

Mr. Brandon Alger
Warren District Office
Remediation and Redevelopment Division
Michigan Department of Environment, Great Lakes, and Energy
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Subject:
Ford Livonia Transmission Plant 2020 Response Activity Plan –
Utility Corridor Evaluation Revised – Addendum #2

ENVIRONMENT

Date:
January 27, 2021

Dear Mr. Alger:

Contact:
Kristoffer Hinskey

Arcadis of Michigan LLC (Arcadis), on behalf of Ford Motor Company (Ford) has prepared this Utility Corridor (UC) Response Activity Plan (RespAP) Addendum #2 for the Livonia Transmission Plant (LTP) property (the site) located at 36200 Plymouth Road in Livonia, Michigan. This UC RespAP Addendum #2 is in compliance with the Consent Decree (CD) filed by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) on July 27, 2017 (No: 2:1712372-GAD-RSW) and provides a response to EGLE's request for additional sampling of sanitary sewers located on the site and in the Plymouth Road right-of-way (ROW). This response serves as an Addendum #2 to the *Response Activity Plan – Utility Corridor Evaluation Revised* and *Response Activity Plan – Utility Corridor Evaluation Revised – Addendum #1* submitted to EGLE on February 11, 2020 and December 4, 2020. Below details the correspondence between EGLE, Ford, and Arcadis.

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Our ref:
30050315

On October 22, 2020, Arcadis on behalf of Ford presented the analytical results of sewer sampling for both onsite and offsite. The results provided to EGLE included vapor, liquid, and sediment samples for the June 2020 and September 2020 sampling events.

On October 23, 2020, EGLE conducted a meeting with Arcadis to discuss the results of the two sewer sampling events and to gather more information concerning the onsite utility corridors. EGLE also requested a desktop evaluation to determine if any laterals were present adjacent to the northern Plymouth Road sanitary sewer system from the southern commercial properties.

On October 30, 2020 EGLE conducted a meeting with Arcadis to discuss the findings from the requests that were provided in the October 23, 2020 meeting.

Arcadis obtained Geographic Information System drawings from the City of Livonia, which indicated that there were no laterals connected to the northern sanitary sewer located on Plymouth Road. In addition, EGLE also requested that additional vapor samples to be collected along the northern ROW of Plymouth Road and from sanitary sewers on Ford's property.

On December 4, 2020, Arcadis submitted on behalf of Ford the UC RespAP Addendum.

On December 11, 2020, EGLE approved the UC RespAP Addendum with modifications. In addition to the additional sampling locations, EGLE also requested that a mitigation plan be completed to address the vapors in the sanitary sewers.

On January 15, 2021, EGLE, Ford, and Arcadis conducted a meeting via Microsoft Teams. The meeting occurred to discuss the analytical results associated with the fourth quarter sampling results of the onsite and offsite sewers. Based on the information discussed in the meeting Arcadis has prepared the UC RespAP Addendum 2.

The proposed additional sampling locations requested by EGLE are located in the northern Plymouth Road ROW and onsite. These locations were requested by EGLE to delineate vapor sample results that exceeded criteria, which was provided by EGLE on September 11, 2020, in previous sampling events from SL-2, SL-3, SAMH-1231, SAMH-1245, and SAMH-1255. The proposed additional sampling locations (i.e., SL-4, SL-5, SAMH-1248, and SAMH-1259) and the previously sampled locations (i.e., SL-2, SL-3, WDC, EDC, SAMH-1231, SAMH-1244, SAMH-1245, SAMH-1255, SAMH-1256, and SAMH-1258) located in the Plymouth Road ROW and onsite are shown on **Figure 1** and **Figure 2**. The additional locations will be sampled concurrently with previously sampled locations that were defined in the *Response Activity Plan – Utility Corridor Evaluation Revised* and *Response Activity Plan – Utility Corridor Evaluation Revised – Addendum #1* in order to further evaluate the potential for vapor to migrate upgradient and downgradient of SL-2, SL-3, SAMH-1231, SAMH-1245, and SAMH-1255. The sewer vapor sampling event will be conducted post the additional assessment, which is described in detail below.

PROPOSED SCOPE OF WORK

Additional Sewer Sampling

In order to evaluate the extent of vapor interacting with the sewers, Arcadis proposes the following additional work to be conducted:

- Collect vapor samples from sanitary manholes (SAMH-1248 and SAMH-1259) to delineate potential vapor migration upgradient of SAMH-1245 and SAMH-1255;
- Collect vapor samples from sanitary manholes (SL-4 and SL-5) to delineate potential vapor migration downgradient of SL-3.

Additionally, during the above sampling event, Arcadis will survey manhole rims, inverts, and sumps for any additional sampling locations that were not previously surveyed in an effort to understand the relationship between the depth of the sanitary sewer and the elevation of impacted groundwater.

Vapor Sampling Procedure and Methodology

Vapor samples will not be collected within 48 hours of a precipitation event as recorded by Michigan State's Enviroweather station in Commerce Township, Michigan. Prior to collecting a grab vapor sample

from the sample and compliance points, locations will be screened with a Landtec GEM 2000 to determine if methane is present. Grab vapor samples will be collected from sewers at manhole locations using tubing attached to one-liter SUMMA® canisters. Sewers with grated lids will be sampled 24 to 48 hours after a vapor barrier has been applied to the opening. Collection of vapor samples from the sewers will be weather dependent to avoid isolate potential flooding. A small opening will be made in the liner 24-48 hours after the vapor barrier has been applied. Tubing will be placed through the opening in the manhole down to the opening of the pipe, but above any water in the sump. If no hole is present, the sewer manhole will be lifted slightly to allow the entry of the tubing into the sewer. Samples will be collected from the sewer via the tubing into the SUMMA® canister and analyzed for site-related constituents of concern (COCs) via United States Environmental Protection Agency (USEPA) Method TO-15. During the vapor sampling event, one field duplicate will be collected.

Additional Assessment

During the first, second, and third sewer sampling events, sewer vapor analytical results indicate that chlorinated solvents constituents (trichloroethene, vinyl chloride, cis-1,2-dichloroethene, 1,1-dichloroethene, and trans-1,2-dichloroethene) have been observed in the onsite sanitary sewer system and along Plymouth Road.

Arcadis on behalf of Ford has prepared the following scope of work (SOW) to systematically assess where the potential source is leading to the vapor impacts within the sanitary sewer. The SOW detailed below is related to the onsite sanitary sewers and the main sanitary line that runs parallel to Plymouth Road.

- A thorough sewer survey will be completed to determine if manhole structures and/pipes are currently in contact or submerged in ground water.
- A survey will be completed for any structure that currently does not have survey data of the pipe inverts and sumps of the manholes.
- Closed Circuit Television (CCTV) will be completed onsite to evaluate the following:
 - Evaluate the structural integrity of the manholes and pipes.
 - Determine where pipes are exiting the building.
 - Determine if groundwater is infiltrating into the sanitary sewer system.
- Clean associated pipes and manholes to remove any potential residual chlorinated impacts.
- All contents collected during the cleaning process will be managed and disposed of in accordance to Ford's total waste manager.
- Collect a full round of vapor samples post CCTV and cleaning of the sanitary sewers.

Analytical results post CCTV and cleaning will be communicated to EGLE once the data has been reviewed by Ford. Based on that meeting and the analytical results, a formal mitigation plan will be developed to prevent migration of vapor to potential receptors.

Schedule

The fourth sewer sampling event and assessment of the LTP sanitary layout is anticipated to start in the first quarter of 2021, which will be followed by a subsequent vapor sampling event. It should be noted that the utility corridor sampling as outlined in the RespAP will be completed concurrently with this additional SOW. The schedule detailed below does not include any delays or complications in the approval process.

Mr. Brandon Alger
EGLE
January 27, 2021

- Receive EGLE Approval for UC RespAP Revised -Addendum #2 2/12/2021
- Complete reconnaissance for surveying of inverts and manhole depth 2/15/2021
- Mobilize for CCTV and Cleaning 3/1/2021
- Complete Site Wide Post Sewer Vapor Sampling Event 4/5/2021
- Provide results to EGLE 5/7/2021

Closing

If you have any questions or concerns, please do not hesitate to contact me by email at Kristoffer.Hinskey@arcadis.com or by phone at 248-994-2240.

Sincerely,

Arcadis of Michigan, LLC



Kristoffer Hinskey
Certified Project Manager II

Copies:

- Steve Hoin - EGLE
- Todd Walton – Ford
- Chuck Pinter – Ford
- Theresa Olechiw – Arcadis

Enclosures:

Figures

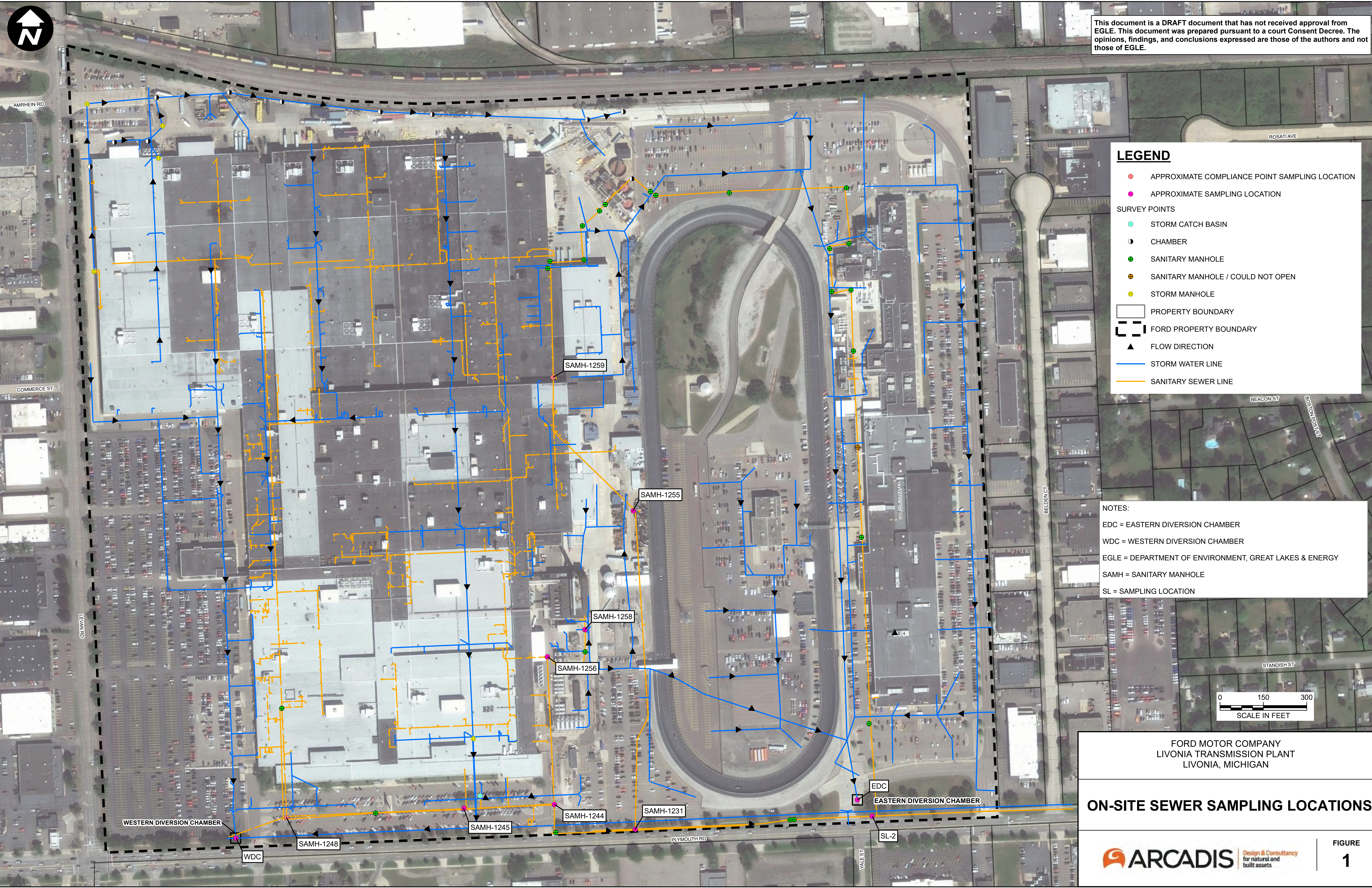
- 1 Onsite Sewer Sampling Locations
- 2 Additional Offsite Sewer Sampling Locations

FIGURES





This document is a DRAFT document that has not received approval from EGLE. This document was prepared pursuant to a court Consent Decree. The opinions, findings, and conclusions expressed are those of the authors and not those of EGLE.



LEGEND

- APPROXIMATE COMPLIANCE POINT SAMPLING LOCATION
- APPROXIMATE SAMPLING LOCATION

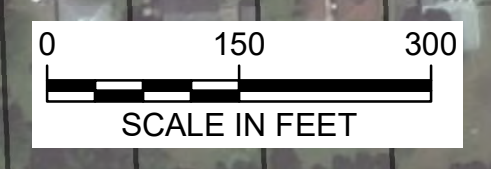
SURVEY POINTS

- STORM CATCH BASIN
- CHAMBER
- SANITARY MANHOLE
- SANITARY MANHOLE / COULD NOT OPEN
- STORM MANHOLE

- ▭ PROPERTY BOUNDARY
- ▭ FORD PROPERTY BOUNDARY
- ▲ FLOW DIRECTION
- STORM WATER LINE
- SANITARY SEWER LINE

NOTES:

EDC = EASTERN DIVERSION CHAMBER
 WDC = WESTERN DIVERSION CHAMBER
 EGLE = DEPARTMENT OF ENVIRONMENT, GREAT LAKES & ENERGY
 SAMH = SANITARY MANHOLE
 SL = SAMPLING LOCATION



FORD MOTOR COMPANY
 LIVONIA TRANSMISSION PLANT
 LIVONIA, MICHIGAN

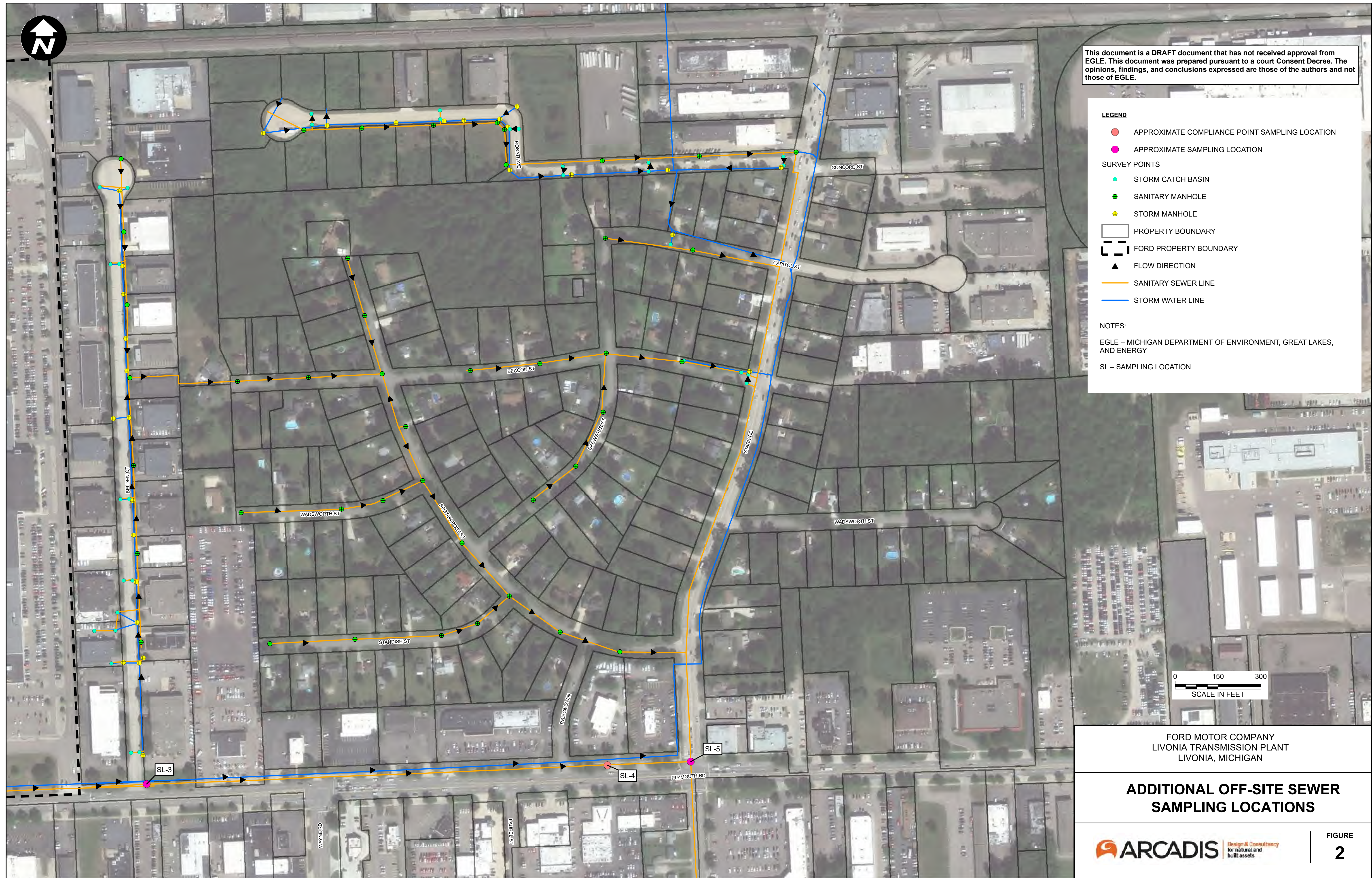
ON-SITE SEWER SAMPLING LOCATIONS

ARCADIS Design & Consultancy
 for natural and built assets

FIGURE
1

CITY: Novi, DIV: ENV, DE: MG, PIC: R. ELLIS, PM: K. HINSKEY, PROJECT NUMBER: 30050315, COORDINATE SYSTEM: NAD, 1983, StatePlane Michigan South FIPS 2113, Feet, Intl, TI: ENV\Novi\Brighton_MilFord\Livonia\GIS\docs\GEC4\Q_2020\Utility_Corridor\Figure 1_Onsite_Sewer_Sampling_Locations.mxd, PLOTTED: 1/22/2021 4:47:39 PM, BY: mal00749

CITY: Novi; DIV: ENV; DB: MG; PIC: R. ELLIS; PM: K. HINSKEY; PROJECT NUMBER: 30050315; COORDINATE SYSTEM: NAD 1983; StatePlane Michigan South FIPS 2113; Feet Intl
Z:\ENV\Novi\Brighton_MilFordLivonia\S\Access\GEO\4\0_2020\Utility Corridor\Figure 2_Off-site_Sewer_Sampling Locations.mxd PLOTTED: 1/25/2021 6:11:45 PM BY: Tyrone



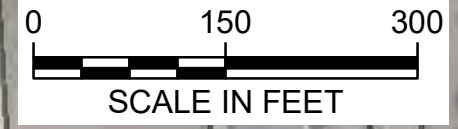
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LEGEND

- APPROXIMATE COMPLIANCE POINT SAMPLING LOCATION
- APPROXIMATE SAMPLING LOCATION
- SURVEY POINTS
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- STORM MANHOLE
- ▭ PROPERTY BOUNDARY
- ▭ FORD PROPERTY BOUNDARY
- ▲ FLOW DIRECTION
- SANITARY SEWER LINE
- STORM WATER LINE

NOTES:

EGLE – MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
SL – SAMPLING LOCATION



FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

ADDITIONAL OFF-SITE SEWER
SAMPLING LOCATIONS

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