WT. LBS/FT ³	WATER CONTENT (%) 10 20 30 40 50
						LIQUID LIMIT (%) 10 20 30 40 50
						⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60



End of Boring

Boring advanced to 25.0 feet with hollow-stem auger. Automatic hammer used for Standard Penetration Tests. Borehole grouted upon completion.

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS		BORING STARTED 1/13/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/13/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEI_MIDWEST_BETA.GDT_3/16/21



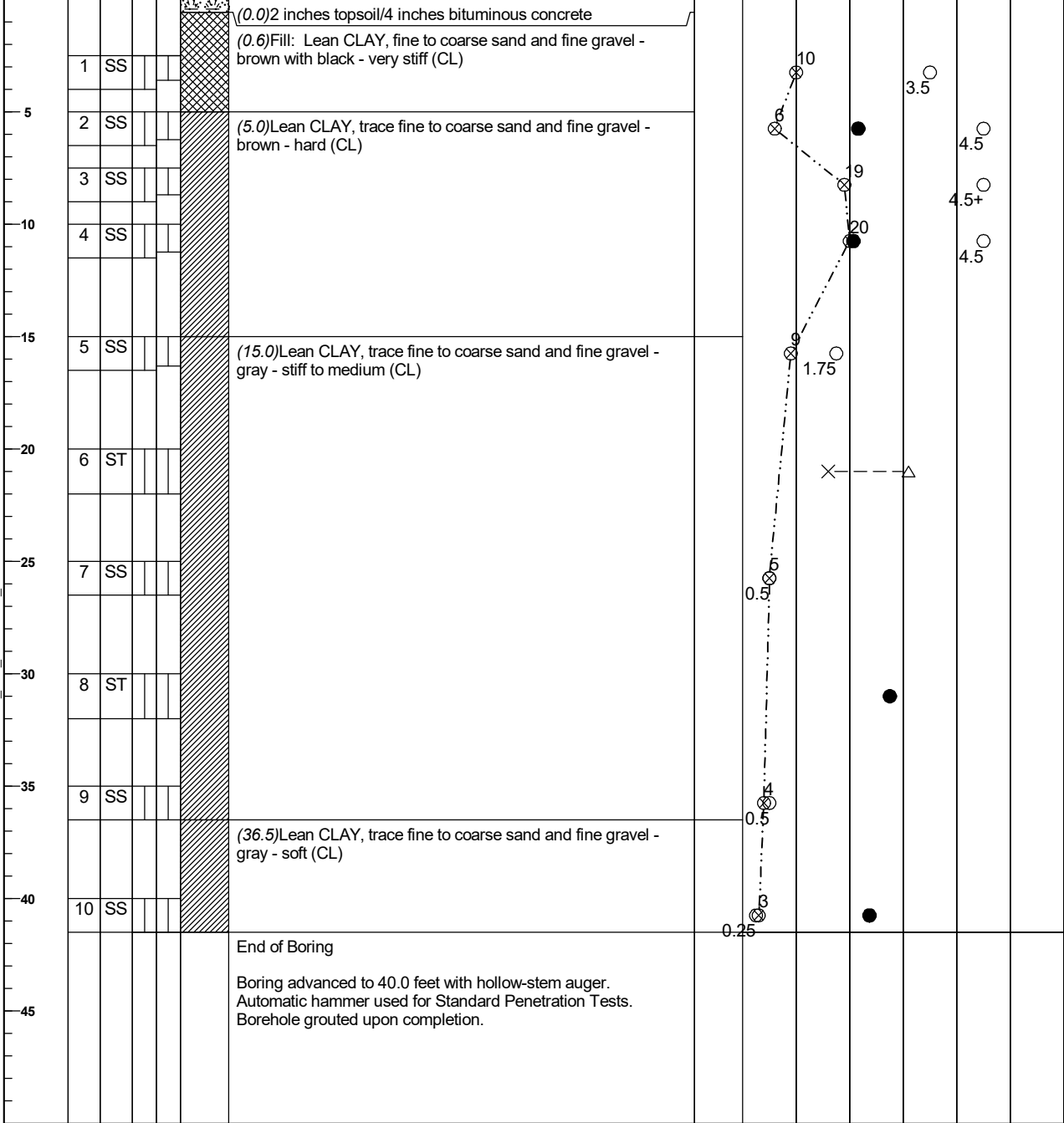
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-113**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5
					DESCRIPTION OF MATERIAL	
					SURFACE ELEVATION	UNIT DRY WT. LBS/FT ³
						STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS	BORING STARTED	1/13/2021	GEI OFFICE	
	BORING COMPLETED		1/13/2021	Plymouth, MI
NORTHING	EASTING	RIG/FOREMAN	GEI PROJECT NO.	
		CME-55 / Zach	2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21



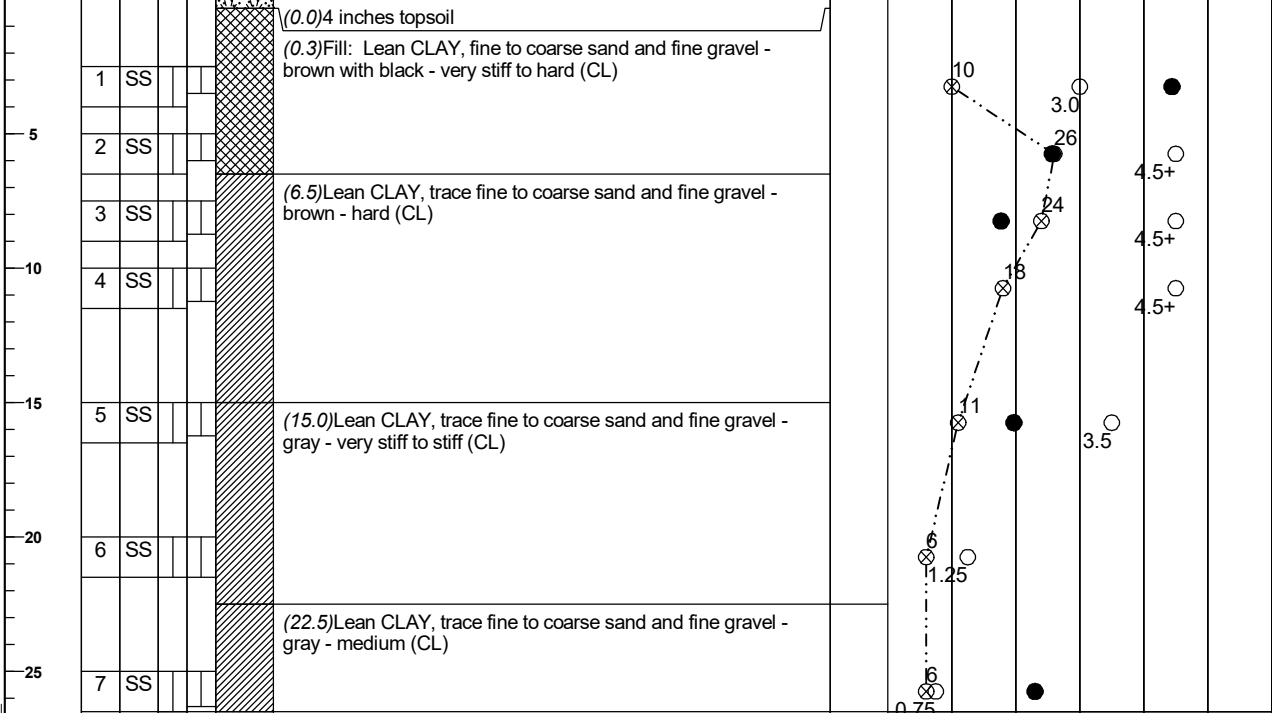
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-114**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNITS DRY WT. LBS/FT ³	○ UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²)
					DESCRIPTION OF MATERIAL		1 2 3 4 5
							PLASTIC LIMIT (%) WATER CONTENT (%) LIQUID LIMIT (%)
SURFACE ELEVATION					⊗ STANDARD PENETRATION (BLOWS/FT)	10 20 30 40 50 60	



End of Boring

Boring advanced to 25.0 feet with hollow-stem auger. Automatic hammer used for Standard Penetration Tests. Borehole grouted upon completion.

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS		BORING STARTED 1/13/2021		GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/13/2021		ENTERED BY LJE APPROVED BY RCR	
NORTHING EASTING		RIG/FOREMAN CME-55 / Zach		GEI PROJECT NO. 2005092 PAGE NO. 1 OF 1	

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21



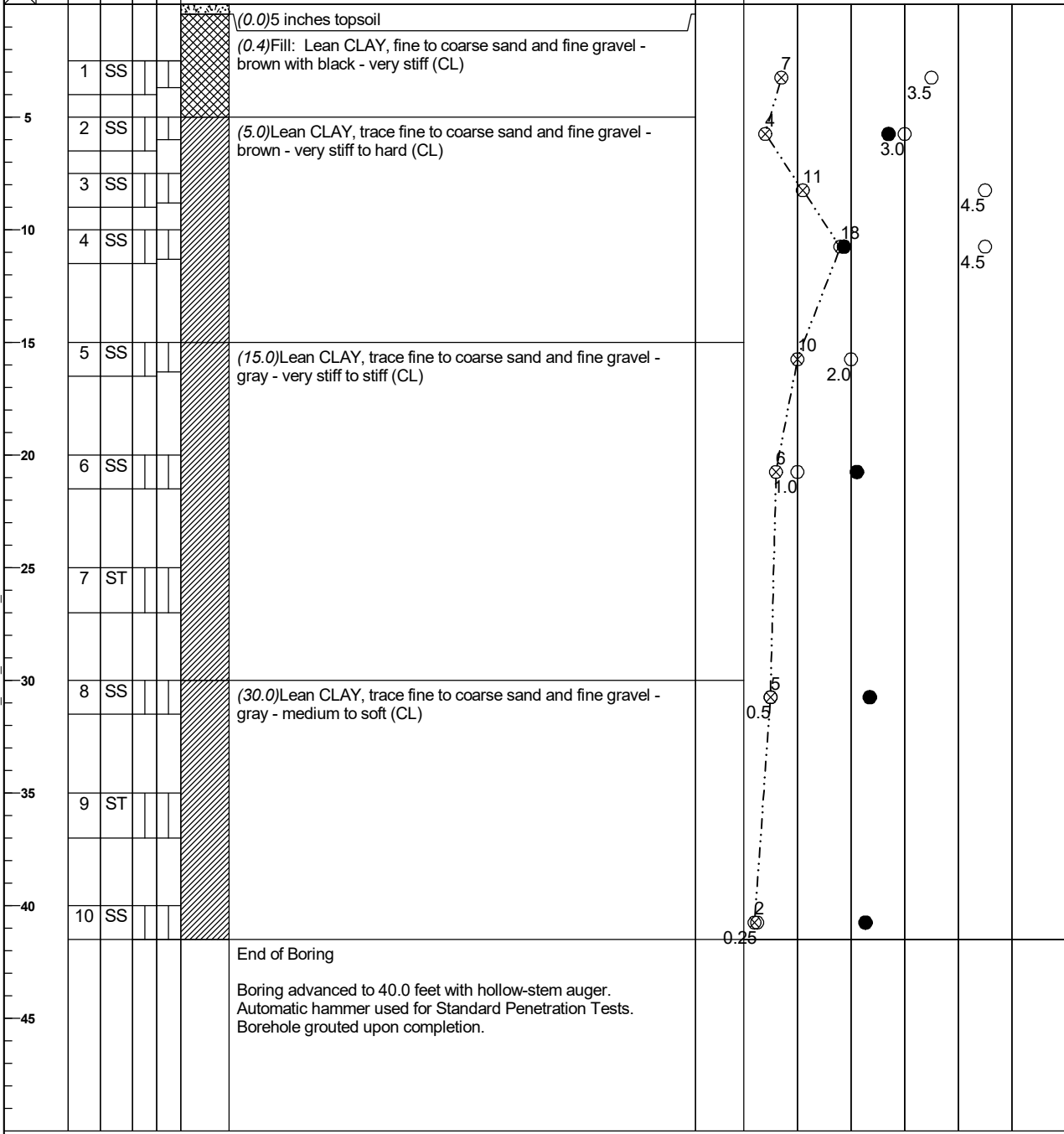
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-115**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5
					DESCRIPTION OF MATERIAL	
					SURFACE ELEVATION	WATER CONTENT (%) 30
						LIQUID LIMIT (%) 50
						STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS		BORING STARTED 1/13/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/13/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21



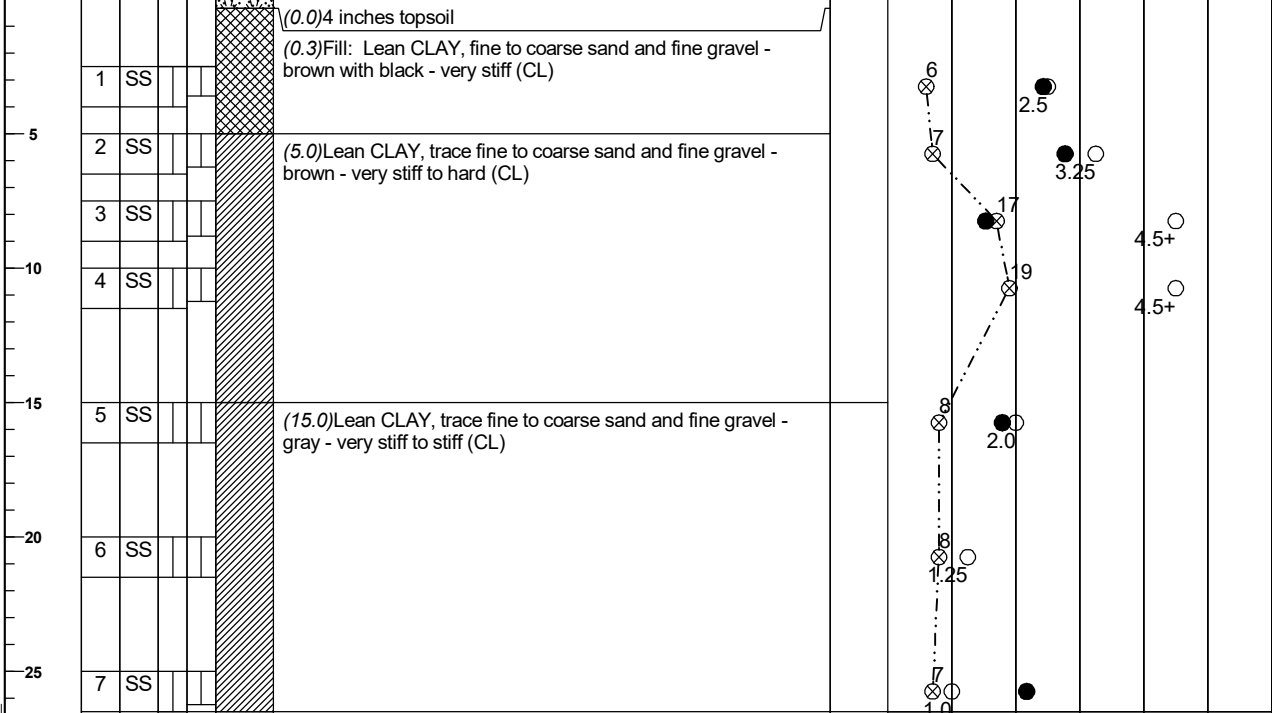
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-116**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNITS DRY WT. LBS/FT ³	○ UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²)
					DESCRIPTION OF MATERIAL		1 2 3 4 5
							PLASTIC LIMIT (%) WATER CONTENT (%) LIQUID LIMIT (%)
SURFACE ELEVATION					⊗ STANDARD PENETRATION (BLOWS/FT)	10 20 30 40 50 60	



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS		BORING STARTED 1/14/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/14/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEI_MIDWEST_BETA.GDT 3/16/21



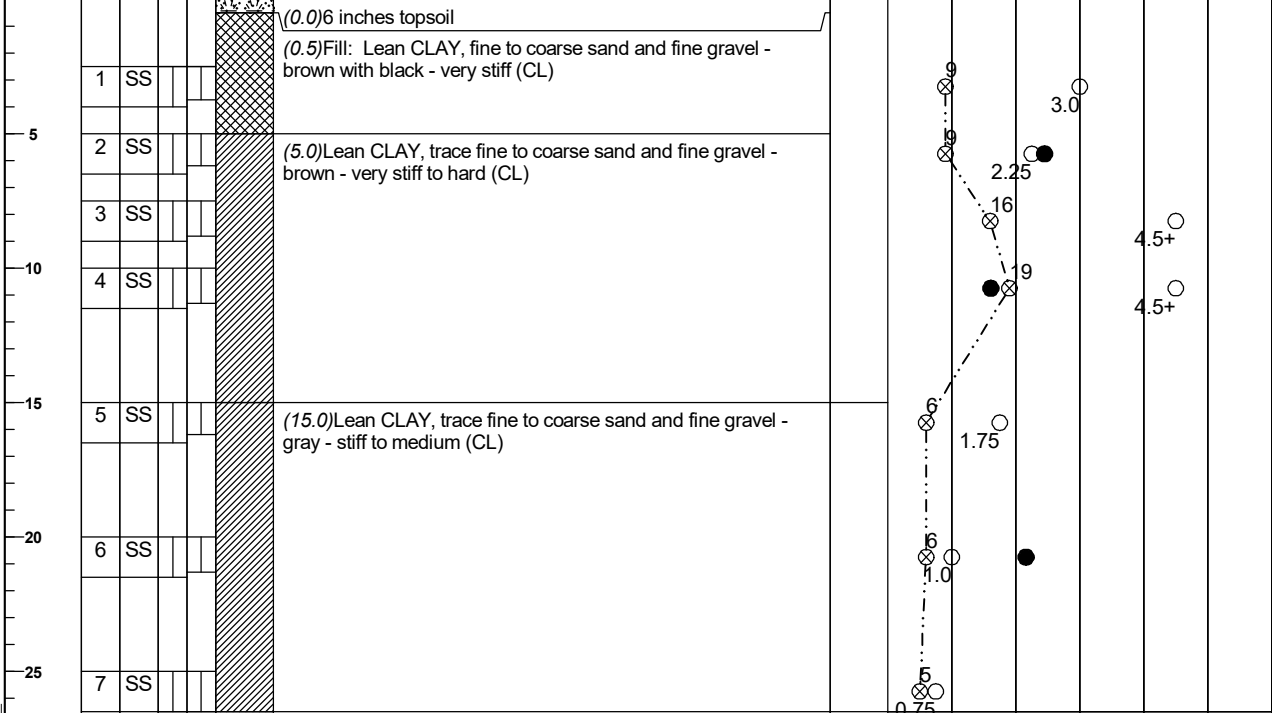
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-117**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNITS DRY WT. LBS/FT ³	○ UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²)
					DESCRIPTION OF MATERIAL		1 2 3 4 5
							PLASTIC LIMIT (%) WATER CONTENT (%) LIQUID LIMIT (%)
SURFACE ELEVATION					⊗ STANDARD PENETRATION (BLOWS/FT)	10 20 30 40 50 60	



MIDWEST BORING LOG - OFFICIAL_2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT_3/16/21

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS		BORING STARTED 1/15/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/15/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1



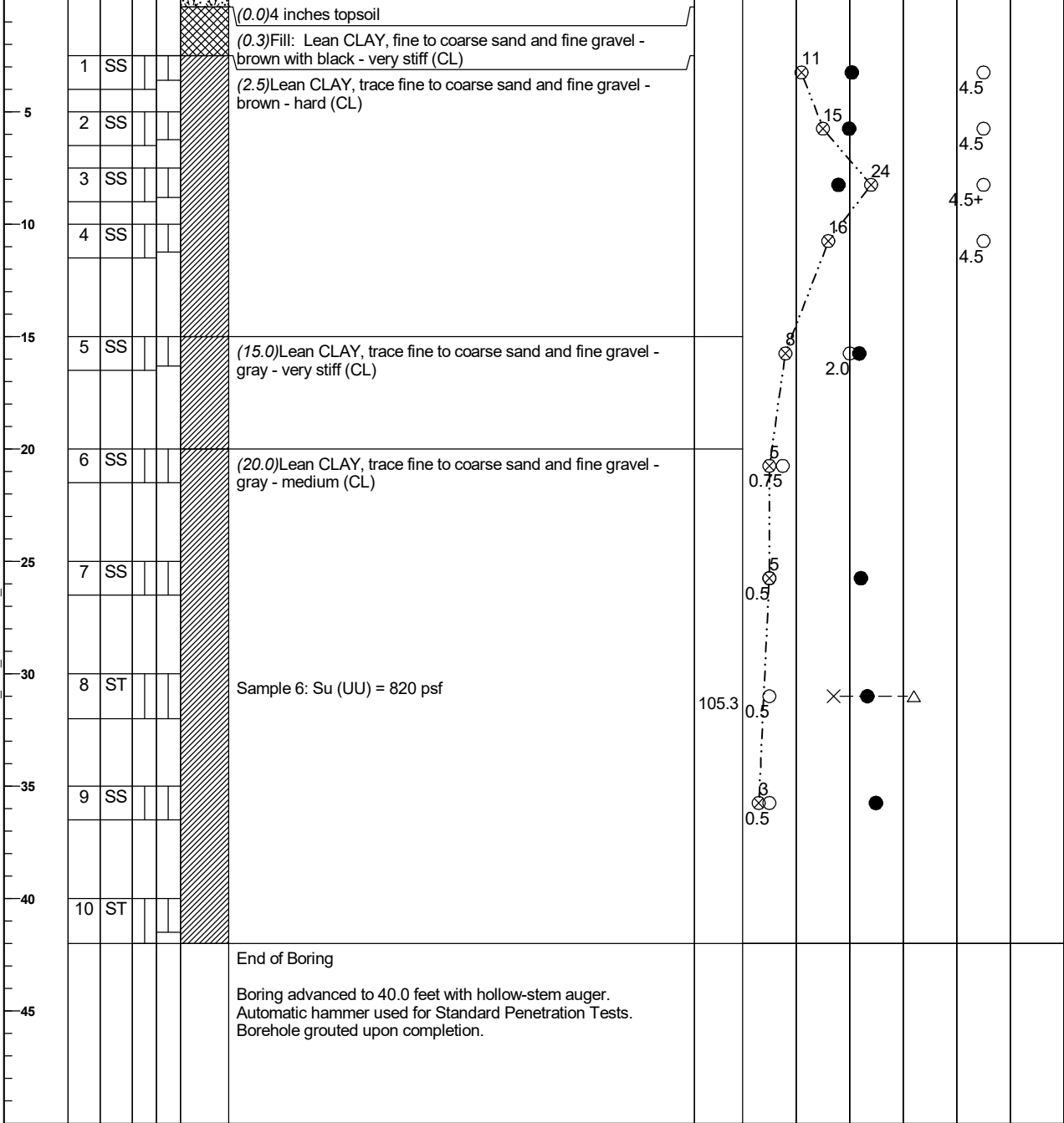
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-118**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5
					DESCRIPTION OF MATERIAL	
					SURFACE ELEVATION	UNIT DRY WT. LBS/FT ³
						STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS	BORING STARTED	1/14/2021	GEI OFFICE	Plymouth, MI		
	BORING COMPLETED	1/14/2021	ENTERED BY	LJE	APPROVED BY	RCR
NORTHING	EASTING	RIG/FOREMAN	CME-55 / Zach	GEI PROJECT NO.	2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21



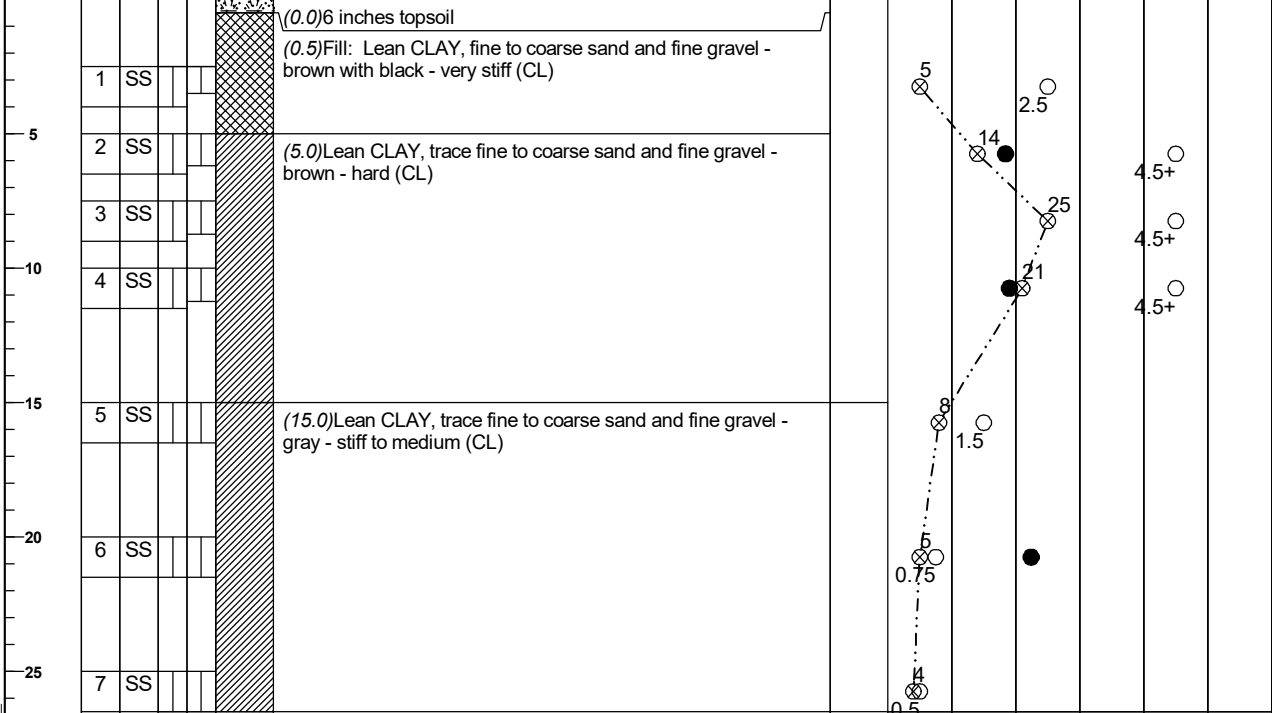
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-119**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5			
					DESCRIPTION OF MATERIAL		PLASTIC LIMIT (%) 10 20 30 40 50	WATER CONTENT (%) 10 20 30 40 50	LIQUID LIMIT (%) 10 20 30 40 50
					SURFACE ELEVATION		⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60		



End of Boring

Boring advanced to 25.0 feet with hollow-stem auger. Automatic hammer used for Standard Penetration Tests. Borehole grouted upon completion.

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 21.0 ft. WS		BORING STARTED 1/18/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/18/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEI_MIDWEST_BETA.GDT 3/16/21



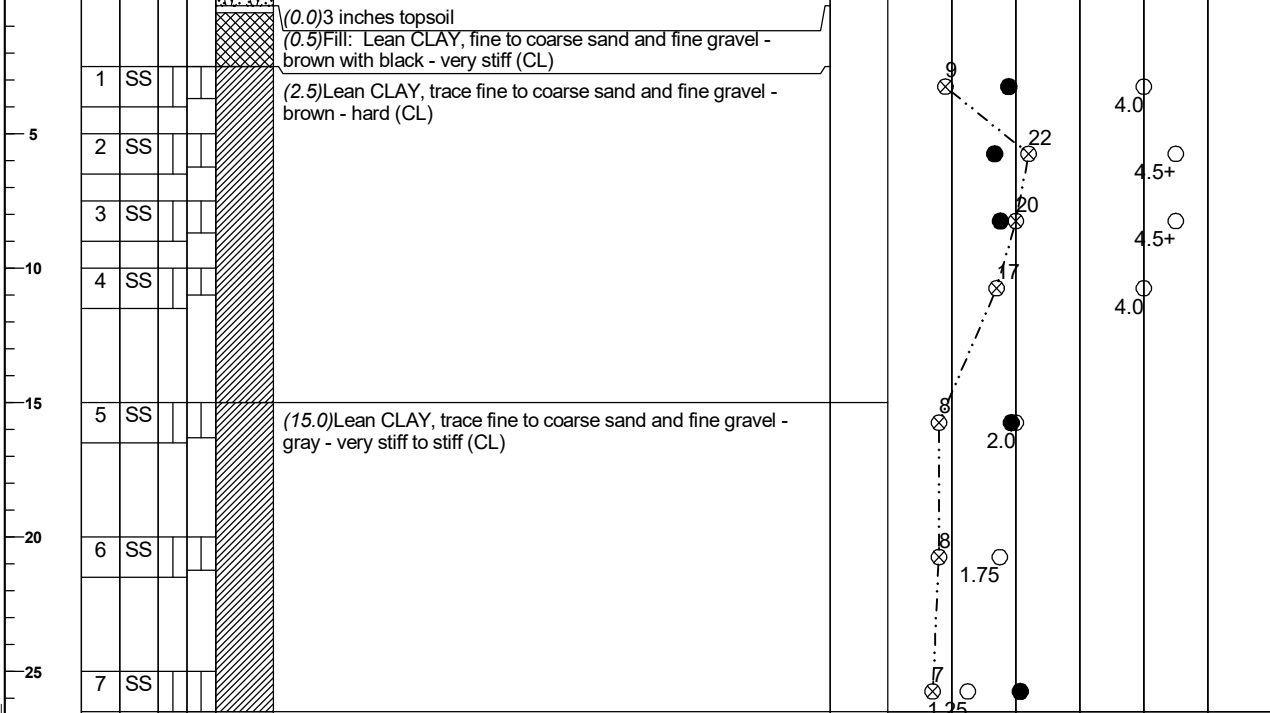
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-120**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5
					DESCRIPTION OF MATERIAL	
					SURFACE ELEVATION	UNIT DRY WT. LBS/FT ³
						⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60



End of Boring

Boring advanced to 25.0 feet with hollow-stem auger. Automatic hammer used for Standard Penetration Tests. Borehole grouted upon completion.

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS		BORING STARTED 1/14/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/14/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEI_MIDWEST_BETA.GDT 3/16/21



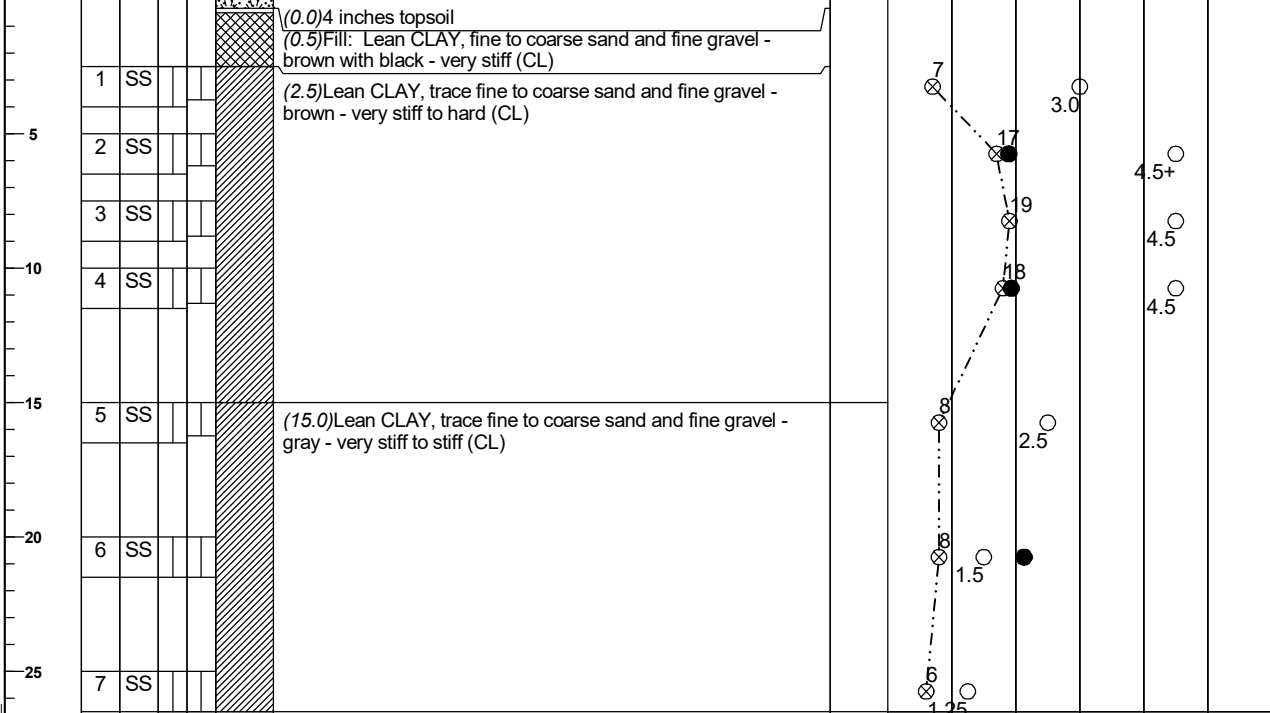
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-121**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5			
					DESCRIPTION OF MATERIAL		PLASTIC LIMIT (%) 10 20 30 40 50	WATER CONTENT (%) 10 20 30 40 50	LIQUID LIMIT (%) 10 20 30 40 50
					SURFACE ELEVATION		⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60		



End of Boring

Boring advanced to 25.0 feet with hollow-stem auger. Automatic hammer used for Standard Penetration Tests. Borehole grouted upon completion.

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS		BORING STARTED 1/14/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/14/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21



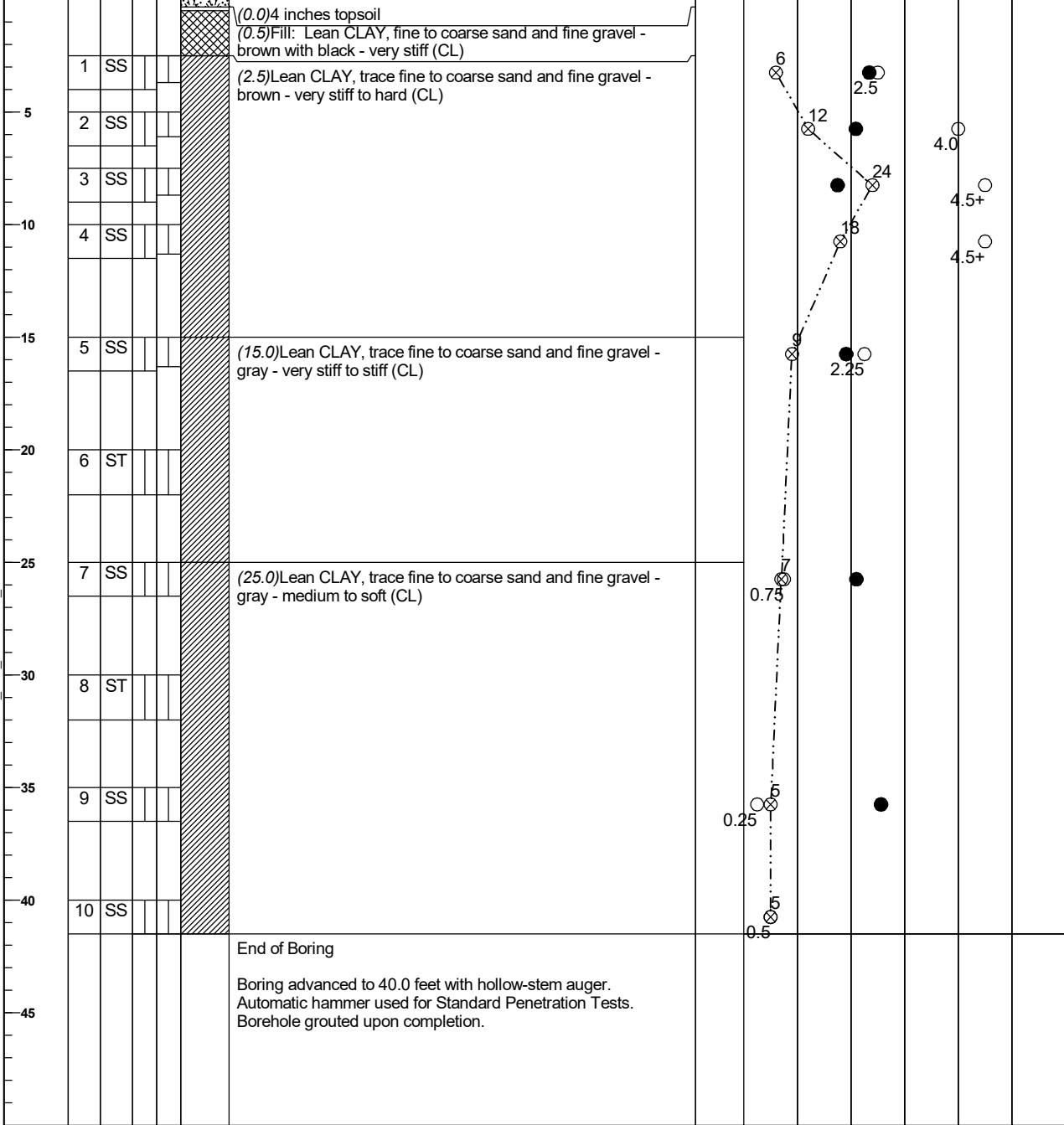
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-122**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5			
					DESCRIPTION OF MATERIAL		PLASTIC LIMIT (%)	WATER CONTENT (%)	LIQUID LIMIT (%)
							10	20	30
SURFACE ELEVATION					UNIT DRY WT. LBS/FT ³	STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60			



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS		BORING STARTED 1/14/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/14/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21



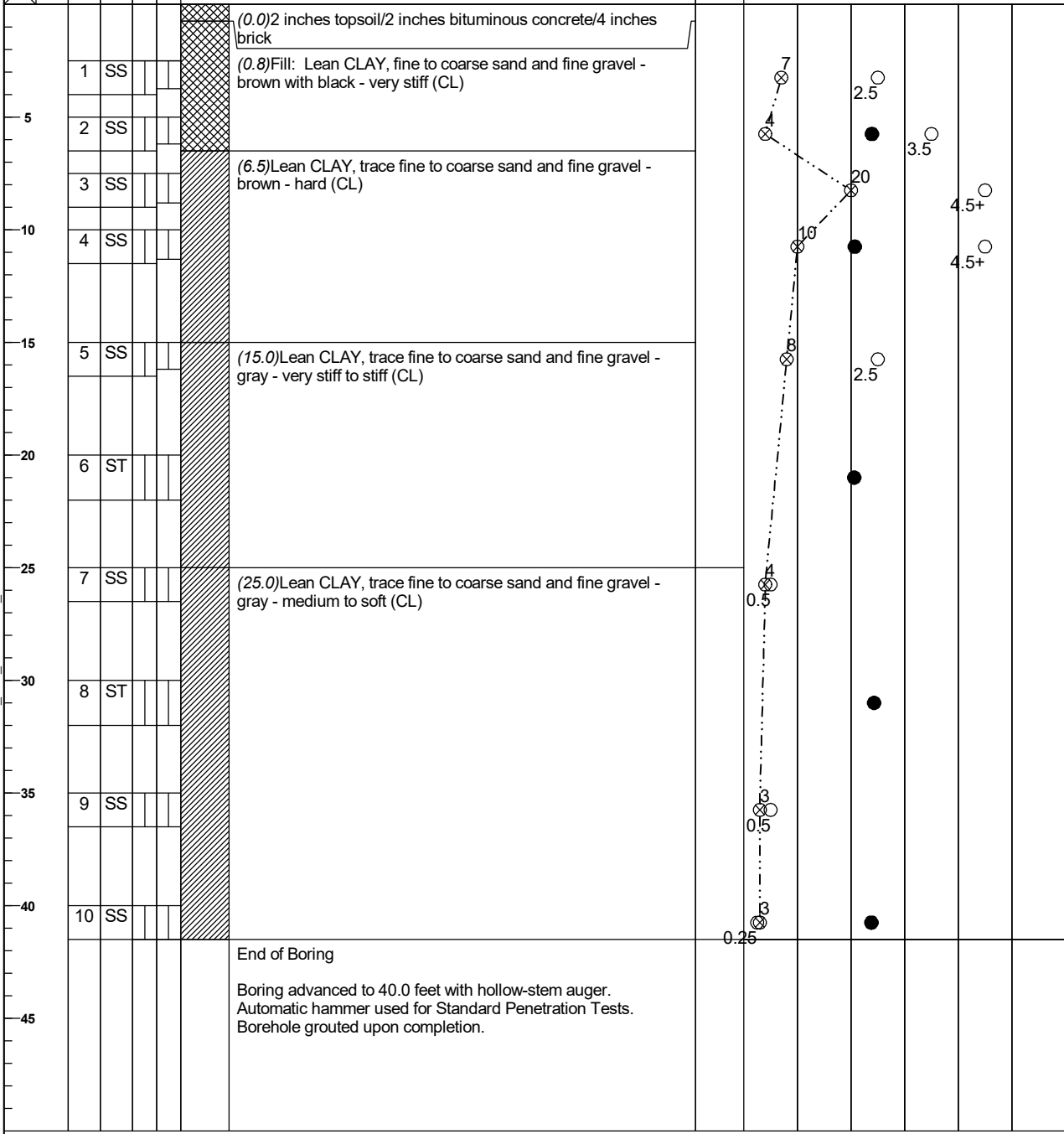
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-123**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5
					DESCRIPTION OF MATERIAL	
					SURFACE ELEVATION	UNIT DRY WT. LBS/FT ³
						⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60



MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS		BORING STARTED 1/18/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/18/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1



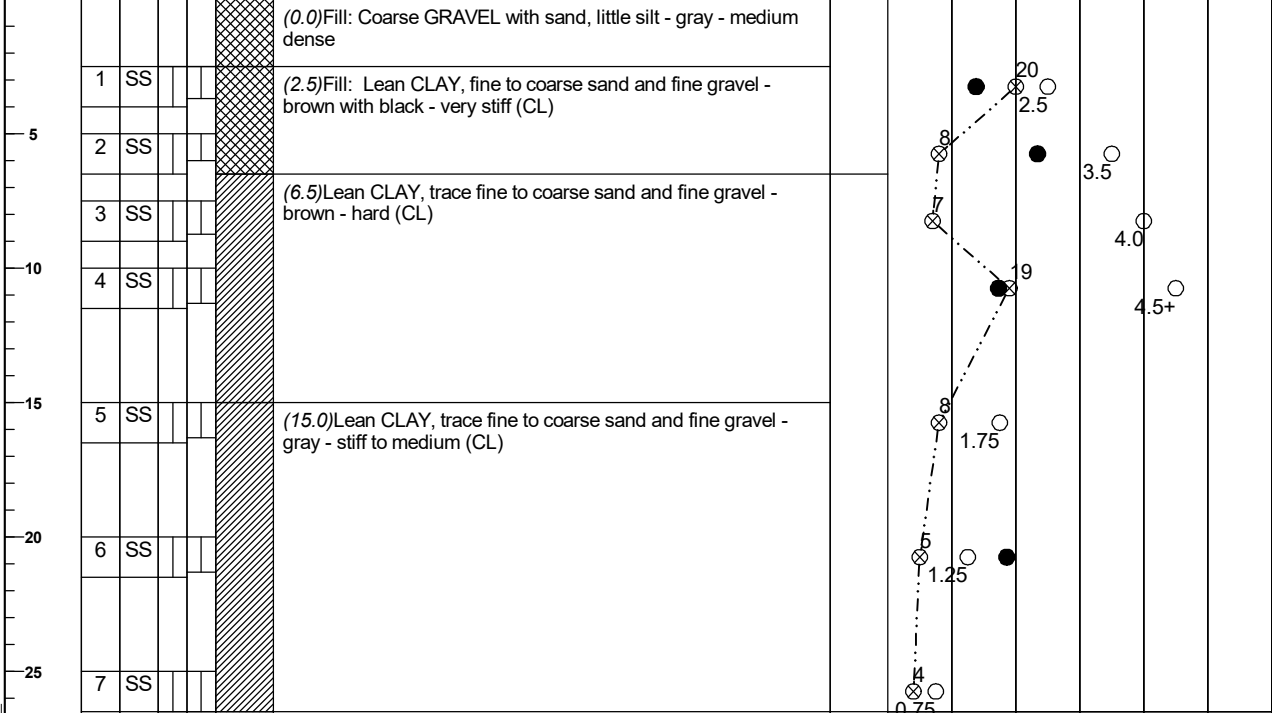
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-124**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5			
					DESCRIPTION OF MATERIAL		PLASTIC LIMIT (%) 10 20 30 40 50	WATER CONTENT (%) 10 20 30 40 50	LIQUID LIMIT (%) 10 20 30 40 50
					SURFACE ELEVATION		⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60		



End of Boring

Boring advanced to 25.0 feet with hollow-stem auger. Automatic hammer used for Standard Penetration Tests. Borehole grouted upon completion.

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 10.0 ft. WS		BORING STARTED 1/18/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/18/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21



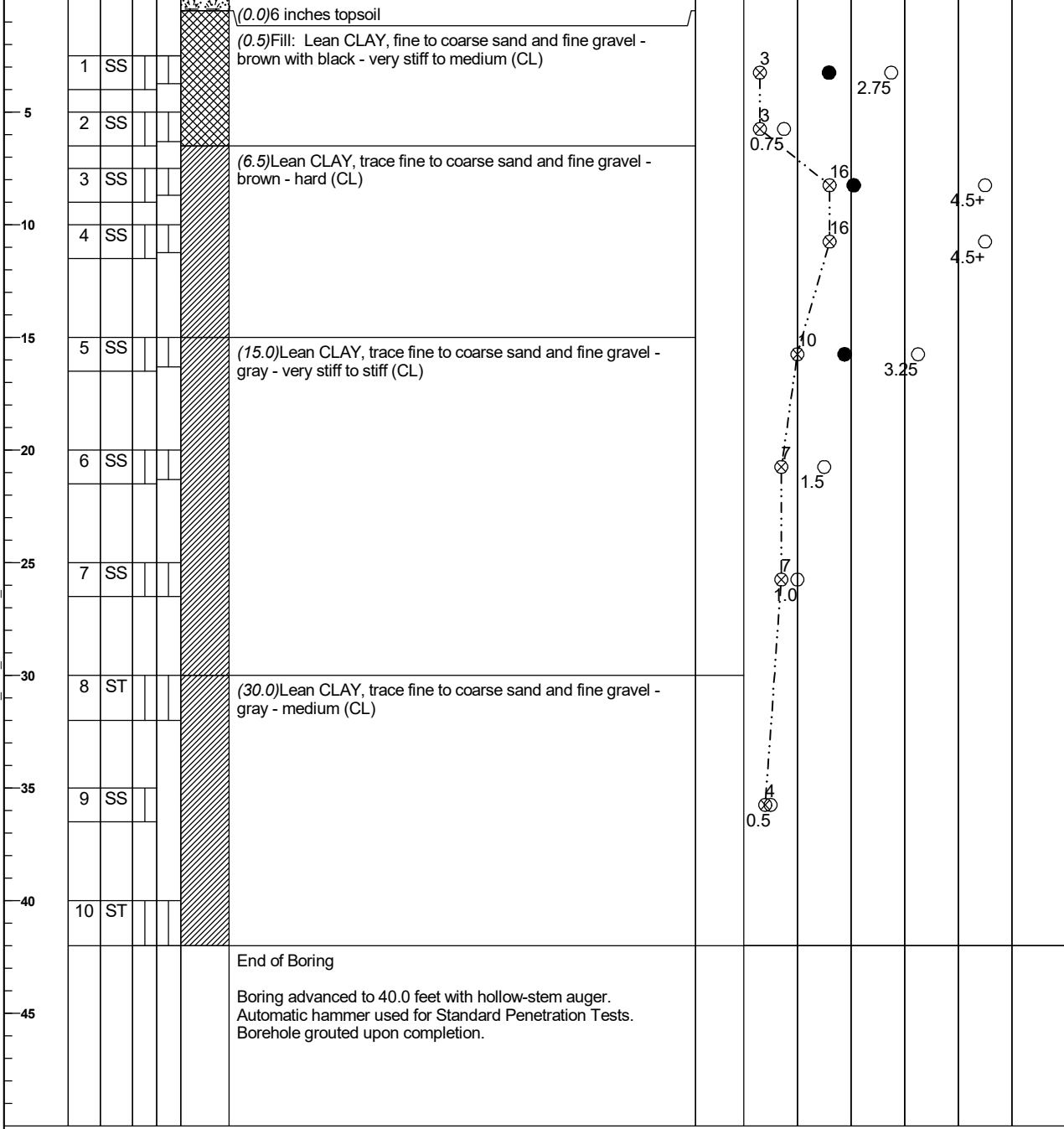
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-125**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5
					DESCRIPTION OF MATERIAL	
					SURFACE ELEVATION	UNIT DRY WT. LBS/FT ³
						⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS

BORING STARTED **1/19/2021**
BORING COMPLETED **1/19/2021**

GEI OFFICE **Plymouth, MI**
ENTERED BY **LJE** APPROVED BY **RCR**

NORTHING EASTING

RIG/FOREMAN **CME-55 / Zach**

GEI PROJECT NO. **2005092**

PAGE NO. **1 OF 1**

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21



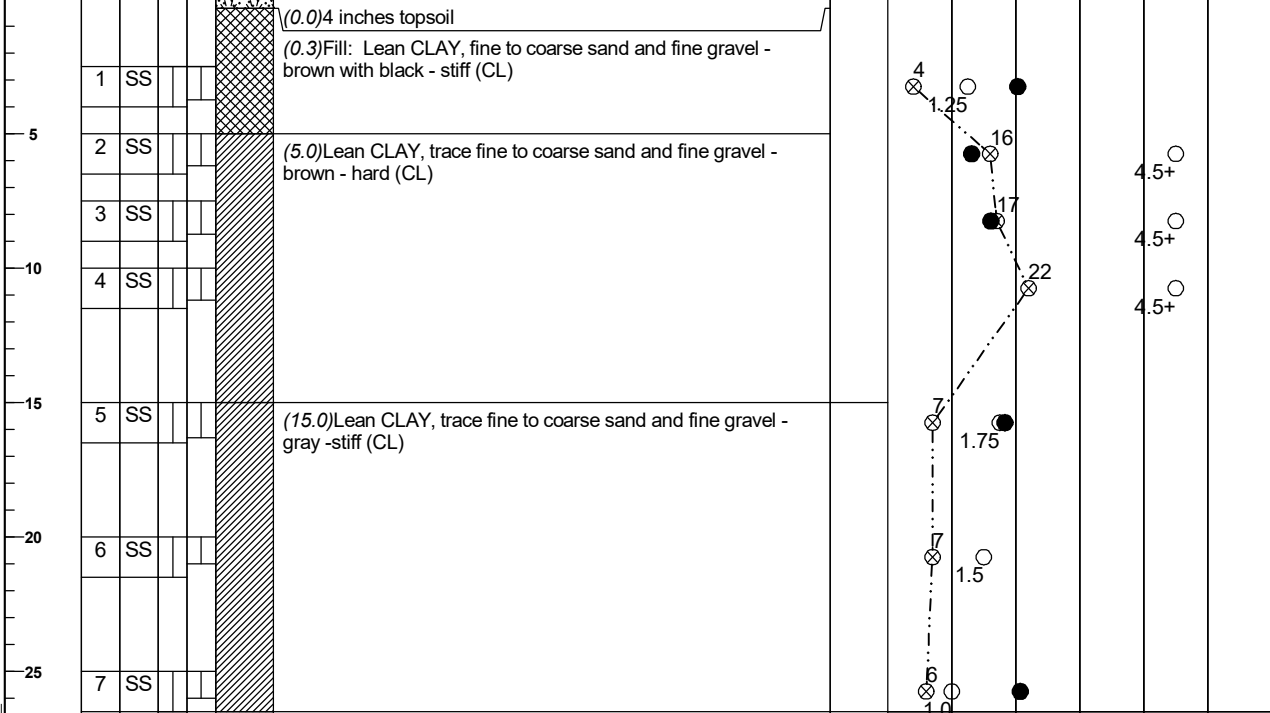
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-126**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²) 1 2 3 4 5			
					DESCRIPTION OF MATERIAL		PLASTIC LIMIT (%) 10 20 30 40 50	WATER CONTENT (%) 10 20 30 40 50	LIQUID LIMIT (%) 10 20 30 40 50
					SURFACE ELEVATION		⊗ STANDARD PENETRATION (BLOWS/FT) 10 20 30 40 50 60		



MIDWEST BORING LOG - OFFICIAL_2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT_3/16/21

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: 15.0 ft. WS		BORING STARTED 1/19/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/19/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1



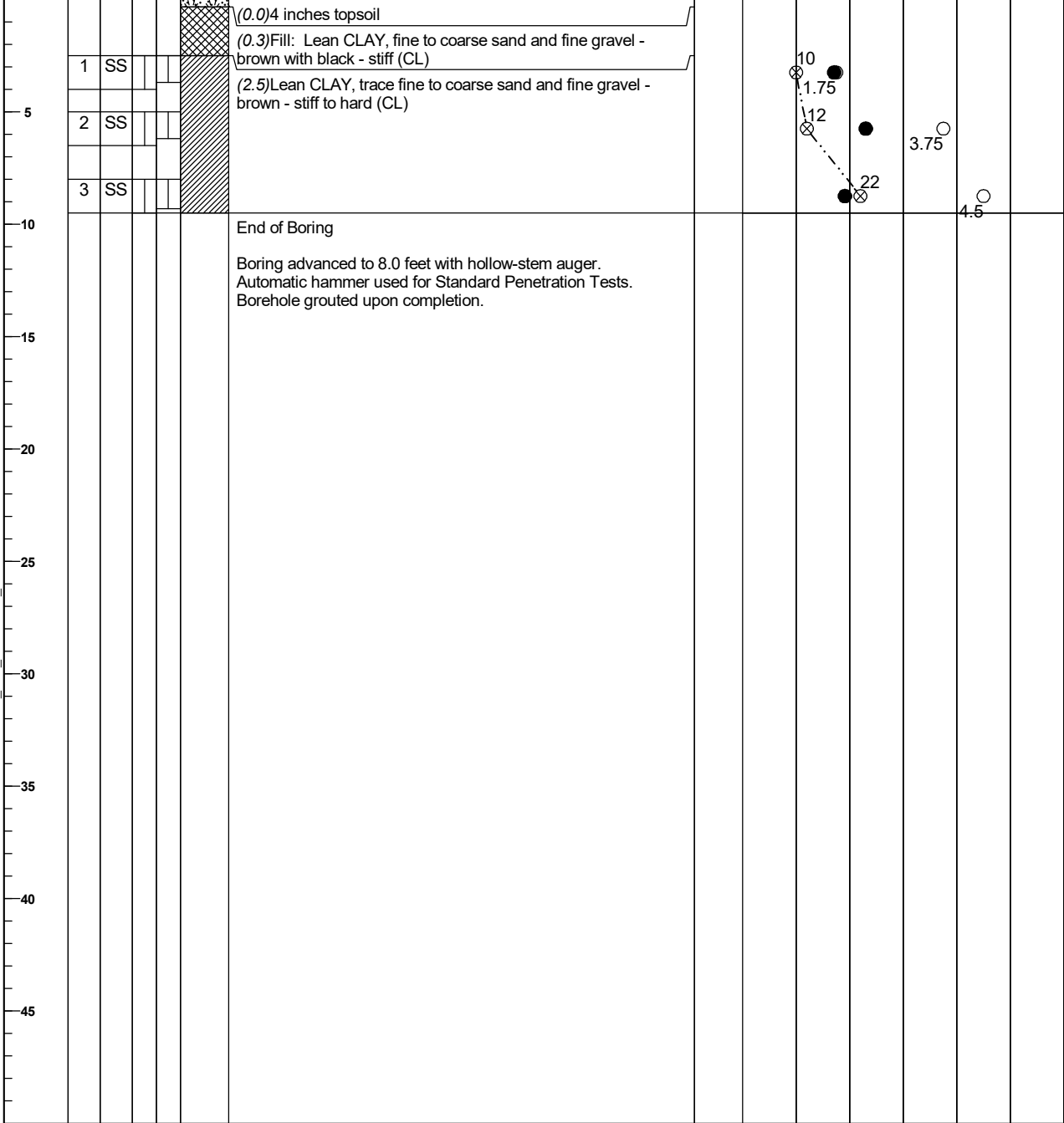
CLIENT:
The Community Builders

PROJECT NAME:
Corktown North

LOG OF BORING NUMBER **B-127**

ENGINEER

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	LOCATION: Detroit, Michigan	UNITS DRY WT. LBS/FT ³	○ UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²)				
					DESCRIPTION OF MATERIAL		1	2	3	4	5
							PLASTIC LIMIT (%)	WATER CONTENT (%)	LIQUID LIMIT (%)		
SURFACE ELEVATION					⊗ STANDARD PENETRATION (BLOWS/FT)						



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WATER LEVEL: Dry WD/AB		BORING STARTED 1/13/2021	GEI OFFICE Plymouth, MI	
		BORING COMPLETED 1/13/2021	ENTERED BY LJE	APPROVED BY RCR
NORTHING	EASTING	RIG/FOREMAN CME-55 / Zach	GEI PROJECT NO. 2005092	PAGE NO. 1 OF 1

MIDWEST BORING LOG - OFFICIAL - 2005092 - CORKTOWN NORTH DETROIT - RR.GPJ_TPL_GEL_MIDWEST_BETA.GDT 3/16/21

Appendix B

Geotechnical Laboratory Results

Moisture Content Data Sheet

(ASTM D-2216)

Client: GEI Consultants
Project Name: Corktown Borings
DLZ Project No.: 2126-1006.00
Date: 1/20/2021

Boring :	B-101	B-101	B-101	B-101	B-101
Sample, Depth :	S-1, 2.5'	S-2, 5'	S-3, 7.5'	S-4, 10'	S-5, 15'
Container :	250	280	296	216	381
Wet Weight with Container	140.59	145.34	156.60	144.92	155.54
Dry Weight with Container	125.93	128.60	140.40	132.25	140.86
Weight of Container	64.43	62.71	62.18	57.77	60.88
Dry Weight of Soil	61.50	65.89	78.22	74.48	79.98
Moisture Content (%)	23.8%	25.4%	20.7%	17.0%	18.4%

Boring :	B-101	B-101	B-102	B-102	B-102
Sample, Depth :	S-6, 20'	S-7, 25'	S-1, 2.5'	S-2, 5'	S-3, 7.5'
Container :	317	394	350	318	360
Wet Weight with Container	139.74	160.91	128.03	130.41	159.06
Dry Weight with Container	122.36	143.60	114.77	119.59	144.43
Weight of Container	64.54	61.44	60.91	60.89	62.90
Dry Weight of Soil	57.82	82.16	53.86	58.70	81.53
Moisture Content (%)	30.1%	21.1%	24.6%	18.4%	17.9%

Boring :	B-102	B-102	B-102	B-102	B-102
Sample, Depth :	S-4, 10'	S-5, 15'	S-7, 25'	S-9, 35'	S-10, 40'
Container :	375	376	218	363	451
Wet Weight with Container	167.19	157.13	134.31	147.64	131.02
Dry Weight with Container	149.53	139.75	120.94	133.96	119.62
Weight of Container	60.32	62.24	55.58	62.40	62.62
Dry Weight of Soil	89.21	77.51	65.36	71.56	57.00
Moisture Content (%)	19.8%	22.4%	20.5%	19.1%	20.0%

Boring :	B-103	B-103	B-103	B-103	B-103
Sample, Depth :	S-1, 2.5'	S-2, 5'	S-3, 7.5'	S-4, 10'	S-6, 20'
Container :	279	225	338	374	451
Wet Weight with Container	148.03	144.40	149.45	170.30	130.04
Dry Weight with Container	133.45	132.85	136.11	154.17	120.44
Weight of Container	62.62	59.87	59.88	61.26	64.26
Dry Weight of Soil	70.83	72.98	76.23	92.91	56.18
Moisture Content (%)	20.6%	15.8%	17.5%	17.4%	17.1%

Boring :	B-103	B-104	B-104	B-104	B-104
Sample, Depth :	S-7, 25'	S-1, 2.5'	S-2, 5'	S-3, 7.5'	S-4, 10'
Container :	273	210	269	390	219
Wet Weight with Container	128.12	141.53	163.14	160.45	160.88
Dry Weight with Container	117.90	127.24	146.77	142.82	143.06
Weight of Container	65.76	66.34	63.25	61.08	56.39
Dry Weight of Soil	52.14	60.90	83.52	81.74	86.67
Moisture Content (%)	19.6%	23.5%	19.6%	21.6%	20.6%

Remarks:

Moisture Content Data Sheet

(ASTM D-2216)

Client: GEI Consultants
Project Name: Corktown Borings
DLZ Project No.: 2126-1006.00
Date: 1/20/2021

Boring :	B-104	B-104	B-105	B-105	B-105
Sample, Depth :	S-5, 15'	S-7, 25'	S-2, 5'	S-4, 10'	S-6, 20'
Container :	292	553	472	409	428
Wet Weight with Container	161.46	122.73	150.35	140.40	146.02
Dry Weight with Container	143.23	111.98	137.48	128.98	130.62
Weight of Container	62.26	62.93	62.68	62.41	62.77
Dry Weight of Soil	80.97	49.05	74.80	66.57	67.85
Moisture Content (%)	22.5%	21.9%	17.2%	17.2%	22.7%

Boring :	B-105	B-105	B-106	B-106	B-106
Sample, Depth :	S-8, 30'	S-10, 40'	S-1, 2.5'	S-2, 5'	S-3, 7.5'
Container :	491	464	422	481	517
Wet Weight with Container	175.07	159.54	176.77	176.08	121.16
Dry Weight with Container	155.43	143.87	160.98	160.21	110.15
Weight of Container	62.78	62.68	62.73	63.04	62.55
Dry Weight of Soil	92.65	81.19	98.25	97.17	47.60
Moisture Content (%)	21.2%	19.3%	16.1%	16.3%	23.1%

Boring :	B-106	B-106	B-107	B-107	B-107
Sample, Depth :	S-5, 15'	S-7, 25'	S-2, 5'	S-4, 10'	S-6, 20'
Container :	556	482	510	549	507
Wet Weight with Container	162.98	138.50	181.19	156.61	148.83
Dry Weight with Container	145.58	125.86	160.21	141.72	132.57
Weight of Container	60.35	63.24	63.58	62.50	62.63
Dry Weight of Soil	85.23	62.62	96.63	79.22	69.94
Moisture Content (%)	20.4%	20.2%	21.7%	18.8%	23.2%

Boring :	B-108	B-108	B-108	B-108	B-109
Sample, Depth :	S-1, 2.5'	S-2, 5'	S-3, 7.5'	S-5, 15'	S-2, 5'
Container :	411	479	546	538	537
Wet Weight with Container	127.98	152.32	159.26	170.69	169.67
Dry Weight with Container	115.25	138.34	143.73	153.46	149.98
Weight of Container	62.32	63.01	61.81	62.45	62.79
Dry Weight of Soil	52.93	75.33	81.92	91.01	87.19
Moisture Content (%)	24.1%	18.6%	19.0%	18.9%	22.6%

Boring :	B-109	B-109	B-110	B-110	B-110
Sample, Depth :	S-4, 10'	S-6, 20'	S-1, 2.5'	S-2, 5'	S-3, 7.5'
Container :	550	515	494	543	420
Wet Weight with Container	153.09	164.90	123.10	175.23	143.13
Dry Weight with Container	138.80	147.37	107.43	156.76	129.20
Weight of Container	63.32	63.58	63.23	63.62	62.63
Dry Weight of Soil	75.48	83.79	44.20	93.14	66.57
Moisture Content (%)	18.9%	20.9%	35.5%	19.8%	20.9%

Remarks:

Moisture Content Data Sheet

(ASTM D-2216)

Client: GEI Consultants
Project Name: Corktown Borings
DLZ Project No.: 2126-1006.00
Date: 1/20/2021

Boring :	B-110	B-110	B-111	B-111	B-111
Sample, Depth :	S-5, 15'	S-7, 25'	S-2, 5'	S-4, 10'	S-6, 20'
Container :	501	398	506	395	414
Wet Weight with Container	177.93	164.00	175.99	169.27	174.59
Dry Weight with Container	158.63	144.78	155.47	152.40	156.67
Weight of Container	62.59	61.37	62.86	60.87	62.47
Dry Weight of Soil	96.04	83.41	92.61	91.53	94.20
Moisture Content (%)	20.1%	23.0%	22.2%	18.4%	19.0%

Boring :	B-111	B-111	B-112	B-112	B-112
Sample, Depth :	S-8, 30'	S-10, 40'	S-1, 2.5'	S-2, 5'	S-3, 7.5'
Container :	412	260	382	547	408
Wet Weight with Container	192.40	180.70	131.89	153.53	188.41
Dry Weight with Container	169.76	158.25	116.52	138.53	166.70
Weight of Container	63.56	57.87	60.74	63.39	62.69
Dry Weight of Soil	106.20	100.38	55.78	75.14	104.01
Moisture Content (%)	21.3%	22.4%	27.6%	20.0%	20.9%

Boring :	B-112	B-112	B-113	B-113	B-113
Sample, Depth :	S-5, 15'	S-7, 25'	S-2, 5'	S-4, 10'	S-10, 40'
Container :	313	568	310	320	232
Wet Weight with Container	168.28	157.94	180.18	155.85	188.89
Dry Weight with Container	150.17	138.57	159.70	140.24	164.30
Weight of Container	63.41	61.16	65.06	64.69	60.71
Dry Weight of Soil	86.76	77.41	94.64	75.55	103.59
Moisture Content (%)	20.9%	25.0%	21.6%	20.7%	23.7%

Boring :	B-114	B-114	B-114	B-114	B-114
Sample, Depth :	S-1, 2.5'	S-2, 5'	S-3, 7.5'	S-5, 15'	S-7, 25'
Container :	446	504	432	255	247
Wet Weight with Container	124.62	159.73	174.52	157.20	160.36
Dry Weight with Container	105.49	139.75	157.72	141.11	141.35
Weight of Container	62.36	61.98	62.62	59.45	58.57
Dry Weight of Soil	43.13	77.77	95.10	81.66	82.78
Moisture Content (%)	44.4%	25.7%	17.7%	19.7%	23.0%

Boring :	B-115	B-115	B-115	B-115	B-115
Sample, Depth :	S-2, 5'	S-4, 10'	S-6, 20'	S-8, 30'	S-10, 40'
Container :	252	564	244	371	321
Wet Weight with Container	130.59	173.41	162.58	175.17	179.01
Dry Weight with Container	116.83	155.64	144.46	153.64	157.39
Weight of Container	65.86	60.86	58.65	61.99	62.13
Dry Weight of Soil	50.97	94.78	85.81	91.65	95.26
Moisture Content (%)	27.0%	18.7%	21.1%	23.5%	22.7%

Remarks:

Moisture Content Data Sheet

(ASTM D-2216)

Client: GEI Consultants
Project Name: Corktown Borings
DLZ Project No.: 2126-1006.00
Date: 1/20/2021

Boring :	B-116	B-116	B-116	B-116	B-116
Sample, Depth :	S-1, 2.5'	S-2, 5'	S-3, 7.5'	S-5, 15'	S-7, 25'
Container :	379	536	489	429	557
Wet Weight with Container	143.20	160.01	168.34	157.56	161.04
Dry Weight with Container	127.14	138.96	154.27	143.14	142.95
Weight of Container	61.08	62.89	62.22	62.49	59.75
Dry Weight of Soil	66.06	76.07	92.05	80.65	83.20
Moisture Content (%)	24.3%	27.7%	15.3%	17.9%	21.7%

Boring :	B-117	B-117	B-117	B-118	B-118
Sample, Depth :	S-2, 5'	S-4, 10'	S-6, 20'	S-1, 2.5'	S-2, 5'
Container :	301	502	362	386	511
Wet Weight with Container	174.50	170.42	165.77	177.21	168.49
Dry Weight with Container	152.87	155.49	147.26	157.55	150.92
Weight of Container	64.55	62.87	61.38	61.24	62.61
Dry Weight of Soil	88.32	92.62	85.88	96.31	88.31
Moisture Content (%)	24.5%	16.1%	21.6%	20.4%	19.9%

Boring :	B-118	B-118	B-118	B-118	B-119
Sample, Depth :	S-3, 7.5'	S-5, 15'	S-7, 25'	S-9, 35'	S-2, 5'
Container :	377	523	289	249	433
Wet Weight with Container	169.08	167.54	169.46	181.46	165.39
Dry Weight with Container	152.79	148.75	150.53	158.20	149.45
Weight of Container	61.84	62.65	64.76	64.88	62.78
Dry Weight of Soil	90.95	86.10	85.77	93.32	86.67
Moisture Content (%)	17.9%	21.8%	22.1%	24.9%	18.4%

Boring :	B-119	B-119	B-120	B-120	B-120
Sample, Depth :	S-4, 10'	S-6, 20'	S-1, 2.5'	S-2, 5'	S-3, 7.5'
Container :	364	567	373	295	436
Wet Weight with Container	150.96	150.78	162.95	171.35	177.89
Dry Weight with Container	136.74	134.32	146.71	155.75	160.61
Weight of Container	61.81	60.73	60.97	62.36	62.55
Dry Weight of Soil	74.93	73.59	85.74	93.39	98.06
Moisture Content (%)	19.0%	22.4%	18.9%	16.7%	17.6%

Boring :	B-120	B-120	B-121	B-121	B-121
Sample, Depth :	S-5, 15'	S-7, 25'	S-2, 5'	S-4, 10'	S-6, 20'
Container :	258	493	477	438	522
Wet Weight with Container	168.77	162.20	159.47	169.79	157.17
Dry Weight with Container	150.94	144.84	144.01	152.49	140.61
Weight of Container	58.46	61.08	62.25	63.01	62.76
Dry Weight of Soil	92.48	83.76	81.76	89.48	77.85
Moisture Content (%)	19.3%	20.7%	18.9%	19.3%	21.3%

Remarks:

Moisture Content Data Sheet

(ASTM D-2216)

Client: GEI Consultants
Project Name: Corktown Borings
DLZ Project No.: 2126-1006.00
Date: 1/20/2021

Boring :	B-122	B-122	B-122	B-122	B-122
Sample, Depth :	S-1, 2.5'	S-2, 5'	S-3, 7.5'	S-5, 15'	S-7, 25'
Container :	487	453	369	207	474
Wet Weight with Container	119.95	164.08	174.19	160.24	164.54
Dry Weight with Container	109.09	146.58	157.64	143.85	146.47
Weight of Container	62.6	62.7	62.94	57.93	62.63
Dry Weight of Soil	46.49	83.88	94.70	85.92	83.84
Moisture Content (%)	23.4%	20.9%	17.5%	19.1%	21.6%

Boring :	B-122	B-123	B-123	B-123	B-124
Sample, Depth :	S-9, 35'	S-2, 5'	S-4, 10'	S-10, 40'	S-1, 2.5'
Container :	352	286	419	448	555
Wet Weight with Container	182.16	162.36	162.38	174.95	133.18
Dry Weight with Container	157.79	143.12	145.28	153.30	124.44
Weight of Container	62.66	62.70	62.48	62.30	60.99
Dry Weight of Soil	95.13	80.42	82.80	91.00	63.45
Moisture Content (%)	25.6%	23.9%	20.7%	23.8%	13.8%

Boring :	B-124	B-124	B-124	B-125	B-125
Sample, Depth :	S-2, 5'	S-4, 10'	S-6, 20'	S-1, 2.5'	S-3, 7.5'
Container :	366	499	217	560	359
Wet Weight with Container	152.28	145.04	168.19	127.17	174.54
Dry Weight with Container	135.11	132.90	151.14	118.02	155.25
Weight of Container	61.81	62.67	59.42	60.31	60.95
Dry Weight of Soil	73.30	70.23	91.72	57.71	94.30
Moisture Content (%)	23.4%	17.3%	18.6%	15.9%	20.5%

Boring :	B-125	B-126	B-126	B-126	B-126
Sample, Depth :	S-5, 15'	S-1, 2.5'	S-2, 5'	S-3, 7.5'	S-5, 15'
Container :	435	444	544	323	548
Wet Weight with Container	149.76	136.36	171.42	190.45	150.47
Dry Weight with Container	136.04	123.97	158.85	172.98	136.74
Weight of Container	62.96	62.89	62.58	64.53	61.74
Dry Weight of Soil	73.08	61.08	96.27	108.45	75.00
Moisture Content (%)	18.8%	20.3%	13.1%	16.1%	18.3%

Boring :	B-126	B-126			
Sample, Depth :	S-7, 25'	S-9, 35'			
Container :	570				
Wet Weight with Container	158.60	DOES			
Dry Weight with Container	142.16	NOT			
Weight of Container	62.89	EXIST			
Dry Weight of Soil	79.27				
Moisture Content (%)	20.7%				

Remarks:

Moisture Content Data Sheet

(ASTM D-2216)

Client: GEI Consultants
Project Name: Corktown Borings
DLZ Project No.: 2126-1006.00
Date: 2/24/2021

Boring :	B-105	B-108	B-108	B-113	B-123
Sample, Depth :	ST-7, 25'	ST-7, 25'	ST-9, 35'	ST-8, 30'	ST-6, 20'
Container :	339	457	306	543	466
Wet Weight with Container	321.60	215.37	211.58	241.36	266.56
Dry Weight with Container	276.18	188.57	186.53	203.00	231.71
Weight of Container	61.01	62.66	65.25	63.62	62.76
Dry Weight of Soil	215.17	125.91	121.28	139.38	168.95
Moisture Content (%)	21.1%	21.3%	20.7%	27.5%	20.6%

Boring :	B-123				
Sample, Depth :	ST-8, 30'				
Container :	470				
Wet Weight with Container	252.88				
Dry Weight with Container	215.71				
Weight of Container	62.69				
Dry Weight of Soil	153.02				
Moisture Content (%)	24.3%				

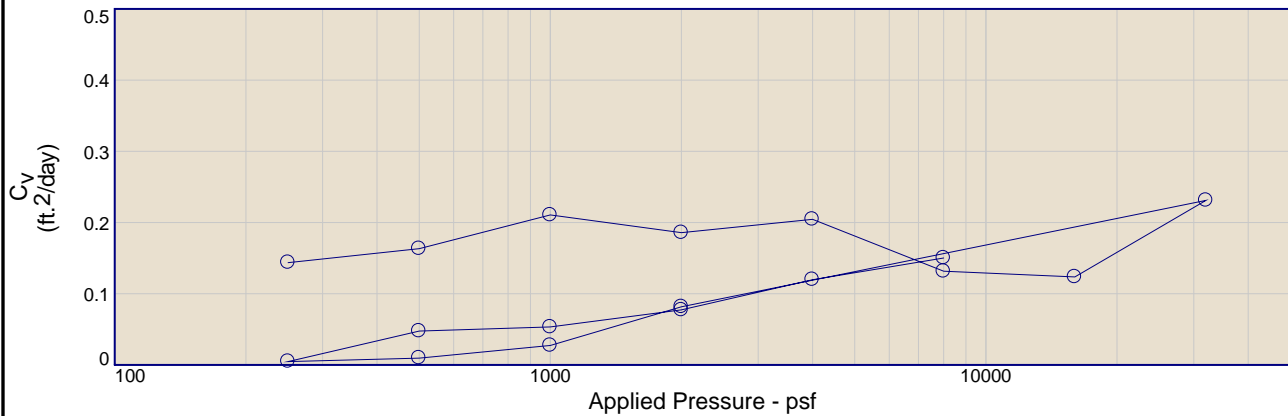
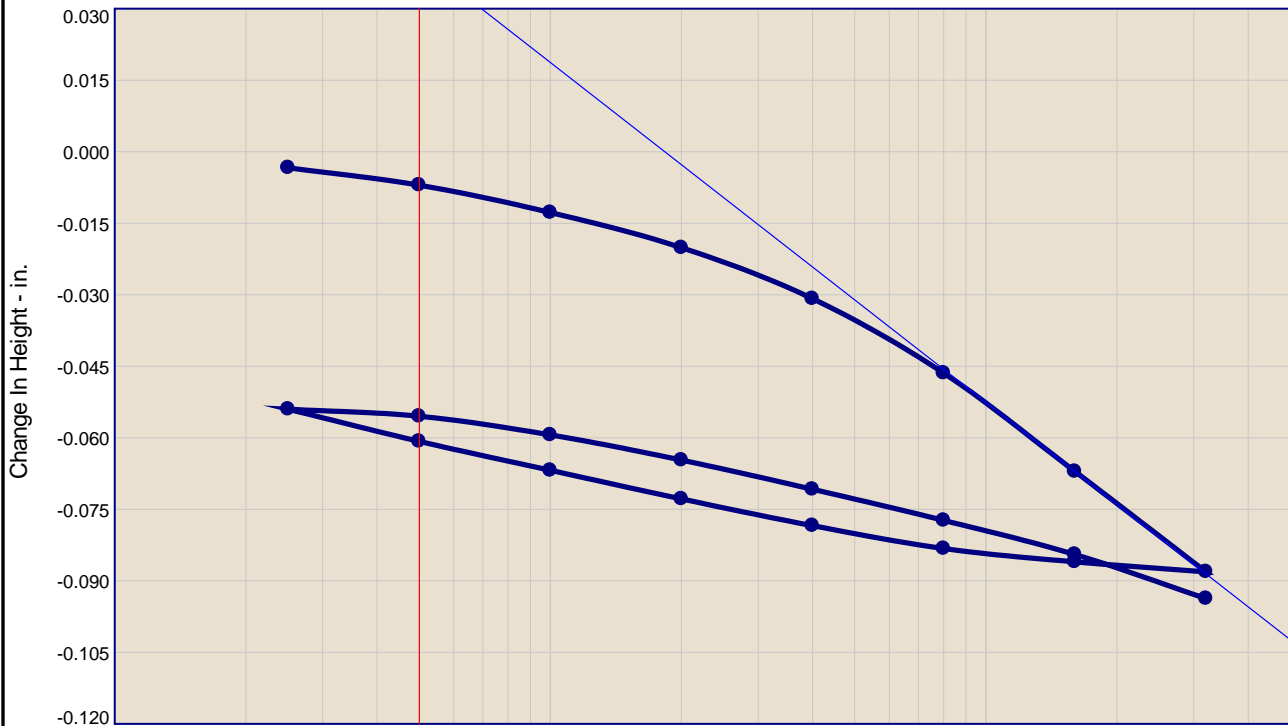
Boring :					
Sample, Depth :					
Container :					
Wet Weight with Container					
Dry Weight with Container					
Weight of Container					
Dry Weight of Soil					
Moisture Content (%)					

Boring :					
Sample, Depth :					
Container :					
Wet Weight with Container					
Dry Weight with Container					
Weight of Container					
Dry Weight of Soil					
Moisture Content (%)					

Boring :					
Sample, Depth :					
Container :					
Wet Weight with Container					
Dry Weight with Container					
Weight of Container					
Dry Weight of Soil					
Moisture Content (%)					

Remarks: _____

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	P _c (psf)	C _c	C _r	Initial Void Ratio
Saturation	Moisture									
88.8 %	18.6 %	109.0	28	13	2.7			0.15	0.04	0.566

MATERIAL DESCRIPTION	USCS	AASHTO

Project No. 2126- Client: GEI Consultants Project: Corktown Borings Source of Sample: B-105 Depth: 35.0' Sample Number: ST-9	Remarks: <div style="text-align: right; margin-top: 20px;">Figure</div>
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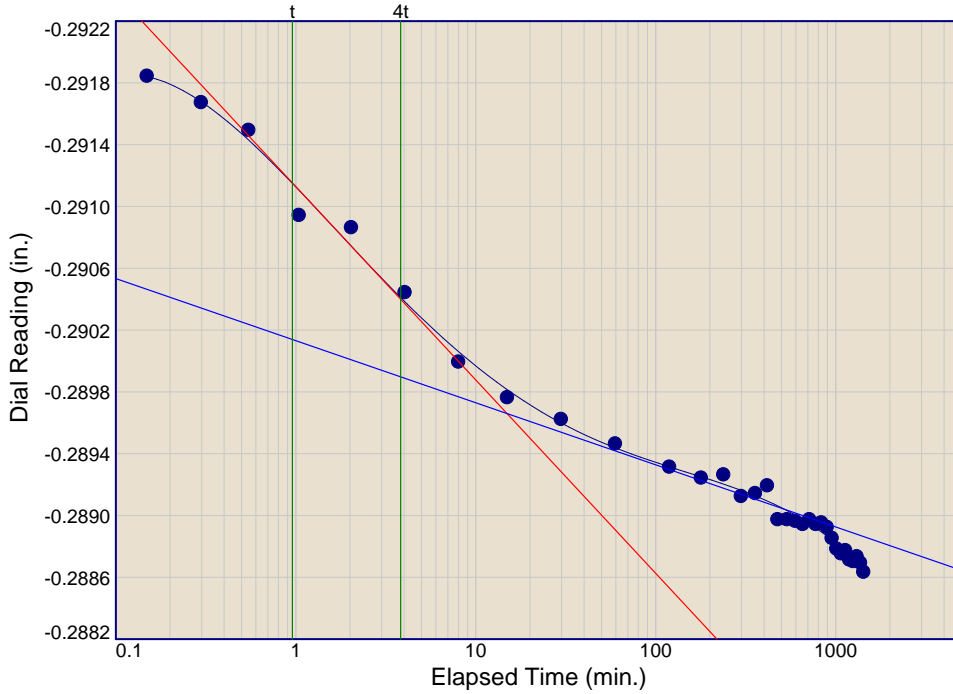


Tested By: BW **Checked By:** SR

Dial Reading vs. Time

Project No.: 2126-1007.00
 Project: Corktown Borings

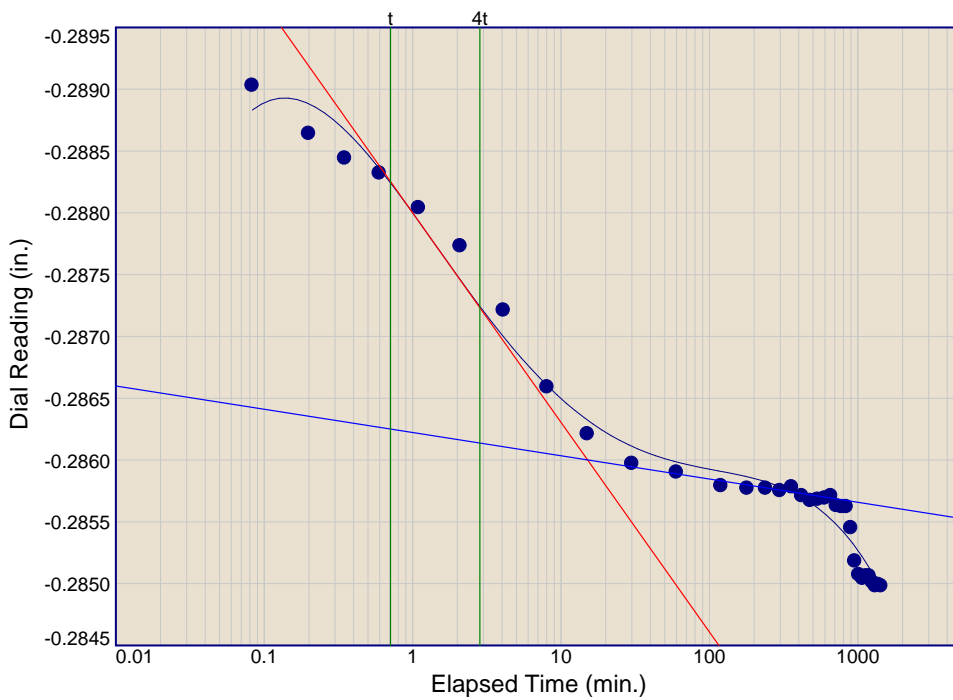
Source of Sample: B-105 Depth: 35.0' Sample Number: ST-9



Load No.= 1
 Load= 250 psf
 $D_0 = -0.2919$
 $D_{50} = -0.2908$
 $D_{100} = -0.2897$
 $T_{50} = 1.92 \text{ min.}$

$C_v @ T_{50}$
 0.144 ft.²/day

$C_\alpha = 0.001$



Load No.= 2
 Load= 500 psf
 $D_0 = -0.2892$
 $D_{50} = -0.2876$
 $D_{100} = -0.2860$
 $T_{50} = 1.67 \text{ min.}$

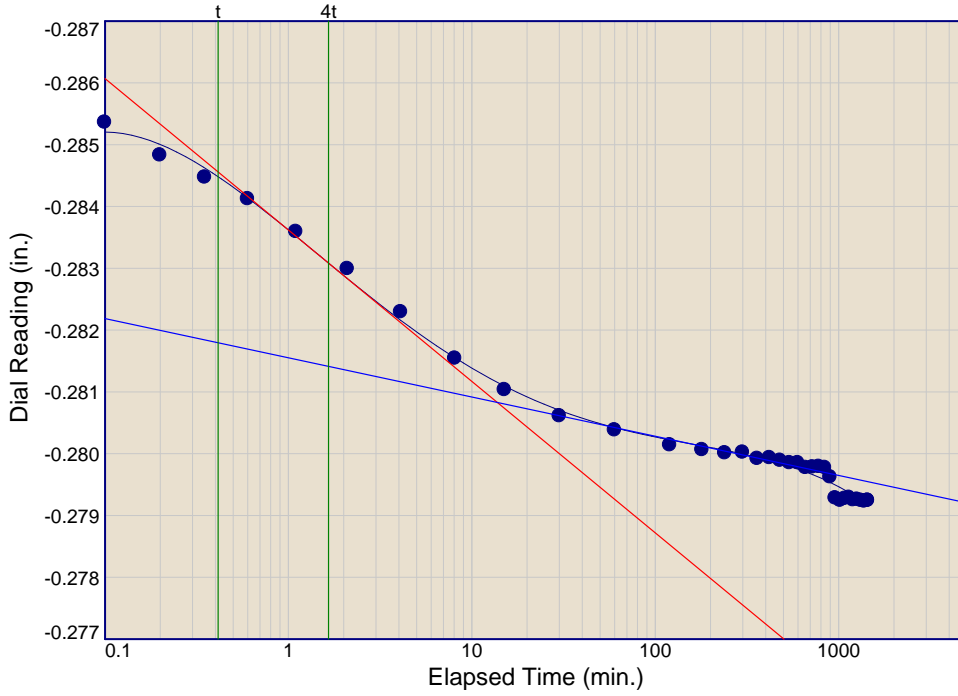
$C_v @ T_{50}$
 0.163 ft.²/day

$C_\alpha = 0.000$

Dial Reading vs. Time

Project No.: 2126-1007.00
 Project: Corktown Borings

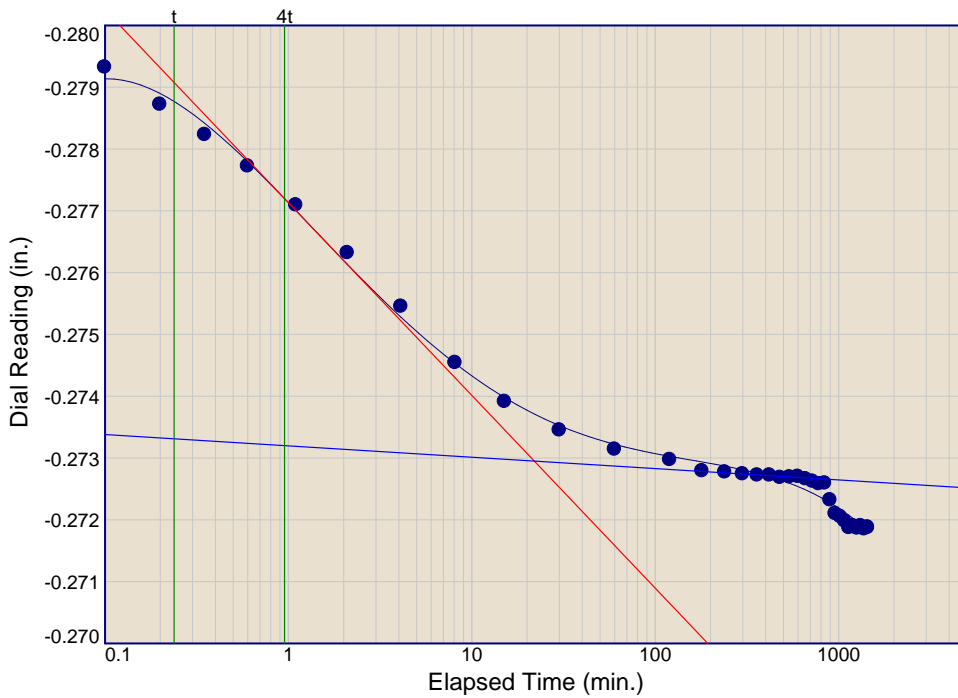
Source of Sample: B-105 Depth: 35.0' Sample Number: ST-9



Load No.= 3
 Load= 1000 psf
 $D_0 = -0.2859$
 $D_{50} = -0.2834$
 $D_{100} = -0.2808$
 $T_{50} = 1.28 \text{ min.}$

$C_v @ T_{50}$
 0.211 ft.²/day

$C_\alpha = 0.001$



Load No.= 4
 Load= 2000 psf
 $D_0 = -0.2803$
 $D_{50} = -0.2766$
 $D_{100} = -0.2730$
 $T_{50} = 1.43 \text{ min.}$

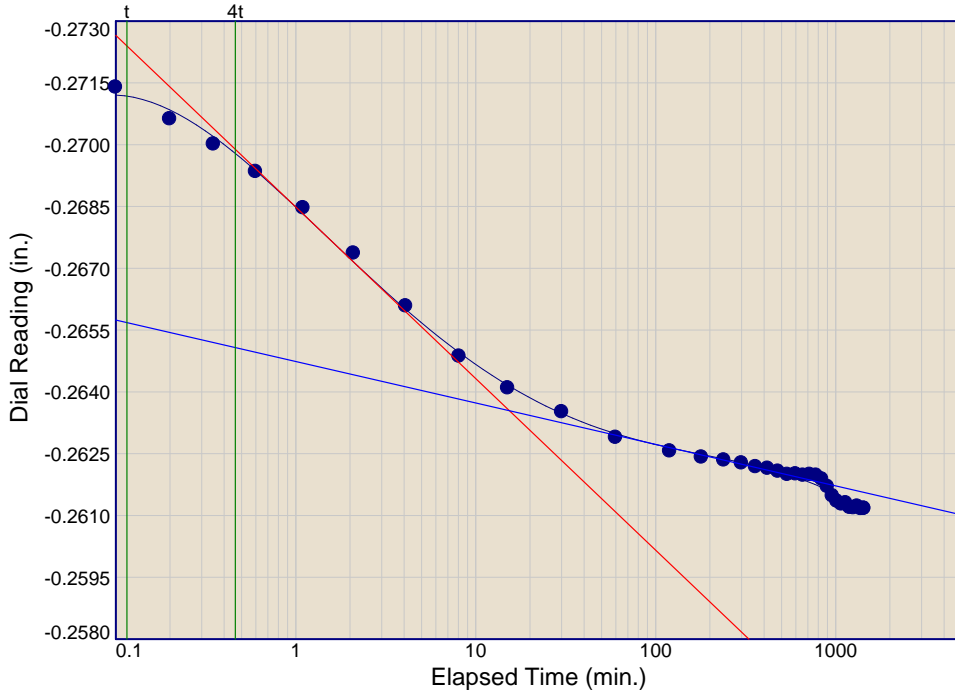
$C_v @ T_{50}$
 0.186 ft.²/day

$C_\alpha = 0.000$

Dial Reading vs. Time

Project No.: 2126-1007.00
 Project: Corktown Borings

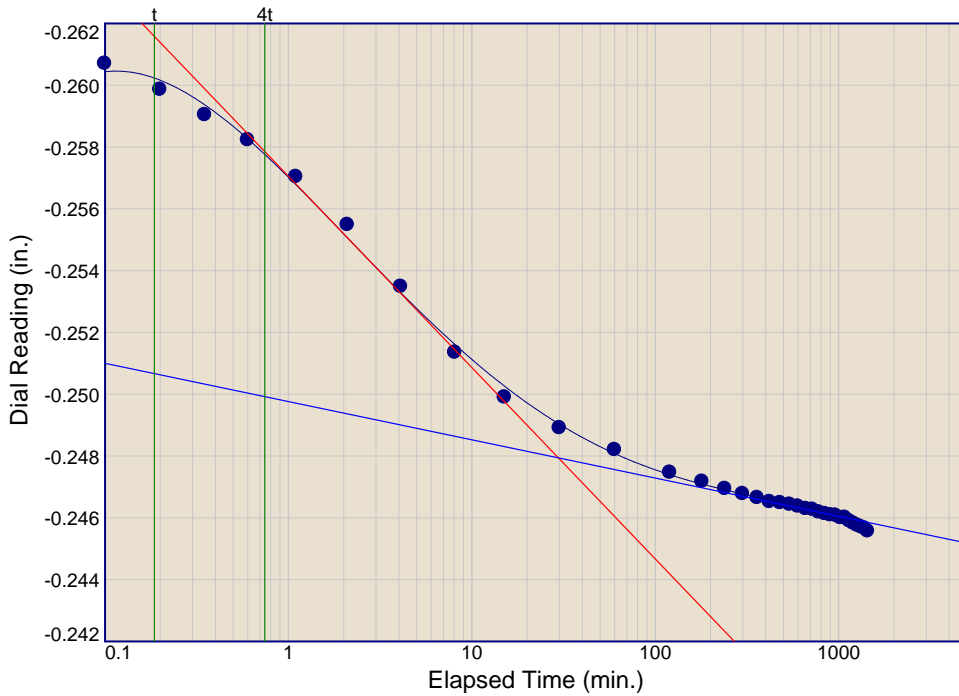
Source of Sample: B-105 Depth: 35.0' Sample Number: ST-9



Load No.= 5
 Load= 4000 psf
 $D_0 = -0.2726$
 $D_{50} = -0.2681$
 $D_{100} = -0.2635$
 $T_{50} = 1.27 \text{ min.}$

$C_v @ T_{50}$
 0.204 ft.²/day

$C_\alpha = 0.002$



Load No.= 6
 Load= 8000 psf
 $D_0 = -0.2627$
 $D_{50} = -0.2553$
 $D_{100} = -0.2479$
 $T_{50} = 1.90 \text{ min.}$

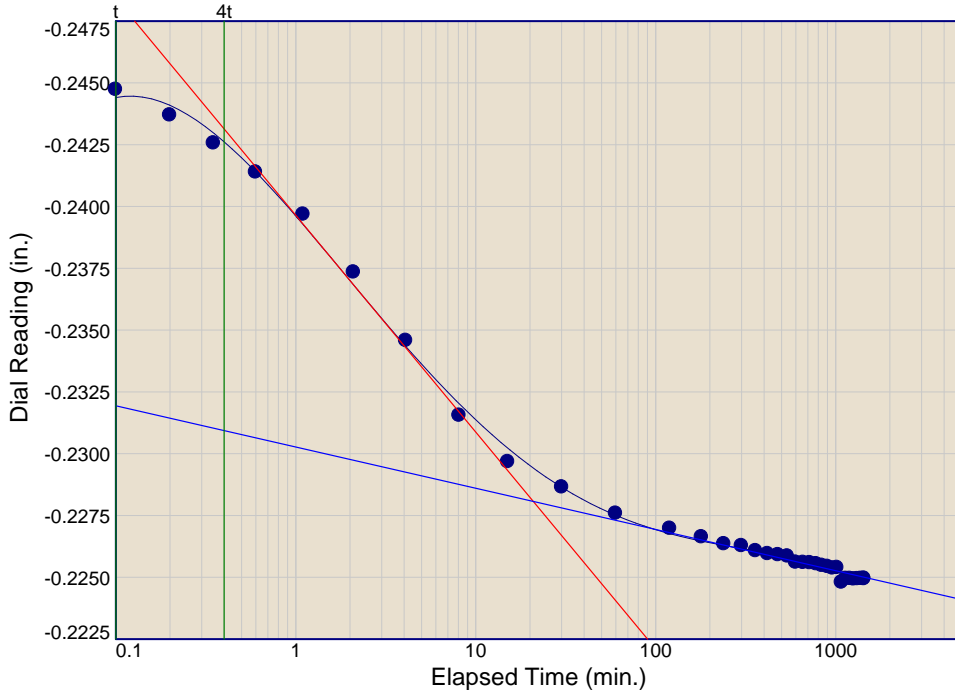
$C_v @ T_{50}$
 0.132 ft.²/day

$C_\alpha = 0.003$

Dial Reading vs. Time

Project No.: 2126-1007.00
 Project: Corktown Borings

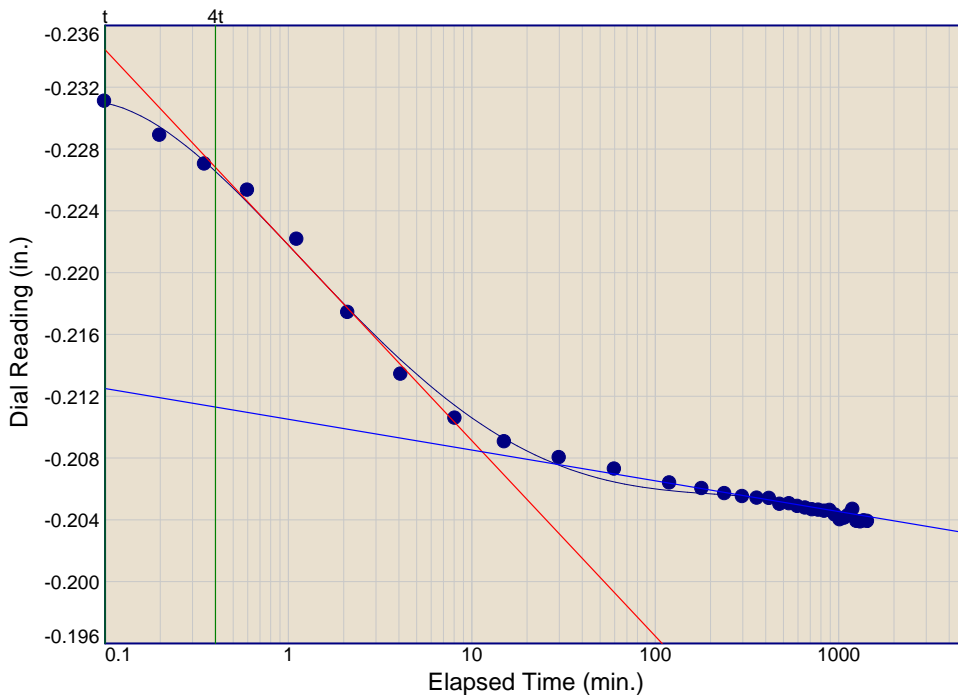
Source of Sample: B-105 Depth: 35.0' Sample Number: ST-9



Load No.= 7
 Load= 16000 psf
 $D_0 = -0.2462$
 $D_{50} = -0.2371$
 $D_{100} = -0.2281$
 $T_{50} = 1.93 \text{ min.}$

$C_v @ T_{50}$
 0.124 ft.²/day

$C_\alpha = 0.003$



Load No.= 8
 Load= 32000 psf
 $D_0 = -0.2354$
 $D_{50} = -0.2219$
 $D_{100} = -0.2084$
 $T_{50} = 0.98 \text{ min.}$

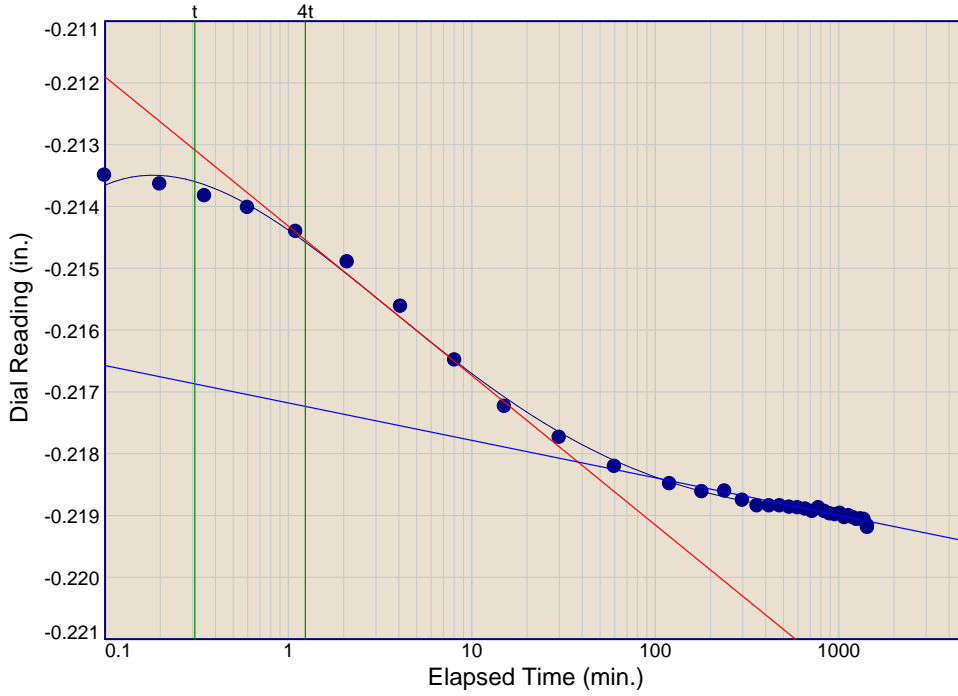
$C_v @ T_{50}$
 0.231 ft.²/day

$C_\alpha = 0.004$

Dial Reading vs. Time

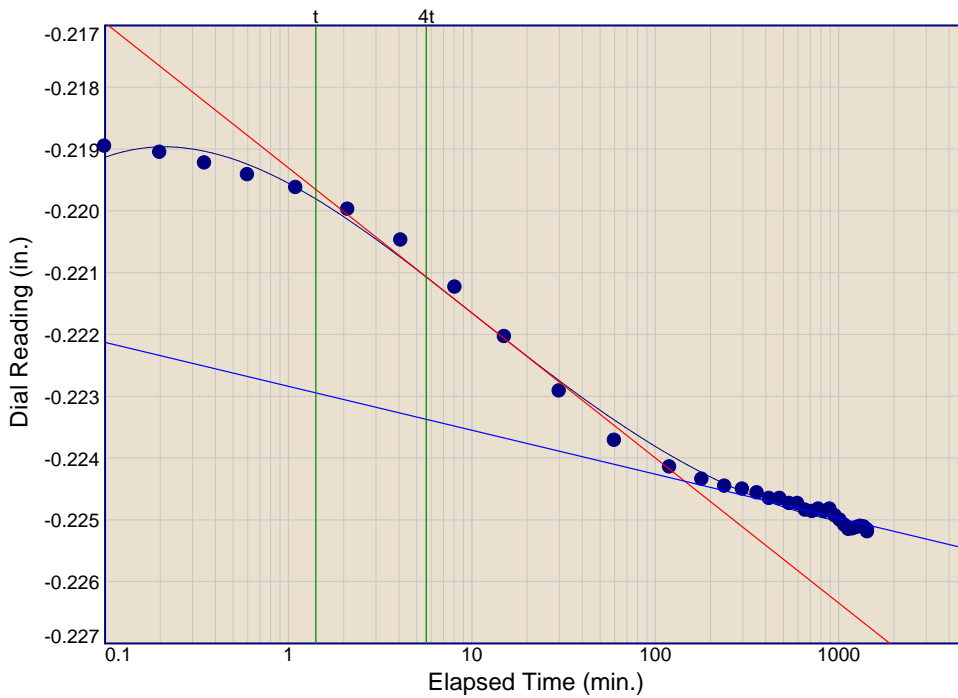
Project No.: 2126-1007.00
 Project: Corktown Borings

Source of Sample: B-105 Depth: 35.0' Sample Number: ST-9



Load No.= 12
 Load= 2000 psf
 $D_0 = -0.2126$
 $D_{50} = -0.2154$
 $D_{100} = -0.2181$
 $T_{50} = 2.74$ min.

$C_v @ T_{50}$
 0.082 ft.²/day



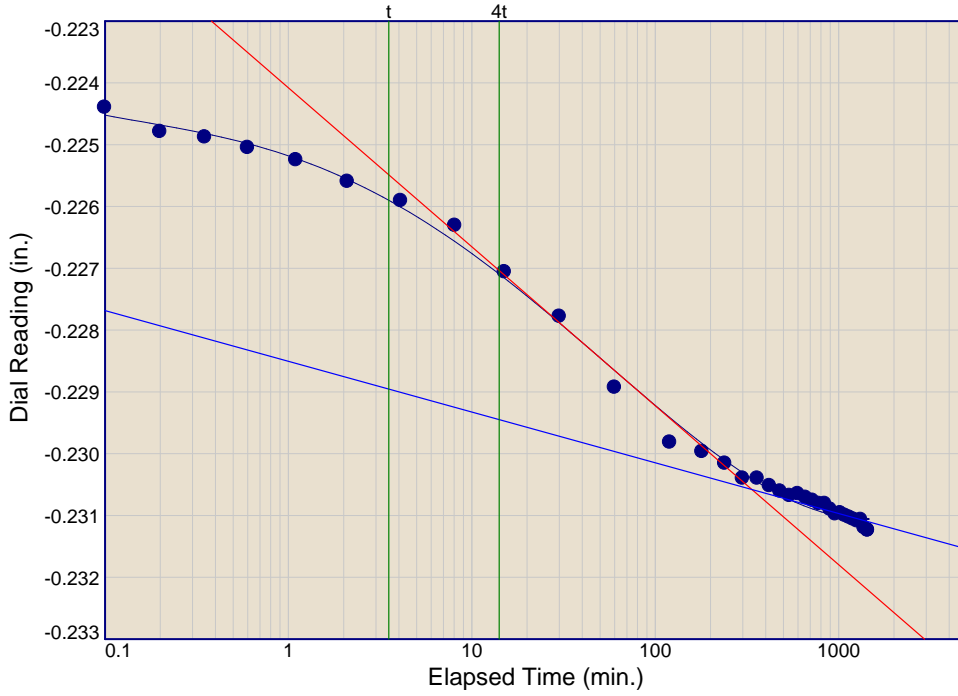
Load No.= 13
 Load= 1000 psf
 $D_0 = -0.2185$
 $D_{50} = -0.2215$
 $D_{100} = -0.2244$
 $T_{50} = 8.28$ min.

$C_v @ T_{50}$
 0.027 ft.²/day

Dial Reading vs. Time

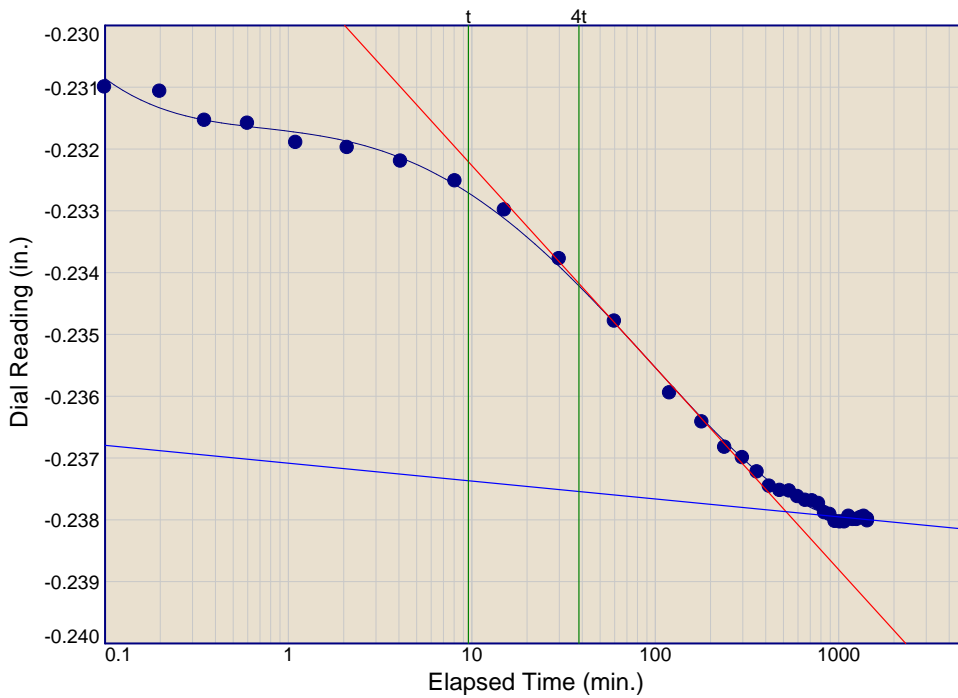
Project No.: 2126-1007.00
 Project: Corktown Borings

Source of Sample: B-105 Depth: 35.0' Sample Number: ST-9



Load No.= 14
 Load= 500 psf
 $D_0 = -0.2247$
 $D_{50} = -0.2276$
 $D_{100} = -0.2306$
 $T_{50} = 23.98 \text{ min.}$

$C_v @ T_{50}$
 0.010 ft.²/day



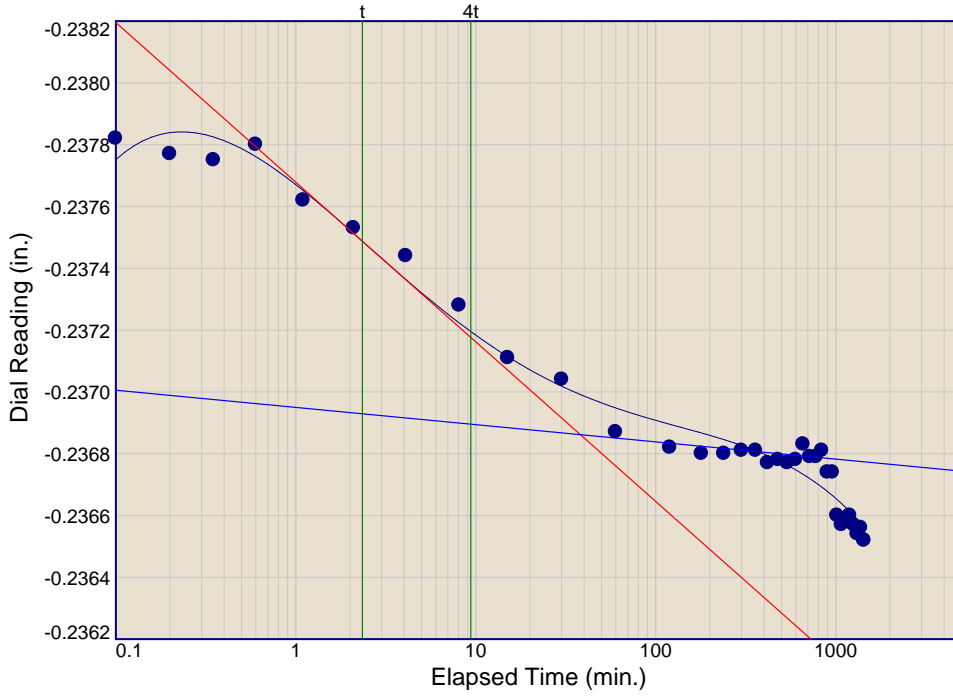
Load No.= 15
 Load= 250 psf
 $D_0 = -0.2312$
 $D_{50} = -0.2345$
 $D_{100} = -0.2379$
 $T_{50} = 48.96 \text{ min.}$

$C_v @ T_{50}$
 0.005 ft.²/day

Dial Reading vs. Time

Project No.: 2126-1007.00
 Project: Corktown Borings

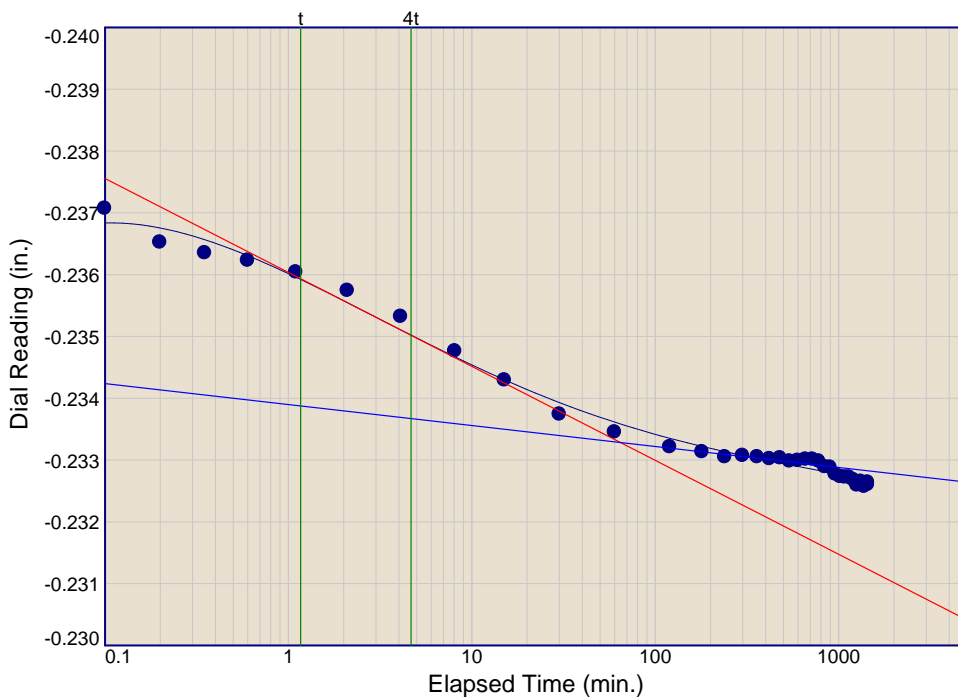
Source of Sample: B-105 Depth: 35.0' Sample Number: ST-9



Load No.= 16
 Load= 500 psf
 $D_0 = -0.2378$
 $D_{50} = -0.2373$
 $D_{100} = -0.2369$
 $T_{50} = 5.00 \text{ min.}$

$C_v @ T_{50}$
 0.048 ft.²/day

$C_\alpha = 0.000$



Load No.= 17
 Load= 1000 psf
 $D_0 = -0.2368$
 $D_{50} = -0.2351$
 $D_{100} = -0.2333$
 $T_{50} = 4.43 \text{ min.}$

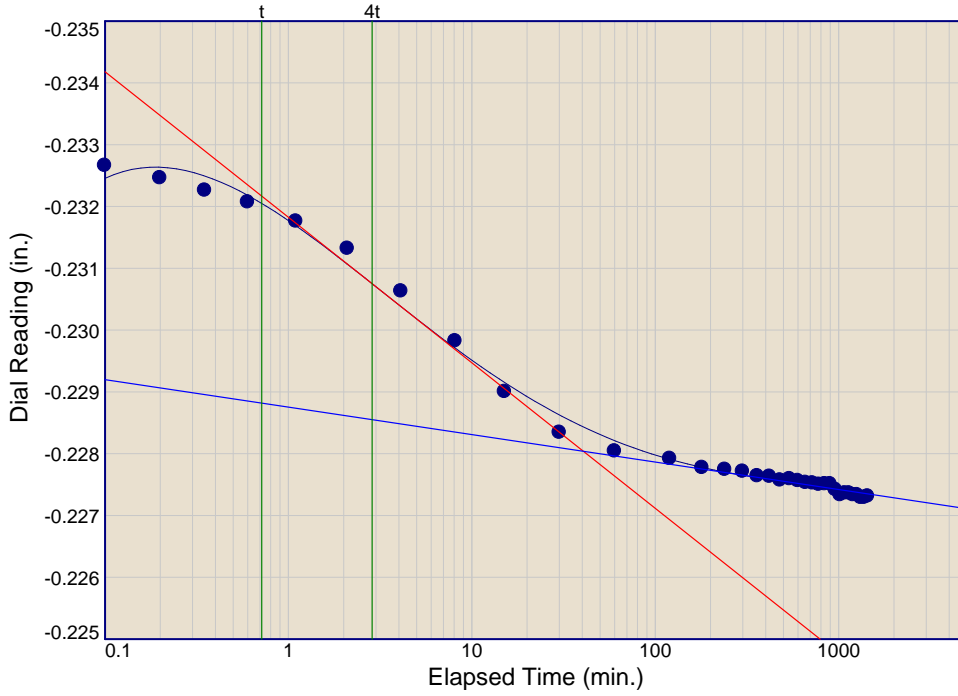
$C_v @ T_{50}$
 0.053 ft.²/day

$C_\alpha = 0.001$

Dial Reading vs. Time

Project No.: 2126-1007.00
 Project: Corktown Borings

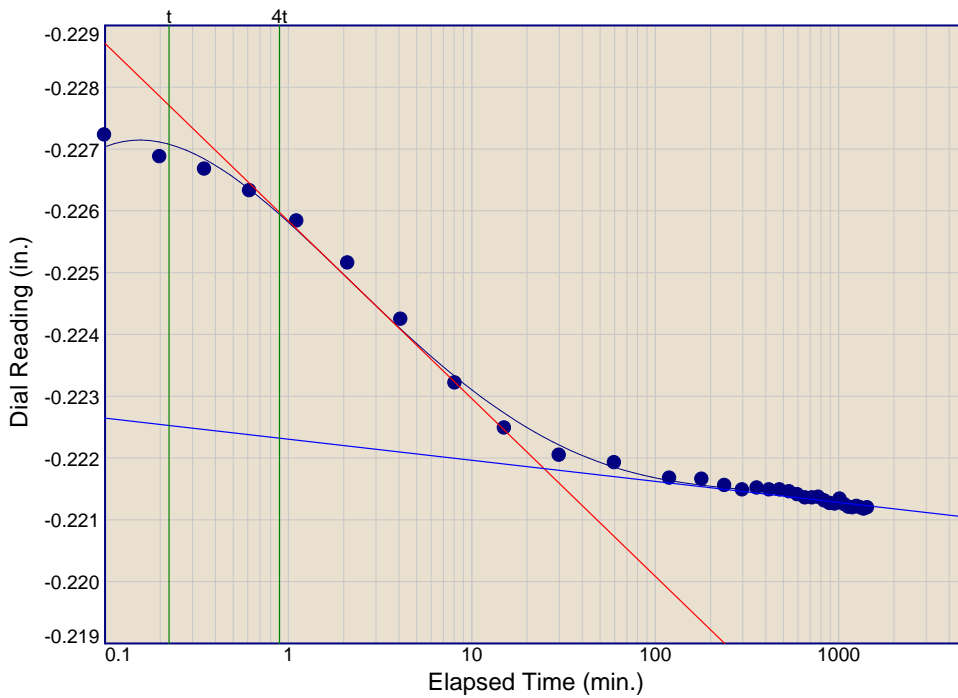
Source of Sample: B-105 Depth: 35.0' Sample Number: ST-9



Load No.= 18
 Load= 2000 psf
 $D_0 = -0.2334$
 $D_{50} = -0.2307$
 $D_{100} = -0.2280$
 $T_{50} = 3.02 \text{ min.}$

$C_v @ T_{50}$
 0.077 ft.²/day

$C_\alpha = 0.001$



Load No.= 19
 Load= 4000 psf
 $D_0 = -0.2282$
 $D_{50} = -0.2250$
 $D_{100} = -0.2218$
 $T_{50} = 1.92 \text{ min.}$

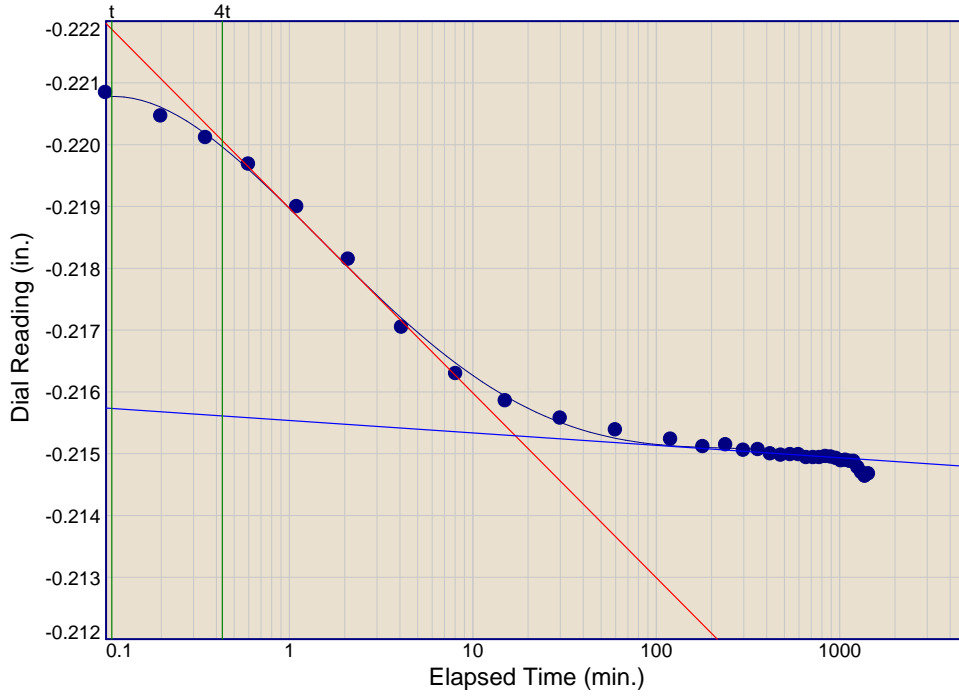
$C_v @ T_{50}$
 0.120 ft.²/day

$C_\alpha = 0.001$

Dial Reading vs. Time

Project No.: 2126-1007.00
Project: Corktown Borings

Source of Sample: B-105 Depth: 35.0' Sample Number: ST-9

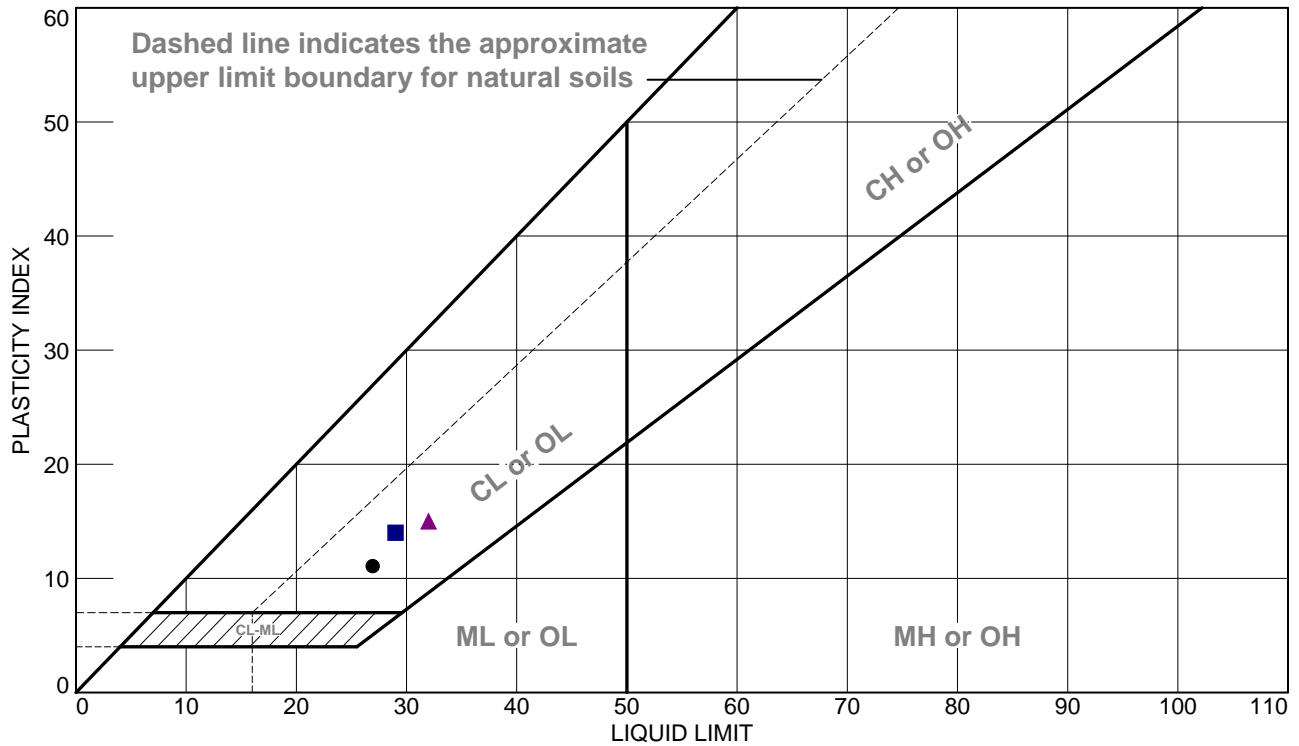


Load No.= 20
Load= 8000 psf
 $D_0 = -0.2216$
 $D_{50} = -0.2184$
 $D_{100} = -0.2153$
 $T_{50} = 1.50 \text{ min.}$

$C_v @ T_{50}$
0.150 ft.²/day

$C_\alpha = 0.000$

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA

	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	LIQUIDITY INDEX	USCS
●	B-102	ST-6	20.0'	19.6	16	27	11	0.3	
■	B-105	ST-9	35.0'	20.4	15	29	14	0.4	
▲	B-118	ST-8	30.0'	23.3	17	32	15	0.4	



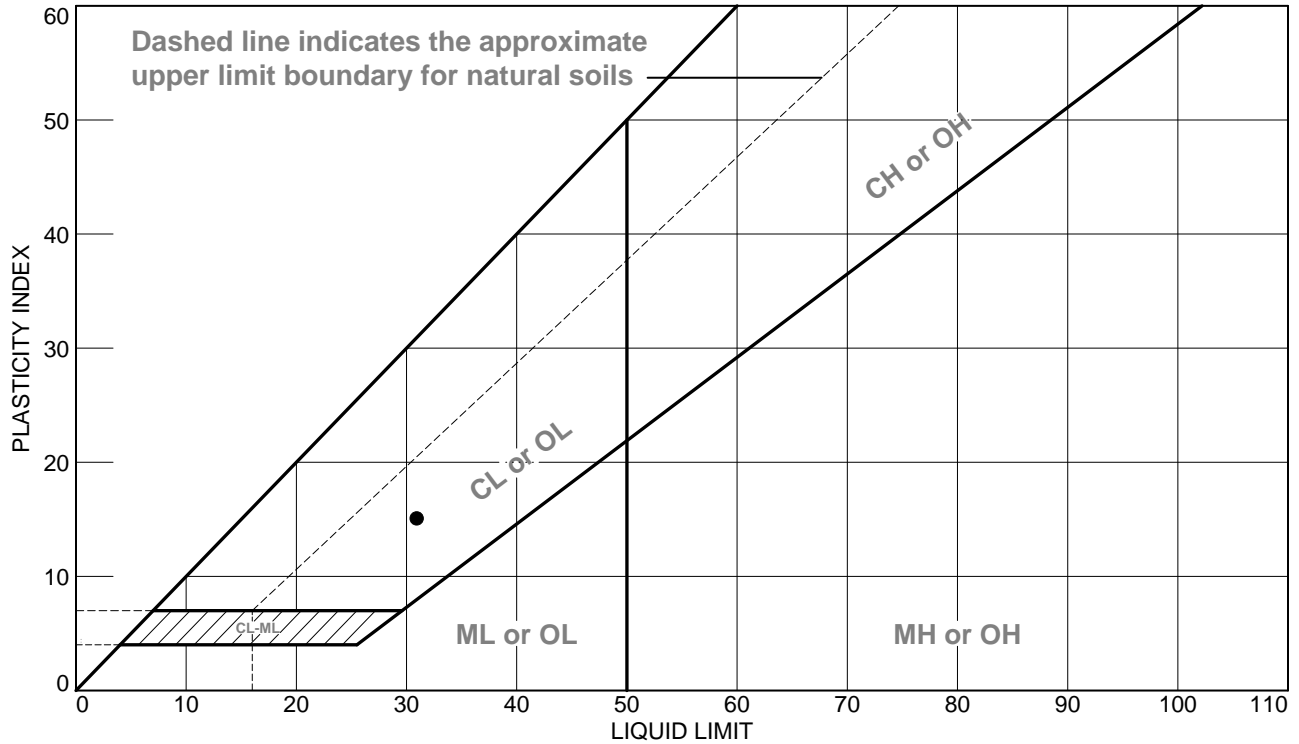
Client: GEI Consultants
Project: Corktown Borings

Project No.: 2126-1007.00

Figure

Tested By: ○ RFS □ Barney Vollborn ▲ RFS **Checked By:** Steve Robinson _____

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA

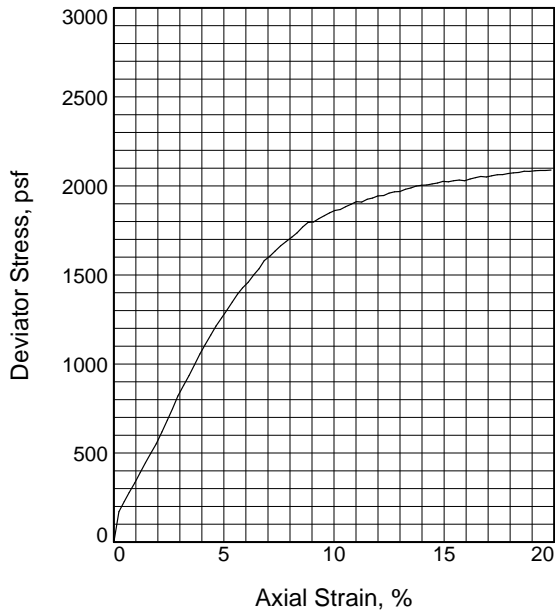
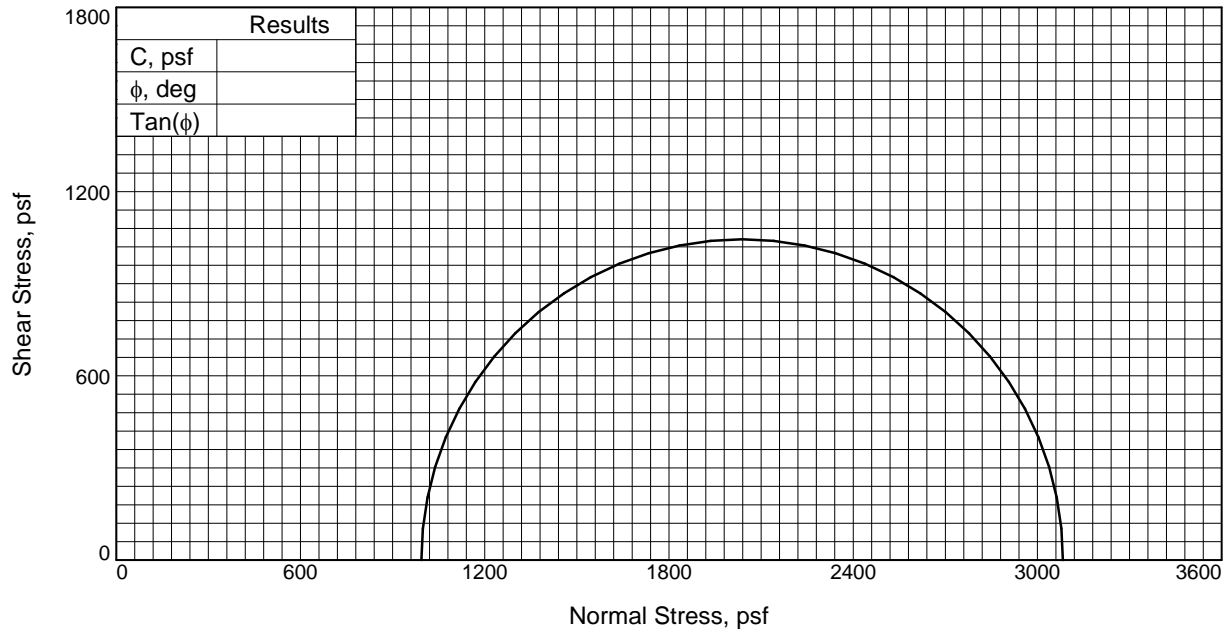
	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	LIQUIDITY INDEX	USCS
●	B-113	ST-6	20'	20.6	16	31	15	0.3	



Client: GEI Consultants
 Project: Corktown Borings
 Project No.: 2126-1007.00

Figure

Tested By: Barney Vollborn Checked By: Steve Robinson



Sample No.	1	
Initial	Water Content, %	19.5
	Dry Density, pcf	111.3
	Saturation, %	99.8
	Void Ratio	0.5364
	Diameter, in.	2.82
At Test	Height, in.	5.55
	Water Content, %	19.6
	Dry Density, pcf	111.3
	Saturation, %	100.0
	Void Ratio	0.5364
Diameter, in.	2.82	
Height, in.	5.55	
Strain rate, in./min.	0.055	
Back Pressure, psi	0.00	
Cell Pressure, psi	6.90	
Fail. Stress, psf	2089	
Strain, %	19.9	
Ult. Stress, psf	2089	
Strain, %	19.9	
σ_1 Failure, psf	3083	
σ_3 Failure, psf	994	

Type of Test:

Unconsolidated Undrained

Sample Type: Intact

Description:

LL= 27 PL= 16 PI= 11

Assumed Specific Gravity= 2.74

Remarks:

Figure _____

Client: GEI Consultants

Project: Corktown Borings

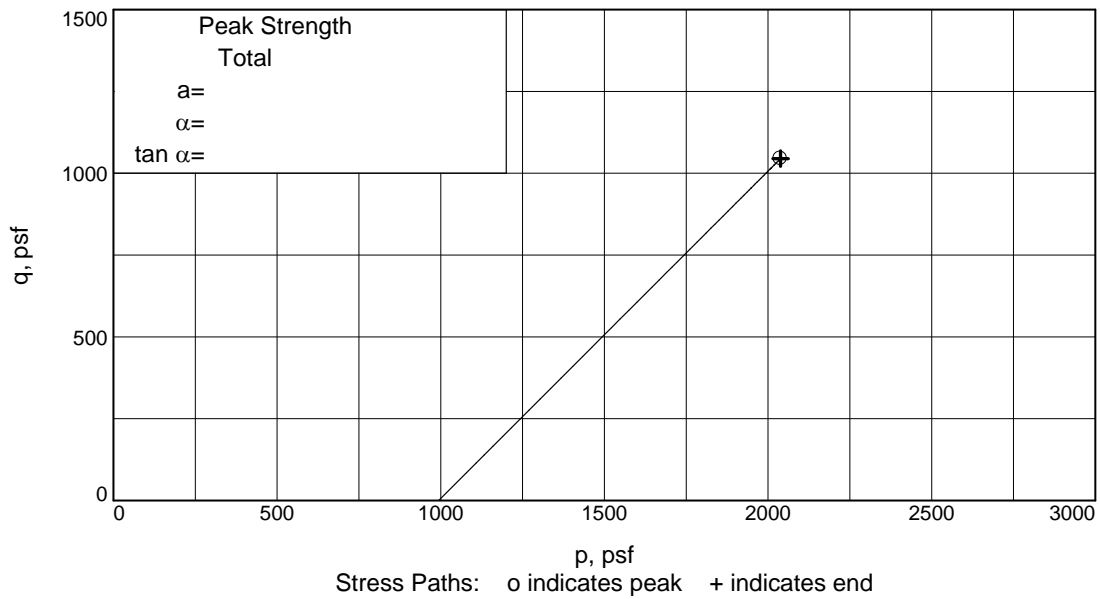
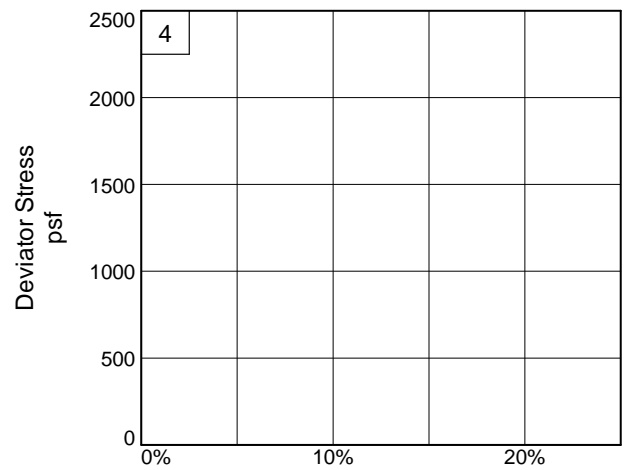
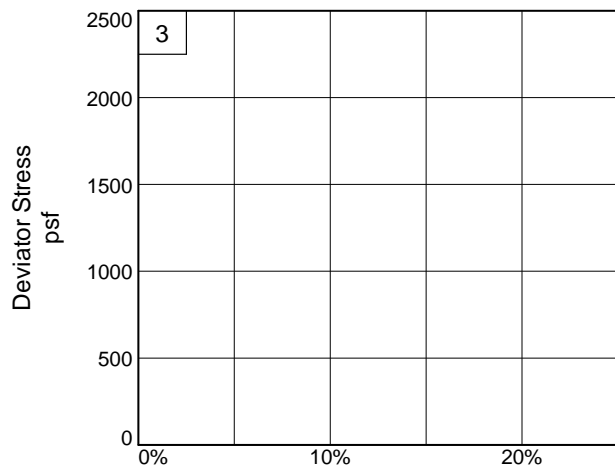
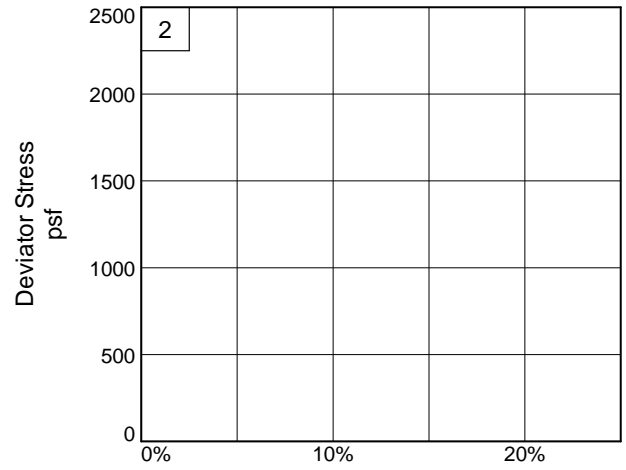
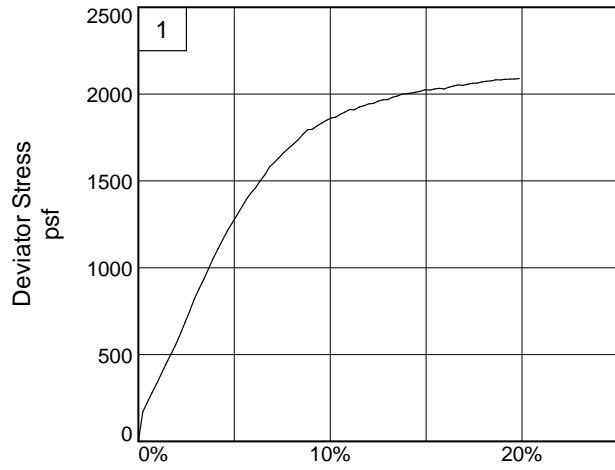
Source of Sample: B-102 **Depth:** 20'

Sample Number: ST-6

Proj. No.: 2126-1007.00

Date Sampled: 01/20/21



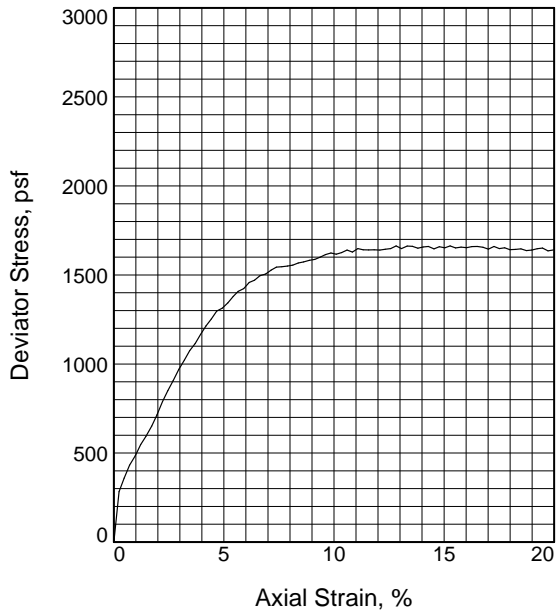
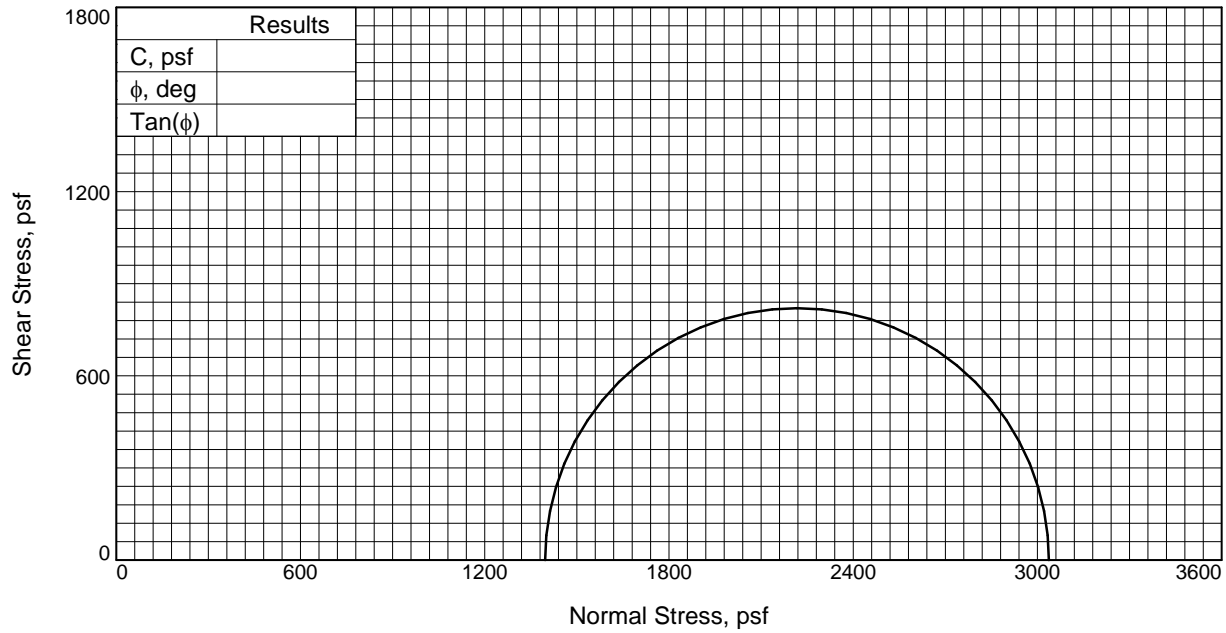


Client: GEI Consultants
Project: Corktown Borings
Source of Sample: B-102
Project No.: 2126-1007.00

Depth: 20' **Sample Number:** ST-6
Figure _____

DLZ, INC.

Tested By: Will Vennemeyer **Checked By:** Steve Robinson



Sample No.	1	
Initial	Water Content, %	23.6
	Dry Density, pcf	105.3
	Saturation, %	99.8
	Void Ratio	0.6606
	Diameter, in.	2.81
At Test	Height, in.	5.52
	Water Content, %	23.6
	Dry Density, pcf	105.3
	Saturation, %	100.0
	Void Ratio	0.6606
Diameter, in.	2.81	
Height, in.	5.52	
Strain rate, in./min.	0.055	
Back Pressure, psi	0.00	
Cell Pressure, psi	9.70	
Fail. Stress, psf	1641	
Strain, %	20.0	
Ult. Stress, psf	1641	
Strain, %	20.0	
σ_1 Failure, psf	3037	
σ_3 Failure, psf	1397	

Type of Test:

Unconsolidated Undrained

Sample Type: Intact

Description:

LL= 32 PL= 17 PI= 15

Assumed Specific Gravity= 2.80

Remarks:

Figure _____

Client: GEI Consultants

Project: Corktown Borings

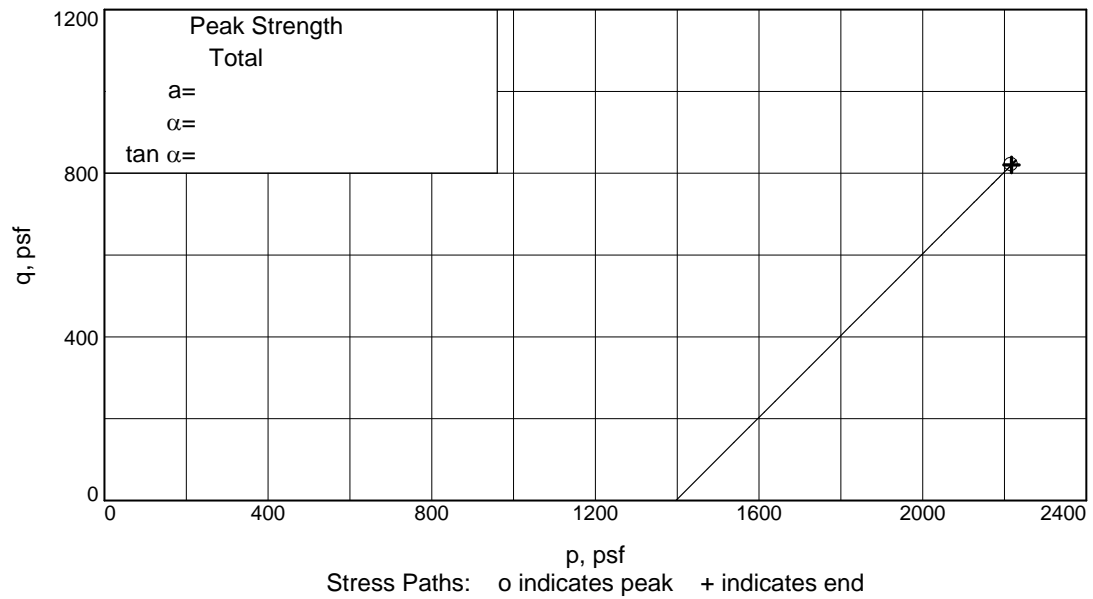
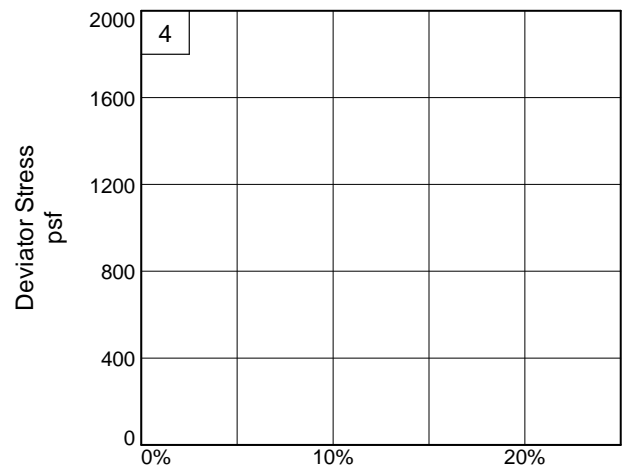
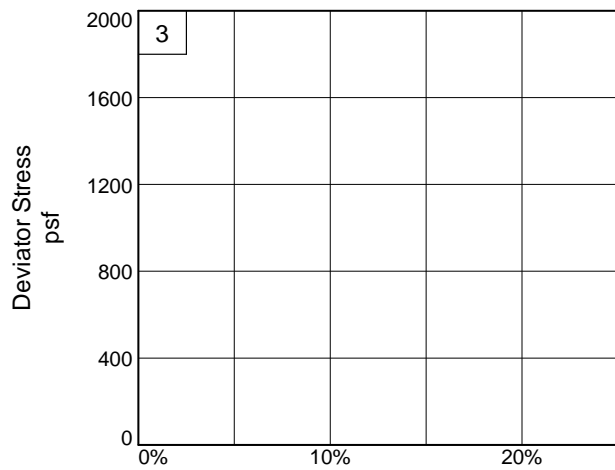
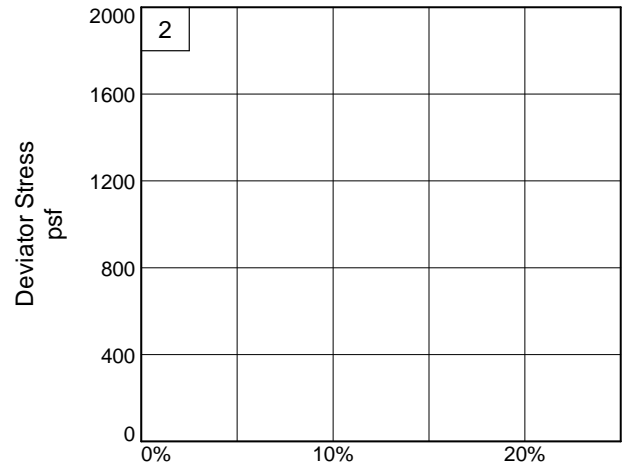
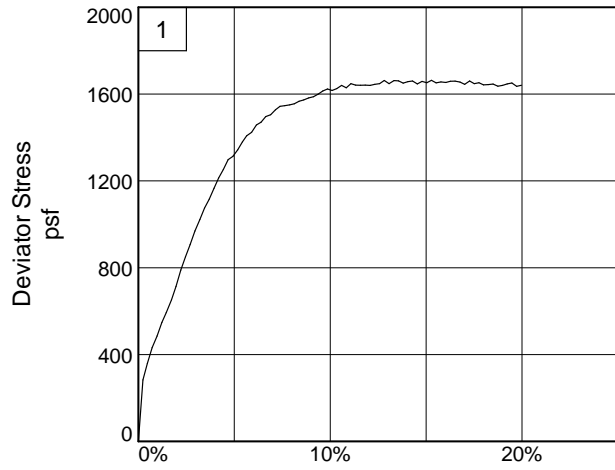
Source of Sample: B-118 **Depth:** 30'

Sample Number: ST-8

Proj. No.: 2126-1007.00

Date Sampled: 01/20/21





Client: GEI Consultants

Project: Corktown Borings

Source of Sample: B-118

Depth: 30'

Sample Number: ST-8

Project No.: 2126-1007.00

Figure _____

DLZ, INC.

Tested By: Will Vennemeyer _____ **Checked By:** Steve Robinson _____

Location: User-specified point center at 42.337591, -83.080089
 Ring (buffer): 1-miles radius
 Description: Corktown POA I

Summary of ACS Estimates		2016 - 2020
Population		10,768
Population Density (per sq. mile)		3,507
People of Color Population		8,459
% People of Color Population		79%
Households		5,393
Housing Units		6,516
Housing Units Built Before 1950		2,694
Per Capita Income		24,468
Land Area (sq. miles) (Source: SF1)		3.07
% Land Area		98%
Water Area (sq. miles) (Source: SF1)		0.05
% Water Area		2%

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	10,768	100%	373
Population Reporting One Race	10,484	97%	1,059
White	2,684	25%	280
Black	7,278	68%	345
American Indian	15	0%	40
Asian	143	1%	101
Pacific Islander	1	0%	11
Some Other Race	364	3%	282
Population Reporting Two or More Races	283	3%	139
Total Hispanic Population	1,002	9%	245
Total Non-Hispanic Population	9,766		
White Alone	2,309	21%	280
Black Alone	7,083	66%	345
American Indian Alone	7	0%	40
Non-Hispanic Asian Alone	143	1%	101
Pacific Islander Alone	0	0%	11
Other Race Alone	89	1%	273
Two or More Races Alone	136	1%	91
Population by Sex			
Male	5,016	47%	304
Female	5,752	53%	282
Population by Age			
Age 0-4	620	6%	148
Age 0-17	2,165	20%	167
Age 18+	8,603	80%	317
Age 65+	1,650	15%	193

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020

Location: User-specified point center at 42.337591, -83.080089
 Ring (buffer): 1-miles radius
 Description: Corktown POA I

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	7,632	100%	328
Less than 9th Grade	438	6%	179
9th - 12th Grade, No Diploma	954	13%	131
High School Graduate	1,829	24%	148
Some College, No Degree	1,774	23%	266
Associate Degree	668	9%	152
Bachelor's Degree or more	1,969	26%	237
Population Age 5+ Years by Ability to Speak English			
Total	10,148	100%	358
Speak only English	9,476	93%	325
Non-English at Home ¹⁺²⁺³⁺⁴	672	7%	181
¹ Speak English "very well"	493	5%	102
² Speak English "well"	113	1%	85
³ Speak English "not well"	61	1%	83
⁴ Speak English "not at all"	6	0%	25
³⁺⁴ Speak English "less than well"	67	1%	83
²⁺³⁺⁴ Speak English "less than very well"	179	2%	118
Linguistically Isolated Households*			
Total	94	100%	49
Speak Spanish	63	67%	48
Speak Other Indo-European Languages	0	0%	11
Speak Asian-Pacific Island Languages	9	10%	26
Speak Other Languages	22	24%	14
Households by Household Income			
Household Income Base	5,393	100%	267
< \$15,000	1,836	34%	183
\$15,000 - \$25,000	981	18%	119
\$25,000 - \$50,000	1,140	21%	263
\$50,000 - \$75,000	431	8%	103
\$75,000 +	1,005	19%	163
Occupied Housing Units by Tenure			
Total	5,393	100%	267
Owner Occupied	1,566	29%	180
Renter Occupied	3,826	71%	283
Employed Population Age 16+ Years			
Total	8,789	100%	328
In Labor Force	4,901	56%	279
Civilian Unemployed in Labor Force	584	7%	71
Not In Labor Force	3,888	44%	232

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of anyrace.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)

*Households in which no one 14 and over speaks English "very well" or speaks English only.

Location: User-specified point center at 42.337591, -83.080089

Ring (buffer): 1-miles radius

Description: Corktown POA I

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	11,594	100%	454
English	11,017	95%	454
Spanish	287	2%	78
French, Haitian, or Cajun	0	0%	59
German or other West Germanic	34	0%	29
Russian, Polish, or Other Slavic	7	0%	14
Other Indo-European	99	1%	79
Korean	28	0%	42
Chinese (including Mandarin, Cantonese)	36	0%	36
Vietnamese	22	0%	61
Tagalog (including Filipino)	0	0%	11
Other Asian and Pacific Island	13	0%	14
Arabic	44	0%	21
Other and Unspecified	8	0%	11
Total Non-English	578	5%	642

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020.
*Population by Language Spoken at Home is available at the census tract summary level and up.

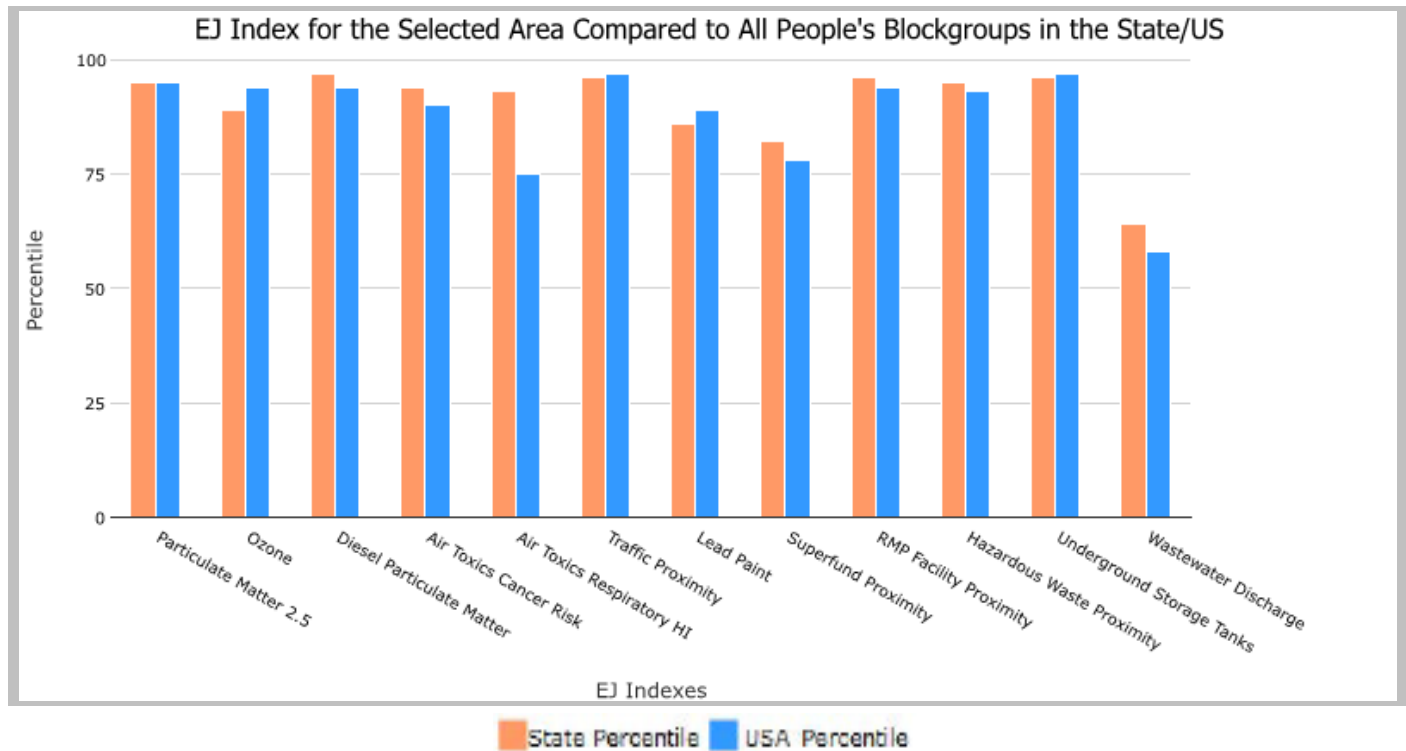
1 mile Ring Centered at 42.337591,-83.080089, MICHIGAN, EPA Region 5

Approximate Population: 10,768

Input Area (sq. miles): 3.14

Corktown POA I (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
EJ Index for Particulate Matter 2.5	95	95
EJ Index for Ozone	89	94
EJ Index for Diesel Particulate Matter*	97	94
EJ Index for Air Toxics Cancer Risk*	94	90
EJ Index for Air Toxics Respiratory HI*	93	75
EJ Index for Traffic Proximity	96	97
EJ Index for Lead Paint	86	89
EJ Index for Superfund Proximity	82	78
EJ Index for RMP Facility Proximity	96	94
EJ Index for Hazardous Waste Proximity	95	93
EJ Index for Underground Storage Tanks	96	97
EJ Index for Wastewater Discharge	64	58



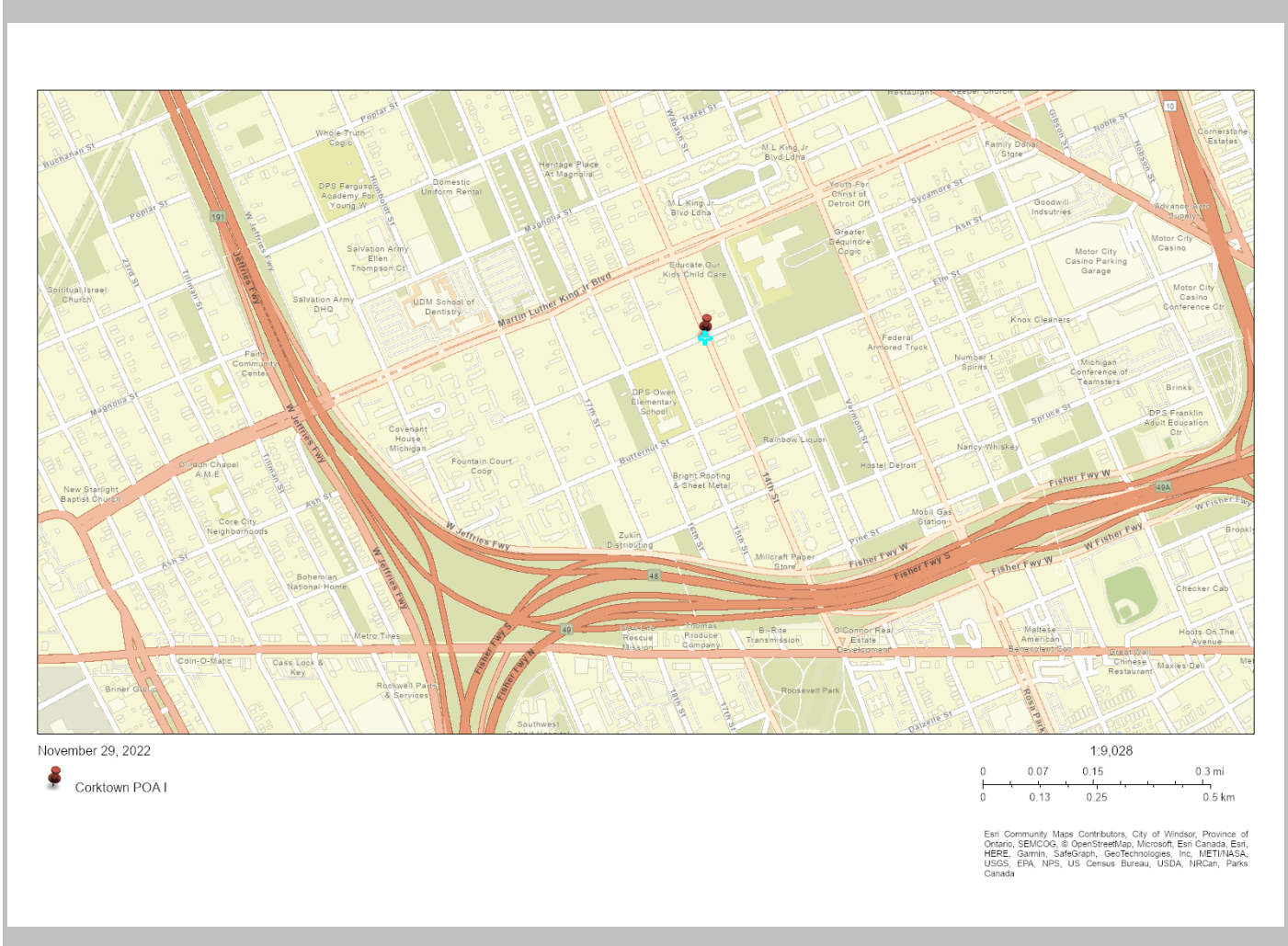
This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective 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.

1 mile Ring Centered at 42.337591,-83.080089, MICHIGAN, EPA Region 5

Approximate Population: 10,768

Input Area (sq. miles): 3.14

Corktown POA I (The study area contains 1 blockgroup(s) with zero population.)



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJScreen Report (Version 2.1)

1 mile Ring Centered at 42.337591,-83.080089, MICHIGAN, EPA Region 5

Approximate Population: 10,768

Input Area (sq. miles): 3.14

Corktown POA I (The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	Value	State Avg.	%ile in State	USA Avg.	%ile in USA
Pollution and Sources					
Particulate Matter 2.5 ($\mu\text{g}/\text{m}^3$)	10.2	8.73	99	8.67	87
Ozone (ppb)	44.7	43.8	53	42.5	73
Diesel Particulate Matter* ($\mu\text{g}/\text{m}^3$)	0.452	0.211	99	0.294	80-90th
Air Toxics Cancer Risk* (lifetime risk per million)	30	23	99	28	80-90th
Air Toxics Respiratory HI*	0.3	0.25	99	0.36	<50th
Traffic Proximity (daily traffic count/distance to road)	4000	910	96	760	96
Lead Paint (% Pre-1960 Housing)	0.47	0.37	64	0.27	71
Superfund Proximity (site count/km distance)	0.048	0.15	37	0.13	42
RMP Facility Proximity (facility count/km distance)	1.6	0.54	91	0.77	86
Hazardous Waste Proximity (facility count/km distance)	3	1.1	89	2.2	78
Underground Storage Tanks (count/km ²)	34	8	96	3.9	98
Wastewater Discharge (toxicity-weighted concentration/m distance)	3.4E-05	0.45	24	12	24
Socioeconomic Indicators					
Demographic Index	71%	28%	92	35%	90
People of Color	79%	26%	90	40%	83
Low Income	63%	31%	89	30%	90
Unemployment Rate	12%	6%	85	5%	86
Limited English Speaking Households	2%	2%	78	5%	61
Less Than High School Education	18%	9%	87	12%	77
Under Age 5	6%	6%	60	6%	57
Over Age 64	15%	17%	45	16%	50

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's 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

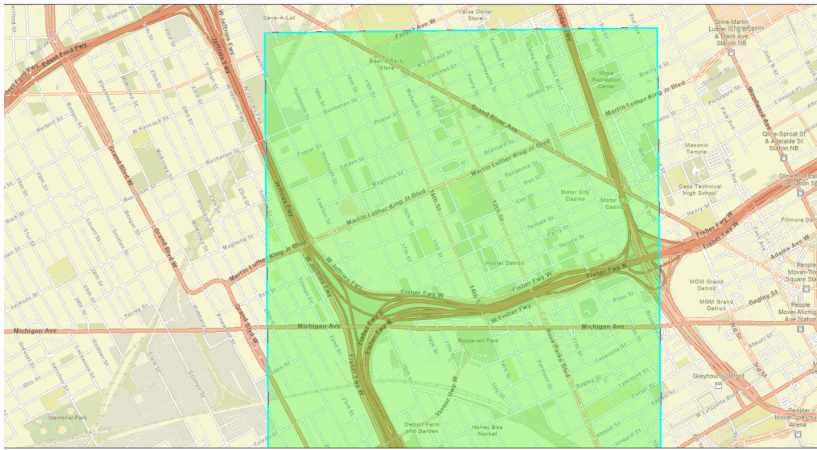
EJScreen is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. 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. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJScreen outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

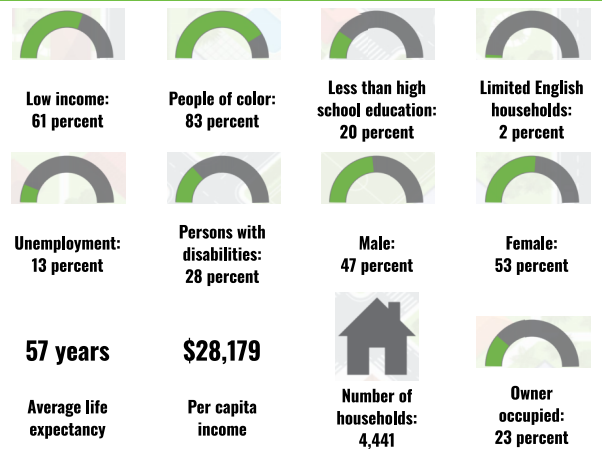
Detroit, MI

the User Specified Area
Population: 9,315
Area in square miles: 2.70



Jan 22, 2023
Project 1
1:18,056
0 0.15 0.3 0.45 0.6 mi
0 0.25 0.5 1 km
Epi Community Maps Contributors: City of Windsor, Province of Ontario, Esri, Canada, Esri, HERE, Garmin, Swisstopo, DeLorme, GeoTechnique, Intermap, Inc., Swisstopo, Esri, NPS, US Census Bureau, USGS, IGN, FRA, Canada

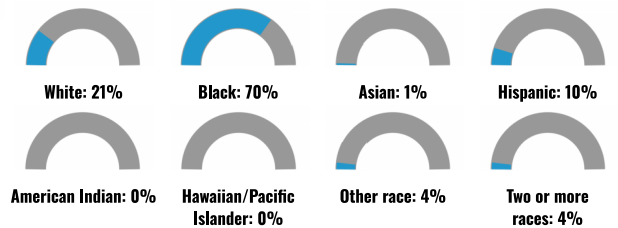
COMMUNITY INFORMATION



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	94%
Spanish	4%
Total Non-English	6%

BREAKDOWN BY RACE



BREAKDOWN BY AGE



LIMITED ENGLISH SPEAKING BREAKDOWN



Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

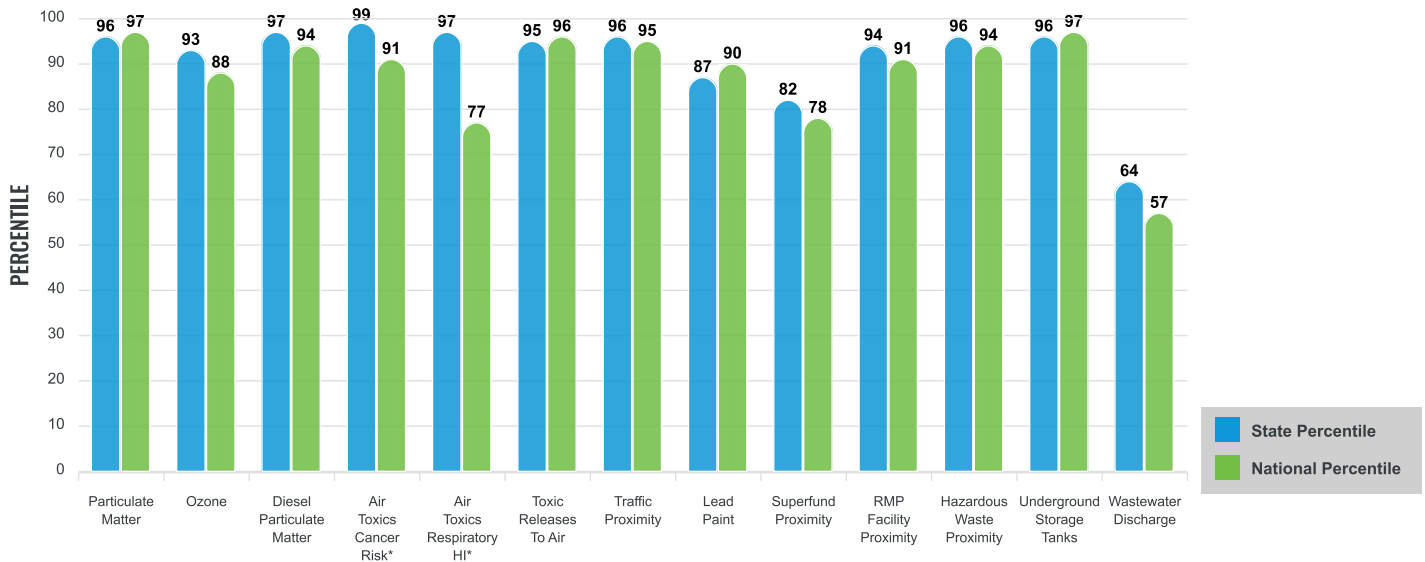
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

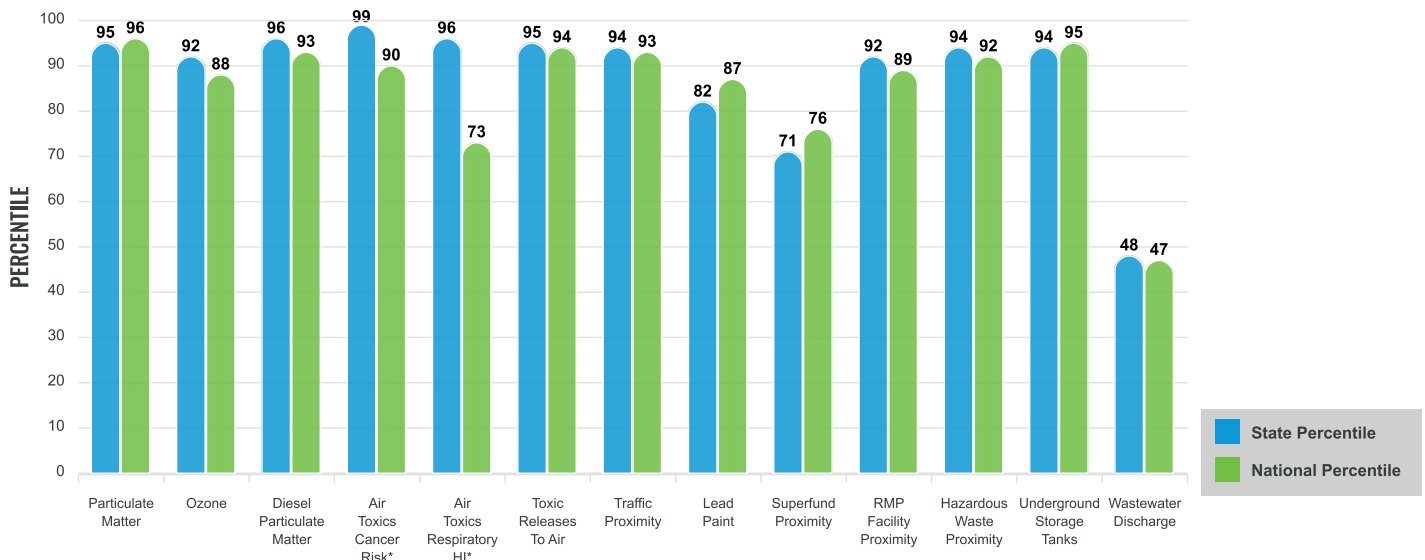
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for the User Specified Area

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter ($\mu\text{g}/\text{m}^3$)	10.6	8.51	99	8.08	97
Ozone (ppb)	62.6	60	73	61.6	61
Diesel Particulate Matter ($\mu\text{g}/\text{m}^3$)	0.388	0.183	99	0.261	82
Air Toxics Cancer Risk* (lifetime risk per million)	30	19	14	25	5
Air Toxics Respiratory HI*	0.3	0.2	11	0.31	4
Toxic Releases to Air	5,300	2,500	92	4,600	86
Traffic Proximity (daily traffic count/distance to road)	540	120	96	210	91
Lead Paint (% Pre-1960 Housing)	0.47	0.38	64	0.3	71
Superfund Proximity (site count/km distance)	0.048	0.15	36	0.13	42
RMP Facility Proximity (facility count/km distance)	0.42	0.31	79	0.43	73
Hazardous Waste Proximity (facility count/km distance)	2.9	1.1	90	1.9	80
Underground Storage Tanks (count/km ²)	34	8	96	3.9	98
Wastewater Discharge (toxicity-weighted concentration/m distance)	2.5E-05	0.13	22	22	22
SOCIOECONOMIC INDICATORS					
Demographic Index	72%	28%	93	35%	91
Supplemental Demographic Index	24%	14%	90	14%	87
People of Color	83%	26%	91	39%	84
Low Income	61%	31%	89	31%	89
Unemployment Rate	13%	7%	85	6%	87
Limited English Speaking Households	2%	2%	81	5%	64
Less Than High School Education	20%	9%	90	12%	81
Under Age 5	7%	5%	69	6%	66
Over Age 64	15%	18%	44	17%	49
Low Life Expectancy	15%	20%	8	20%	13

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's 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/naps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	0
Water Dischargers	0
Air Pollution	3
Brownfields	18
Toxic Release Inventory	4

Other community features within defined area:

Schools	4
Hospitals	3
Places of Worship	7

Other environmental data:

Air Non-attainment	Yes
Impaired Waters	No

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community	Yes
Selected location contains an EPA IRA disadvantaged community	Yes

Report for the User Specified Area

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	15%	20%	8	20%	13
Heart Disease	8.6	6.6	88	6.1	89
Asthma	15.8	11.6	94	10	99
Cancer	5.2	6.6	14	6.1	27
Persons with Disabilities	24.9%	14.6%	94	13.4%	95

CLIMATE INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	2%	7%	27	12%	25
Wildfire Risk	0%	0%	0	14%	0

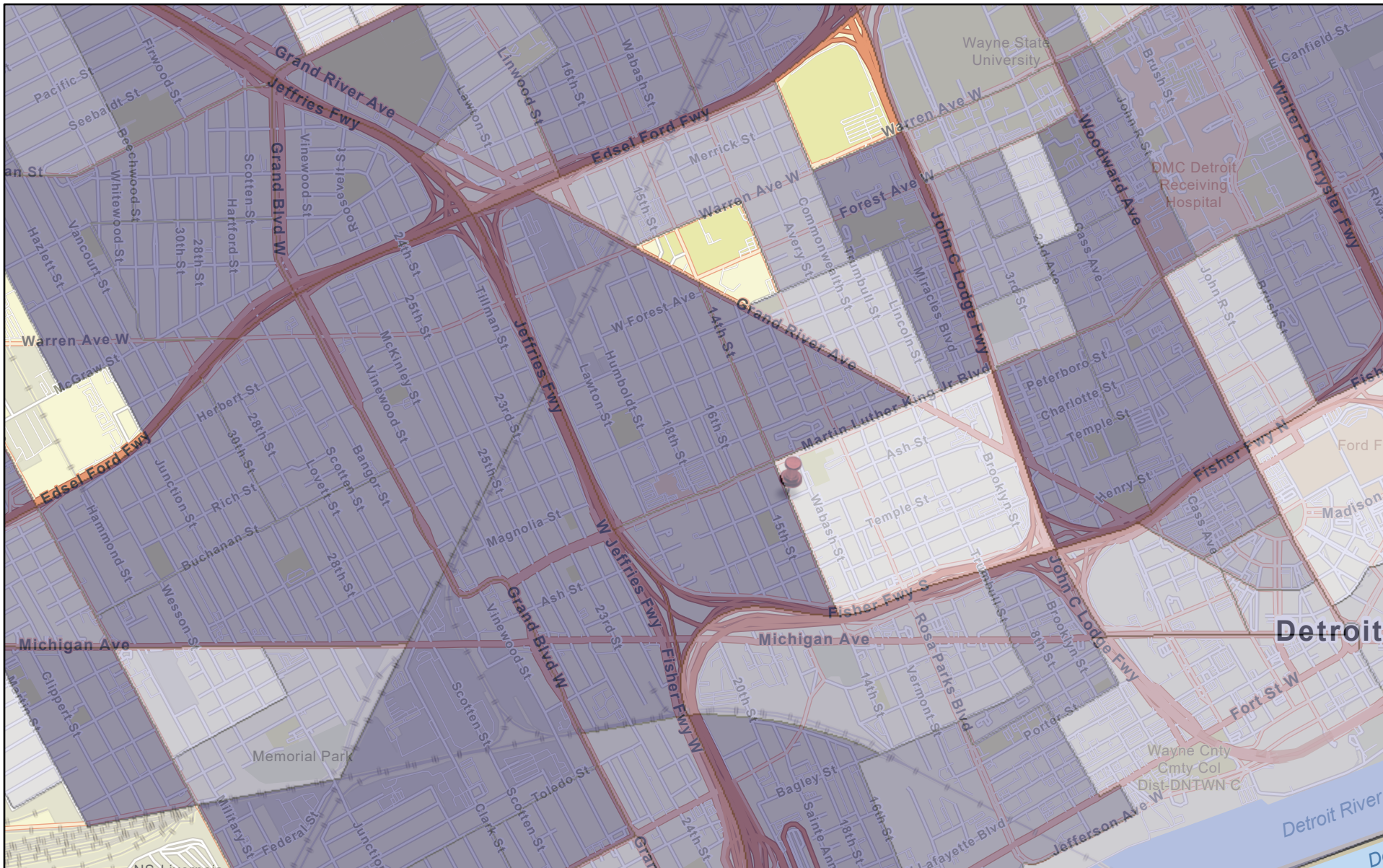
CRITICAL SERVICE GAPS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	20%	14%	75	14%	74
Lack of Health Insurance	7%	5%	72	9%	50
Housing Burden	Yes	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Footnotes

Report for the User Specified Area

Percent Unemployed



11/29/2022

Percent Unemployed in Civilian labor force

0 – 0

> 0 – 2.8

> 2.8 – 5.38

> 5.38 – 9.5

> 9.5 – 100



Corktown POA I

1:36,112

0 0.23 0.45 0.9 mi

0 0.35 0.7 1.4 km

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

3300 15th Street

Jeffries, (/MI/Detroit/Jeffries) Detroit (/MI/Detroit), 48208

Commute to **Downtown Detroit** (/compare#edit-commutes)

6 min 19 min 12 min 37 min

Favorite

Map

Nearby Apartments (/apartments/search/3300-15th-st-detroit-mi-48208)

More about 3300 15th Street (<https://www.redfin.com/MI/Detroit/3300-18th-St-48208/home/113399080>).



Somewhat Walkable

Some errands can be accomplished on foot.



Some Transit

A few nearby public transportation options.

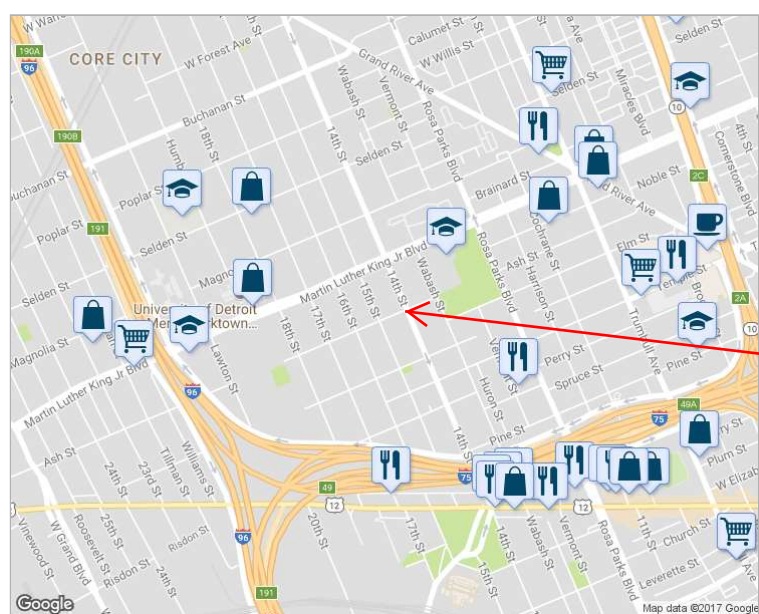


Very Bikeable

Biking is convenient for most trips.

About your score

Add scores to your site (</professional/badges.php?address=3300 15th Street Detroit, MI 48208>).



Approximate location of North Corktown project

About this Location





Google
Report a problem (https://www.google.com/local/imagery/report/?cb_client=apiv3&image_key=!1e2!2sVI0LLG2X9hyz7JfSmA00Qw&cbp=1,311.269,,0.014,0&hl=en-US)
Google Maps (https://maps.google.com/maps/@42.337406,-83.0808222,0a,73.2y,311.27h,90t/data=!3m4!1e1!3m2!1sVI0LLG2X9hyz7JfSmA00Qw!2e0?source=apiv3)

3300 15th Street has a Walk Score of 52 out of 100. This location is Somewhat Walkable so some errands can be accomplished on foot.

This location is in the Jeffries neighborhood in Detroit. Nearby parks include Roosevelt Park, Macomb Park and Scripps Park.



Some Transit

3300 15th Street has some transit which means a few nearby public transportation options. Car sharing is available from Zipcar.

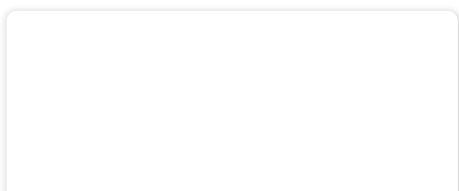
Rail lines:

DPM Detroit People Mover 1.5 mi

More ▼

Jeffries Detroit Apartments for Rent

View all Jeffries apartments (</apartments/search/MI/Detroit/Jeffries>) on a map.



\$1,620

Sheridan Court Apartments 304...
1 bed Walk Score 94



from **\$1,550**

Willis Apartments 2 (/score/the...
1 bed Walk Score 93



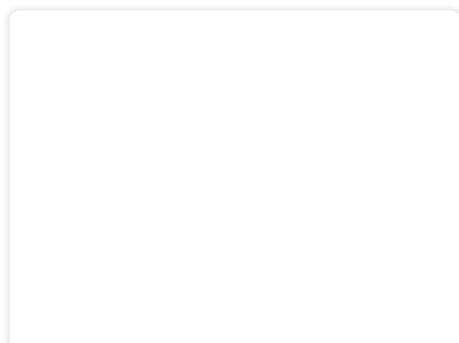
from **\$1,050**

The Union At Midtown (/score/t...
1 bed Walk Score 94

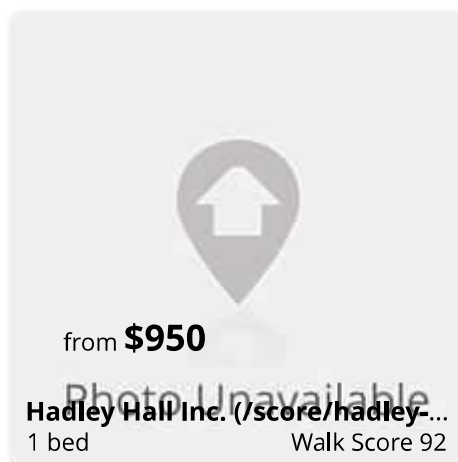


from **\$1,175**

University Club (/score/universi...
1 bed Walk Score 93



\$1,200
3410 Rosa Parks Boulevard (/sc...
2 bed Walk Score 59



from **\$950**
Hadley Hall Inc. (/score/hadley...
1 bed Walk Score 92

Jeffries Neighborhood

3300 15th Street is in the Jeffries neighborhood. Jeffries is the 5th most walkable neighborhood in **Detroit** (</MI/Detroit>) with a neighborhood Walk Score of 64.

Moving to Detroit from another city? View our [moving to Detroit guide \(/moving/to-detroit\)](/moving/to-detroit).

[Learn More About Jeffries \(/MI/Detroit/Jeffries\)](/MI/Detroit/Jeffries)

[Learn More About Detroit \(/MI/Detroit\)](/MI/Detroit)

[United States \(/cities-and-neighborhoods/\)](/cities-and-neighborhoods/) [Michigan \(/MI\)](/MI/) [Detroit \(/MI/Detroit\)](/MI/Detroit/) **[Jeffries \(/MI/Detroit/Jeffries\)](/MI/Detroit/Jeffries)**

Walk Score (/

**Professional
(/professional/)**

About (/about.shtml)

Walk Score Widget (/professional/walk-score-widget.php)

How It Works (/how-it-works/)

Walk Score APIs (/professional/walk-score-apis.php)

Press (/press/)

Data Services (/professional/research.php)

Terms & Privacy (/terms-of-use.shtml)

Real Estate Professionals (/professional/real-estate-professionals.php)

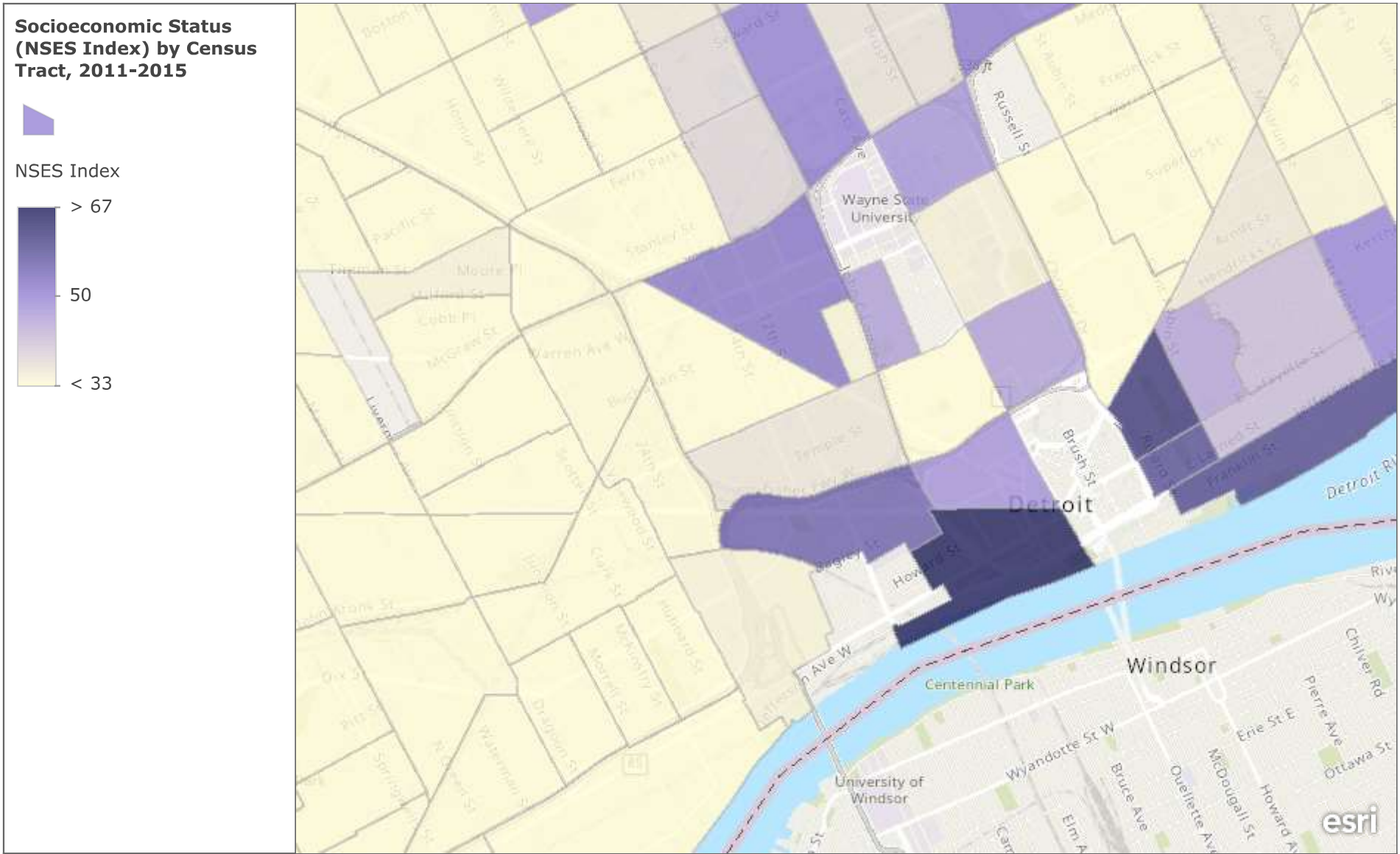
Feedback (/contact)

Walkability Research (/professional/walkability-research.php)

Badges (/professional/badges.php)

If you are using a screen reader or having trouble reading this website, please call Walk Score customer service at (253) 256-1634.

Socioeconomic Status (NSES Index) by Census Tract, 2011-2015



This layer shows the socioeconomic status of each census tract. Data come from the US Census Bureau's 2011-2015 American Community Survey.

Esri, NASA, NGA, USGS, FEMA | City of Windsor, Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCAN, Parks Canada

2022 FFIEC Geocode Census Report

Address: Selected Tract
 MSA: 19804 - DETROIT-DEARBORN-LIVONIA, MI
 State: 26 -
 County: 163 - WAYNE COUNTY
 Tract Code: 5215.00

Summary Census Demographic Information

Tract Income Level	Moderate
Underserved or Distressed Tract	No
2022 FFIEC Estimated MSA/MD/non-MSA/MD Median Family Income	\$72,800
2022 Estimated Tract Median Family Income	\$48,630
2010 Tract Median Family Income	\$42,686
Tract Median Family Income %	66.80
Tract Population	1354
Tract Minority %	82.05
Tract Minority Population	1111
Owner-Occupied Units	221
1- to 4- Family Units	551

Census Income Information

Tract Income Level	Moderate
2010 MSA/MD/statewide non-MSA/MD Median Family Income	\$63,896
2022 FFIEC Estimated MSA/MD/non-MSA/MD Median Family Income	\$72,800
% below Poverty Line	29.88
Tract Median Family Income %	66.80
2010 Tract Median Family Income	\$42,686
2022 Estimated Tract Median Family Income	\$48,630
2010 Tract Median Household Income	\$36,406

Census Population Information

Tract Population	1354
Tract Minority %	82.05
Number of Families	249
Number of Households	631
Non-Hispanic White Population	243
Tract Minority Population	1111
American Indian Population	0
Asian/Hawaiian/Pacific Islander Population	3
Black Population	890
Hispanic Population	113
Other/Two or More Races Population	15

Census Housing Information

Total Housing Units	821
1- to 4- Family Units	551
Median House Age (Years)	53
Owner-Occupied Units	221
Renter Occupied Units	410
Owner Occupied 1- to 4- Family Units	221
Inside Principal City?	YES
Vacant Units	190



2023 FFIEC Geocode Census Report

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Renter Occupied Units	410
Owner Occupied 1- to 4- Family Units	221
Inside Principal City?	YES
Vacant Units	190

Location: User-specified polygonal location
 Ring (buffer): 0-miles radius
 Description:

Summary		Census 2010
Population		905
Population Density (per sq. mile)		4,467
People of Color Population		837
% People of Color Population		0.924594563654328%
Households		361
Housing Units		425
Land Area (sq. miles)		0.20
% Land Area		1%
Water Area (sq. miles)		0.00
% Water Area		0%

Population by Race	Number	Percent
Total	905	-----
Population Reporting One Race	880	0.972607537144054%
White	76	.0842511910990615%
Black	784	0.865925953177231%
American Indian	3	.0304915921993073%
Asian	1	.0010734410128462%
Pacific Islander	0	0%
Some Other Race	17	.0183077926349855%
Population Reporting Two or More Races	25	.0273924628559457%
Total Hispanic Population	36	.0394862118422868%
Total Non-Hispanic Population	869	0.960513788157713%
White Alone	68	.0754054363456724%
Black Alone	778	.860011291086834%
American Indian Alone	1	.0161865291185463%
Non-Hispanic Asian Alone	1	.0010734410128462%
Pacific Islander Alone	0	0%
Other Race Alone	1	.0124972853330468%
Two or More Races Alone	19	.0211552382672008%

Population by Sex	Number	Percent
Male	390	0.431343720162926%
Female	515	0.568656279837074%

Population by Age	Number	Percent
Age 0-4	66	0.730568092626501%
Age 0-17	236	.260622123383897%
Age 18+	669	.739377876616103%
Age 65+	99	.109095545461149%

Households by Tenure	Number	Percent
Total	361	
Owner Occupied	61	.167922232823995%
Renter Occupied	300	.832077767176005%

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
Source: U.S. Census Bureau, Census 2010 Summary File 1.



QuickFacts Wayne County, Michigan; Michigan; Detroit city, Michigan

QuickFacts provides statistics for all states and counties, and for cities and towns with a *population of 5,000 or more*.

Table

All Topics	Wayne County, Michigan	Michigan	Detroit city, Michigan
Population Estimates, July 1, 2022, (V2022)	△ 1,757,043	△ 10,034,113	△ 620,376
PEOPLE			
Population			
Population Estimates, July 1, 2022, (V2022)	△ 1,757,043	△ 10,034,113	△ 620,376
Population estimates base, April 1, 2020, (V2022)	△ 1,793,549	△ 10,077,325	△ 639,115
Population, percent change - April 1, 2020 (estimates base) to July 1, 2022, (V2022)	△ -2.0%	△ -0.4%	△ -2.9%
Population, Census, April 1, 2020	1,793,561	10,077,331	639,111
Population, Census, April 1, 2010	1,820,584	9,883,640	713,777
Age and Sex			
Persons under 5 years, percent	△ 6.3%	△ 5.3%	△ 7.1%
Persons under 18 years, percent	△ 23.4%	△ 21.0%	△ 24.9%
Persons 65 years and over, percent	△ 16.6%	△ 18.7%	△ 14.1%
Female persons, percent	△ 51.5%	△ 50.3%	△ 52.5%
Race and Hispanic Origin			
White alone, percent	△ 54.6%	△ 78.8%	△ 12.9%
Black or African American alone, percent (a)	△ 38.3%	△ 14.1%	△ 77.9%
American Indian and Alaska Native alone, percent (a)	△ 0.5%	△ 0.7%	△ 0.4%
Asian alone, percent (a)	△ 3.7%	△ 3.5%	△ 1.6%
Native Hawaiian and Other Pacific Islander alone, percent (a)	△ Z	△ Z	△ 0.0%
Two or More Races, percent	△ 2.9%	△ 2.8%	△ 3.3%
Hispanic or Latino, percent (b)	△ 6.6%	△ 5.7%	△ 7.8%
White alone, not Hispanic or Latino, percent	△ 49.0%	△ 74.0%	△ 10.1%
Population Characteristics			
Veterans, 2017-2021	75,594	516,924	23,823
Foreign born persons, percent, 2017-2021	9.4%	6.9%	5.7%
Housing			
Housing units, July 1, 2022, (V2022)	790,946	4,611,660	X
Owner-occupied housing unit rate, 2017-2021	63.4%	72.2%	48.3%
Median value of owner-occupied housing units, 2017-2021	\$136,200	\$172,100	\$57,700
Median selected monthly owner costs -with a mortgage, 2017-2021	\$1,377	\$1,374	\$1,125
Median selected monthly owner costs -without a mortgage, 2017-2021	\$533	\$520	\$465
Median gross rent, 2017-2021	\$951	\$946	\$899
Building permits, 2022	2,381	21,983 ¹	X
Families & Living Arrangements			
Households, 2017-2021	685,635	3,976,729	250,096
Persons per household, 2017-2021	2.58	2.48	2.53
Living in same house 1 year ago, percent of persons age 1 year+, 2017-2021	88.7%	87.3%	87.4%
Language other than English spoken at home, percent of persons age 5 years+, 2017-2021	15.3%	9.9%	10.8%
Computer and Internet Use			
Households with a computer, percent, 2017-2021	91.2%	92.4%	87.6%
Households with a broadband Internet subscription, percent, 2017-2021	83.3%	86.4%	76.0%
Education			
High school graduate or higher, percent of persons age 25 years+, 2017-2021	87.6%	91.6%	
Bachelor's degree or higher, percent of persons age 25 years+, 2017-2021	25.8%	30.6%	

Is this page helpful? ✕



Health			
With a disability, under age 65 years, percent, 2017-2021	11.7%	10.1%	15.7%
Persons without health insurance, under age 65 years, percent	△ 6.6%	△ 6.0%	△ 9.0%
Economy			
In civilian labor force, total, percent of population age 16 years+, 2017-2021	59.2%	61.5%	54.3%
In civilian labor force, female, percent of population age 16 years+, 2017-2021	55.3%	57.4%	53.2%
Total accommodation and food services sales, 2017 (\$1,000) (c)	5,250,790	23,056,352	2,729,569
Total health care and social assistance receipts/revenue, 2017 (\$1,000) (c)	14,321,600	74,194,505	7,484,820
Total transportation and warehousing receipts/revenue, 2017 (\$1,000) (c)	11,438,064	25,019,797	1,188,024
Total retail sales, 2017 (\$1,000) (c)	21,293,284	143,437,054	3,564,708
Total retail sales per capita, 2017 (c)	\$12,113	\$14,377	\$5,281
Transportation			
Mean travel time to work (minutes), workers age 16 years+, 2017-2021	25.2	24.5	25.7
Income & Poverty			
Median household income (in 2021 dollars), 2017-2021	\$52,830	\$63,202	\$34,762
Per capita income in past 12 months (in 2021 dollars), 2017-2021	\$29,953	\$34,768	\$20,780
Persons in poverty, percent	△ 19.6%	△ 13.1%	△ 31.8%

BUSINESSES

Businesses			
Total employer establishments, 2021	33,056	224,676	X
Total employment, 2021	623,212	3,768,321	X
Total annual payroll, 2021 (\$1,000)	40,927,242	216,772,518	X
Total employment, percent change, 2020-2021	-6.9%	-5.8%	X
Total nonemployer establishments, 2020	136,830	738,884	X
All employer firms, Reference year 2017	26,195	165,460	6,869
Men-owned employer firms, Reference year 2017	16,838	106,137	4,153
Women-owned employer firms, Reference year 2017	4,623	29,706	1,094
Minority-owned employer firms, Reference year 2017	3,284	13,091	1,205
Nonminority-owned employer firms, Reference year 2017	20,348	141,153	4,516
Veteran-owned employer firms, Reference year 2017	1,031	8,714	232
Nonveteran-owned employer firms, Reference year 2017	22,303	142,782	5,419

GEOGRAPHY

Geography			
Population per square mile, 2020	2,931.4	178.0	4,606.8
Population per square mile, 2010	2,974.4	174.8	5,144.3
Land area in square miles, 2020	611.84	56,608.22	138.73
Land area in square miles, 2010	612.08	56,538.90	138.75
FIPS Code	26163	26	2622000


Is this page helpful? ✕




[About datasets used in this table](#)

Value Notes

- I. Includes data not distributed by county.

 Estimates are not comparable to other geographic levels due to methodology differences that may exist between different data sources.

Some estimates presented here come from sample data, and thus have sampling errors that may render some apparent differences between geographies statistically indistinguishable.] Click the Quick Info  icon to the left of each row in T learn about sampling error.

In Vintage 2022, as a result of the formal request from the state, Connecticut transitioned from eight counties to nine planning regions. For more details, please see the Vintage 2022 release notes available here: [Release Notes](#).

The vintage year (e.g., V2022) refers to the final year of the series (2020 thru 2022). Different vintage years of estimates are not comparable.

Users should exercise caution when comparing 2017-2021 ACS 5-year estimates to other ACS estimates. For more information, please visit the [2021 5-year ACS Comparison Guidance](#) page.

Fact Notes

- (a) Includes persons reporting only one race
- (b) Hispanics may be of any race, so also are included in applicable race categories
- (c) Economic Census - Puerto Rico data are not comparable to U.S. Economic Census data

Value Flags

- D** Suppressed to avoid disclosure of confidential information
- F** Fewer than 25 firms
- FN** Footnote on this item in place of data
- NA** Not available
- S** Suppressed; does not meet publication standards
- X** Not applicable
- Z** Value greater than zero but less than half unit of measure shown
- Either no or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest or upper interval of an open end
- N** Data for this geographic area cannot be displayed because the number of sample cases is too small.

QuickFacts data are derived from: Population Estimates, American Community Survey, Census of Population and Housing, Current Population Survey, Small Area Health Insurance Estimates, Small Area Income and Poverty Estimates, State Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

CONNECT WITH US     

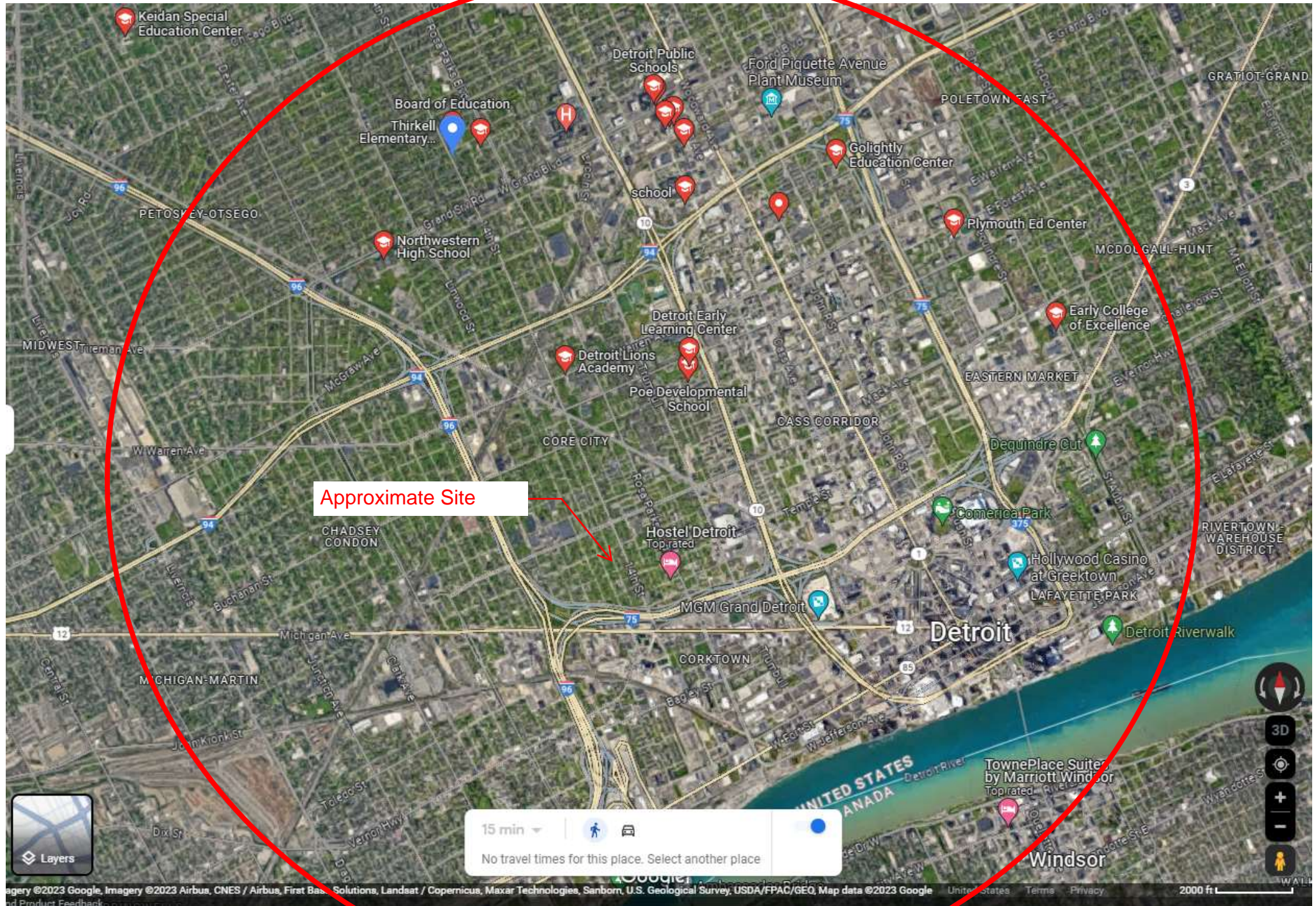
[Information Quality](#) | [Data Linkage Infrastructure](#) | [Data Protection and Privacy Policy](#) | [Accessibility](#) | [FOIA](#) | [Inspector General](#) | [No FEAR Act](#) | [U.S. Department of Commerce](#) | [USA.gov](#)

Measuring America's People, Places, and Economy

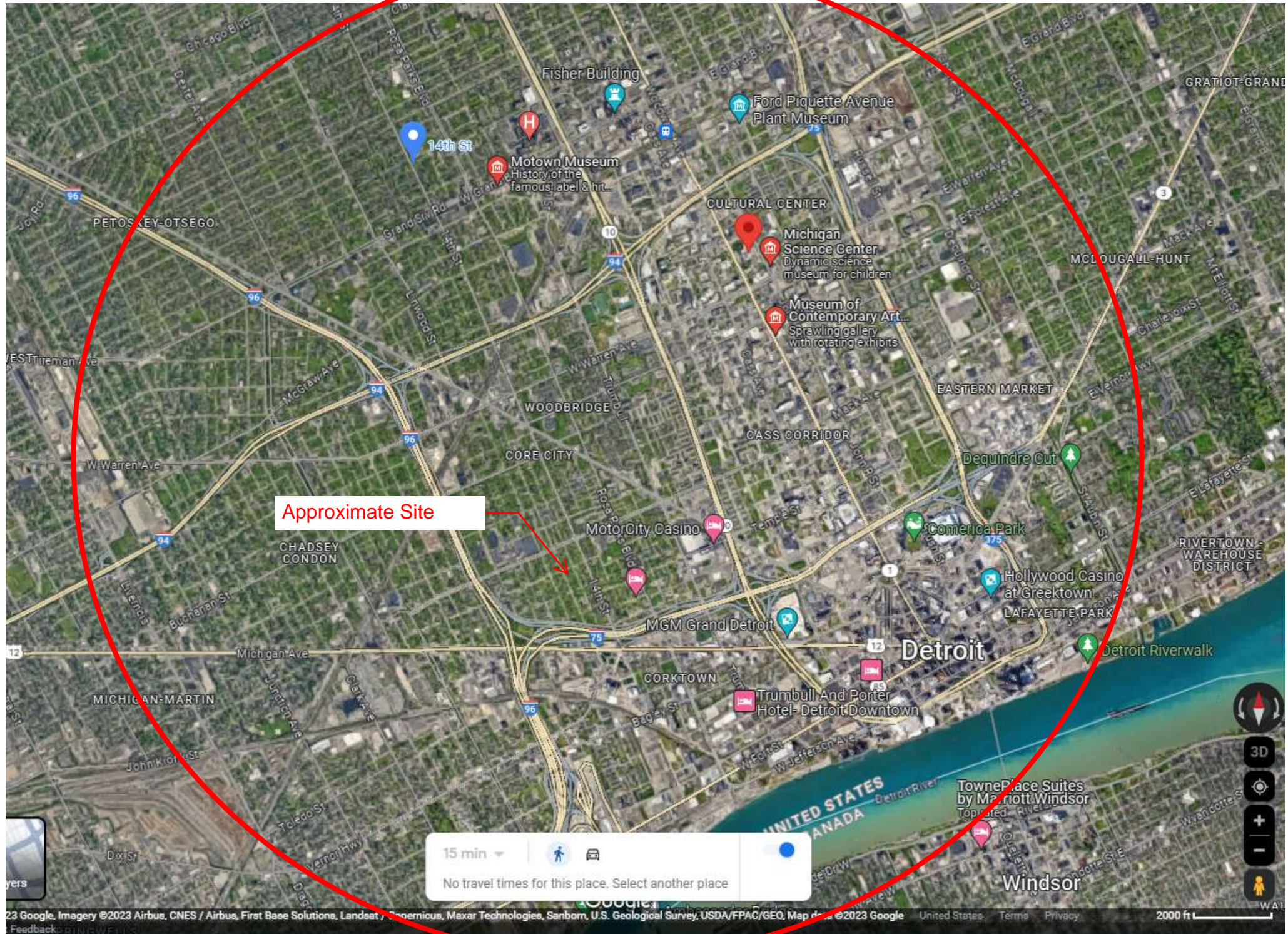
Is this page helpful? 



Educational Facilities



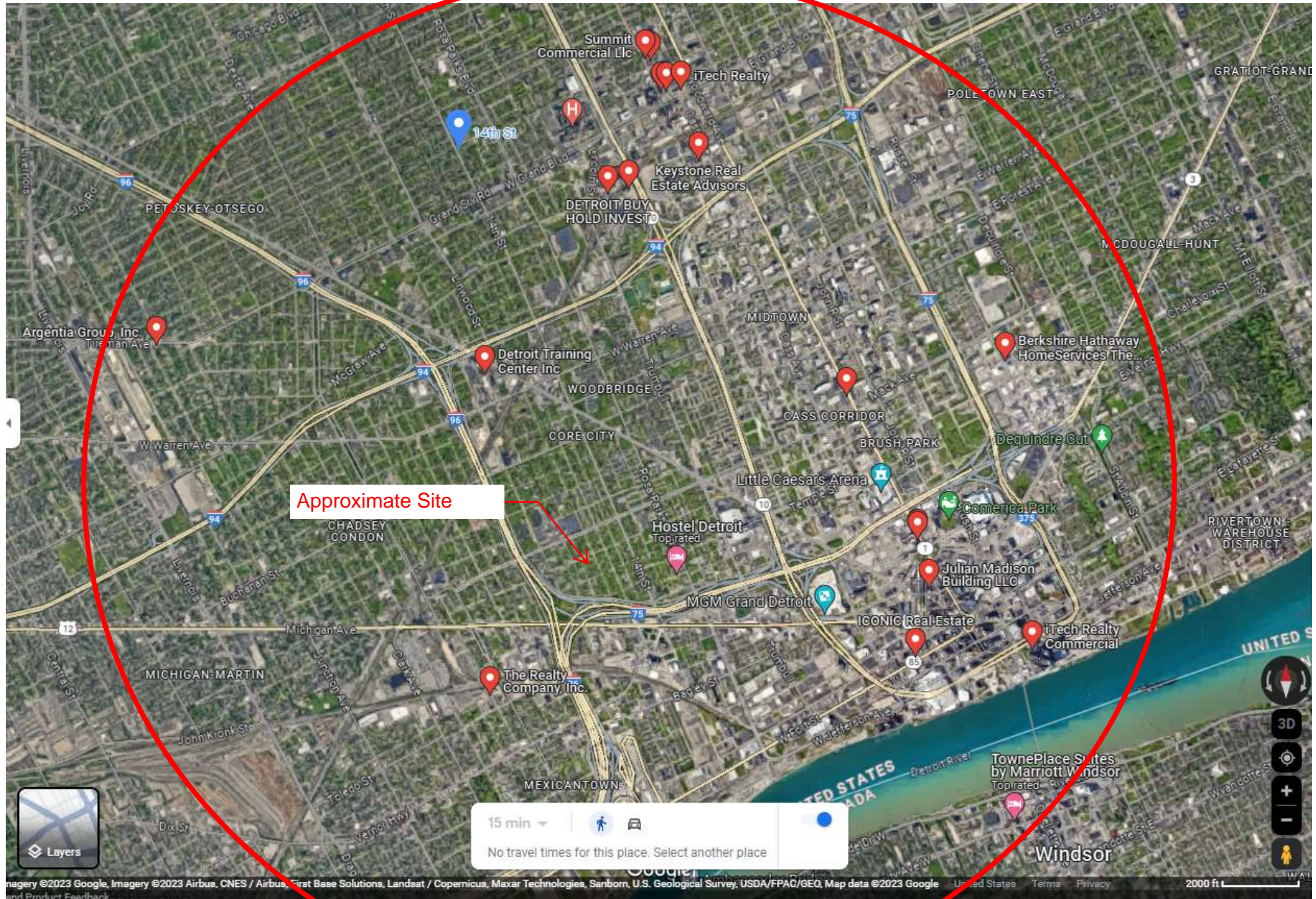
Cultural Facilities



Approximate Site

15 min
No travel times for this place. Select another place

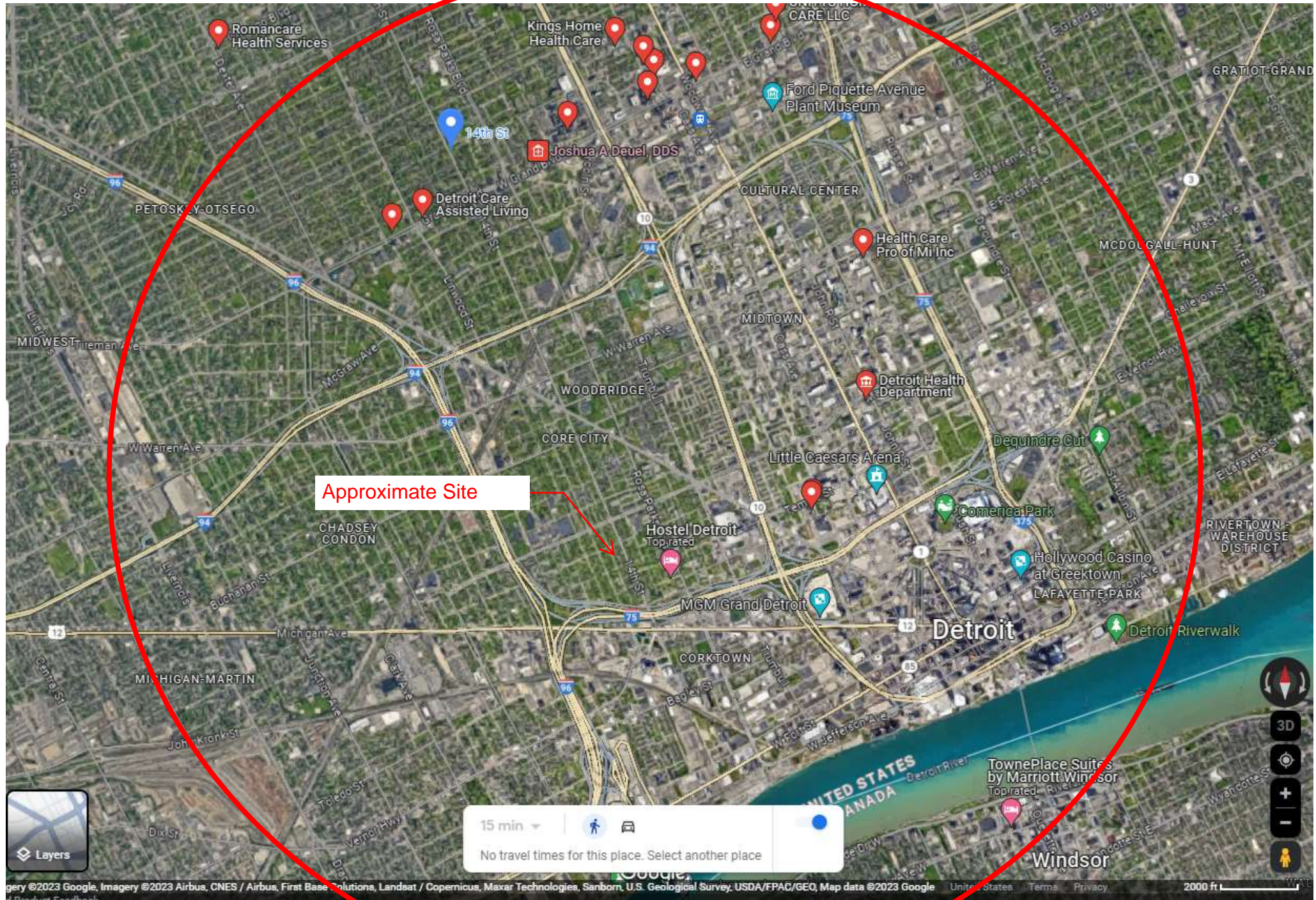
Commercial Facilities



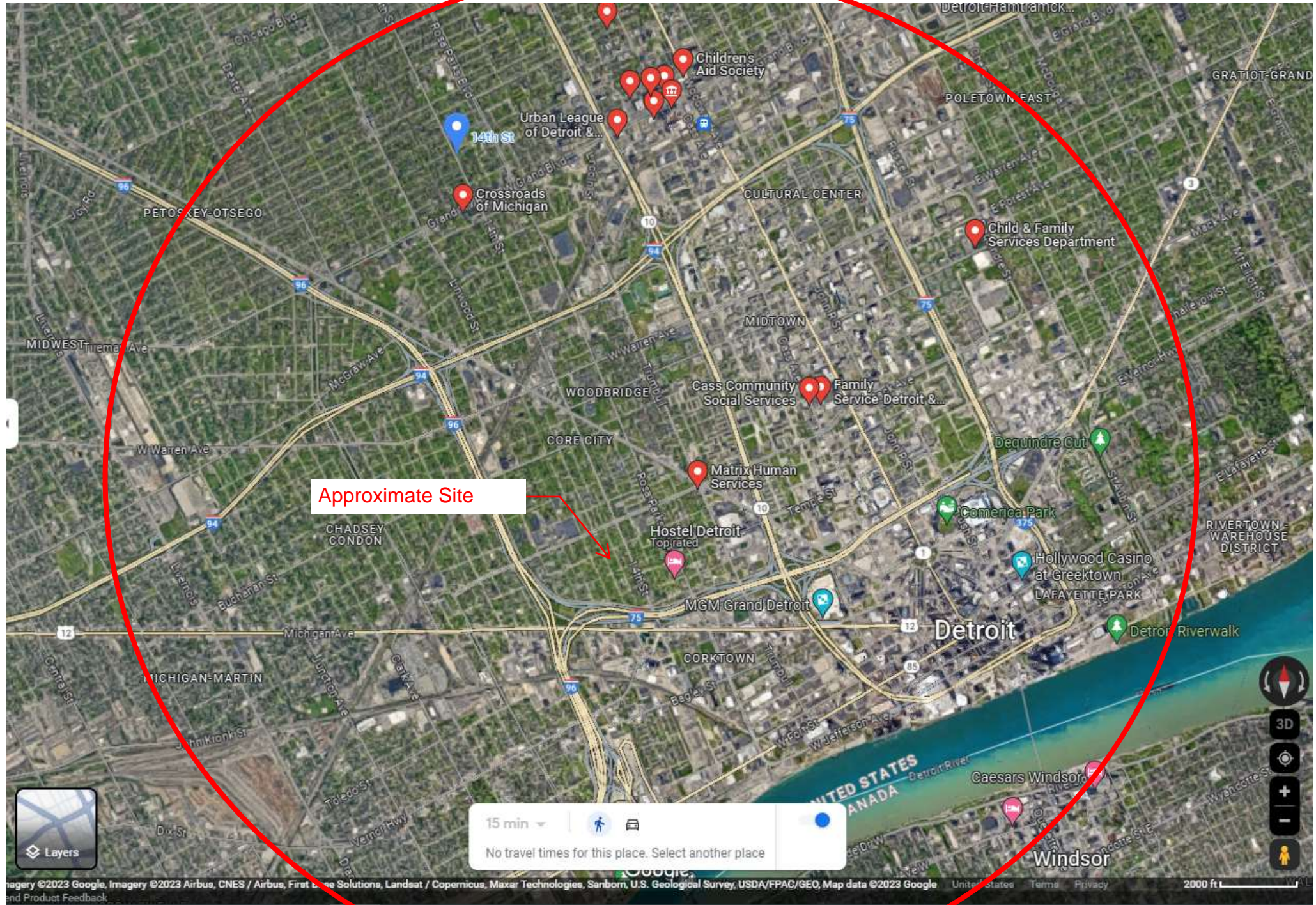
Approximate Site

15 min | [Walking icon] [Car icon] [Location pin icon]
No travel times for this place. Select another place

Health Care Services



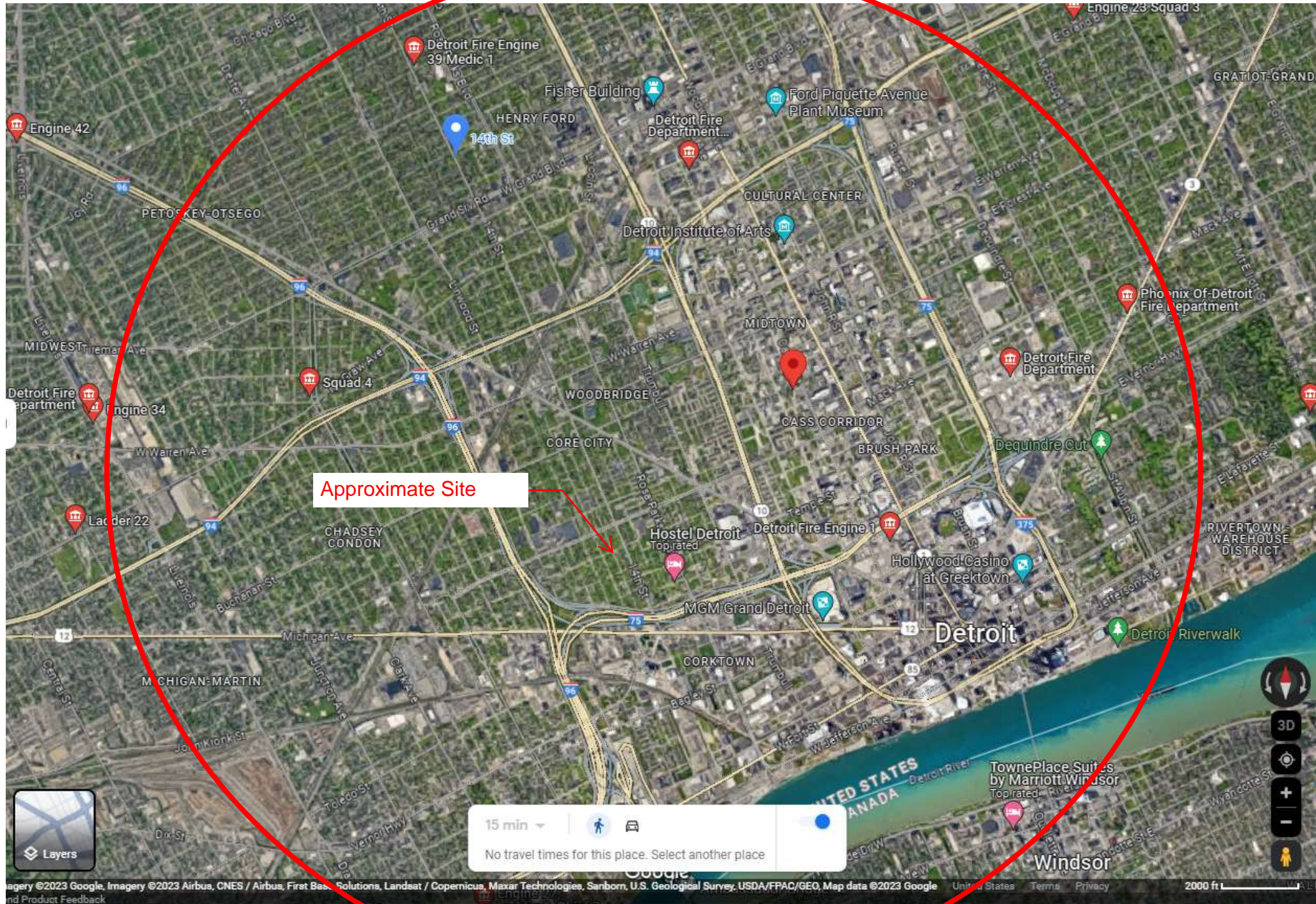
Social Services



Approximate Site

15 min | [Walking icon] [Driving icon] [Location pin icon]
No travel times for this place. Select another place

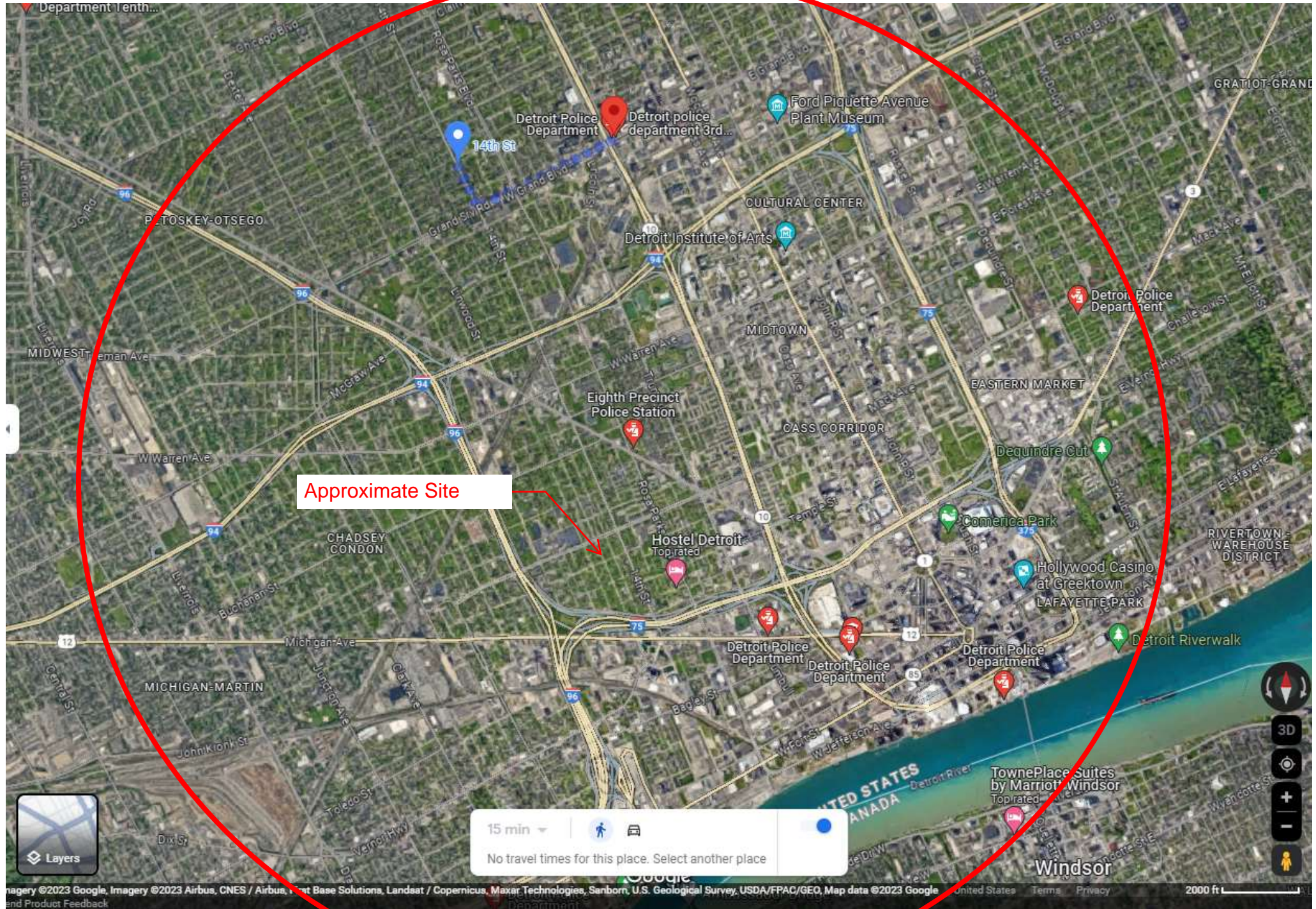
Fire Stations



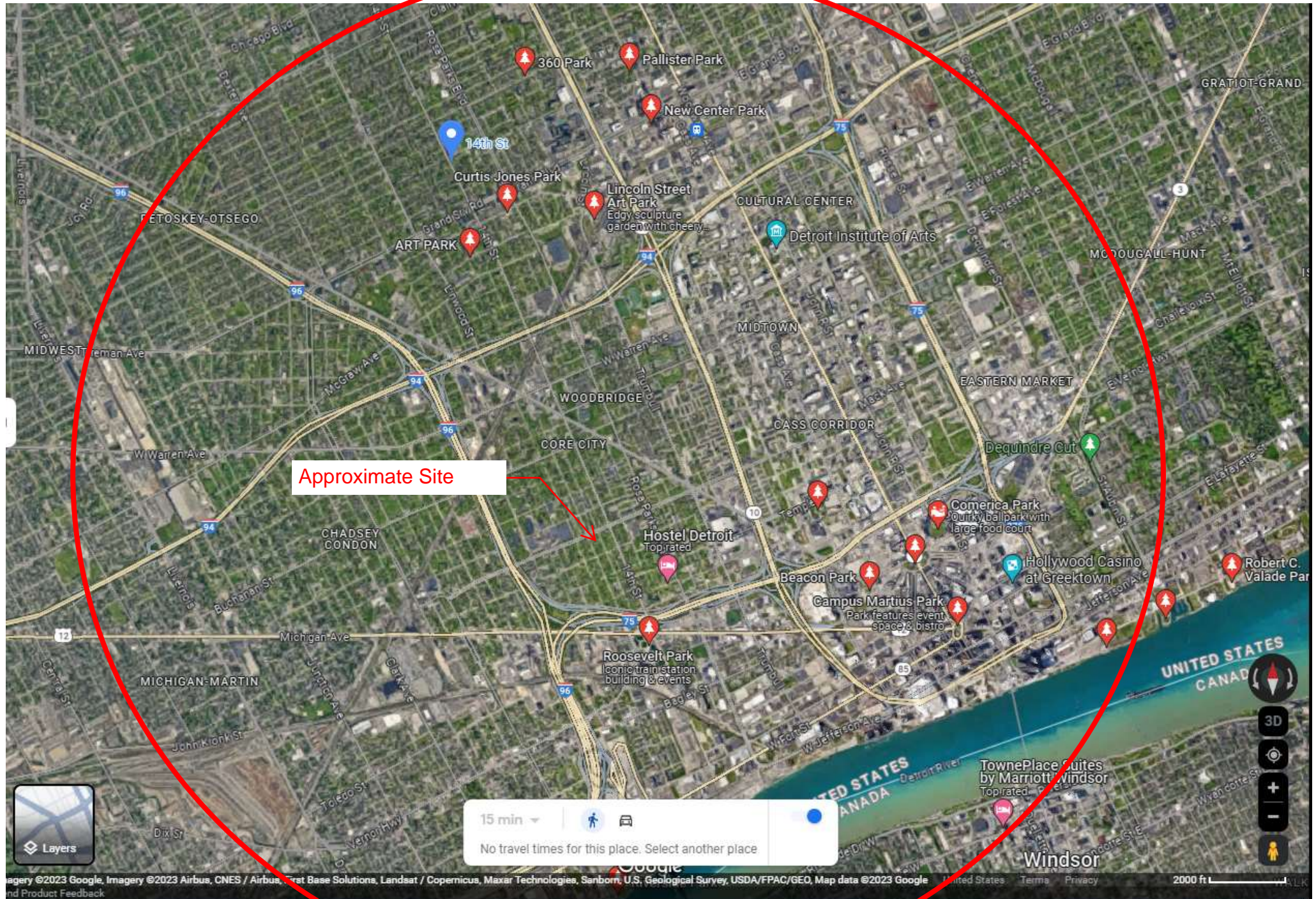
Approximate Site

15 min
No travel times for this place. Select another place

Police Stations



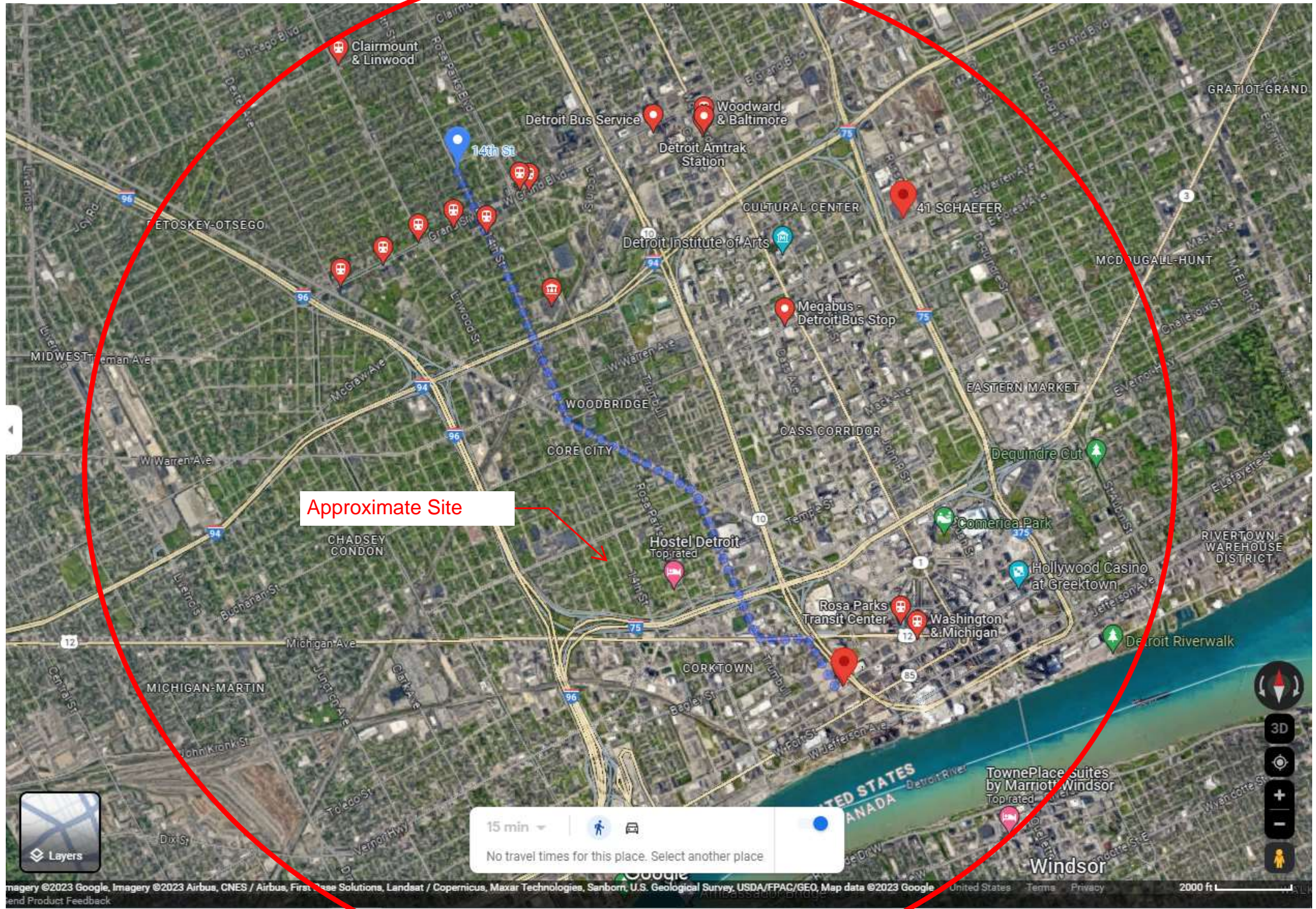
Parks, Open Space, and Recreation



Approximate Site

15 min
No travel times for this place. Select another place

Bus Stations



Approximate Site

15 min | [Walking icon] [Driving icon] | [Location pin icon]
No travel times for this place. Select another place