STORM WATER POLLUTION PREVENTION PLAN

OU1, Modified Zone 1
USS Lead Superfund Property
East Chicago, Indiana

May 2023

Prepared for:
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1.0 INTRODUCTION

1.1 STORM WATER POLLUTION PREVENTION PLAN

This Storm Water Pollution Prevention Plan (SWP3) has been developed by Verdantas LLC (Verdantas) as the Supervising Contractor on behalf of Industrial Development Advantage of East Chicago, LLC (IDA) "Purchaser" for construction activities associated with a portion of Operable Unit 1 (OU1), Modified Zone 1 of the U.S. Smelter and Lead Refinery, Inc. (USS Lead) Superfund Property Remediation Project purchased by the Purchaser located on the Northwest corner of 151 Street and McCook Avenue in East Chicago, Indiana (Property). The objective of this SWP3 is to comply with the requirements listed in the National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit No. INRA00000 as regulated by the Indiana Department of Environmental Management (IDEM) (General Permit). All information contained in this SWP3 is consistent with the criteria established in the General Permit for Storm Water Discharges Associated with Construction Activity and considers the use of Best Management Practices (BMPs).

The SWP3 includes, but is not limited to, Property Legal Descriptions, ALTA/NSPS Land Title Survey, and the Construction Plans in Appendix C, the Notice of Intent (NOI) and General Permit in Appendix A, Co-Permittee Forms and Certifications in Appendix B, Notice of Termination (NOT), all records of inspections and activities which are created during the work in Appendix F and Appendix G, and other documents as may be included by reference to this SWP3. Changes, modifications, revisions, additions, or deletions shall become part of this SWP3 as they occur.

The following information must be posted near the construction exit in a prominent place for public viewing until termination of permit coverage has been obtained by filing the NOT:

- NOI;
- Permit Authorization;
- Construction Site Notice; and
- Location of SWP3 on Property.

1.2 NOTICE OF INTENT

A Notice of Intent (NOI) shall be submitted electronically to the address below for coverage under the General Permit prior to construction activities, and a copy of the NOI is to be included in Appendix A.

https://stormwater.idem.in.gov/ncore/external/home

For the purposes of this plan, the term Operator shall mean:

1. The party that has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
2. The party that has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWP3 for the Property or other permit conditions (e.g., they are authorized to direct workers at a Property to carry out activities required by the SWP3 or comply with other permit conditions).

The Operator shall include IDA (Owner) and any contractors (typically the Contractor) that may be engaged to perform services on the project. Prior to the start of construction, the Contractor shall submit an NOI form in accordance with Section 5.0 of the General Permit, and a copy of the NOI form is to be included in Appendix A. The Contractor will have day-to-day control of activities at the Property and will be responsible for complying with the General Permit and this SWP3.

1.3 GENERAL PERMIT

A copy of the General Permit is also included in Appendix A. This SWP3 has been prepared in accordance with good engineering and/or conservation practices to meet the following objectives:

1. Identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction activities.
2. Describe and ensure the implementation of BMPs that reduce the pollutants in storm water discharges during construction and pollutants associated with post-construction activities.
3. Assure compliance with the terms and conditions of the General Permit.

As a condition of the permit, the Operator will implement and comply with the practices and procedures established in this SWP3 on or before the start of the construction activity. This SWP3 will provide a means to record Property-specific information including dates of construction activities, the specific location of the project, methods of sediment and erosion control, and a detailed Property Map.

This document has been developed to establish general guidelines for pollution prevention, including sediment, runoff, and erosion control practices, which may be used at the Property during construction activities; and to describe the required information that must be included in the SWP3 to satisfy the terms of the General Permit. All contractors and subcontractors shall understand the contents of this document and the terms and conditions of the General Permit that authorizes the discharge of storm water from construction activities at the Property. All contractors and subcontractors will be required to understand the conditions and standards of this SWP3 and will be required to adhere to one or more control measures during construction activities, as needed.

1.4 NOTICE OF TERMINATION

A Notice of Termination (NOT) form must be submitted by the Operator (Owner) to the IDEM in accordance with Section 6.0 of the General Permit. Compliance with this permit is required until an NOT form is submitted. The permittee's authorization to discharge under this permit terminates at midnight of the day the NOT form is submitted. An NOT form must be submitted to IDEM within 45 days of completing all permitted land disturbance activities. Prior to submitting an NOT form, each of the following conditions must have been met (per Section 6.4 of the General Permit):

1. All land-disturbing activities, with the exception of activities identified in Section 3.4(b)(1)(B), 3.4(b)(1)(C), and 3.4(b)(1)(D) of the General Permit, including construction on all building lots, have been completed and the entire Property has been stabilized.
2. All temporary erosion and sediment control measures have been removed.
3. All discharges of potential pollutants associated with the active construction and pollutant-generating activities have ceased.
4. All construction materials, waste, waste handling devices, equipment and vehicles have been removed.

2.0 SIGNATURE AND PLAN REVIEW/REVISION

2.1 CERTIFICATION

The Operator shall sign all NOIs, NOTs, SWP3s, reports, certifications or information that is either submitted to the IDEM or that is required to be maintained by the permittee, as follows:

1. Corporation: By a responsible corporate officer;
2. Partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
3. Municipality, State, Federal or other public agency: by either a principal executive officer or ranking elected official.

All reports required by the permit and other information requested by IDEM shall be signed by a person named above, or a duly authorized representative of that person.

The current certification for this plan is on the following page and must be signed by a representative of the Operator. A new certification page will be inserted if; for reasons such as changes in personnel, responsibilities, or position; the original signature authorizations are no longer valid. All certification pages that are no longer valid will be included in Appendix B along with blank signature pages to be completed every time there is a change of personnel or responsibility.

PLAN CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____
Name (Print)

_____
Signature

_____
Title

_____
Company Name

_____
Address

_____
Telephone Number

_____
Received By

_____
Date

2.2 PLAN AVAILABILITY/REVISION

The SWP3 shall be made readily available at the Property upon the request of IDEM or other appropriate regulatory agencies for review during normal working hours. A copy of the NOI and letter granting permit coverage shall also be made available and is to be included in Appendix A. The plan will be amended accordingly, should the Operator be notified of any deficiencies in this plan.

2.3 PLAN AMENDMENTS

This SWP3 shall be amended whenever there is a change in the design, construction, operation, or maintenance practices which significantly affects the construction Property's potential discharge of pollutants to surface waters of the State. If additional coverage is required under an additional NPDES General Permit for an adjacent, contiguous property, the operator will also amend the SWP3 with appropriate plans and property locations as well as copies of the other permits. The plan will be amended if it proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified at the Property, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity. In addition, the SWP3 will be updated as the applicable regulations are revised or amended, or as required by IDEM or other appropriate regulatory agencies.

Any amendments proposed by Co-Permittee's (if applicable) shall be approved by the original Permittee before the plan is revised.

2.4 PLAN RETENTION

A complete copy of this SWP3, all records summarizing the results of inspections, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, and major observations relating to the implementations of the SWP3 shall be maintained by the Operator for at least three years following the submittal of a NOT. A NOT will need to be developed and submitted to the regulatory agency once construction activities have been completed and final stabilization measures are in place. A site certification showing compliance with the plan and the permit, including reference to incidences of non-compliance, will also be included in the record. The record and certifications will be signed in accordance with the certification described above.

3.0 CONTRACTORS

The construction activities at the Property will require the use of independent contractors and subcontractors to complete the scope of work. The contractor(s) that will perform the work will comply with any and/or all measures included in this SWP3. The contractor(s) will also be required to sign a certification statement to verify that they understand the terms of the General Permit in Appendix A and will implement the requirements of the SWP3.

The Operator will review with each appropriate contractor or subcontractor the requirements for runoff, sediment, and erosion control to be implemented as described in this SWP3. The certification defined below shall be obtained prior to commencement of work at the Property.

3.1 CONTRACTOR CERTIFICATION

All contractors and subcontractors involved in implementing the SWP3 shall complete the certification on the following page. A copy of each contractor certification shall be maintained in Appendix B.

CONTRACTOR CERTIFICATION

"I certify under penalty of law that I understand the terms and conditions of the National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit and that I have reviewed and understand the conditions and responsibility of this SWP3. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

_____
Name (Print)

_____
Signature

_____
Title

_____
Company Name

_____
Address

_____
Telephone Number

_____
Received By

_____
Date

4.0 CONTENTS OF PLAN

4.1 PROPERTY DESCRIPTION AND BACKGROUND

This SWP3 has been prepared for major construction activities as described in Appendix C. This project is being constructed for IDA for construction activities associated with a portion of OU1, Modified Zone 1 of the USS Lead Superfund Property located in East Chicago, Indiana (Latitude: 41.623583, Longitude: -87.468964). The Property encompasses the former West Calumet Housing Complex (WCHC), Goodman Park and adjacent utility corridor, generally bound by the Carrie Gosch School to the north, East 151st Street to the south, McCook Avenue to the east and the Indiana Harbor Canal to the west. See Table 1 below for descriptions of the current use of the adjoining properties. In the early 1970s, the WCHC was constructed within the footprint of the former Anaconda Lead Products and International Lead Refining Company facility (included as part of the USS Lead Superfund Property), and was used for multi-family, low-income housing, and recreation until 2018. In 2018, utilities were disconnected and capped, and the WCHC was demolished due to elevated arsenic and lead in soils. Refer to the RD/RA Work Plan prepared by Verdantas, dated December 2022.

Table 1: Current Use of Adjoining Properties

CURRENT USE OF ADJOINING PROPERTIES	
North	455 E. 148th Street - Carrie Gosch School and Vernon Avenue
South	East 151st Street, 405 E. 151st Street - Central States Marketing Company (Paper and Paper Product Merchant Wholesalers Industry), 415 E. 151st Street - Scrap Metal Services, LLC, CMA Recycling 475 E. 151st Street - Howard Industries, 481 E. 151st Street – Pinder Polyurethane & Plastics
East	McCook Ave. Alley, Multiple Residential Properties, 4942 McCook Ave. - ECHA Maintenance Building and parking, 5025 McCook Ave. - Harbor Health & Rehab. Center, 501 E. 149th Street - The Dipper Foot Mart, 4911 McCook Ave. – First Baptist Church of East Chicago
West	Indiana Harbor Canal followed by vacant, undeveloped former industrial property (Union Tank Car Company)

The purpose of this project is to enable IDA to implement the remedy for soils at the Property, reducing lead and arsenic levels in impacted soils to acceptable levels for human health risk exposure to arsenic and lead. Therefore, the scope of this project includes remedial excavation activities to remove impacted soils at the Property to a maximum depth of one foot below ground surface (bgs) and perform backfilling of clean

off-Property soils. Some remedial excavation areas will require an in-situ stabilization treatment of impacted soils prior to excavation and disposal to render the material non-hazardous. Also, some areas of the Property will receive stabilization treatment, but will not be excavated. The proposed remedy of Property soils was based on previous soil sampling activities at the Property by Verdantas in November 2020, and subsequent Environmental Protection Agency (EPA) evaluations, and requirements. This project also involves installation of property erosion and sediment control devices, property clearing, demolition of existing property features including existing pavement, fences, etc., installation of new fence, property grading, and seeding.

The SWP3 will, at a minimum, address all the requirements as outlined in the Construction Stormwater General Permit No. INRA00000 as regulated by IDEM. This plan and its contents will be implemented upon commencement of construction activities. Appendix C provides construction drawings, details, and general notes to be followed in conjunction with the best management practices for the controls described in this document.

4.1.1 Nature and Type of Construction Activity

Construction activities for the project described herein includes the following activities:

- Mobilization of equipment, and installation of temporary construction entrances and laydown areas;
- Locate and protect existing utilities during construction activities;
- Installation and maintenance of erosion and sediment controls;
- Property clearing and grubbing, including tree removal and stump grinding;
- Demolition of existing asphalt and concrete pavements, and existing fence removal;
- Off-Property Import and On-Property Stockpiling of Clean Backfill Materials;
- Remedial excavation and backfilling activities, including in-situ stabilization work;
- Installation of new fence;
- Perform property grading; and
- Permanent stabilization of all disturbed areas and laydown areas.

All off-Property support activities (e.g., material distribution, disposal areas, etc.) will be conducted by commercial operators. Soil erosion, sediment, runoff, and post construction control measures are to be maintained in working condition and are discussed in Section 4.2 of this document.

Construction phase pollutant sources anticipated at the Property are disturbed (bare) soil, vehicle fuels and lubricants, and construction generated litter and debris. Without adequate control there is a potential for each type of pollutant to be transported by storm water.

4.1.2 Property Maps

Appendix C includes construction drawings depicting the Property location, related notes and details and generally includes the following information:

1. Existing contours and locations of proposed construction activates.
2. Surface water locations on or within 200 feet of the Property.
3. The location of existing buildings, roads, utilities, and other Property features.

4.1.3 Estimate of the Disturbed Areas

The estimated limits of disturbance during construction is approximately 42.39 Acres. The Property is nearly entirely pervious, with the exception being some areas of existing pavement. The proposed construction will not create any new impervious surfaces at the Property. The pre-construction percent imperviousness at the Property is 1.3% and post-construction percent imperviousness at the Property is 0%.

4.1.4 Calculation of Runoff Coefficients

An estimate of the runoff coefficient is typically used to determine the impact of the construction activities on runoff after the project is complete. The runoff coefficient is the fractional amount of total rainfall that is estimated to become runoff. Low runoff coefficients indicate that the Property will absorb storm water and minimize sediments and pollutants from being discharged from the Property. High runoff coefficients predict that the Property sheds large amounts of the rainfall and encourages erosion and sediment transport. However, according to Section 3.2(a)(9) of the General Permit, projects where the post-development run-off discharge from the project Property does not exceed the pre-development run-off discharge do not need to incorporate post-construction stormwater quality BMPs. Water Quality Volumes and Runoff Coefficients were calculated below.

Water quality volume is equivalent to the volume of runoff from a 0.90-inch rainfall and determined using the following equations taken from the OHC000005 Permit:

$$WQ_v = Rv * P * A / 12 \qquad \text{(Equation 1)}$$

where:
WQ_v = water quality volume in acre-feet
Rv = the volumetric runoff coefficient calculated using equation 2
P = 0.90 inch precipitation depth
A = area draining into the BMP in acres

$$Rv = 0.05 + 0.9i \qquad \text{(Equation 2)}$$

where i = fraction of post-construction impervious surface

1. <u>Existing Conditions Volumetric Runoff Coefficient:</u>

   The volumetric runoff coefficient for the existing conditions is calculated assuming 1.3% impervious.

Rv = 0.05 + 0.9*0.013 **= 0.0617**
WQv = (0.0617) * (0.9 inch) * (42.39 acres) / 12 **= 0.196 Acre-Feet**

2. Post-Construction Volumetric Runoff Coefficient:

The volumetric runoff coefficient for the post-construction conditions is calculated assuming 0% impervious.

Rv = 0.05 + 0.9*0 **= 0.05**
WQv = (0.05) * (0.9 inch) * (42.39 acres) / 12 **= 0.159 Acre-Feet**

4.1.5 Description of the Soils Present at the Property and Quality of Runoff

The Property generally includes open grass areas with trees scattered throughout. The Property also includes gravel surface areas at former road and building locations. The north end of the Property includes some paved sidewalks, drives, a parking lot, and basketball courts. Existing grades at the Site are generally flat. Based upon the soils map retrieved from The United States Department of Agriculture (USDA) Web Soil Survey in Appendix C, a large percentage of the soil present at the Property is considered Urban Land and Oakville-Adrian Complex, 0 to 6 percent slopes. Verdantas' geotechnical sampling work, which was completed in November 2020, included five (5) 0.0 to 1.0-foot depth interval sub-samples into a single sample within each of the 55 Decision Units of the Property (Refer to the Construction Plans in Appendix C). Based on the Decision Unit sampling logs, the upper stratum soils appear to generally consist of clayey and/or silty sand, sandy clay, underlain by varying amounts of aggregate fill material.

Any stormwater entering the Site, if at all, enters from the east, and flows generally westward towards the Indiana Harbor Canal. However, any such sheet flows are anticipated to infiltrate due to the existing sandy soils (determined based on the previous geotechnical sampling described in this section), and for that reason, no specific locations of stormwater discharges/flows from the Site are depicted on the construction plans. Sandy soils are conducive to infiltration, therefore, collection/detention of stormwater for this project is not applicable. The USDA Web Soil Survey for soils classified within the Oakville Series specifies the following regarding this soil type's drainage (*https://soilseries.sc.egov.usda.gov/OSD_Docs/O/OAKVILLE.html*): "Excessively drained. Potential for surface runoff is negligible to low. Saturated hydraulic conductivity is high or very high. Permeability is rapid." As previously stated, this project involves the excavation and backfilling of Site soils one foot deep, and grading to maintain the general westward flows across the Site. Redevelopment of the Site, with potentially significant Site grading, will occur following completion of the remedial project associated with this SWP3, and will be covered under a separate SWP3 submission.

4.1.6 Schedule of Major Construction Operations

The following is a general sequence of major construction operations and the erosion, runoff, and sediment control practices that shall be implemented during and associated with the construction activities:

1. Review requirements of Property-specific SWP3.
2. Install temporary sediment control devices, such as filter sock, silt fence, sediment traps, diversion berms, etc. Practices intended to trap sediment shall be implemented prior to any grading activities and within (seven) 7 days from the start of any grading activities.
3. Practices intended to trap sediment shall also be utilized for Off-Property Import and On-Property Stockpiling of Clean Backfill Materials activities.
4. Locate existing utilities within the approximate limit of disturbance.
5. Perform Property clearing and grubbing, tree removal, demolition of existing pavement and fence, remedial excavation and backfilling, in-situ stabilization, installation of new fence, and Property grading as shown in the construction drawings.
6. Perform permanent stabilization for all disturbed areas. Decompact access routes and staging areas prior to permanently stabilizing. Stabilize disturbed areas no longer being worked within the timeframes specified in Section 4.2.1.
7. After the Property has been permanently stabilized (i.e., 70% vegetated growth over vegetated areas), remove temporary sediment controls.
8. Continue daily inspection reports until the final daily inspection is signed off by the construction manager that the Property is fully stabilized.
9. Remove temporary construction entrances.
10. File NPDES Notice of Termination with IDEM.

4.1.7 Receiving Waters

Stormwater runoff within the limits of disturbance is anticipated to fully infiltrate into the site soils. However, proposed final grades provide for gradual positive drainage across the Property westwards towards the Indiana Harbor Canal, and eastwards towards McCook Avenue. The canal flows northwards and ultimately discharges into Lake Michigan. The intent of this project is not to discharge any stormwater off-site during remediation activities. The Property shall be diligently protected from any storm water pollution flowing off-site associated with construction activities throughout the project until the NOT has been accepted. The Indiana Harbor Canal does not have an established TMDL. However, IDEM's 303(d) List of Impaired Waters impairments include the following pollutants of concern: Biological Integrity, PCBs in Fish Tissue, Oil and Grease, and E. Coli.

4.2 CONTROLS

This section includes a description of appropriate controls and measures that will be implemented at the Property, as needed. One or more of the controls and measures

deemed necessary will be used by the Contractors, subcontractors, or Property personnel. The controls will include the following minimum components:

1. Non-structural preservation methods;
2. Erosion control practices;
3. Runoff control practices;
4. Sediment control practices;
5. Post-construction control practices; and
6. Other controls, as needed.

The controls and measures listed above are discussed in the following sections and will satisfy the conditions of applicable permits. These sections identify the most commonly used control measures and are not intended to be inclusive of all technologies available. The Contractors and subcontractors will be encouraged to implement the best possible control measures attainable for the Property and will not be limited to the measures identified in this plan. The Contractors are responsible for ensuring that the necessary controls are implemented, regardless of whether the Contractors have subcontractors working on portions of the work.

Note that during construction, temporary (or where required permanent) stabilization measures shall be installed where construction activities have temporarily or permanently ceased in accordance with Section 4.2.1 of this document. These measures will generally include vegetative practices and will be performed in accordance with the appropriate timing per Section 4.2.1. Other devices may be used if deemed necessary. A summary of construction activities, construction phases and associated structural and non-structural controls (if applicable) are described in section 4.1.6 of this document.

A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the Property, and when stabilization measures are initiated will be included in Appendix F. The form provided in Appendix F may be used to document these activities, or a Property-specific inspection form may be used in its place.

4.2.1 Erosion Control Practices

Erosion controls will be used at the Property to minimize runoff and reduce the sediment loading in storm water both on a temporary and permanent basis. Stabilization measures to control erosion are in portions of the Property where construction activities have temporarily or permanently ceased. The Contractors will initiate appropriate temporary stabilization practices in accordance with the following timeframes:

1. Any disturbed area within 50 feet of a stream and not at final grade shall have temporary erosion controls within two (2) days of the most recent disturbance, if the area will remain idle for more than 14 days.
2. Any disturbed areas not within 50 feet of a stream that will be dormant for more than 14 days but less than one year shall have temporary erosion

controls applied within seven (7) days of the most recent disturbance to the area.

3. If areas will lie dormant over the winter, temporary erosion controls shall be applied prior to the onset of winter.

The Contractors will initiate appropriate permanent stabilization practices in accordance with the following timeframes:

1. If areas will lie dormant for one year or more, permanent erosion controls shall be applied within seven (7) days of the most recent disturbance.
2. For any area within 50 feet of a stream and at final grade, permanent erosion controls shall be applied within two (2) days of reaching final grade.
3. For any other areas that are at final grade, permanent erosion controls shall be applied within seven (7) days of reaching final grade within that area.

Potential erosion control methods, both vegetative and non-vegetative methods, are described in the following sections.

4.2.1.1 Vegetative and Non-Vegetative Methods

Several vegetative practices such as temporary and permanent seeding will generally be used to control erosion at the Property. Several non-vegetative practices, such as rolled erosion control blankets and mulching, may also be used to control erosion at the Property. Special measures may be required to dissipate the velocity of rapidly flowing runoff from the construction area and stabilize channels. These practices are listed below. Also listed below are special provisions needed for protecting existing waterways. These practices are listed below.

1. Temporary seeding involves growing a vegetative cover on disturbed areas that may be subject to erosion. The purpose of temporary seeding is to reduce erosion and control sedimentation by stabilizing disturbed areas that will undergo future construction activities. Temporary seeding generally uses fast-growing grasses and will be used in areas where construction activities will be inactive for 21 days but are likely to re-occur or where permanent plant growth is not necessary. Temporary seeding shall be applied within 7 days of the most recent disturbance in that area. Fertilization and mulching requirements will ensure that temporary seeding is taking root.
2. Permanent seeding of grasses, trees, and brush will minimize the transport of soil by wind or storm water flowing over the area. Temporary and/or permanent seeding will be needed for the Property. Permanent seeding will utilize a native seed mix. Seeding shall be performed with mulching, fertilizing, and watering per the plans, specifications, and contract documents. Areas at final grade must be seeded or sodded within seven (7) days after completion of work in that area. All areas to be seeded will have topsoil and other soil amendments.

3. Optimum seeding dates will generally be from April through May, and from mid-August through September. Permanent seeding will be limited to these timeframes when possible and will be performed in accordance with the BMPs in the "Indiana Storm Water Quality Manual". Temporary seeding performed between October and March, shall be in accordance with the application rates per the plans, specifications, and contract documents.
4. Mulching is a temporary soil stabilization or erosion prevention technique used where materials such as grass, hay, wood chips, straw, gravel, or vegetative construction waste are placed on the soil surface. Mulching will help to keep soil particles and their associated attached chemicals from entering surface water. Additionally, mulching will reduce the speed of storm water runoff over the area. Mulching, in combination with seeding, offers immediate sediment and erosion control while providing seed protection from adverse weather conditions. Use of mulch may require a retaining measure to be added such as netting or anchoring to keep it in place.

Other methods of temporary or permanent vegetative stabilization may be used at the Property and will be dependent on the conditions encountered at the Property and the preference of the Contractor. When seasonal conditions prohibit the application of temporary or permanent seeding, non-vegetative soil stabilization practices, such as mulching and/or erosion control blankets shall be used.

4.2.2 Runoff Control Practices

Runoff controls will be used at the Property to minimize erosion by diverting the flow away from disturbed areas, when possible, and controlling the flow of runoff from disturbed areas. Several practices may be used to control runoff at the Property. These practices include protective grading, rock check dams, and stream pump around to direct flow away from exposed soils, and preventative grading practices. These practices are listed below.

1. Protective Grading Practices can control runoff and minimize erosion. The grading and drainage plans and/or drawings should be designed so that runoff patterns and directions of flow remain the same, to the extent possible. The implementation of simple measures such as grading horizontally on the slope, surface roughening, and avoiding significant grade changes (when possible) should also minimize erosion caused by runoff.
2. Rock Check Dams are shaped rock dams constructed in swales, grassed waterways or diversions. They reduce the velocity of concentrated flows, thereby reducing erosion within the swale or waterway. While a rock check dam may trap sediment, its trapping efficiency is extremely poor, therefore it should not be used as the primary sediment-trapping practice.
3. Drainage Channels convey storm water without allowing channel erosion. Channels are generally vegetated but may also have other protective

lining such as riprap, erosion control blanket, etc. depending on the application.

4.2.3 Sediment Control Practices

Sediment controls will be used at the Property to control erosion and trap sediment from the portions of the Property remaining disturbed for more than 14 days. The controls shall store runoff allowing sediments to settle, and/or divert flows away from exposed soils to limit runoff from exposed areas. Sediment control practices shall be functional throughout the duration of the earth-disturbing portion of the construction project. They shall be implemented prior to grading activities and within seven days from the start of any activities that disturb the surface of the Property. Sediment control practices may need to be modified as construction progresses if the topography is altered such that drainage patterns are changed. Sediment controls shall be utilized at all times within areas identified for containing any long term on-Property stockpiled backfill material. Recommended controls for managing soil stockpiles may include compost filter socks or silt fence to prevent the transport of sediment.

Several practices will be used to control sediment transport and improve the quality of storm water discharged from the Property. These practices may include sediment traps, silt fence, earthen diversion berms and channels that direct runoff to a sediment basin/trap, filtering barriers, and dust control. These practices are listed below.

1. Compost Filter Socks Compost filter socks shall be installed on or parallel to the contour at the edge of disturbed areas. Both ends of each sock section must be extended upslope at 45 degrees to the main sock alignment. Filter socks shall be installed in accordance with the manufacturer's specifications. Traffic shall not be permitted to cross filter socks. Accumulated sediment shall be removed when it reaches one-half (1/2) of the aboveground height of the filter sock. Refer to the Indiana Storm Water Quality Manual for compost filler material specifications and additional notes. Upon stabilization of the area tributary to the sock, stakes shall be removed. The sock may be left in place or removed. If the sock is left in place, the mesh shall be cut open and the mulch spread as a soil supplement and then vegetated. Socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired according to manufacturer's specifications or replaced within 24 hours of inspection. Biodegradable filter socks shall be replaced after six months and photodegradable socks shall be replaced after one year. Polypropylene socks shall be replaced according to manufacturer's recommendations.
2. Silt Fence is a sediment-trapping device that utilizes a geotextile fence and topography to cause sediment deposition from sheet flow, typically at the perimeter of a disturbed area. Silt fence should be used on the flattest areas available. To maximize soil deposition, silt fence should be placed on the level contour of the land so that flows are dissipated into uniform sheet flow. Silt fence should be placed several feet away from the toe of slope, when possible.

3. Super Silt Fence is a reinforced sediment trapping device that utilizes a geotextile fence reinforced with wire mesh and topography to cause deposition from sheet flow, typically at the perimeter of a disturbed area. Super Silt fence should be used on the flattest areas available. To maximize soil deposition, silt fence should be placed on the level contour of the land so that flows are dissipated into uniform sheet flow. Silt fence should be placed several feet away from the toe of slope, when possible.
4. Sediment Trap is a temporary settling pond formed by construction of an embankment and/or excavated basin and having a simple outlet structure that is typically stabilized with geotextile and rip-rap. Sediment traps are constructed to detain sediment-laden runoff from small, disturbed areas for a sufficient period of time to allow the majority of the sediment to settle out. They are established early in the construction process using natural drainage patterns and favorable topography where possible to minimize grading.
5. Road stabilization minimizes off-Property vehicle tracking of sediments. Stabilized temporary construction entrances will be installed where traffic will be moving into and from the Property at all access points from the public street, and shall be in accordance with the standard detail in Appendix C. The rough texture of the stone helps to remove clumps of soil adhering to the construction vehicle tires through the action of vibration and jarring over the rough surface and the friction of the stone matrix against soils attached to vehicle tires. In addition to the stone at the Rock Construction Entrance, it may be necessary to install devices such as pipes (cattle guard) to increase the vibration and jarring. It may also be necessary to install a wheel wash system. If this is done, a sediment trap control must be installed to treat the wash water before it discharges from the Property. All Property access must be confined to the Rock Construction Entrance(s). Barricade, sufficient to prevent use, any locations other than the Rock Construction Entrance where vehicles or equipment may access the Property. Rock construction entrance thickness shall be constantly maintained to the specified dimensions by adding rock. A stockpile shall be maintained on the Property for this purpose. All sediment deposited on paved roadways shall be removed and returned to the construction area immediately. If excessive amounts of sediment are being deposited on roadway, extend length of rock construction entrance by 50-foot increments until condition is alleviated or install wash rack. Washing the roadway or sweeping the deposits into roadway ditches, sewers, culverts, or other drainage courses is not acceptable.
6. Dust control may be required at the Property for activities that generate excessive dust and due to wind effects. There are various methods to control dust generation at construction sites. Establishing vegetative cover provides an effective barrier against wind. Mulching, spray-on adhesive, watering, stone covering or wind barriers will minimize dust generation by protecting the ground surface from blowing winds. Dust control must be implemented as needed to prevent excessive dust.

4.2.4 Post Construction Control Practices

For this project, the proposed improvements will not result in any increase in impervious areas. Therefore, it will not require post-construction storm water management (other than permanent vegetation) with no increase in the required water quality volume. For this project, Property grading will be performed to provide positive drainage across the Property.

4.2.5 Surface Water Protection

A buffer zone of 50 feet, referred to as a "Restricted Activity Area", will be established wherever project-related activity traverses, or comes in proximity to, wetlands and surface waters (e.g., temporary staging areas or laydown yards). Construction vehicles will be allowed in this zone, if necessary. However, to provide further protection to wetlands and surface waters, restricted activities within this buffer zone will include:

1. No deposition of trash;
2. No accumulation of construction debris;
3. No equipment washing or refueling; and
4. No storage of any petroleum or chemical materials.

4.2.6 Other Controls

4.2.6.1 Non-Sediment Pollutant Controls

No solvents, paints, stains, gasoline, diesel fuel, used motor oil, hydraulic fluid, anti-freeze, cement-curing compounds, building materials, and other such liquid, solid, or hazardous wastes will be discharged to the waters of the State. Solid wastes will be disposed of in accordance with applicable federal and State regulations. Rinse waters of the above materials are also prohibited from being discharged into drainage ways. Contaminated soils must be treated and/or disposed in EPA approved solid waste management facilities or hazardous waste treatment, storage, or disposal facilities (TSDFs).

Contaminated soil will be encountered during construction activities. The Contractor shall follow Verdantas' Standard Operating Procedures (SOP) No. VDTSGLK.SOP.F1000 to safely handle the contaminated soils prior to coordinating proper disposal. The following practices shall be used to prevent contamination from being released:

1. The use of berms, trenches, and pits to collect contaminated runoff and prevent discharges; or
2. Covering areas of contamination with tarps or other methods that prevent storm water from encountering the material.

In the event of a release of petroleum waste the contractor shall act according to the severity of the spill:

1. In the event of a small release (less than 25 gallons) the contractor shall implement protective measures to control the spill and limit runoff from the

contaminated area. The contaminated soils must be disposed appropriately as described in this section and in accordance with applicable federal and State regulations.

2. In the event of a large release (25 or more gallons) the appropriate emergency management agencies must be contacted within 30 minutes. Emergency Management Agencies include IDEM (800-451-6027), the local fire department, and the local emergency planning committee.

To minimize the potential for a spill of petroleum product or hazardous materials to encounter storm water, the following steps will be implemented:

1. All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, additives for soil stabilization, concrete, curing compounds and additives, etc.) will be stored in a secure location, under cover, when not in use.
2. The minimum practical quantity of all such materials will be kept on the job Property and scheduled for delivery as close to time of use as practical.
3. A **spill control and containment kit** (containing for example, absorbent material such as kitty litter or sawdust, acid neutralizing agent, brooms, dust pans, mops, rags, gloves, goggles, plastic, and metal trash containers, etc.) will be provided at the storage Property.
4. All the product in a container will be used before the container is disposed of. All such containers will be triple rinsed, with water prior to disposal. The rinse water used in these containers will be disposed of in a manner in compliance with state and federal regulations and will not be allowed to mix with storm water discharges.
5. All products will be stored in and used from the original container with the original product label. All products will be used in strict compliance with instructions on the product label.
6. The disposal of excess or used products will be in strict compliance with instructions on the products label.
7. Abide by the Facility's Property-specific SPCC Plan, if applicable.

4.2.6.2 Off-Property Traffic

Off-Property vehicle tracking of sediments can have a significant impact on the quality of storm water discharged from the Property and surrounding area. Sediments and the generation of dust can be minimized by stabilizing or watering entrance and access roadways at the Property as discussed in Section 4.2.3. Other measures to reduce off-Property vehicle tracking include cleaning of vehicle wheels to remove mud prior to leaving the Property or sweeping of adjacent roadways to remove excess mud, dirt, or rocks tracked from the Property.

4.2.6.3 Compliance with Other Requirements

To comply with the terms of the General Permit, this SWP3 will ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer, or septic system regulations, including provisions prohibiting waste disposal by open burning.

The SWP3 will be integrated with applicable sediment and erosion control plans or permits, or storm water management plans or permits, approved by State or local officials, where required.

4.2.6.4 Trench and Groundwater Control

If dewatering activities are needed, there shall be no turbid discharges of groundwater to waters of the State. Groundwater that contains sediment must pass through a sediment basin, or another equally effective sediment control device, prior to being discharged from the Property. Groundwater dewatering, which does not contain sediment or other pollutants is not required to be treated prior to discharge. Groundwater is not anticipated to be encountered during this project.

The preferred method for stormwater management in the excavations is infiltration. No pumping or containment of stormwater shall be conducted without prior approval of the Supervising Contractor. Should the Supervising Contractor approve the management of accumulated water within remediation areas , the Contractor shall furnish and operate suitable pumping equipment of such capacity adequate to dewater accumulated water within remedial areas. Areas shall be sufficiently dewatered so that the placement of backfill is made in an area free of standing water. The Contractor shall properly containerize, characterize, and dispose of water in accordance with all local, state, and federal regulations.

4.2.6.5 Construction Phase Best Management Practices

During the construction phase the Contractor shall implement the following measures:

1. Materials resulting from the clearing and grubbing or excavation operations shall be stockpiled within approved locations on-Property, up slope from adequate sedimentation controls. Materials removed to an off-Property location shall be protected with appropriate controls and properly permitted.
2. The Contractor and subcontractors shall utilize designated areas for equipment cleaning, maintenance, and repair. Cleaning, maintenance, and repair areas shall be protected by a temporary perimeter barrier, shall not occur within 150 feet of any waterway, water body or wetland, and in areas located as far as practical from storm sewer inlets.
3. Use of detergents for large scale washing is prohibited (i.e., vehicles, buildings, pavement surfaces, etc.).
4. Chemicals, paints, solvents, fertilizers, and other toxic materials must be stored in waterproof containers. Except during application, the containers, the contents must be kept in trucks or within storage facilities. Runoff

containing such material must be collected, removed from the Property, treated, and disposed of at an approved solid waste and chemical disposal facility.

4.2.6.6 Sanitary Facilities

All personnel involved with construction activities must comply with state and local sanitary or septic system regulations. Temporary sanitary facilities will be provided at the Property throughout the construction phase. They must be utilized by all construction personnel and will be serviced by a commercial operator. The location of sanitary facilities shall be Coordinated with the Property Contractor and the Owner.

4.2.6.7 Fuel Tanks

Temporary on-Property fuel tanks for construction vehicles shall meet all state and federal regulations. Tanks shall have approved spill containment with the capacity required by the applicable regulations. The tanks shall be in sound condition free of rust or other damage which might compromise containment. Fuel storage areas will meet all EPA, OSHA and other regulatory requirements for signage, fire extinguisher, etc. Hoses, valves, fittings, caps, filler nozzles, and associated hardware shall be maintained in proper working conditions always. The location of fuel tanks shall be shown on the Property Maps. A Spill Prevention, Control and Countermeasure (SPCC) Plan must be developed if aboveground oil storage capacity at the Property exceeds 1,320-gallons. Containers with a storage capacity of 55-gallons or less are not included when calculating Property storage capacity. If applicable, the Contractor shall develop and implement a SPCC Plan in accordance with the Oil Pollution Prevention regulation at Title 40 of the Code of Federal Regulations, Part 112, (40 CFR 112).

4.2.6.8 Non-Storm Water Discharges

Non-Storm water components of Property discharges must be clean water. Water used for construction which discharges from the Property must originate from a public water supply or private well approved by the State Health Department. Water used for construction that does not originate from an approved public supply must not discharge from the Property. It can be retained in the ponds until it infiltrates and evaporates. Other non-storm water discharges would include groundwater. Only uncontaminated groundwater can be discharged from the Property. When non-storm water is discharged from the Property, it must be done in a manner such that it does not cause erosion of the soil during discharge.

4.2.6.9 Non-Sediment Pollutant Controls

Whenever dirt, rock, or other materials are imported to the Property or exported for placement in areas off-Property, the Contractor is responsible for determining that all storm water permitting, and pollution control requirements are met for each off-Property location which receives such materials or from which off-Property materials are taken. Prior to the disturbance of any such off-Property location, Contractor will confirm that the operators of the off-Property location that they are importing to or exporting from have

properly obtained all required permits, and will comply with all laws, regulations, and permit conditions applicable to such off-Property locations. At a minimum, each off-Property location that provides or receives material or is disturbed by project activities must implement erosion and sediment control measures consisting of perimeter controls on all down slope and side slope boundaries and must also provide for both temporary stabilization and for permanent revegetation after all disturbance has ended.

4.3 MAINTENANCE

The effectiveness of control measures established by this SWP3 is dependent on the continual maintenance of the stabilization and structural devices. The function of the control measures must be maintained until all upslope areas they control are permanently stabilized. This SWP3 includes a description of the procedures that may be followed to ensure the timely maintenance of vegetation and other control measures and that erosion and sediment control measures and other protective measures remain in good and effective operating condition.

Maintenance issues will be evaluated during the regular inspection that will be performed in accordance with Section 4.4 of this document. General maintenance items include the following:

1. Accumulated sediment shall be removed from structural controls before sediment laden runoff overtops them. Sediment should typically be removed when the deposition reaches one-half the height of the control or when it affects the integrity of the control (i.e., silt fence bulging).
2. Accumulated sediment shall be removed from inlet protection as frequently as needed to prevent standing water around inlets due to accumulated sediment.
3. Grassed areas shall be inspected periodically, especially after storm events, until the stand is successfully established. Repair damaged, bare, or sparse areas by filling any gullies, re-fertilizing, over-seeding, or re-seeding, and mulching;.
4. Anchoring of erosion blanketing shall be inspected periodically, after storm events, and after windy periods. Blanketing shall be promptly re-anchored as necessary.
5. Growth of plantings shall be inspected and watered as needed to promote growth.
6. The construction entrance aggregate voids shall be inspected, and the aggregate shall be maintained to control mud tracking, as necessary.

A copy of the Maintenance and Inspection Form to document a description of the maintenance performed, date, and person completing the maintenance, is in Appendix G. Maintenance records will be kept in Appendix G to document the activities performed.

4.4 INSPECTIONS

Sediment, runoff, and erosion control measures installed at the Property will be inspected by qualified personnel. A representative of the Operator and/or its Contractors, having sufficient knowledge of the policies and procedures established under this SWP3 and the technical ability to ensure that the pollution prevention practices are in good working order will be responsible for conducting inspections.

The General Permit requires that disturbed areas that have not yet received final stabilization be inspected at least once every seven (7) calendar days and within 24 hours following the end of a storm event that is 0.5 inches or greater. Inspections shall comply with the General Permit Section 3.6. Inspections will cover:

1. Disturbed areas at the Property or material storage areas that are exposed to precipitation and have not been finally stabilized.
2. Structural control measures, including silt fence, filter sock, check dams, erosion control blanket, sediment traps, and sediment basins.
3. Accessible locations or points where discharges occur, including at silt fence and inlets.
4. Locations where vehicles enter or exit the Property.

A copy of the Maintenance and Inspection Form is included in Appendix G.

4.4.1 Procedures for Inspections

Personnel assigned to complete the inspections will have sufficient knowledge of the control measures to evaluate their effectiveness. In general, the inspector will determine if the control measures have been installed correctly, if damage has occurred to the measure since it was installed, and what will be done to correct problems should they be identified. In addition to a general inspection of the Property, the General Permit typically requires the inspection of the following:

1. Disturbed areas or material storage areas exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Stabilization measures installed for erosion and sediment control identified in the SWP3 will be observed to ensure that they are operating as intended. Inspection of disturbed areas will ensure that seeding or other vegetative practices are taking root and that excessive sediments are not entering the storm water discharged from the Property. Areas where materials are stored will be inspected for evidence of pollutants entering the drainage system. Maintenance of stabilization areas will be implemented as appropriate;
2. Structural control measures shall be inspected to ensure that they are in proper working condition. Each control device installed at the Property will be inspected to determine if damage has occurred and to identify the necessary repairs to return the measure to the proper working order.

Additionally, the inspector will determine if the control device is adequate to prevent excessive sediments from entering the storm water drainage systems.

3. Accessible locations or points where discharges occur shall be observed for evidence of significant erosion. If storm water is being discharged at the time of the inspection, it will be examined for sediment loading and debris. If erosion at the point of discharge or excessive sediment loading of the discharge is observed, control measures to correct the incident will be specified and implemented.
4. Locations where vehicles enter or exit the Property will be inspected to ensure that off-Property sediment tracking or excess dust generation is not occurring. As discussed under Section 4.2.3 of this plan, land that is subject to vehicle travel may require road stabilization or watering to reduce off-Property sediment tracking and provide dust control. Required maintenance of these areas is to be noted and implemented.

4.4.2 Revisions Based on Inspections

This SWP3 will be revised accordingly, based on the results of the inspection and in accordance with the following:

1. In general, if the inspection indicates that a control measure needs repair or maintenance, it must be repaired or maintained within 48 hours of the inspection. In the case of sediment basins, they must be repaired or maintained within seven days of the inspection.
2. If the inspection indicates that the control measure does not meet its intended function, and that a more appropriate control measure is required, the SWP3 shall be revised and the new control device must be installed within seven days of the inspection.
3. If the inspection indicates that a control measure has not been implemented in accordance with the permit and this SWP3, the control device must be implemented prior to the next storm event that produces runoff from the Property, but in no case later than seven days from the date of the inspection. If the inspection indicates that the control measure is not needed, the record must explain why this is the case.

4.4.3 Maintenance of Inspection Records

A record of inspections will be maintained and will summarize the inspections completed. The record will be comprised of a copy of the completed Maintenance and Inspection Forms in Appendix G and retained on file with the Operator for at least three years from the submittal of the Notice of Termination. The record will identify any incidents of non-compliance. Where no incidents of non-compliance are identified for each inspection, the Maintenance and Inspection Form shall contain a certification that the Property follows the SWP3 and the General Permit. The certification statement included with the Maintenance and Inspection Forms shall be signed by an individual who is duly authorized as a representative of the Operator or the Contractor.

4.4.4 Agency Storm Water Inspections

A log of all inspections by federal, state, or local storm water or other environmental agencies shall be kept in the Contractor's SWP3. The log form can be found in Appendix F and shall include the date and time of the visit and whether a report was issued because of the inspection. In addition to the log, a Project Representative should attend the Property inspection with the regulatory inspector and take notes regarding any deficiencies noted during the inspection. Noted deficiencies are to be resolved before the next scheduled weekly inspection.

4.5 NON-STORM WATER DISCHARGES

The non-storm water discharges presented below are authorized under Section 1.2(d) of the General Permit to be discharged along with storm water from a construction Property. Except for discharges from fire-fighting activities, any authorized non-storm water sources must be identified. Best management practices and good housekeeping measures will be taken to control the sediment, erosion, and pollutants generated from these discharges.

1. Discharges from fire-fighting activities;
2. Fire hydrant flushing;
3. Waters used to wash vehicles and for dust control;
5. Potable water sources including waterline flushing;
6. Irrigation drainage;
7. Routine external building washdown water that does not use detergents; and
8. Uncontaminated groundwater from well point dewatering.

5.0 REFERENCES

Referenced documents and publications may or may not have been reviewed in their entirety. The guidelines and procedures presented in the documents and publications referenced may not have been strictly adhered to unless stated otherwise.

NPDES Permit No. INRA00000 – Indiana Department of Environmental Management (IDEM). Construction Stormwater General Permit. December 18, 2021.

Indiana Storm Water Quality Manual. Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality. Indiana Department of Environmental Management, October 2007.

U.S. Department of Agriculture, Natural Resources Conservation Service. (Accessed 2022, December 15). *Web Soil Survey*. Retrieved from USDA NRCS: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

APPENDIX A

COPY OF NOTICE OF INTENT AND GENERAL PERMIT

Indiana Department of Environmental Management
Office of Water Quality
100 North Senate Avenue
IGCN, Room 1255
Indianapolis, Indiana 46204
(317) 232-8670
Toll Free (800) 451-6027
www.idem.IN.gov

In compliance with the provisions of the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq., the "Act"), Title 13 of the Indiana Code, Articles 5 and 15 of Title 327 the Indiana Administrative Code, and regulations adopted by the Environmental Rules Board, the Indiana Department of Environmental Management (IDEM) is issuing this NPDES general permit to regulate discharges of stormwater from construction activities into surface waters of the State of Indiana.

This permit is issued on: **December 9, 2021**

This permit is effective on: **December 18, 2021**

This permit expires on: **December 17, 2026**

In accordance with IC 13-15-3-6, 40 CFR 122.6, and 123.25, the conditions of this permit remain fully effective and enforceable after the expiration date of this permit if the permittee has timely submitted a notice of intent for coverage under this permit and IDEM has not, through no fault of the permittee, issued a new permit on or before the expiration date of this permit.

Martha Clark Mettler
Assistant Commissioner
Office of Water Quality

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GENERAL PERMIT COVERAGE and PERFORMANCE STANDARDS

1.0 GENERAL PERMIT COVERAGE

1.1 Permit Area

This general permit covers all areas of the State of Indiana.

1.2 Discharges Authorized/Covered by this Permit

This permit authorizes the following discharges to waters of the state:

(a) Stormwater, including stormwater run-off, snowmelt run-off, and surface run-off and drainage, associated with construction activity (40 CFR § 122.26(b)(14) or § 122.26(b)(15)(i)).

(b) Stormwater discharges designated by IDEM as needing to obtain coverage under this permit (40 CFR § 122.26(a)(1)(v) or § 122.26(b)(15)(ii)).

(c) Stormwater discharges from construction support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material) provided the support activity is directly related to the construction site, and:

(1) The support activity is not a commercial/industrial operation, nor does it serve multiple unrelated construction projects.

(2) The support activity does not continue to operate beyond the completion of the construction activity for the project it supports; and

(d) Non-stormwater discharges or flows from permitted construction activities, provided they are not identified by the department as significant sources of pollutants to waters of the state. This includes but is not limited to:

(1) Emergency fire-fighting water

(2) Fire hydrant flushing water

(3) Landscape irrigation water

(4) Water used to control dust

(5) Water line flushing

(6) Routine external building washdown water that does not use detergents

(7) Water used to wash vehicles and equipment, provided that there is no discharge of soaps, solvents, or detergents used for such purposes

(8) Uncontaminated, non-turbid discharges of ground water or spring water

(9) Uncontaminated condensate from air conditioning units, coolers, and other compressors, and from outside storage of refrigerated gases or liquids

(10) Foundation or crawl space footing drainage where flows are not contaminated with process materials such as solvents or contaminated ground water; and

(11) Construction dewatering water that has been treated by an appropriate water quality measure or series of measures, provided other contaminants are not present in the discharge water

This permit serves as a National Pollutant Discharge Elimination System (NPDES) general permit and is issued to be effective for a term of five (5) years. In order to obtain authorization to discharge under this permit, a person must submit a notice of intent (NOI) pursuant to Section 5.0 of this permit. The commissioner may deny coverage under this permit and require an application for an individual permit.

Except as provided in Section 1.3, when a complete NOI is submitted as set forth in Section 5.0 of this permit, a project site is permitted to discharge stormwater and allowable non-stormwater in accordance with the terms of this permit. The authorization to discharge becomes effective 48-hours after submittal of the NOI to IDEM. Any discharge of stormwater not authorized under this permit or by an individual permit are unlawful.

Permittees who are granted general permit coverage will remain covered under this permit until the earliest of the following:

(a) The permittee receives authorization for coverage under a reissued or replacement version of this permit; or
(b) IDEM's receipt of the permittee's submittal of a notice of termination (refer to Section 6.0); or
(c) Issuance or modification of an individual permit for the discharges covered by this permit; or
(d) A final decision by IDEM either to revoke or to not reissue this permit, at which time IDEM will identify a reasonable time period for covered dischargers to seek coverage under an alternative permit or an individual permit. Coverage under this permit will terminate at the end of this identified time period.

1.3 Discharges Not Authorized by This Permit

The following discharges are not authorized by this permit:

(a) Direct discharges into waters that are designated as an Outstanding National Resource Water (ONRW) defined at IC 13-11-2-149.5 or an Outstanding State Resource Water (OSRW) defined at IC 13-11-2-149.6 and listed at 327 IAC 2-1.3-3(d) when the commissioner determines that a discharge from the land-disturbing activity will significantly lower water quality as defined under 327 IAC 2-1.3-2(50) of such a water downstream of that discharge.

(b) Direct discharges to a receiving stream when the discharge results in an increase in the ambient concentration of a pollutant which contributes to the impairment of the receiving stream for that pollutant as identified on the current 303(d) list of impaired waters.

(c) Discharges of concrete or cementitious wash water from washout activities or release from containment systems.

(d) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials.

(e) Soaps, detergents, or solvents used in vehicle and equipment washing.

(f) Other discharges, including but not limited to fuel, oil, or other pollutants used in vehicle and equipment operation and maintenance.

1.4 Fees (Application)

Any person who seeks coverage under this general permit is required to remit an application fee with the NOI in accordance with IC 13-18-20-10(a). This fee is required for an initial NOI or a renewal request. Coverage under this permit may be revoked for nonpayment of applicable fees as set forth in IC 13-18-20.

2.0 ELIGIBILITY FOR PERMIT COVERAGE

This permit applies to all projects that meet the requirements in Section 2.1. Projects that occur in a designated municipal separate storm sewer system (MS4) jurisdictional area and are regulated by the MS4 entity must also comply with all appropriate MS4 ordinances and regulations related to stormwater discharges.

2.1 Permit Coverage

This permit applies to construction activities with a projected land disturbance of one (1) acre or more, and operations that result in the land disturbance of less than one (1) acre of total land area that are part of a larger common plan of development or sale. Land disturbances that will require permit coverage are further clarified in Appendix A.

2.2 Exclusion from Permit Coverage

(a) This permit does not apply to:

(1) Agricultural land-disturbing activities, including tillage, planting, cultivation, or harvesting operations for the production of agricultural or nursery and vegetative crops, pasture renovation and establishment, the construction of agricultural conservation practices, and the installation and maintenance of agricultural subsurface field tile.

(2) Silvicultural activities associated with nonpoint discharges (40 CFR 122.27).

(3) Stormwater discharges associated with oil and gas exploration, production, processing or treatment operations, or transmission facilities (40 CFR 122.26).

(4) Ditch maintenance for activities performed on a regulated drain by a county drainage board, or a ditch where the drainage board has relinquished jurisdiction to a municipality or a sanitary district, as defined in Appendix B and in accordance with IC 36-9-27.

(5) Land-disturbing activities listed below, provided other applicable permits contain provisions requiring implementation of erosion and sediment control measures and stormwater management measures:

(A) Landfills that have been issued a certification of closure under 329 IAC 10.

(B) Coal mining activities permitted under IC 14-34.

(C) Municipal solid waste landfills that are accepting waste pursuant to a permit issued by IDEM under 329 IAC 10 that contains equivalent stormwater requirements, including the expansion of landfill boundaries and construction of new cells either within or outside the original solid waste permit boundary.

2.3 Waivers and Special Conditions

(a) Discharges are conditionally authorized for land-disturbing activities that are subject to this permit but are considered an emergency. Emergency activities include any work which requires immediate implementation to avoid imminent endangerment to human health, public safety, the environment, or to re-establish essential public services.

(b) Procedures for obtaining an emergency condition authorization, require the applicant to:

(1) Submit notification of the emergency to IDEM and where applicable to a MS4 within 24 hours or next business day of initiating land disturbance. An email notification to IDEM Stormwater Program (Stormwat@idem.IN.gov) is acceptable. For projects regulated by a MS4 notification to a MS4 must follow the local process defined for emergencies.

(2) Develop a SWP3 that specifically addresses the operations associated with the emergency. The submittal of the plan to IDEM is not required.

(3) Submit a complete NOI within thirty (30) calendar days after commencing land-disturbing activities to IDEM, establishing eligibility under this permit.

3.0 PERFORMANCE STANDARDS

All permittees must manage stormwater discharges as necessary to meet the narrative water quality criteria (327 IAC 2-1-6(a)(1)(A-D) and 327 IAC 2-1.5-8(a) and 327 IAC 2-1.5-8 (b)(1)(A-D) for any discharge authorized by this permit, compliance is required upon beginning such discharge. For stormwater discharges, the use of stormwater management measures and planning principles is expected to achieve the control necessary to meet water quality criteria.

(a) The stormwater pollution prevention plan (SWP3) will serve as a guideline for stormwater management but should not be interpreted to be the only basis for implementation of stormwater measures for a project site. The permittee is responsible for implementing all measures necessary to comply with the provisions of this permit.

(b) All stormwater management measures, including erosion and sediment control measures and post-construction measures must be implemented in accordance with this permit and sufficient to satisfy Section 3.1 through 3.9.

(c) Ensure "trained individuals", as defined in Appendix B, are utilized for activities associated with the development and design of the SWP3, stormwater measure implementation, self-monitoring, and stormwater project management.

(d) Retain the construction/SWP3 and the project management log for at least three (3) years following the date the project permit coverage is terminated.

3.1 General Requirements

(a) A permittee must, at a minimum, meet each of the following requirements:

(1) Sediment-laden water which otherwise would flow from the project site must be managed with sediment control measures appropriate to minimize sedimentation to receiving waters and adjacent properties.

(2) Natural features, including wetlands and sinkholes (karst features), must be protected with appropriate stormwater management and/or treatment measures to address pollutant discharges associated with stormwater run-off.

(3) Soil compaction is to be minimized, especially in areas where permanent vegetation will be re-established and/or areas that are designated to infiltrate stormwater for the post-construction phase.

(4) Topsoil must be preserved, unless infeasible.

(5) Existing natural buffers that are adjacent to waters of the state must be preserved to promote infiltration and provide protection of the water resource, unless infeasible. Activities performed by a county drainage board under IC 36-9-27 are excluded.

(A) Natural buffers must be preserved, including the entire buffer bordering and/or surrounding the water resource. Existing buffers:
  1) 50 feet or more in width must be preserved to a minimum of 50 feet.
  2) Less than 50 feet in width must be preserved in their entirety.
  3) May be enhanced with vegetation that is native and promotes ecological improvement and sustainability.

(B) Run-off directed to the natural buffer must be:
  1) Treated with appropriate erosion and sediment control measures prior to discharging to the buffer.
  2) Managed with appropriate run-off control measures to prevent erosion from occurring within the buffer area.

3.2 Design Requirements

(a) The selection, design, and implementation of all stormwater quality and management measures must at a minimum take into consideration the following:
  (1) Sound engineering, agronomic, and scientific principles.
  (2) Applicable standards as specified in technical manuals, the Indiana Stormwater Quality Manual or similar guidance documents, local ordinances, and the product guidance/specifications of the manufacturer.
  (3) Appropriate measures must be planned, designed, and installed as part of an erosion and sediment control system.
  (4) Stormwater run-off leaving the project site must be discharged in a manner that is consistent with applicable local, state, or federal law.
  (5) Collected run-off leaving the project site must be either discharged directly into a well-defined, stable receiving conveyance or diffused and released without causing erosion at the point of discharge.
  (6) Conveyance systems must be designed taking into consideration both peak flow and total volume and must be adequately protected so that their final gradients and resultant velocities are unlikely to cause erosion at the outlet or in the receiving channel, based on known conditions of the discharge at the time of design to accommodate post-construction conditions.
  (7) Sediment basins, where feasible, must withdraw water from the surface of the water column unless equivalent sediment reduction can be achieved by use of alternative measures. Alternative measures include but are not limited to increasing the basin length to width ratio to 4:1 or greater, implementation of porous baffles, use of flocculants/polymers, and/or phasing of project land disturbance that also incorporates a rapid stabilization program. During freezing conditions, the implementation of alternative withdrawal methods may be utilized.

(8) Where applicable, stormwater run-off and project site discharges must be directed to an established vegetated area to increase pollutant removal and maximize stormwater infiltration.

(9) Post-construction stormwater management measures must be implemented to manage the discharge of stormwater run-off to address quality and quantity. Measures must be designed and engineered in accordance with the following standards and at a minimum:

(A) The run-off rate of stormwater run-off and/or volume from the project site must meet local requirements to address stormwater quantity as established by ordinance or other regulatory mechanism. When a local requirement does not exist, the post-development run-off discharge from the project site must not exceed the pre-development discharge based on the two-year, ten-year, and one-hundred-year peak storm events.

(B) Run-off from the project site must be managed to minimize pollutants that are expected to be associated with stormwater run-off from the final land use. To achieve pollutant minimization goals, measures must be selected and meet the requirements as established by local ordinance or other regulatory mechanism. When a local requirement does not exist, the post-construction measures must be selected based on correct sizing to address the Water Quality Volume (WQv) or water quality flow rate to ensure compliance with 327 IAC 2-1-6(a)(1)(A-D) and 327 IAC 2-1.5-8(a) and 327 IAC 2-1.5-8 (b)(1)(A-D).

(C) Utilize one (1) or more post-construction measures working in tandem or series to treat stormwater run-off and increase the overall efficiency of individual and specialized measures.

(D) In combination with proper post-construction measure selection, design and development strategies may be selected and incorporated into the plan to minimize the discharge pollutants. These strategies may include, but are not limited to:

1) Low Impact Development (LID) and green infrastructure.
2) Infiltration measures. When selected, infiltration measures must take into consideration the pollutants associated with run-off and the potential to contaminate ground water resources. When there is a potential for contamination, choose alternative measures or measures that pre-treat run-off to eliminate or reduce the pollutants of concern.

3.3 Implementation Requirements

(a) The following minimum standards apply to activities performed under this permit:

(1) Public roadways and roadways not exclusive to construction traffic must be kept cleared of accumulated sediment that is a result of run-off or tracking. The following minimum conditions are applicable:

(A) Clearing of sediment must not include the utilization of mechanical methods that will result in mobilization of dust off the project site or flushing the area with water unless the flushed water is directed to an appropriate sediment control measure.

(B) Cleared sediment must be redistributed or disposed of in a manner that is in accordance with all applicable statutes and regulations.

(C) Sediment discharged or tracked onto roadways that are open to traffic must be removed as directed by a regulatory authority or at a minimum, removed by the end of the same day.

(2) Phasing of construction activities must be used, when feasible, to minimize the footprint of disturbed unstable areas.

(3) Minimize the generation of dust through dust suppression techniques to prevent deposition into waters of the state and areas located beyond the permitted boundaries of the site.

(4) Stable construction site access measures must be provided at all points of construction traffic ingress and egress to the project site. Where the selected measure is not effective, an alternative measure or additional controls must be utilized to minimize tracking. Alternative measures may include, but are not limited to, wheel wash systems and rumble strips.

(5) During the period of construction activities, all stormwater management measures necessary to meet the requirements of this permit must be maintained. Alternative measures must be selected and implemented, as necessary.

(6) Discharge water from dewatering of ground water from excavations, trenches, foundations, etc. must not be discharged when:

(A) Sediment-laden water is not first directed to an appropriate sediment control measure or a series of control measures that minimizes the discharge of the sediment.

(B) A visible sheen and/or pollutants are present at a level that requires additional treatment and/or an alternate permit.

(7) Appropriate measures must be implemented to eliminate wastes or unused building materials including, but not limited to garbage, debris, cleaning wastes, wastewater, concrete or cementitious washout water, mortar/masonry products, soil stabilizers, lime stabilization materials, and other substances from being carried from a project site by run-off or wind.

Wastes and unused building materials must be managed and disposed of in accordance with all applicable statutes and regulations.

(8) Construction and domestic waste must be managed to prevent the discharge of pollutants and windblown debris. Surplus plastic or hardened concrete/cementitious materials are not required to be placed in trash receptacles and are considered clean fill that may reused, disposed of on-site, or recycled in accordance with applicable state and federal regulations. Management of waste materials may include, but are not limited to:

(A) Waste containers (trash receptacles), when selected to manage waste, must be managed to reduce the discharge of pollutants and blowing of debris. Receptacles that are not appropriately managed will require alternatives that include but are not limited to:

1) A cover (e.g., lid, tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation or

2) A similarly effective method designed to minimize the discharge of pollutants.

(B) Waste that is not disposed of in trash receptacles must be protected from exposure to the weather and/or removed at the end of the day from the site and disposed of properly.

(9) Concrete or cementitious washout areas, where washout is permissible, must be identified for the site and the locations clearly posted. Wash water must be directed into leak-proof containers or leak-proof containment areas which are located and designed to divert run-off away from the measure and sized to prevent the discharge and/or overflow of the wash water.

(10) Fertilizer applications associated with the stabilization plan for the project must meet the following requirements:

(A) Apply fertilizer at a rate and amount as determined by a soil analysis or in accordance with the Indiana Stormwater Quality Manual or similar guidance documents.

(B) Apply fertilizer at an appropriate time of year for the project location, taking into consideration proximity to a waterbody, and preferably timed to coincide with the period of maximum vegetative uptake and growth.

(C) Avoid applying fertilizer immediately prior to precipitation events that are anticipated to result in stormwater run-off from the application area.

(11) Proper storage and handling of materials, such as fuels or hazardous wastes, and spill prevention and clean-up measures must be implemented to minimize the potential for pollutants to contaminate surface or ground water or degrade soil quality. To meet this requirement:
   (A) Proper project management and the utilization of appropriate measures including, but not limited to, eliminating a source or the exposure of materials must be completed.
   (B) Manage the following activities:
      1) Fueling and maintenance of equipment.
      2) Washing of equipment and vehicles.
      3) Storage, handling, and disposal of construction materials, products, and wastes.
      4) Application of pesticides, herbicides, insecticides, and fertilizers
      5) Dispensing and utilization of diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals.
      6) Handling and disposal of hazardous wastes, including, but not limited to paints, solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids.
      7) Washing of applicators and containers used for paint, grout, or other materials.

(12) Personnel associated with the project must be informed of the terms and conditions of this permit and the requirements within the SWP3. The permittee is required to document this process. Information must be provided through written notification, contracts, or other means (i.e., pre-construction meetings) that effectively communicates the provisions and requirements of the permit and SWP3. Personnel may include, but are not limited to:
   (A) General contractors, construction management firms, grading or excavating contractors, and trade industry representatives (i.e., concrete industry) associated with the overall project.
   (B) Contractors or individual lot operators that have primary oversight on individual building lots.
   (C) Those responsible for the implementation of the SWP3, and the installation, repair, and maintenance of stormwater measures.
   (D) Those responsible for the application and storage of treatment chemicals.
   (E) Those responsible for administering the self-monitoring program (SMP).

(13) A notice must be posted near the main entrance of the project site or at a publicly accessible location. For linear project sites, such as a pipeline or highway, the notice must be placed in a publicly accessible location near the project field office.

(A) The notice must be maintained in a legible condition and include:

1) A copy of the completed NOI or a document that at a minimum contains the information in Section 5.2 (a)(1), (a)(3), (a)(6)(A), (a)(6)(E), and (a)(10).
2) Documentation contained in Section 3.7 (a)(3)(A).
3) The NPDES permit number(s), upon receipt.
4) The location of the construction plan/SWP3 if the project site does not have an on-site location to store the plan.

3.4 Stabilization Requirements

(a) Un-vegetated areas that are left idle or scheduled to be left inactive must be temporarily or permanently stabilized with measures appropriate for the season to minimize erosion potential. To meet this requirement, the following apply:

(1) Stabilization must be initiated by the end of the seventh day the area is left idle. The stabilization activity must be completed within fourteen (14) days after initiation. Initiation of stabilization includes, but is not limited to, the seeding and/or planting of the exposed area and applying mulch or other temporary surface stabilization methods where appropriate. Areas that are not accessible due to an unexpected and disruptive event that prevents construction activities are not considered idle.

(2) Areas that have been compacted may be excluded from the stabilization requirement when the areas are intended to be impervious surfaces associated with the final land use, provided run-off from the area is directed to appropriate sediment control measures.

(b) Final stabilization of a project site is achieved when:

(1) All land-disturbing activities have been completed and a uniform (evenly distributed, without large bare areas) perennial vegetative cover with a density of seventy percent (70%) has been established on all unpaved disturbed areas, and areas not covered by permanent structures, or equivalent permanent stabilization measures have been employed. This requirement does not apply to:

(A) Landscaping that is part of the final project plan. This is considered stable when the plan has been fully implemented and areas not being vegetated are stable with a non-erosive material and/or product.

(B) Projects or specific stormwater measures that utilize native vegetation and/or special vegetative plantings that are either required by a water quality permit/authorization or part of the design and functionality of a

stormwater measure provided the activity does not pose a threat that will result in off-site sedimentation.

(C) Projects on land used for agricultural purposes when:

1) Stabilization is completed in accordance with Section 3.4 (a) as land-disturbance progresses. Land that is returned to agricultural production must be temporarily or permanently seeded upon completing land-disturbing activities. Stabilization requirements may be waived by the inspecting authority if the project site does not pose a threat of discharging sediment.
2) Disturbed areas not previously used for agricultural production, such as filter strips, must be returned to their pre-land disturbance use.

(D) Specific projects, due to function and/or operation may necessitate that an area remain disturbed. Only the minimum operational area is allowed to remain disturbed. This option primarily applies to off-road recreational commercial operations but may apply to other land use types upon determination by the regulating entity.

3.5 Special Provisions

(a) The use of anionic polymers (cationic polymers are not authorized for use) on the project site are authorized for sediment control provided their use is in conformance with current State of Indiana standards and specifications and the use is identified in the stormwater pollution prevention plan (SWP3). If use of a polymer is not in the SWP3 and is selected at a later date notification to IDEM or the MS4 regulating the project is required. An email notification prior to the use of the polymer to the IDEM Stormwater Program is acceptable. For projects regulated by a MS4 notification must follow the local process for the use of polymers.

(b) Restoration and/or clean-up may be required for those areas impacted by sediment or other pollutant discharges. These activities will be performed as directed by the inspecting authority and may require:

(1) Development and submittal of a removal and restoration plan to ensure the methodology chosen will not result in further degradation of the resource.
(2) Permission by a property owner when the restoration activity requires access to a property owned by another entity or individual.
(3) Additional permits prior to initiation of the work.

3.6 Monitoring and Project Management Requirements

(a) Monitor and manage project construction and stormwater activities through administration of a self-monitoring program (SMP) that includes:

(1) A written evaluation of the entire project site, with the exception of those areas that are considered unsafe. The evaluation must be performed by a trained individual and completed:

(A) Twenty-four (24) hours prior to a qualifying precipitation event or by the end of the next business day following each measurable storm event (excludes accumulated snow events); which is defined as a precipitation accumulation equal to, or greater than, one-half (0.50) inch of rainfall within a 24-hour period. If no rain event occurs within the work week a minimum of one inspection must occur. In the event of multiple qualifying events during the work week, no more than three (3) inspections would be required to meet the self-monitoring commitment.

(B) At a minimum of one (1) time per month for specific areas within the project which are stabilized with permanent vegetative cover at seventy (70) percent density and/or erosion resistant armoring is installed. A reduction to once per month is also applicable for the entire project site for stabilized common areas, basins, conveyances, outfalls, and inactive building sites. Prior to reducing the monitoring to monthly, records must identify the area and the date the area became eligible for monthly monitoring. Weekly monitoring as identified in (A) above must resume if one or more of the following occurs:

1) The vegetative cover fails or there is evidence of erosion in the identified area.

2) IDEM or the inspecting authority requires monitoring to resume.

(2) A complete written evaluation report which must include:

(A) Name of the individual performing the evaluation, including printed name, title, and signature (electronic signatures are acceptable).

(B) Date of the evaluation.

(C) Amount of precipitation, when the evaluation is conducted after a measurable storm event. Recorded rainfall may be documented utilizing an on-site rain gauge or storm event information from a weather station that is representative of the project location.

(D) Observations of project performance in relation to:

1) Implementation of the stormwater pollution prevention plan.

2) Assessment of existing stormwater measures based on industry standards and as identified in Section 4.1 (a)(8)(D) to ensure each measure is operational and functioning properly.

3) Additional measures necessary in the event an existing measure fails or is not present in the landscape
4) Impacts including, but not limited to, sediment discharges, erosion, discharges that results in bank erosion, and operational activities that have the potential to generate pollutants and unauthorized discharges.
5) Status of areas that have been identified to be inspected once per month as outlined in Section 3.6 (a)(1)(B).

(E) Documentation of an actual discharge that is visible during the assessment, the location of the discharge and a visual description of the discharge. The visual description includes, but is not limited to, color (turbidity reading is an option), odor, floatables, settled/suspended solids, foam, oil sheen, and any other visible sign that may be attributed to operations occurring on the project site.

(F) Detail of corrective action recommended and/or completed. Corrective action includes, but is not limited to:
1) Repairing, modifying, or replacing any stormwater management measure.
2) Clean-up and proper disposal of spills, releases, or other deposits.
3) Remedying a permit violation.
4) Taking reasonable steps to remediate, minimize or prevent the discharge of pollutants associated with the construction activity until a permanent corrective solution is initiated.
5) Restoring an impacted area and/or removing accumulated sediment, provided appropriate permission and permits are obtained to conduct the activity.

(G) A timeline for which the corrective action will occur to remediate the discharge of pollutants. The established corrective action, at a minimum, must be initiated:
1) On the day the deficiency was discovered or when it is not practical to initiate on the discovery date, no later than forty- eight (48) hours for the repair of a measure or installation of a temporary measure until a new and/or replacement measure is installed as specified in item 2) below.
2) Within seven (7) days of discovery for the installation of a new (alternative) measure or replacement of an existing measure, unless a shorter timeframe is required as part of a regulatory inspection. The inspecting authority may also allow additional time to take corrective action.

3) If corrective action cannot be achieved within the timelines outlined in 1) or 2) above, a reason for incompletion must be provided and documented, including the anticipated completion date.

(H) Documentation of corrective action taken from the previous self-monitoring report.

(3) Maintaining the SMP reports at the site or at an easily accessible location (refer to Project Documentation Requirements in Section 3.7 below).

(4) Providing all reports for the project site to the inspecting authority within forty-eight (48) hours of a request. Electronic copies are acceptable, provided they are in a format consistent with the paper record.

3.7 Project Documentation Requirements

(a) A project site owner must demonstrate that the public has been notified that a construction activity is to commence. The notification must:

(1) Be completed prior to the submittal of an initial notice of intent.

(2) Contain specific language, including:

(A) The name of the company or individual responsible for obtaining permit coverage or another entity that represents the responsible company or individual.

(B) A statement that a NOI will be submitted to IDEM with intent to discharge stormwater from construction activities/land-disturbing activities.

(C) The name of the construction project and a general location or if applicable an address for the project.

(D) The name(s) of the receiving water(s).

(E) Contact information (phone and email) to where questions may be directed.

(3) Meet one or more of the options below:

(A) A posted notification at the project site, The notification must:

1) Be located and visible at a publicly accessible location, preferably at the proposed entrance to the project.

2) Contain the date the notice was posted.

3) Include items in (2) (A) - (E)

4) Signed by the project site owner or their representative.

5) Be legible and on an 81/2 X 11-inch sheet at a minimum.

6) Be posted ten (10) calendar days prior to submittal of the notice of intent and remain posted with the NOI when it is posted at the project site.

(B) Local, state, and federal governmental agencies have the option to post a notification on their publicly accessible website for ten (10) calendar days prior to submittal of the notice of intent. The posting must include the date of the posting and items in (2) (A) - (E) above. The notice must be maintained with the project management log.

(C) If the applicant does not meet the requirement listed in either (A) or (B) above, the notification must be published in a printed or digital newspaper of general circulation in the affected area(s) for at least one day. The posting must include the items in (2) (A) - (E) above and posted with the NOI at the project site. Maintain a copy of the published advertisement and the affidavit with the project management log.

(4) Be documented and a record maintained in the project management log that demonstrates compliance with the notification process. Documentation may be requested and must be provided within 48 Hours of a request.

(b) Maintain a project management log that contains:

(1) Information related to all off-site borrow sites, disposal areas, and staging areas that are off-site and meet the criteria listed in Appendix A (5)(B), including:

(A) The location of each activity.

(2) Information related to all project activities including, but not limited to:

(A) SMP reports.

(B) Regulatory inspections.

(C) Responses to a compliance action or enforcement action.

(D) Records showing the dates of all SWP3 modifications. The records must include the name of the person authorizing each change and a summary of all changes.

(c) Ensure the SWP3 and supporting documentation associated with the SMP and project management log are accessible at the project site office or in the possession of on-site individuals with responsibility for the overall project management or associated with the management and operations of construction activities. This information must be provided to IDEM or the inspecting authority within forty-eight (48) hours of a request.

3.8 General Performance Standards Applicable to Individual Residential Building Sites within a Permitted Project Area:

(a) The following general requirements apply to all individual building lots, where the individual lot operator/owner is working within a permitted project.

(1) All stormwater measures, including erosion and sediment control measures, necessary to comply with this permit must be implemented in accordance with the overall project construction plan and sufficient to satisfy 3.8(2)-(3).

(2) Provisions for erosion and sediment control and project management on individual building lots regulated under the overall project site permit must ensure:

(A) The individual lot operator (contractor/subcontractor), whether owning the property or acting as the agent of the individual lot owner, is responsible for erosion and sediment control requirements associated with activities on individual lots.

(B) Installation and maintenance of a stable construction site access, unless the site is to be accessed solely from impervious or similar non-erosive areas.

(C) Installation and maintenance of appropriate erosion and sediment control measures prior to land disturbance.

(D) Temporary stabilization is utilized on the building site, but not required during periods when accessibility to the building site is a necessity.

(E) Sediment discharges and tracking from each lot is minimized until permanent stabilization has been achieved.

(F) Sediment that is either tracked or discharged onto internal project site roads is removed by the end the same day. Clearing of sediment must not include flushing the area with water. Cleared sediment must be redistributed or disposed of in a manner that is in compliance with all applicable statutes and rules.

(G) Adjacent lots disturbed by an individual lot operator are required to be repaired and stabilized with permanent surface stabilization.

(H) Appropriate measures must be implemented to eliminate wastes or unused building materials including, but not limited to garbage, debris, cleaning wastes, wastewater, concrete or cementitious washout water, mortar/masonry products, soil stabilizers, lime stabilization materials, and other substances from being carried from the building site by run-off or wind. Wastes and unused building materials must be managed and disposed of in accordance with all applicable statutes and regulations.

(I) Construction and domestic waste must be managed to prevent the discharge of pollutants and windblown debris in accordance with 3.3 (a)(8).

(J) Demolition waste must be managed to prevent windblown debris and to protect water quality.

(K) Concrete and cementitious washout areas provided by the permittee of the overall project site are utilized unless a leak-proof containment system is operated on the building lot, or special arrangements are made to properly dispose of the wash water. Washout systems on individual lots are the responsibility of the individual lot operator and must be properly installed and maintained. Wash water must be managed by the individual lot operator and is not allowed to discharge.

(3) For individual residential lots, final stabilization meeting the criteria in Section 3.4(b)(1) of this permit will be achieved. The individual lot operator must:

(A) Complete final stabilization taking into account weather and season.

(B) Initiate permanent seeding with appropriately crimped or tackified mulch cover, erosion control blanket, sod; or

(C) Install appropriate and/or ensure functional erosion and sediment control measures are in place on the individual lot. Upon issuance of the certificate of occupancy and concurrence of the homeowner, the homeowner is responsible to maintain the sediment control measures until final stabilization has occurred.

3.9 Single Family Residences and Ponds that are not Part of a Larger Common Plan of Development or Sale must:

(a) Obtain permit coverage in accordance with Section 2.0.

(b) Comply with this permit and the general performance standards in this Section with the exception of 3.2 (a)(9), 3.6, and 3.8.

4.0 CONSTRUCTION/STORMWATER POLLUTION PREVENTION PLAN

The construction plan represents the overall project, including infrastructure and layout.

4.1 Plan Content

Develop a construction plan that includes a stormwater pollution prevention plan (SWP3) for both the construction and post-construction phases of the project. The SWP3 must be developed in accordance with this permit or where applicable the requirements of a MS4 ordinance. The SWP3 must be signed by a "trained individual" as defined in Appendix B.

(a) The construction plan must include:
- (1) An index indicating the location, in the construction plan, of all information required by this Section.
- (2) A vicinity map depicting the project site location in relationship to recognizable local landmarks, towns, and major roads.
- (3) A project narrative and supporting plan documents (documentation may be included on the plan sheets or in a separate document), which must include:
  - (A) A description of the nature and purpose of the project.
  - (B) A legal description of the project site. The description must include the legal section(s), or alternative land division(s), township and range.
  - (C) The latitude and longitude in decimal representation at:
    - 1) The approximate entrance to the project site that is obtaining permit coverage if the project is not linear.
    - 2) The beginning of the project site for linear projects.
  - (D) The size of the project area expressed in acres.
  - (E) The total expected land disturbance expressed in acres.
  - (F) Construction support activities that are expected to be part of the project.
  - (G) The soil properties, characteristics, limitations, and hazards associated with the project site and the measures that will be integrated into the project to overcome or minimize adverse soil conditions.
  - (H) The general construction sequence related to phasing of the project.
  - (I) A reduced plat or project site map that is submitted on a sheet or sheets no larger than eleven (11) inches by seventeen (17) inches for all phases or sections of the project site (multiple sheets may be submitted to meet this requirement) and includes:
    - 1) The boundaries of the project site as represented in the full construction plans and for which the notice of intent (NOI) will be submitted.

2) The boundaries of each phase, section, or other divisions of the project site associated with the construction activity.
3) When applicable, the lot numbers, lot boundaries, road layout, and road names.
4) A legend.

(J) The identification and location of all wetlands, lakes and water courses on or adjacent to the project site.

(K) The location of any in-stream activities that are planned for the project including, but not limited to stream crossings and pump arounds.

(L) The identification and status of any other state or federal water quality permits or authorizations that are required for construction activities associated with the project site. If the permit or authorization has not been obtained, provide the expected timeline for obtaining the permit or authorization.

(M) The Identification of a U.S. EPA approved or established TMDL, including the name of the TMDL and the pollutant(s) for which there is a TMDL.

(N) The Identification of discharges to a water on the current 303(d) list of impaired waters and the pollutant(s) for which it is impaired.

(4) An existing project site layout which must include:

(A) The identification of all wetlands, lakes, and water courses on, or adjacent to, the project site.

(B) The location of all existing structures on the project site.

(C) The boundaries of the one hundred (100) year floodplains, floodway fringes, and floodways.

(D) A soil map of the predominant soil types, as determined by the United States Department of Agriculture, Natural Resources Conservation Service (USDA, NRCS) Soil Survey, an equivalent publication, or as determined by a soil scientist. A soil legend must be included with the soil map.

(E) The identification and delineation of natural buffers and existing vegetative cover, such as crop or crop residue, grass, weeds, brush, and trees.

(F) The land use of all adjacent properties.

(G) The existing topography at a contour interval appropriate to indicate drainage patterns.

(H) The location(s) of where run-off enters the project site.

(I) The location(s) of where run-off discharges from the project site.

(5) The final project site layout which must include:

(A) The location of all proposed site improvements, including roads, utilities, lot delineation and identification, proposed structures, and common areas.
(B) The boundaries of one hundred (100) year floodplains, floodway fringes, and floodways.
(C) The proposed final topography at a contour interval appropriate to indicate drainage patterns.
(D) The boundaries of natural features or unique resource areas that will be left undisturbed or preserved including, but not limited to, wetlands, steep slopes, riparian corridors, and natural buffers.

(6) A grading plan which must include:
(A) A delineation of all proposed land-disturbing activities, including known off-site activities that will provide services to the project site.
(B) The location of all on-site soil stockpiles and borrow areas and, when known at the time of submittal, the location of all off-site borrow, soil stockpiles, and disposal areas.
(C) The existing and proposed topography.

(7) A drainage plan which must include:
(A) The location, size, and dimensions of all stormwater drainage systems, such as culverts, storm sewers, and conveyance channels.
(B) The locations of specific points where concentrated stormwater and non-stormwater discharges will leave the project site.
(C) The locations where stormwater may be directly discharged into ground water, such as abandoned wells, sinkholes, or karst features.
(D) The name(s) of the receiving water(s) and, when the discharge is to a system (storm sewer, stormwater management measure, etc.) owned/or operated by a municipality, city, town, or county, the name of the system operator and the ultimate receiving water.
(E) The location, size, and dimensions of features, such as existing permanent retention or detention facilities, including manmade wetlands, designed for the purpose of stormwater management.

(8) A SWP3 associated with construction activities. The plan must be designed and implemented to achieve the minimum performance requirements of Section 3.0 of this permit and must include:
(A) A description of the potential pollutant generating sources and pollutants, including all potential non-stormwater discharges listed in Section 1.2 (d) that are associated with the construction activities, which may reasonably be expected to contribute pollutants to stormwater discharges.

(B) The location, dimensions, detailed specifications, and construction details of all temporary and permanent stormwater quality measures, Including, but not limited to:
1) Erosion control measures;
2) Sediment control measures;
3) Perimeter control measures;
4) Run-off control measures;
5) Dewatering applications and management methods;
6) Measures utilized to cross water resources for the accessibility needed to perform construction;
7) Measures utilized to isolate or separate construction activities from work within waterbodies; and
8) Concrete and cementitious washout areas and management measures.

(C) Temporary stabilization and permanent stabilization plans, including the sequence of implementation planned to minimize the footprint of disturbed, unstable soil and the following information:
1) Specifications and application rates for soil amendments and seed mixtures.
2) The type and application rate for anchored mulch, erosion control blanket, and other appropriate stabilization options.

(D) For each temporary stormwater measure, a maintenance standard, including a threshold of when each requires corrective action and/or replacement with alternative measures.

(E) The planned construction sequence describing the relationship between implementation of stormwater quality measures, including temporary and permanent stabilization and stages of construction activities. The sequence must include the measures that will be implemented prior to land disturbance in a specific drainage area and those that will be implemented as construction progresses throughout the life of the project.

(F) The provisions for erosion and sediment control on individual building lots regulated under the permit.

(G) A material handling and spill prevention and spill response plan meeting the requirements in 327 IAC 2-6.1, including contact information for local emergency personnel and the IDEM Emergency Spill Line (888)233-7745 or (317)233-7745

(H) The material handling and storage procedures associated with construction activity describing the management and disposal of construction products and waste.

(9) A post-construction SWP3 is required for all projects with the exception of:

(A) Land-disturbing activities where there will be no additional impervious surfaces associated with the final completed project, including but not limited to, ditch construction/reconstruction and utility installation/maintenance activities.
(B) Single-family residential strip development offered for sale or lease without land improvements and the project is not part of a larger common plan of development or sale.
(C) Individual residential building lots within a permitted project site.
(D) Residential developments consisting of four (4) or fewer lot developments where the proposed impervious surfaces are 10% or less of the project acreage. Impervious is determined by the sum of all infrastructure (roads, paths, parking, etc.) and the average projects hard surfaces associated with all building lots within the project.
(E) Single family residences and private ponds that are not part of a larger common plan of development or sale.

(10) The post-construction SWP3 must meet, at a minimum, the performance requirements in Section 3.1 and 3.2 or where applicable local post-construction requirements. The plan must include:
(A) A description of potential pollutant generating sources and a list of pollutants from the proposed land use that may reasonably be expected to contribute pollutants to stormwater discharges.
(B) A description of stormwater quality and stormwater management measures that will be installed to address post-construction sources that are expected to generate pollutants in stormwater discharges after construction activities have been completed. The measures selected should achieve, at a minimum, the following objectives:
1) Stormwater quality measures that target pollutants of concern and are designed to remove or minimize pollutants from stormwater run-off that is associated with the final land use.
2) Stormwater quality measures that will be implemented to prevent or minimize adverse impacts to aquatic resources including, but not limited to, wetlands, streams, karst features, and riparian habitats.
3) Stormwater management measures that will address the potential impacts of increased run-off from the project. Measures must be designed and approved according to this permit or where applicable local requirements and drainage ordinances. A trained individual must approve that the design meets the applicable requirement(s).

4) Measures, including structural and those based on low impact development principles, selected to address the pollutant(s) of concern, reduction of peak flows, and ability to infiltrate.
5) Protective measures that will be implemented during active construction when the type of post-construction measure(s) planned are susceptible to pollutants, specifically sediment that may be generated during land-disturbing activities.

(C) The location, dimensions, detailed specifications, and construction details of all post-construction stormwater quality and stormwater management measures.

(D) A sequence describing when each post-construction stormwater measure will be installed in relation to project construction.

(E) An operation and maintenance manual that includes a description of the maintenance guidelines for all post-construction stormwater measures to facilitate their proper long-term function. This operation and maintenance manual must be provided to future parties who will assume responsibility for the operation and long-term maintenance of the post-construction stormwater measures.

(F) When known at the time of plan submittal, the entity that will be responsible for operation and maintenance of the post-construction system.

4.2 Plan Submittal

(a) For a project site where the proposed land disturbance is one (1) acre or more as determined under Section 2.0 of this permit, the following requirements apply:

(1) A construction plan, including the stormwater pollution prevention plan (SWP3) must be submitted prior to the initiation of any land-disturbing activities to the appropriate soil and water conservation district (SWCD), municipal separate storm sewer system (MS4), or, when directed, to IDEM for verification that the plan meets the minimum requirements of this permit or the applicable ordinance of a MS4.

(2) Project site owners of projects occurring outside of MS4 jurisdictional areas may request a single coordinated review through IDEM when the construction activity will occur in more than one (1) county.

4.3 Plan Review

(a) The construction/SWP3 review is based on the requirements of this permit and for projects within a MS4, the requirements as established by the MS4. The MS4 is responsible for plan reviews within their jurisdictional area.

(b) IDEM, SWCDs, or MS4s, may require plan modifications, terms, and conditions as necessary to meet the requirements of the permit and for a MS4, the local ordinance.

(c) A plan may be deemed deficient based any of the following:

(1) The plan does not meet the content requirements of Section 4.0 or MS4 requirements.

(2) The plan does not include provisions to avoid, adequately protect, or identify a wetland, state/federal jurisdictional water, or other natural feature and work activities are not feasible on other areas of the project site. Upon notification, the plan review is suspended until such time as the appropriate permits/authorizations are obtained or stormwater measures are planned to protect the resource feature.

(d) When the plan is determined to be deficient:

(1) When notification of a deficient plan is received, the plan must be modified to meet the requirements of this permit and/ a MS4 requirement and resubmitted prior to land disturbance.

(e) When the project site representative does not receive notification of plan review verification within:

(1) The review period as established by the MS4 a NOI may be submitted to IDEM provided documentation of the delivery date of the plan is included with the NOI submittal.

(2) Twenty-eight (28) days after the plan is received by the department or a SWCD reviewing on behalf of the department, a NOI may be submitted to IDEM, provided documentation of the delivery date of the plan is included with the NOI submittal.

4.4 Plan Modification

(a) Modifications to the construction and/or stormwater pollution prevention plan (SWP3) are required when:

(1) There are changes to the construction plan/SWP3, stormwater management measures, pollution prevention measures, off-site borrow and disposal areas, or other activities at the project site are no longer accurately reflected in the plan(s).

(2) Evaluations related to implementation of the self-monitoring program (SMP) or investigations by project management staff determine that SWP3 modifications are necessary for management of the project and compliance with this permit.

(3) IDEM and/or the inspecting authority upon finding reasonable cause determines that changes to the plan are necessary due to site conditions, inadequate minimization of pollution discharge, or project design changes.

(b) Modifications or revisions to the plans are only required to be submitted upon request. If requested, plans must be submitted to the appropriate entity within twenty-one (21) calendar days, or a later date determined by the inspecting authority of a request for a modification.

5.0 NOTICE OF INTENT (NOI)

5.1 NOI Requirement

A person seeking coverage under this permit must submit the appropriate notice of intent (NOI) for this specific general permit as provided by the commissioner. The NOI must be signed by a person who has the appropriate signatory authority as required by 40 CFR 122.22.

5.2 NOI Content

(a) The following information must be submitted by the project site owner with a complete notice of intent (NOI):

(1) The project site owner's name, address, telephone number, and email address.

(2) The ownership status associated with the project as defined by federal, state, county, municipal, private, or other entity.

(3) A contact person's (if different than project site owner), name, company name, address, email address, and telephone number.

(4) The NOI preparer's name, address, telephone number, and email address.

(5) The construction plan/stormwater pollution prevention plan preparer's, name, address, telephone number, and email address.

(6) Project site information, including:

(A) The name of the project as it appears on the construction plan and, when applicable, alternative names that may be associated with the project. The name must include the specific designations that are associated with the project and identified on the plans, including phases, sections, or other divisions

(B) When available, the street address of the project for which the NOI is being submitted or when not available a description of the location based on local landmarks (e.g., road, intersections).

(C) A brief description of the construction project, including a statement of the specific activity (clearing, grading, etc.) for which the NOI is being submitted and which corresponds to the scope of the construction plan that was submitted for the project site.

(D) The total acreage of the project site. This does not include future sections and/or phases that will be developed.

(E) The number of acres to be involved in the construction activities and disturbed. The disturbed acreage claimed in the NOI must be consistent with the acreage identified in the construction/stormwater pollution prevention plan. Permit coverage is only associated with the disturbed acreage and those areas where appropriate storm-water management measures are identified in the SWP3.

(F) The total impervious surface area, in square feet for the final project site including structures, roads, parking lots, and other similar improvements.

(G) The latitude and longitude in decimal representation at:

1) The approximate entrance to the project site if the project is not linear.

2) For linear projects the latitude and longitude for the beginning of the project.

(H) The estimated dates for initiation and completion of construction activities.

(7) The name(s) of the receiving water(s) and, when the discharge is to a system (storm sewer, stormwater management measure, etc.) owned/or operated by a municipality, city, town, or county, the name of the system operator and the ultimate receiving water.

(8) The Identification of a U.S. EPA approved or established TMDL.

(9) The Identification of discharges to a water on the current 303(d) list of impaired waters.

(10) As applicable, a list of all municipal separate storm sewer systems (MS4s) within which the project site lies or discharges to.

(11) Notification from IDEM, soil and water conservation district (SWCD), or MS4 (for projects regulated by a MS4) as the reviewing agency indicating that the construction/stormwater pollution prevention plan is sufficient to comply with this permit or the applicable ordinance of a MS4, including the name of the plan reviewer and the MS4 the reviewer represents.

(A) When the review was not completed within twenty-eight (28) days (this time frame may not apply to a MS4 conducting a plan review in accordance with a local ordinance), documentation of the delivery date of the plan to the reviewing agency is acceptable to meet this requirement.

(B) Verification of plan review of an acceptable plan may be used for a renewal NOI or for continuation of permit coverage provided the following conditions are met:

1) The original boundaries of the project are not being expanded by one (1) acre or more. Expansion beyond one (1) acre or more at the time of renewal will require new permit coverage for the project expansion.
2) The local MS4 or designated reviewing agency does not require a new review.

(12) A reduced plat or project site map that is submitted on a sheet or sheets no larger than eleven (11) inches by seventeen (17) inches for all phases or sections of the project site (multiple sheets may be submitted to meet this requirement) and includes:
- (A) The boundaries of each phase, section, or other divisions of the project site that is associated with the construction activity and as represented in the construction plans/stormwater pollution prevention plan.
- (B) When applicable, the lot numbers, lot boundaries, and road layout, and road names.
- (C) A legend.

(13) A written certification by the project site owner that:
- (A) The public has been notified of the intent to obtain stormwater construction permit coverage for land-disturbing activities utilizing one of the three options outlined in Section 3.7 (a).
- (B) A notice will be posted on the project site prior to land disturbance as required by Section 3.3 (a)(13).
- (C) The stormwater quality measures included in the stormwater pollution prevention plan comply with the requirements in Section 3.0 of this permit and that the plan complies with all applicable federal, state, and local stormwater requirements.
- (D) The measures required by Section 3.0 of this permit will be implemented in accordance with the stormwater pollution prevention plan (SWP3).
- (E) Stormwater quality measures beyond those specified in the SWP3 will be implemented during the life of the permit when necessary to comply with Section 3.0 of this permit.
- (F) Implementation of stormwater quality measures will be inspected by trained individuals.

5.3 Deadlines for NOI Submittal

After the project site owner has received notification from the reviewing agency that the construction plan/SWP3 meets the requirements of this permit and any applicable municipal separate storm sewer system (MS4) ordinance a complete NOI must be submitted to the commissioner.

(a) For a new project, the NOI must be submitted at least 48 hours prior to any land disturbance, or a discharge occurs.

(b) For a project that has existing, effective coverage under the former general permit rule (327 IAC 15-5), on the effective date of this general permit, the existing coverage shall automatically be extended, provided that the permittee takes one of the following actions within ninety (90) days following the date that the commissioner makes the NOI form available to the permittee.

(1) The project site owner submits a new NOI in accordance with this Section to affirm his/her intention to comply with the requirements of this general permit.

(2) The permittee submits a NOI - Continuation of Coverage, unless otherwise directed by the commissioner to submit a new NOI. By submitting a NOI - Continuation of Coverage, the permittee agrees to operate under the new general permit, including all applicable performance requirements. The effective dates for the project as established under the previous permit will remain in effect and must be renewed ninety (90) days prior to the established expiration date. Permittees that submit a NOI-Continuation of Coverage must comply with the construction stormwater general permit. Projects that are currently permitted under 327 IAC 15-5 were developed under specific requirements and it is not the intent of the department to require extensive modifications to the design elements. Following is a list of items that are applicable to a permittee applying for continuation of coverage.

(A) Section 3.0 Performance Standards including:

1) 3.0(a), 3.0(c), and 3.0(d)
2) 3.1(a)(1) through (4)
3) 3.2(a)(1) through 3.2(a)(6)
4) 3.3
5) 3.4
6) 3.5
7) 3.6
8) 3.7
9) 3.8.

(B) The construction/stormwater pollution prevention plan is not required to be updated for design elements that are listed in the construction stormwater general permit.

(C) The performance standards that apply to continuing coverage and are procedural may require modifications to operating procedures. The permittee must update their procedures within 30 days of applying for continuation of coverage.

(3) The permittee notifies IDEM in writing of its intent to terminate general permit coverage in accordance with Section 6.0 of this general permit; or

(4) The permittee submits an individual NPDES application or modification to IDEM for the existing discharge permitted by the former general permit rule. In such cases, the general permit coverage will remain in effect until the effective date of coverage under an individual NPDES permit.

(c) A copy of the completed NOI, once submitted to IDEM must also be submitted to the appropriate plan review agency (SWCD(s) and/or MS4(s)), where the land-disturbing activities are to occur.

5.4 NOI Renewal

(a) Coverage under this general permit is granted by the commissioner for a period of five (5) years from the date coverage commences.

(b) Once the five (5) year term duration is reached, coverage issued under this general permit will be considered expired, and, as necessary for construction activity continuation, a new NOI must be submitted in accordance with 5.3(b).

(c) To obtain renewal of coverage under this general permit, the information required under 5.2 must be submitted to the commissioner ninety (90) days prior to the termination of coverage under this general permit, unless the commissioner determines that a later date is acceptable.

5.5 NOI Amendments

(a) An amendment for coverage is required when:

(1) The name of the project has changed.

(2) The project personnel (individual representing the projects site owner and/or project contact) identified in the notice of intent have changed.

(3) The original boundaries of the project are being expanded and the total cumulative expansion is less than one (1) acre. Project expansion thresholds at one (1) acre and above require submittal of a new NOI and coverage under a new permit with the exception of the provision in (b) below.

(4) Land disturbance identified in the SWP3 and within the original project boundaries cumulatively expands less than one (1) acre.

(b) IDEM may grant an amendment for permit coverage based on a written request from the project site owner demonstrating extenuating circumstances that warrant an amendment to an existing permit in lieu of submitting a new NOI.

5.6 Submitting the NOI and Processing Fee

The NOI and all supporting documents must be submitted online through the Regulatory ePortal. Applicants are encouraged to pay the fee online per the instructions on the ePortal.

If an individual or entity does not have the ability to submit NOIs or NOTs electronically, the applicant/permittee may request an exemption from the

requirement which must include the justification of the inability to utilize an electronic filing system.

Submit hard copies to this address:
Indiana Department of Environmental Management
Office of Water Quality, Stormwater Program
100 North Senate Avenue
IGCN, Room 1255
Indianapolis, Indiana 46204-2251

5.7 NOI Review

When the NOI is determined to be deficient by IDEM, the project site owner or their representative must address the deficient items or submit an amended NOI to the department within fourteen (14) calendar days of receipt of the notification. Upon notification that a NOI is deficient, land disturbance may not commence.

6.0 NOTICE OF TERMINATION (NOT)

6.1 NOT Requirement

A permittee must request termination of coverage under this general permit when discharges of stormwater associated with the construction activity and land disturbance have ceased. In order to do so, the permittee must complete and submit a notice of termination (NOT) including a signature as required by 40 CFR 122.22.

6.2 NOT Content

(a) The notice of termination (NOT) must include:
   (1) The name of the project as it appeared on the notice of intent.
   (2) The NPDES permit number that was assigned to the project by IDEM.
   (3) The location of the project.
   (4) The acreage associated with the project as it appeared on the notice of intent or acceptable amendments.
   (5) The name of the permittee.
   (6) Permittee contact information, including the name of the company and/or corporation, when applicable, address, phone number, and email address.
   (7) Date the site was eligible for termination.
   (8) A certification statement acknowledging eligibility for termination, based on the appropriate requirements for the type of termination.
   (9) The date, if required, when verification was performed including a copy of the document. Verification by IDEM, a soil and water conservation district (SWCD), or municipal separate storm sewer system (MS4), is required when:

(A) It is a requirement of compliance, an agreed order, or an enforcement settlement.
(B) The project is within and regulated by a local MS4.

6.3 NOT Conditions

(a) The permittee must plan an orderly and timely termination of the construction activities, including the implementation of permanent stormwater management measures that are to remain on the project site.
(b) After a NOT has been received, maintenance of the remaining stormwater management measures will be the responsibility of the individual lot owner or occupier of the property, unless a contractual agreement exists for another entity such as a municipal separate storm sewer system (MS4) to take responsibility for the measures.
(c) Failure to maintain a post-construction stormwater quality measure that results in a violation of water quality standards, following project termination, may require the responsible entity that manages the measure to obtain permit coverage and/or implement a compliance plan to ensure long-term functionality of the measure.

6.4 Deadlines for NOT Submittal

(a) Where a project site has coverage under this general permit and the MS4 has regulatory authority for that project, the permittee must obtain verification of eligibility to terminate from the MS4 prior to submittal of the NOT.
(b) The permittee must submit a NOT to the department and a copy to the appropriate soil and water conservation district (SWCD) and/or MS4 in accordance with the following:
    (1) Except as provided (2) or (3) below, the permittee must submit a NOT when each of the following conditions have been met:
        (A) All land-disturbing activities, with the exception of activities identified in Section 3.4 (b)(1)(B), 3.4 (b)(1)(C), and 3.4 (b)(1)(D), including construction on all building lots, have been completed and the entire site has been stabilized.
        (B) All temporary erosion and sediment control measures have been removed.
        (C) All discharges of potential pollutants associated with active construction and pollutant-generating activities have ceased.
        (D) All construction materials, waste, waste handling devices, equipment and vehicles have been removed.
    (2) The permittee may be eligible to obtain early release from compliance with this permit when each of the following conditions are met:

(A) The project is a multi-lot development that includes residential building lots or out lots associated with a commercial/industrial project that is part of a larger common project that has permit coverage.

(B) All land-disturbing activities have been completed and the entire project site meets the performance criteria for final stabilization as required by 3.4(b), with the exception of individual residential building lots or commercial/industrial out lots that have active land disturbance at the time of the request to terminate.

(C) The remaining, undeveloped acreage does not exceed five (5) acres, with contiguous areas not exceeding one (1) acre (applies to residential projects only).

(D) A NOT is submitted with a map of the entire project site, clearly identifying all remaining undeveloped lots and acreage of each, including those under construction. The submittal must be accompanied by a list of names and addresses of individual lot owners or individual lot operators for each lot that is idle or currently being built upon.

(E) All public and common improvements, including infrastructure and common areas, have been completed and have been transferred to the appropriate local entity.

(F) All permanent post-construction stormwater management measures common to the overall development have been installed and are operational.

(G) The planned disturbance of remaining acreage does not pose a significant threat to the integrity of the infrastructure, adjacent properties, or water quality.

(H) Following acceptance of the NOT from IDEM for early release, the permittee must notify all current individual lot owners and all subsequent individual lot owners of the remaining undeveloped acreage and acreage with construction activity of the following:

1) The requirement to install and maintain appropriate erosion and sediment control measures to prevent sediment from leaving the individual building lot.
2) Their responsibility to maintain all erosion and sediment control measures that are to remain on-site.
3) Post-construction measures common to the overall project are not intended to be the primary construction site sediment control measure(s).
4) Permit coverage and the submittal of a NOI is required under the construction stormwater general permit, regardless of lot size for all commercial/industrial out lots.

5) Permit coverage and submittal of a NOI by the project site owner/operator of an individual residential lot is not required unless notified by IDEM.

(3) Change of Ownership under this permit must be made when the project is sold to a new owner or operator and the following occurs:

(A) The change of ownership is requested for portions of the site based on eligibility and concurrence of IDEM, when the following conditions are met:

1) The portion(s) of the project site being sold are specifically designated by section, phase, etc. that is represented on the plans and the active NOI.

(B) The seller notifies IDEM in advance of the proposed transfer date.

1) The seller must submit an amended NOI that reflects the change and indicates the portion(s) of the project site (section, phase, etc.) they are retaining, or

2) The seller must submit a NOT if they are transferring/selling the entire project site as identified in the original NOI to the buyer

(C) Stormwater measures required as part of the overall project and located within common areas of the project are operational and are under the control of the new owner(s).

(D) The new owner or operator certifies to IDEM their intent to operate the project site without making such material and substantial alterations or additions to the project as would significantly change the nature or quantities of pollutants discharged.

(E) The new owner or operator submits a new NOI before the transfer in accordance with the provisions of Section 5.0 of this permit.

(c) A permittee that requests termination and is found to be ineligible may be returned to permit coverage and/or subject to civil penalties.

7.0 ADDITIONAL REQUIREMENTS

7.1 Standard Conditions for General Permits

The following standard permit conditions are incorporated by reference, as applicable to general permits.

Standard Conditions	Federal Regulatory Cite
a) Duty to comply	40 CFR 122.41(a)
b) Duty to reapply	40 CFR 122.41(b)
c) Need to halt or reduce activity not a defense	40 CFR 122.41(c)
d) Duty to mitigate	40 CFR 122.41(d)
e) Proper operation and maintenance	40 CFR 122.41(e)

f) Permit actions	40 CFR 122.41(f)
g) Property rights	40 CFR 122.41(g)
h) Duty to provide information	40 CFR 122.41(h)
i) Inspection and entry	40 CFR 122.41(i)
j) Monitoring and records	40 CFR 122.41(j)
k) Signatory requirements	40 CFR 122.41(k)
l) Reporting requirements	40 CFR 122.41(l)
m) Bypass reporting	40 CFR 122.41(m)
n) Upset reporting	40 CFR 122.41(n)
o) Additional reporting requirement for existing manufacturing, commercial, mining, and silvicultural dischargers	40 CFR 122.42(a)

7.2 Planned Changes in Project or Discharge

The permittee must give notice to IDEM no later than thirty (30) days prior to the initiation of any physical alterations or additions to the permitted facility that will or may:

(a) result in a discharge from a point previously not identified in the NOI;
(b) result in the facility meeting one of the criteria for determining whether the facility is a new source as defined in 40 CFR 122.29(b);
(c) change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject either to performance standards in the general permit, or to notification requirements under 40 CFR 122.42(a)(1); or
(d) change the amount or frequency of the discharge.

Changes resulting in the addition (item (a) above) or deletion of a discharge point will necessitate the submission of a new NOI requesting this amendment, along with the appropriate fee in accordance with IC 13-18-20-12.

7.3 Other Information

When the permittee becomes aware of a failure to submit any relevant facts or the submission of incorrect information in an NOI or any report, the permittee must promptly submit such facts and/or corrected information to the commissioner.

The permittee must promptly provide to IDEM written notice of any changes to items listed on the NOI. These would include:

(a) any changes in contacts or responsible party;
(b) any changes to addresses- mailing address or email address- for any contact or responsible party;
(c) any changes to telephone numbers for any contact person or responsible party,

(d) any changes involving the person or position with delegated signature authority for any forms or reports required by this general permit as set forth in Section 5.4 and 5.5 of this general permit.

7.4 Effect of Noncompliance

All discharges must be consistent with the terms and conditions of this general permit. Any noncompliance constitutes a violation of applicable State and Federal laws, the Clean Water Act and IC 13 and is grounds for enforcement action, termination of coverage under the permit, requirement of an individual permit, and/or denial of permit coverage renewal.

When IDEM or the U.S. EPA determines that the performance standards contained in Section 3.0 of this general permit are not being met consistently, or that the discharge is causing or contributing to an excursion above any applicable water quality standard, the permittee may be notified by the commissioner in writing that an individual permit application is necessary.

7.5 Reporting Spills and Noncompliance

The permittee must monitor for, identify, and report to IDEM any adverse incidents (including spills and leaks) which reach any surface water of the state. When the permittee observes or is otherwise made aware of any permit noncompliance or any adverse incident that may have resulted from a discharge from the permitted facility, the permittee must notify the IDEM Spill Line at (888) 233-7745 or (317) 233-7745.

7.6 Individual or Alternative General NPDES Permit

(a) IDEM may require a person to obtain an individual NPDES permit or an alternative general permit in accordance with the provisions of 327 IAC 15-2-9 or 40 CFR 122.28(b)(3).

(b) Any discharger authorized for coverage under this general permit may apply for coverage under an individual NPDES permit by submitting an individual NPDES application or modification to IDEM.

7.7 Records Retention

All records and information must be retained by the permittee for a minimum of three (3) years. All records must be kept by the permittee in such a manner that the reports will be readily available for IDEM compliance staff review. The three-year retention requirement will be extended:

(a) automatically during the course of any litigation regarding the discharge of pollutants by the permittee or regarding promulgated effluent guidelines applicable to the permittee; or

(b) as requested by the Regional Administrator of U.S. EPA or the commissioner.

7.8 Reopening Clause

(a) This general permit may be modified, or alternately, revoked and reissued, after public notice and opportunity for hearing to include any applicable effluent limitation or standard issued or approved under 301(b)(2)(C), (D) and (E), 304 (b)(2), and 307(a)(2) of the Clean Water Act, when the effluent limitation or standard so issued or approved:
   (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
   (2) controls any pollutant not limited in the permit.

(b) When this general permit is modified or revoked and reissued all persons regulated under it will be notified by IDEM. Those persons notified under this Section must, within one hundred twenty (120) days of the receipt of notification:
   (1) submit a complete NOI containing the information required under the modified or reissued permit; or
   (2) apply for an individual NPDES permit.; or
   (3) submit a notice of termination (NOT) of discharge.

7.9 State and Local Laws

Coverage under this permit does not preempt any duty to obtain any other state, or local assent required by law for the discharge or for the construction or operation of the facility from which a discharge is made. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation or the Clean Water Act, as amended.

Appendix A:
Clarification of land-disturbing activities and the applicability to obtain permit coverage.

(a) Specific activities will require permit coverage and notice of intent (NOI) based on land disturbance. Other land-disturbing activities will require compliance with conditions of this permit or may allow land-disturbing operations to occur under an existing permit for the overall development. These activities are defined below and apply to:
   (1) An individual lot operator of a residential lot within a multi-lot project site with permit coverage is required to:
      (A) Develop a lot specific stormwater pollution prevention plan (SWP3). Where site characteristics are similar, one SWP3 may be developed for multiple lots. The SWP3 must be developed in accordance with Section 3.8 and any applicable requirements of a MS4.
      (B) Complete a Construction Stormwater Residential Development Registration form certifying their intent to comply with the Construction General Permit and where applicable the MS4 local ordinance. The Construction Stormwater Residential Development Registration certification must:
         1) Include the permittee of the overall residential development contact information, project name, permit number, and signature.
         2) Include the individual lot operator, contact information, and building lot or lots(s), and signature.
         3) Be maintained at each individual building lot.
      (C) A NOI for the land disturbance on a lot or multiple lots within a project site is not required unless notified by the department that:
         1) The site characteristics dictates the need for separate permit coverage.
         2) A compliance issue has been identified for a specific individual lot operator or lot owner.
         3) The original permittee is no longer available and land-disturbing activities on individual lots necessitate permit coverage.
   (2) A single-family residential lot (not part of a multi-lot project) must obtain permit coverage if the projected land disturbance is one (1.0) acre or more.
   (3) Off-site construction activities with a projected land disturbance of one (1) acre or more that provide services (for example, road extensions, sewer, water, and other utilities) to a permitted project site when the activity is not under the control of the project site permittee must obtain permit coverage.
   (4) Residential strip developments are considered multi-lot projects and are required to obtain permit coverage. To determine applicability of coverage the following options apply.

(A) When improvements are made to the property in preparation for development and the total projected land disturbance for the entire development, including each building lot is one (1) acre or more based on the calculation in Appendix A (a)(c), the individual lot operator must obtain permit coverage. Upon sale of the individual lots, the permittee must notify each individual lot owner and/or individual lot operator of the requirements of this permit specifically Appendix A (1)(A) and (B).

(B) The individual that owns the parcels of platted lots does not make improvements and only sells the lots is not required to obtain permit coverage. Upon sale of the lots, the lot operator of one or more lots must obtain permit coverage and must develop a lot specific stormwater pollution prevention plan (SWP3). Where site characteristics are similar, one SWP3 may be developed for multiple lots. The SWP3 must be developed in accordance with Section 3.8 and any applicable requirements of a MS4.

(5) Project site access roads and borrow, disposal, and soil stockpile areas that are associated with a permitted project and are located off the permitted site, must utilize the following criteria to determine if permit coverage is required:

(A) When the activities are located off-site and at a site or facility that has an NPDES permit that addresses stormwater run-off, the project site owner does not have to obtain permit coverage.

(B) When the off-site area is associated with an active construction stormwater permit and is owned and/or operated by the permittee, a new construction stormwater general permit is not required, provided the area(s) have been identified in the original construction plans and the acreage has been identified in the notice of intent (NOI).

(C) When activities are located at an off-site property and is operated by the contractor, the contractor must obtain permit coverage.

(D) When the contractor/project site owner offers for sale or transport to another location or delivers material and does not manipulate and/or place the material as part of an activity to construct or distribute for a specific purpose, the entity or property owner in receipt of the material must obtain permit coverage provided the operation meets the disturbance thresholds of this permit.

(E) When the operation is an independent activity for the purpose of selling/providing soil material the activity requires permit coverage provided the operation meets the land disturbance thresholds of this permit.

(6) Land-disturbing activities for the construction of the following agricultural operations must obtain permit coverage:
- (A) Barns.
- (B) Buildings to house livestock.
- (C) Roads associated with infrastructure.
- (D) Agricultural waste lagoons and other facilities.
- (E) Lake, ponds and impoundments.
- (F) Wetlands constructed voluntarily or as mitigation.
- (G) Other infrastructure.

(7) Utility projects that will result in land disturbances equal to or greater than one (1) acre must obtain permit coverage. Calculation of land disturbance must include an estimation for staging areas, new access roads, and the area necessary to work on a pole or junction.
- (A) Land disturbance does not include:
  1) Vehicle travel between distinct areas through agricultural land that is in row crop production.
  2) Sections covered by protective mat (timber or synthetic materials) that will be restored to pre-construction land use.
- (B) For projects that are not required to obtain permit coverage, appropriate storm-water management measures must be implemented on site to protect waters of the state

(8) Facilities that have an industrial stormwater general permit or an individual permit that includes stormwater requirements must utilize the following criteria to determine if construction stormwater permit coverage is required from the department.
- (A) Land disturbances of one (1) acre or more that are planned or projected, require the facility to obtain coverage under this permit.
- (B) Land disturbances of less than one (1) acre that are to occur in a twelve-month period do not require the facility obtain separate coverage under this permit, however the facility is required to modify the facility's industrial stormwater pollution prevention plan prior to land disturbance. The modification to the plan must:
  1) Meet the intent of this permit and address all pollutants, including sediment that is associated with the land disturbance.
  2) Document when land disturbance for each activity is initiated.

(C) When incremental land-disturbing activities are planned or occur within the existing facility boundaries identified in the industrial permit for the facility which will cumulatively result in one (1) acre or more disturbance in a twelve (12) month period (the 12 months is based on the first initiation of land disturbance), coverage under this permit will be required in accordance with the following:

1) When the projected acreage of the incremental disturbance is known prior to initiation of construction, the facility operator is required to obtain permit coverage.
2) When the projected acreage of the incremental disturbance is not known at the time of the first initiation of land disturbance, the facility operator is required to obtain permit coverage for the final activity that meets or exceeds the one (1) acre threshold regardless of the acreage size.

(b) Land disturbance associated with off-road recreational commercial operations require permit coverage for initial land-disturbing activities or expansion of an existing operation of one (1) acre or more. The following provisions apply to these facilities and their operations:

(1) Off-road recreational facilities must maintain all post-construction measures, including sediment control measures that are designed to capture sediment from the final established track layout at the time of termination of permit coverage.
(2) Discharges of sediment or other pollutants once operations commence, may require continued permit coverage or a new permit.

(c) Land disturbance on a multi-lot project must be calculated by adding the total area of land disturbance for improvements, such as roads, utilities, or common areas, and the expected total disturbance on each individual lot. The expected land disturbance for an individual lot must be calculated for:

(1) A single-family residential project site where the lot(s) are one-half (0.5) acre or more in total size, as one-half (0.5) acre of land disturbance.
(2) A single-family residential project site where the lot(s) are less than one-half (0.5) acre in size, as the actual lot size.
(3) All other types of project sites, such as industrial and commercial project sites, as a minimum of one (1) acre for all lots regardless of size.

Appendix B
Definitions:

The following definitions are specific to this permit.

(1) "Agricultural conservation practices" means practices that are constructed on agricultural land for the purposes of controlling soil erosion and sedimentation. These practices include, but are not limited to grass waterways, sediment basins, terraces, and grade stabilization structures.
(2) "Agricultural land-disturbing activity" means tillage, planting, cultivation, or harvesting operations for the production of agricultural or nursery vegetative crops. The term also includes pasture renovation and establishment, the construction of agricultural conservation practices, and the installation and maintenance of agricultural subsurface drainage tile.
(3) "Borrow area" means areas where materials are excavated for use as fill.
(4) "Business day" means Monday through Friday excluding holidays.
(5) "Cementitious wash water" means water that may contain a slurry of cement fines resulting from the cleaning of tools, and equipment used in the delivery, mixing, handling and working of materials that contain cement and has the properties of cement such as high pH and containing toxic metals and is often associated with materials such as mortar, plaster, stucco, and grout.
(6) "Commissioner" refers to the commissioner of the department.
(7) "Concrete washout" means the rinsing of chutes, pumps, curb and paving machines, hoppers, wheelbarrows, hand tools and any other equipment that are used to handle concrete, mortar, stucco, grout or other mixtures of cement. Concrete washout water is a wastewater slurry containing cementitious materials, metals and is caustic or corrosive, having a high pH.
(8) "Construction activity" means land-disturbing activities and land-disturbing activities associated with the construction of infrastructure and structures. This term does not include routine ditch or road maintenance or minor landscaping projects.
(9) "Construction site access" means a stabilized stone surface at all points of ingress or egress to a project site for the purpose of capturing and detaining sediment carried by tires of vehicles or other equipment entering or exiting the project site.
(10) "Construction support activity" means an activity that specifically supports the project and involves land disturbance and/or activities that may result in pollutant generating activities on their own. These activities include but are not limited to concrete or asphalt batch plants, staging areas, material storage areas, disposal sites, and soil stockpile areas.
(11) "Construction waste" means discarded materials including packaging materials, electrical cuttings, plastics, styrofoam, and scrap construction materials including, shingles, timber, steel, and pipe.

(12) "Contractor" or "subcontractor" means an individual or company hired by the project site or individual lot owner, their agent, or the individual lot operator to perform services on the project site.

(13) "Conveyance" means combination of drainage components that are used to convey stormwater discharge, either within or downstream of the land-disturbing activity including:

a) Manmade stormwater conveyance system" means a pipe, ditch, vegetated swale, or other stormwater conveyance system constructed by man except for restored stormwater conveyance systems;

b) Natural stormwater conveyance system" means the main channel of a natural stream and the flood-prone area adjacent to the main channel; or

c) Restored stormwater conveyance system means a stormwater conveyance system that has been designed and constructed using natural channel design concepts. Restored stormwater conveyance systems include the main channel and the flood-prone area adjacent to the main channel.

(14) "Debrushing" means controlling and removing woody vegetation with no or minimal disturbance of soil.

(15) "Demolition" means solid waste resulting from the demolition of buildings and other structures, including, but not limited to, wood, plaster, metals, asphaltic substances, bricks, block and unsegregated concrete.

(16) "Department" refers to the department of environmental management.

(17) "Developer" means:

a) any person financially responsible for construction activity; or

b) an owner of property who sells or leases, or offers for sale or lease, any lots in a multiple lot project.

(18) "Dewatering" means the act of draining rainwater and/or ground water from excavations, stormwater measures, building foundations, vaults, and trenches.

(19) "Ditch maintenance" means to restore a conveyance system to its originally constructed channel capacity and to perform the function for which it was originally constructed as defined in IC 36-9-27. Maintenance includes:

a) cleaning (removal of accumulated sediments, de-brushing, and mowing),

b) spraying,

c) removing obstructions,

d) conducting minor repairs

(20) "Domestic waste" means typical household trash, garbage or rubbish.

(21) "Erosion" means the detachment and movement of soil, sediment, or rock fragments by water, wind, ice, or gravity.

(22) "Erosion and sediment control measure" means a practice, or a combination of practices, to control erosion and resulting sedimentation.

(23) "Erosion and sediment control system" means the use of appropriate erosion, run-off, and sediment control measures to minimize sedimentation by first reducing or eliminating erosion at the source and then, as necessary, trapping sediment to prevent it from being discharged.
(24) "Equivalent" means producing or achieving similar results and performance.
(25) "Filter strip" means an area of undisturbed or planted vegetation used to retard or collect sediment for the protection of watercourses, reservoirs, or adjacent properties.
(26) "Grading" means the cutting and filling of the land surface to a desired slope or elevation.
(27) "Green Infrastructure" means an approach to water management that protects, restores, or mimics the natural water cycle.
(28) "Impaired water" means any waterbody included on IDEM's current 303(d) list.
(29) "Impervious surface" means any land surface with a low or no capacity for soil infiltration, including, but not limited to pavement (sidewalks, streets, parking areas, and driveways), packed gravel or soil, and rooftops.
(30) "Individual building lot" means a single parcel of land within a multi-parcel development.
(31) "Individual lot operator" means a builder, contractor or subcontractor working on an individual lot.
(32) "Individual lot owner" means a person who has a financial interest in the construction activities for an individual lot.
(33) "Infeasible" means not technologically possible, or not economically practicable and achievable in light of best industry practices
(34) "Infiltration" means the process by which surface water enters the soil and recharges streams, lakes, rivers, and underground aquifers. Stormwater infiltration is a fundamental component of the water cycle and is a centerpiece of stormwater management strategies.
(35) "Inspection authority" means the department or other entity designated by the department to administer this permit or develop a local stormwater program.
(36) "Land-disturbing activity" means any manmade change of the land surface including, but not limited to removing vegetative cover that exposes the underlying soil, excavating, filling, and grading.
(37) "Landscape maintenance" means soil disturbance, excluding grading, cutting or filling, that is associated with killing existing vegetation to restore a lawn, seedbed preparation for establishing new lawns or planting sod, applying landscape mulch, or planting ornamental shrubs, trees, or other plantings.

(38) "Larger common plan of development or sale" means a plan, undertaken by a single project site owner or a group of project site owners acting in concert, to offer lots for sale or lease; where such land is contiguous, or is known, designated, purchased or advertised as a common unit or by a common name, such land must be presumed as being offered for sale or lease as part of a larger common plan. The term also includes phased or other construction activity by a single entity for its own use.

(39) "Low Impact Development (LID)" means systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater in order to protect water quality and associated aquatic habitat.

(40) "Measurable storm event" means a precipitation event that results in a total measured precipitation accumulation equal to, or greater than, one-half (0.5) inch of rainfall, unless otherwise specified as a condition of this permit. A measureable storm event excludes an accumulated snow event.

(41) "Natural buffer" means an existing (prior to land disturbance) undisturbed area adjacent to or surrounding surface waters within which construction activity is restricted.

(42) "Natural Vegetation" means "vegetation that occurs spontaneously without regular management and/or maintenance. This definition also includes mitigation sites.

(43) "Non-stormwater discharges" means discharges that do not originate from storm events. These discharges include, but are not limited to process water, air conditioner condensate, non-contact cooling water, sanitary waste, concrete washout water, paint wash water, irrigation water, or pipe testing water.

(44) "Off road" means an operation or facility that is designed for vehicular recreational use.

(45) "Permittee" means the individual or entity required to obtain a permit coverage as defined by Project Site Owner.

(46) "Phasing" means sequential development of smaller portions of a large project site, stabilizing each portion before beginning land disturbance on subsequent portions, to minimize exposure of disturbed land to erosion.

(47) "Plan review agency" means an entity that is authorized to evaluate the completeness and requirements of a plan including the department and other entity designated by department including a MS4 or SWCD.

(48) "Project site" means the entire area on which construction activity is to be performed.

(49) "Project site owner/operator" means the person required to submit the NOI letter and required to comply with the terms of this permit, including either of the following:
   a) A developer.
   b) A person or entity that has financial and operational control of construction activities and project plans and specifications, including the authority to approve expenditure of funds and ability to make modifications to plans and specifications.

(50) "Regulatory authority" means the department or other entity designated by the department to administer this permit or develop a local stormwater program. The definition as used in this permit may also include local law enforcement.

(51) "Run-off" means water that originates during a precipitation event and flows over the land rather than infiltrating into the ground or evaporating

(52) "Run-on" means sources of stormwater that drain from land located upslope or upstream of a permitted project site.

(53) "Sediment" means solid material (both mineral and organic) that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface.

(54) "Sedimentation" means the settling and accumulation of unconsolidated sediment carried by stormwater run-off.

(55) "Seepage" means the slow escape of a liquid or gas through porous materials or small holes

(56) "Silvicultural" means the practice of controlling the establishment, growth, composition, health, and quality of forests to meet diverse needs and values.
   a) Nonpoint activities that do not require permit coverage include source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or logging road construction and maintenance from which there is natural run-off. Some of these activities (such as stream crossing for roads) may involve the placement of dredged or fill material which may require a CWA section 404 permit and a 401 Water Quality Certification.
   b) Point source activities, subject to permit coverage include any discernible, confined and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into waters of the United States or the State.

(57) "Soil" means the unconsolidated mineral and organic material on the surface of the earth that serves as the natural medium for the growth of plants.

(58) Soil and Water Conservation District" or "SWCD" means a political subdivision established under IC 14-32.

(59) "Steep slope" means slopes that are 1:3 (V:H) or 33.3 percent or steeper in grade.

(60) "Stormwater management measure" means a practice or a combination of practices selected to improve the quality of run-off discharges, divert run-off, or mitigate the impacts related to quantity of run-off.
(61) "Stormwater quality measure" means a practice, or a combination of practices, to control or minimize pollutants associated with stormwater run-off.
(62) "Strip development" means a multi-lot project where building lots front on an existing road and are not part of a larger common plan of development or sale.
(63) "Stormwater pollution prevention plan" means a plan developed to minimize the impact of stormwater pollutants resulting from construction activities.
(64) "Stormwater quality measure" means a practice, or a combination of practices, to control or minimize pollutants associated with stormwater run-off.
(65) "Total Maximum Daily Load" or "TMDL means" A Total Maximum Daily Load (TMDL) is a regulatory term in the U.S. Clean Water Act, describing a plan for restoring impaired waters that identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards
(66) "Trained individual" means an individual who is trained and experienced in the principles of stormwater management, including erosion and sediment control as is demonstrated by completion of coursework, state registration, professional certification, or annual training that enable the individual to make judgments regarding stormwater management, treatment, and monitoring.
(67) "Treat" means improving the stormwater run-off quality, reducing run-off volume, reducing peak flow, or any combination thereof.
(68) "Water Quality Flow (WQF)" means the peak flow associated with the water quality volume calculated using the Natural Resources Conservation Service graphical peak discharge method.
(69) "Water Quality Volume (WQV)" means the volume of run-off generated by one inch of rainfall on a site.

APPENDIX B

CERTIFICATION PAGES

APPENDIX C

PROPERTY SPECIFIC INFORMATION, CONSTRUCTION PLANS AND DETAILS

- **PROPERTY LEGAL DESCRIPTIONS & ALTA/NSPS LAND TITLE SURVEY**
- **PROPERTY'S USDA WEB SOIL SURVEY REPORT**
- **CONSTRUCTION PLAN SET**

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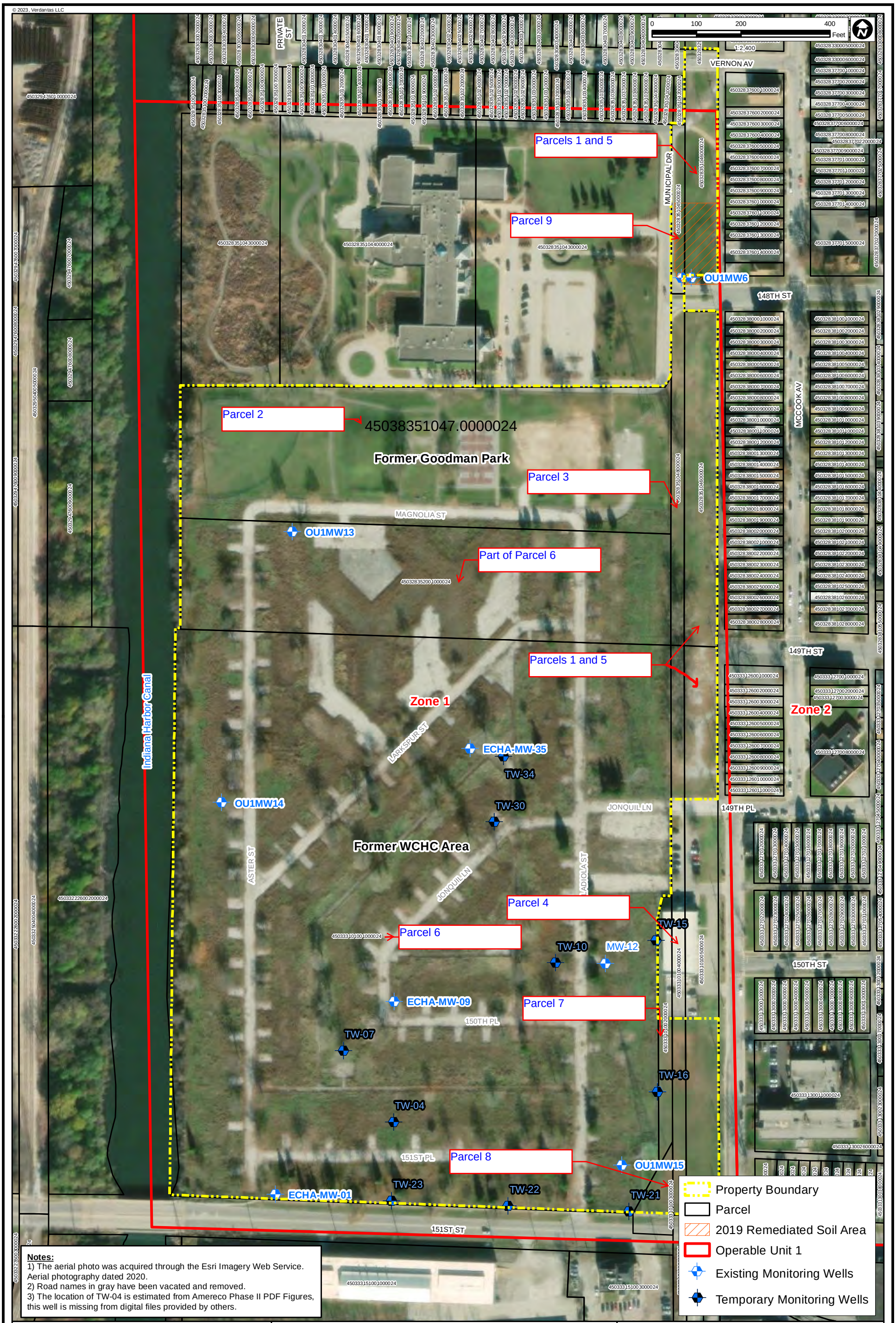

Notes:
1) The aerial photo was acquired through the Esri Imagery Web Service. Aerial photography dated 2020.
2) Road names in gray have been vacated and removed.
3) The location of TW-04 is estimated from Amereco Phase II PDF Figures, this well is missing from digital files provided by others.

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April 2023

Storm Water Pollution Prevention Plan
OU1, Modified Zone 1, USS Lead Superfund Site

Site Map

East Chicago, Lake County, Indiana

Figure 1

IDA Legal Descriptions

Parcels 1 and 5:

Vesting: East Chicago Housing Authority

Split from Tax Parcel Numbers 45-03-28-351-046.000-024 and 45-03-33-101-005.000-024

Part of the Southwest Quarter of Section 28, Township 37 North, Range 9 West of the Second Principal Meridian and Part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian in Lake County, Indiana, more particularly described as follows: Commencing at the Southeast corner of Block 4, Subdivision of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, in the City of East Chicago, as shown in Plat Book 4, page 4, in the Recorder's Office of Lake County, Indiana; thence North along the East line of said Block 4 and said line extended to the South right of way line of Chicago Avenue; thence East along said South line, a distance of 75 feet; thence South along a line that is 75 feet distant and parallel to the West line of this described tract to the North right of way line of 151st Street; thence West 75 feet to a point on the East line of said Block 4 that is 45 feet North of the point of commencement, excepting therefrom the North 266 feet;

Also excepting that part lying within the following described parcel of land:

That part of Block 4, as marked and laid down on the recorded Plat of Subdivision of part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, situated in the City of East Chicago, Lake County, Indiana along with part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, Lake County, Indiana described as follows:

Commencing at the point of intersection of the southerly line of said Block 4 (being also the center line of 151st Street as dedicated) with a line parallel to and 30,000 feet westerly of the east line of said Block 4 (said east line being also the west line of the 75.0 foot right of way conveyed to Chicago and Calumet Terminal Transfer Railway Company by the deed dated April 2, 1890 and recorded in Deed Record 49, page 375, in the Recorder’s Office of Lake County, Indiana); thence running northerly on said parallel line a distance of 755.0 feet to the Point of Beginning; thence running westerly at right angles to said parallel line 20.0 feet; thence southwesterly a distance of 51.20 feet more or less, to a point in a line 31.0 feet distant, westerly form said parallel line and 50.0 feet south of the north line of this parcel of real estate extended westerly; thence running south and parallel to said parallel line a distance of 234.00 feet; thence running easterly at right angles to said parallel line a distance of 136.00 feet to a line 75.00 feet distant and parallel to the east line of said Block 4; thence running northerly on said parallel line a distance of 512.00 feet; thence running westerly at right angles to said parallel line a distance of 105.00 feet to a line parallel to and 30.00 feet westerly of the east line of said Block 4; thence running south on said parallel line a distance of 228.0 feet to the Point of Beginning, in Lake County, Indiana.

Parcel 2:

Vesting: City of East Chicago for the use and benefit of its Department of Parks and Recreation

Tax Parcel Number 45-03-28-351-047.000-024

All that part of Block 13, Subdivision of the Southwest Quarter of Section 28, Township 37 North, Range 9 West of the 2nd P.M. in the City of East Chicago, Lake County, Indiana, as shown in Plat Book 2, page 25, in the Office of the Recorder of Lake County, Indiana;

EXCEPTING THEREFROM: The East 30 feet thereof;

ALSO EXCEPTING THEREFROM: Beginning at a point 100 feet East of the West Line of Section 28, which point is the Northwest corner of Block 13; thence Easterly and along the North Line of Block 13, a distance of 1,102 feet; thence Southerly and along a line 30 feet West of and parallel to the Easterly Line of said Block 13, a distance of 186.6 feet; thence Southwesterly (South 29° 44' 30" West) a distance of 27.01 feet; thence Westerly and parallel to the North Line of

Block 13, a distance of 1,088.4 feet; thence Northerly and parallel to the West Line of Section 23, a distance of 210.0 feet; to the point of beginning;

ALSO EXCEPTING THEREFROM: Commencing at the Southwest corner of Block 13, thence Northerly on and upon the West Line of said Block 13 a distance of 250.25 feet; thence Easterly parallel to the South Line of said Block 13 a distance of 125.07 feet; thence Northerly parallel to the West Line of said Block 13 a distance of 60.00 feet; thence Easterly parallel to the South Line of said Block 13 a distance of 913.34 feet; thence Southerly parallel to the East Line of said Block 13 a distance of 60.00 feet; thence Easterly parallel to the South Line of said Block 13 a distance of 163.11 feet to a line parallel to and 30 feet West of the East Line of said Block 13; thence Southerly parallel to said East Line of Block 13 a distance of 250.25 feet to the South Line of said Block 13; thence Westerly on and upon the said South Line of Block 13 a distance of 1,102.3 feet to the place of commencement.

Parcel 3:

Vesting: East Chicago Housing Authority

Tax Parcel Number 45-03-28-351-048.000-024

The East 30 feet of Block 13, Subdivision of the Southwest Quarter of Section 28, Township 37 North, Range 9 West of the Second Principal Meridian, in the City of East Chicago, as per plat thereof, recorded in Plat Book 2, page 25, in the Office of the Recorder of Lake County, Indiana.

Parcel 4:

Vesting: East Chicago Housing Authority

Split from Tax Parcel Number 45-03-33-101-004.000-024

The East 30 feet of Block 4, (except the South 45 feet thereof) Subdivision of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, in the City of East Chicago, as per plat thereof, recorded in Plat Book 4, page 4, in the Office of the Recorder of Lake County, Indiana;

Also excepting that part lying within the following described parcel of land:

That part of Block 4, as marked and laid down on the recorded Plat of Subdivision of part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, situated in the City of East Chicago, Lake County, Indiana along with part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, Lake County, Indiana described as follows:

Commencing at the point of intersection of the southerly line of said Block 4 (being also the center line of 151st Street as dedicated) with a line parallel to and 30,000 feet westerly of the east line of said Block 4 (said east line being also the west line of the 75.0 foot right of way conveyed to Chicago and Calumet Terminal Transfer Railway Company by the deed dated April 2, 1890 and recorded in Deed Record 49, page 375, in the Recorder's Office of Lake County, Indiana); thence running northerly on said parallel line a distance of 755.0 feet to the Point of Beginning; thence running westerly at right angles to said parallel line 20.0 feet; thence southwesterly a distance of 51.20 feet more or less, to a point in a line 31.0 feet distant, westerly form said parallel line and 50.0 feet south of the north line of this parcel of real estate extended westerly; thence running south and parallel to said parallel line a distance of 234.00 feet; thence running easterly at right angles to said parallel line a distance of 136.00 feet to a line 75.00 feet distant and parallel to the east line of said Block 4; thence running northerly on said parallel line a distance of 512.00 feet; thence running westerly at right angles to said parallel line a distance of 105.00 feet to a line parallel to and 30.00 feet westerly of the east line of said Block 4; thence running south on said parallel line a distance of 228.0 feet to the Point of Beginning, in Lake County, Indiana.

Parcel 6:

Vesting: The City of East Chicago Housing Authority

Tax Parcel Number 45-03-33-101-001.000-024

All of Block 4, Subdivision of part of the Northwest Quarter of Section 33, Township 37 North, Range 9 west of the 2nd P.M. in the City of East Chicago, as per plat thereof, recorded in Plat Book 4, Page 4, in the Office of the Recorder of Lake County, Indiana, excepting the East 30 feet, also excepting that part conveyed to Goldschmidt Detinning Company by Warranty Deed dated 11-14-11 and recorded 11-18-11 in Deed Record 174, pages 391 and 392, and also excepting therefrom that part conveyed to Metal and Thermit Corporation by deed dated 11-6-62 and recorded 11-15-62 in Deed Record 1219, Page 528.

And: Commencing at the Southwest corner of Block 13, Subdivision of the Southwest Quarter of Section 28, Township 37 North, Range 9 West of the 2nd P.M. in the City of East Chicago, Indiana, as shown in Plat Book 2, Page 25, in Lake County, Indiana: thence Northerly on and upon the West line of said Block 13 a distance of 250.25 feet; thence Easterly parallel to the South line of said Block 13 a distance of 125.07 feet; thence Northerly parallel to the West line of said Block 13 a distance of 60.00 feet; thence Easterly parallel to the South line of said Block 13 a distance of 813.34 feet; thence Southerly parallel to the East line of said Block 13 a distance of 60.00 feet; thence Easterly parallel to the South line of said Block 13 a distance of 163.11 feet to a line parallel to and 30 feet West of the East line of said Block 13; thence Southerly parallel to said East line of Block 13 a distance of 250.25 feet to the South line of said Block 13; thence Westerly on and upon the said South line of Block 13 a distance of 1102.3 feet to the place of commencement.

Parcel 7:

Vesting: City of East Chicago

Split from Tax Parcel Number 45-03-33-101-002.000-024

That part of Block 4, as marked and laid down on the recorded plat of a Subdivision of part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, situated in the City of East Chicago, Lake County, Indiana described as follows: Beginning at the point of intersection of the Southerly line of said Block 4 (being also the center line of 151st Street as dedicated) with a line parallel to and 30.0 feet Westerly of the East line of said Block 4 (said East line being also the West line of the 75.0 foot right of way conveyed to the Chicago and Calumet Terminal Transfer Railway Company by Deed Dated April 2, 1890, and recorded in Deed Record 49, page 375, in the Recorder's Office of Lake County, Indiana); thence running Northerly on said parallel line a distance of 205.0 feet to a point, which point shall be the starting point of this description; thence running Northerly on said parallel line a distance of 550.0 feet to a point; thence running Westerly at right angles to said parallel line 20.0 feet: thence Southwesterly a distance of 51.20 feet, more or less, to a point in a line 31.0 feet distant, Westerly from said parallel line and 50.0 feet South of the North line of this parcel of real estate extended Westerly; thence running South and parallel to said parallel line a distance of 553.63 feet, more or less, to the Northwesterly side of the tract of land conveyed by Deed of East Chicago Company to Goldsmith Detinning Company, dated November 14, 1911, and recorded in Deed Record 174, page 391, in the Recorder's Office of Lake County. Indiana; thence running Northeasterly along the Northwesterly line of said tract, 62.15 feet, more or less, to the point of beginning, in Lake County, Indiana;

Excepting that part lying within the following described parcel of land:

That part of Block 4, as marked and laid down on the recorded Plat of Subdivision of part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, situated in the City of East Chicago, Lake County, Indiana along with part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, Lake County, Indiana described as follows:

Commencing at the point of intersection of the southerly line of said Block 4 (being also the center line of 151st Street as dedicated) with a line parallel to and 30,000 feet westerly of the east line of said Block 4 (said east line being also the west line of the 75.0 foot right of way conveyed to Chicago and Calumet Terminal Transfer Railway Company by the deed dated April 2, 1890 and recorded in Deed Record 49, page 375, in the Recorder’s Office of Lake County, Indiana); thence

running northerly on said parallel line a distance of 755.0 feet to the Point of Beginning; thence running westerly at right angles to said parallel line 20.0 feet; thence southwesterly a distance of 51.20 feet more or less, to a point in a line 31.0 feet distant, westerly form said parallel line and 50.0 feet south of the north line of this parcel of real estate extended westerly; thence running south and parallel to said parallel line a distance of 234.00 feet; thence running easterly at right angles to said parallel line a distance of 136.00 feet to a line 75.00 feet distant and parallel to the east line of said Block 4; thence running northerly on said parallel line a distance of 512.00 feet; thence running westerly at right angles to said parallel line a distance of 105.00 feet to a line parallel to and 30.00 feet westerly of the east line of said Block 4; thence running south on said parallel line a distance of 228.0 feet to the Point of Beginning, in Lake County, Indiana.

Parcel 8:

Vesting: City of East Chicago

Tax Parcel Number 45-03-33-101-003.000-024

That part of Block 4 in a Subdivision of part of the Northwest Quarter of Section 33, Township 37 North. Range 9 West of the 2nd Principal Meridian, in the city of East Chicago, as per plat thereof, recorded in Plat Book 4, page 4, in the Office of the Recorder of Lake County, Indiana, described as follows: Beginning at the point of intersection of the Southerly line of said Block 4 (being also the center line of 151st Street as dedicated) with a line parallel with and 30 feet Westerly of the East Line of said Block 4 (said East line being also the West line of the 75 foot right of way conveyed to the Chicago and Calumet Terminal Transfer Railway Company by Deed dated April 2, 1890); thence Northerly on said parallel line 205 feet; thence Southwesterly on a straight line 180.33 to a point in the Northerly line of 151st Street, 90 feet distant Westerly measured along said North line from its intersection with the line described as parallel with and 30 feet Westerly of the East line of said Block 4; thence Southerly parallel with said East line 45 feet to the center line of 151st Street, Thence Easterly on said center line 90 feet to the place of beginning, in Lake County, Indiana.

Parcel 9:

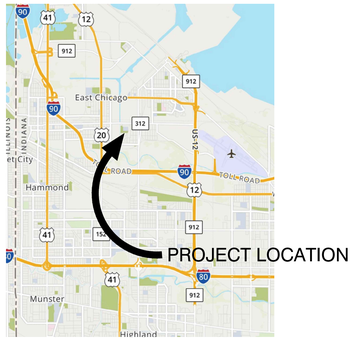
Vesting: East Chicago Housing Authority

Tax Parcel Number 45-03-28-351-045.000-024

The East 30 feet of Lot 37, Block 12, Subdivision of the Southwest Quarter of Section 28, Township 37 North, Range 9 West of the Second Principal Meridian, in the City of East Chicago, as per plat thereof, recorded in Plat Book 2, page 25, in the Office of the Recorder of Lake County, Indiana.

ALTA/NSPS LAND TITLE SURVEY

of



Legal Description

Parcels 1 and 5:

Part of the Southwest Quarter of Section 28, Township 37 North, Range 9 West of the Second Principal Meridian and Part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian in Lake County, Indiana, more particularly described as follows:

Commencing at the southeast corner of Block 4, Subdivision of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, in the City of East Chicago, as shown in Plat Book 4, Page 4, in the Recorder's Office of Lake County, Indiana; thence north along the east line of said Block 4 and said line extended to the south right of way line of Chicago Avenue; thence east along said south line, a distance of 75 feet; thence south along a line that is 75 feet distant and parallel to the west line of this described tract to the north right of way line of 151st Street; thence west 75 feet to a point on the east line of said Block 4 that is 45 feet north of the Point of Commencement, excepting therefrom the north 266 feet.

Also excepting that part lying within the following described parcel of land:

That part of Block 4, as marked and laid down on the recorded Plat of Subdivision of part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, situated in the City of East Chicago, Lake County, Indiana along with part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, Lake County, Indiana described as follows:

Commencing at the point of intersection of the southerly line of said Block 4 (being also the center line of 151st Street as dedicated) with a line parallel to and 30.00 feet westerly of the east line of said Block 4 (said east line being also the west line of the 75.0 foot right of way conveyed to the Chicago and Calumet Terminal Transfer Railway Company by deed dated April 2, 1890 and recorded in Deed Record 49, Page 375, in the Recorder's Office of Lake County, Indiana); thence running northerly on said parallel line a distance of 755.0 feet to the Point of Beginning; thence running westerly at right angles to said parallel line 20.0 feet; thence southwesterly a distance of 51.20 feet more or less, to a point in a line 31.0 feet distant, westerly from said parallel line and 50.0 feet south of the north line of this parcel of real estate extended westerly; thence running south and parallel to said parallel line a distance of 234.00 feet; thence running easterly at right angles to said parallel line a distance of 136.00 feet to a line 75.00 feet distant and parallel to the east line of said Block 4; thence running northerly on said parallel line a distance of 512.00 feet; thence running westerly at right angles to said parallel line a distance of 105.00 feet to a line parallel to and 30.00 feet westerly of the east line of said Block 4; thence running south on said parallel line a distance of 228.00 feet to the Point of Beginning, in Lake County, Indiana.

Parcel 2:

All that part of Block 13, Subdivision of the Southwest Quarter of Section 28, Township 37 North, Range 9 West of the Second Principal Meridian in the City of East Chicago, Lake County, Indiana, as shown in Plat Book 2, Page 25 in Lake County, Indiana

Excepting therefrom:

The east 30 feet thereof;

Also excepting therefrom:

Beginning at a point 100 feet east of the west line of Section 28, which point is the northwest corner of Block 13; thence easterly and along the north Line of Block 13, a distance of 1102 feet; thence southerly and along a line 30 feet west of and parallel to the easterly line of said Block 13, a distance of 186.6 feet; thence southwesterly (South 29 degrees 44 minutes 30 seconds West) a distance of 27.01 feet; thence westerly and parallel to the north Line of Block 13, a distance of 1088.4 feet; thence northerly and parallel to the west line of Section 23, a distance of 210.0 feet to the Point of Beginning;

Also excepting therefrom:

Commencing at the southwest corner of Block 13, thence northerly on and upon the west line of said Block 13 a distance of 250.25 feet; thence easterly parallel to the south line of said Block 13 a distance of 125.07 feet; thence northerly parallel to the west line of said Block 13 a distance of 60.00 feet; thence easterly parallel to the south line of said Block 13 a distance of 813.34 feet (corrected from 913.34 feet); thence southerly parallel to the east line of said Block 13 a distance of 60.00 feet; thence easterly parallel to the south line of said Block 13 a distance of 163.11 feet to a line parallel to and 30 feet west of the east line of said Block 13; thence southerly parallel to said east line of Block 13 a distance of 250.25 feet to the south line of said Block 13; thence westerly on and upon the said south line of Block 13 a distance of 1102.3 feet to the Place of Commencement.

Parcel 3:

The east 30 feet of Block 13, Subdivision of the Southwest Quarter of Section 28, Township 37 North, Range 9 West of the Second Principal Meridian, in the City of East Chicago, as per plat thereof, recorded in Plat Book 2, Page 25, in the Office of the Recorder of Lake County, Indiana.

Parcel 4:

The east 30 feet of Block 4, (except the south 45 feet thereof) Subdivision of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, in the City of East Chicago, as per plat thereof, recorded in Plat Book 4, Page 4, in the Office of the Recorder of Lake County, Indiana.

Also excepting that part lying within the following described parcel of land:

That part of Block 4, as marked and laid down on the recorded Plat of Subdivision of part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, situated in the City of East Chicago, Lake County, Indiana along with part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, Lake County, Indiana described as follows:

Commencing at the point of intersection of the southerly line of said Block 4 (being also the center line of 151st Street as dedicated) with a line parallel to and 30.00 feet westerly of the east line of said Block 4 (said east line being also the west line of the 75.0 foot right of way conveyed to the Chicago and Calumet Terminal Transfer Railway Company by deed dated April 2, 1890 and recorded in Deed Record 49, Page 375, in the Recorder's Office of Lake County, Indiana); thence running northerly on said parallel line a distance of 755.0 feet to the Point of Beginning; thence running westerly at right angles to said parallel line 20.0 feet; thence southwesterly a distance of 51.20 feet more or less, to a point in a line 31.0 feet distant, westerly from said parallel line and 50.0 feet south of the north line of this parcel of real estate extended westerly; thence running south and parallel to said parallel line a distance of 234.00 feet; thence running easterly at right angles to said parallel line a distance of 136.00 feet to a line 75.00 feet distant and parallel to the east line of said Block 4; thence running northerly on said parallel line a distance of 512.00 feet; thence running westerly at right angles to said parallel line a distance of 105.00 feet to a line parallel to and 30.00 feet westerly of the east line of said Block 4; thence running south on said parallel line a distance of 228.00 feet to the Point of Beginning, in Lake County, Indiana.

Parcel 5 (see prior description above with Parcel 1):

Parcel 6:

All of Block 4, Subdivision of part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian in the City of East Chicago, as per plat thereof, recorded in Plat Book 4, Page 4, in the Office of the Recorder of Lake County, Indiana

Excepting therefrom:

The east 30 feet thereof:

Also excepting therefrom:

That part conveyed to Goldschmidt Detinning Company by Warranty Deed dated November 14, 1911 and recorded November 18, 1911 in Deed Record 174, Page 391 and 392;

And also excepting therefrom:

That part conveyed to Metal and Thermit Corporation by deed dated November 6, 1962 and recorded November 15, 1962 in Deed Record 1219, Page 528.

And also the following:

Commencing at the southwest corner of Block 13, Subdivision of the Southwest Quarter of Section 28, Township 37 North, Range 9 West of the Second Principal Meridian in the City of East Chicago, Indiana, as shown in Plat Book 2, Page 25, in Lake County, Indiana; thence northerly on and upon the west line of said Block 13 a distance of 250.25 feet; thence easterly parallel to the south line of said Block 13 a distance of 125.07 feet; thence northerly parallel to the west line of said Block 13 a distance of 60.00 feet; thence easterly parallel to the south line of said Block 13 a distance of 813.34 feet; thence southerly parallel to the east line of said Block 13 a distance of 60.00 feet; thence easterly parallel to the south line of said Block 13 a distance of 163.11 feet to a line parallel to and 30 feet west of the east line of said Block 13 a distance of 250.25 feet to the south line of said Block 13; thence westerly on and upon the said south line of Block 13 a distance of 1102.3 feet to the Place of Commencement.

Parcel 7:

That part of Block 4, as marked and laid down on the recorded Plat of Subdivision of part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, situated in the City of East Chicago, Lake County, Indiana described as follows: Beginning at the point of intersection of the southerly line of said Block 4 (being also the center line of 151st Street as dedicated) with a line parallel to and 30.00 feet westerly of the east line of said Block 4 (said east line being also the west line of the 75.0 foot right of way conveyed to the Chicago and Calumet Terminal Transfer Railway Company by deed dated April 2, 1890 and recorded in Deed Record 49, Page 375, in the Recorder's Office of Lake County, Indiana); thence running northerly on said parallel line a distance of 205.0 feet to a point, which point shall be the starting point of this description; thence running northerly on said parallel line a distance of 550.0 feet to a point; thence running westerly at right angles to said parallel line 20.0 feet; thence southwesterly a distance of 51.20 feet more or less, to a point in a line 31.0 feet distant, westerly from said parallel line and 50.0 feet south of the north line of this parcel of real estate extended westerly; thence running south and parallel to said parallel line a distance of 553.63 feet, more or less, to the northwesterly side of the tract of land conveyed by deed of East Chicago Company to Goldsmith Detinning Company, dated November 14, 1911 and recorded in Deed Record 174, Page 391, in the Recorder's Office of Lake County, Indiana; thence running northeasterly along the northwesterly line of said tract, 62.15 feet more or less, to the Point of Beginning, in Lake County, Indiana.

Excepting that part lying within the following described parcel of land:

That part of Block 4, as marked and laid down on the recorded Plat of Subdivision of part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, situated in the City of East Chicago, Lake County, Indiana along with part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the Second Principal Meridian, Lake County, Indiana described as follows:

Commencing at the point of intersection of the southerly line of said Block 4 (being also the center line of 151st Street as dedicated) with a line parallel to and 30.00 feet westerly of the east line of said Block 4 (said east line being also the west line of the 75.0 foot right of way conveyed to the Chicago and Calumet Terminal Transfer Railway Company by deed dated April 2, 1890 and recorded in Deed Record 49, Page 375, in the Recorder's Office of Lake County, Indiana); thence running northerly on said parallel line a distance of 755.0 feet to the Point of Beginning; thence running westerly at right angles to said parallel line 20.0 feet; thence southwesterly a distance of 51.20 feet more or less, to a point in a line 31.0 feet distant, westerly from said parallel line and 50.0 feet south of the north line of this parcel of real estate extended westerly; thence running south and parallel to said parallel line a distance of 234.00 feet; thence running easterly at right angles to said parallel line a distance of 136.00 feet to a line 75.00 feet distant and parallel to the east line of said Block 4; thence running northerly on said parallel line a distance of 512.00 feet; thence running westerly at right angles to said parallel line a distance of 105.00 feet to a line parallel to and 30.00 feet westerly of the east line of said Block 4; thence running south on said parallel line a distance of 228.00 feet to the Point of Beginning, in Lake County, Indiana.

Parcel 8:

That part of Block 4 in a subdivision of part of the Northwest Quarter of Section 33, Township 37 North, Range 9 West of the 2nd Principal Meridian, in the City of East Chicago, as per plat thereof recorded in Plat Book 4, Page 4, in the Office of the Recorder of Lake County, Indiana, described as follows: Beginning at the point of intersection of the southerly line of said Block 4 (being also the center line of 151st Street as dedicated) with a line parallel with and 30 feet westerly of the east line of said Block 4 (said east line being also the west line of the 75 foot right of way conveyed to the Chicago and Calumet Terminal Transfer Railway Company by deed dated April 2, 1890); thence northerly on said parallel line 205 feet; thence southwesterly on a straight line 180.33 feet to a point in the northerly line of 151st Street, 90 feet distant westerly measured along said north line from its intersection with the line described as parallel with and 30 feet westerly of the east line of said Block 4; thence southerly parallel with said east line 45 feet to the center line of 151st Street; thence easterly on said center line 90 feet, to the Place of Beginning, in Lake County, Indiana.

Parcel 9:

The east 30 feet of Lot 37, Block 12, Subdivision of the Southwest Quarter of Section 28, Township 37 North, Range 9 West of the Second Principal Meridian, in the City of East Chicago, as per plat thereof, recorded in Plat Book 2, Page 25, in the Office of the Recorder of Lake County, Indiana.

Excepting therefrom the north 269.4 feet thereof platted as Ladd and Smith's Addition to the City of East Chicago, Lake County, Indiana, recorded in Plat Book 6, Page 22, in the Office of the Recorder of Lake County Indiana.

N

SCALE 1" = 50'

Documents Reviewed

- Commitment for Title Insurance issued by Fidelity National Title Company, LLC Order Number FNW2000863 Revision 2, with an effective date of March 25, 2022
- ALTA/NSPS Land Title Survey prepared by Torrenga Surveying LLC, John Stuart Allen, filed for record January 13, 2017 as Document Number 2017 002663 in Survey Plat Book 29 Page 57, Lake County, Indiana Recorder
- ALTA/NSPS Land Title Survey prepared by Torrenga Surveying LLC, John Stuart Allen, filed for record March 30, 2017 as Document Number 2017 020231 in Survey Plat Book 29 Page 83,Lake County, Indiana Recorder
- Andrew Simko's Addition to the City of East Chicago, filed for record August 1907 in Plat Book 6 Page 44, Lake County, Indiana Recorder
- Part of East Chicago Indiana, filed for record in Plat Book 4 Page 4, Lake County, Indiana Recorder
- East Chicago Land Association Addition to East Chicago, filed for record April 22, 1909 in Plat Book 8 Page 16, Lake County, Indiana Recorder
- L. C. Smith Addition to East Chicago, filed for record September 10, 1925, in Plat Book 18 Page 29, Lake County, Indiana Recorder
- Ladd and Smith's Addition to City of East Chicago, filed for record January 2, 1907, in Plat Book 6 Page 22, Lake County, Indiana Recorder
- Part of East Chicago, filed for record June 2, 1890, Plat Book 2, Page 25, Lake County, Indiana Recorder
- Peto's Addition, filed for record Plat Book 6 Page 12, Lake County, Indiana Recorder
- Plat of U.S Reduction Company's Block - "A" filed for record Plat Book 23 Page 64, Lake County, Indiana Recorder
- ALTA/ACSM Land Title Survey prepared by Mahlon J. Plumb filed for record June 24, 1992, in Survey Plat Book 1 Page 45, Lake County, Indiana Recorder
- Subdivision of Lot 13, Block 8, in the Subdivision of the Southwest Quarter of Section 28, Township 37 North, Range 9 West of 2nd Principal Meridian, filed for record July 5, 1907, Plat Book 6 Page 37, Lake County, Indiana Recorder
- Warranty Deed dated November 14, 1911 recorded November 18, 1911 in Deed Record 174, Pages 391 and 392
- Warranty Deed dated November 6, 1962 recorded November 15, 1962 Deed Record 1219, Pages 528 through 530
- Grant of Easement by the Calumet Canal & Improvement Company dated May 31, 1890 and filed for record June 25 ,1890 Book 7 Page 360; modification of agreement recorded February 4, 1910 in Record Book 157, Page 112; assignment of agreement recorded March 27, 1941 in Book 329, Page 98
- Right of Way Easement recorded November 7, 1961 as Document Number 365318, Book 816, Page 294
- Right of Way Contract recorded March 6, 2003 as Document Number 2003 023672
- Warranty Deed recorded April 1, 1955 in Book 991, Pages 505 through 508
- Right of Way Easement recorded November 8, 1961, Book 816, Pages 297 through 299
- Assignment and Conveyance by BP Pipelines (North America) to BP River Rouge Pipeline Company, LLC recorded July 11, 2017 as Document Number 2017 042119
- Grant of Easement to Northern Indiana Public Service Company, recorded September 27, 1946 as Document Number 243910, in Book 452 Pages 617 through 623
- Grant of Easement to Northern Indiana Public Service Company, recorded June 22, 1971 as Document Number 104673
- Warranty Deed recorded March 24, 1949 as Document Number 392316 in Deed Record Book 834 Page 118 and 119
- Warranty Deed recorded December 12, 1946 as Document Number 255851 in Deed Record Book 770 Pages 1 through 3
- Warranty Deed recorded November 9, 1946 as Document Number 251016 in Deed Record Book 767 Pages 135 and 141
- Deed of Dedication for public highway recorded May 28, 1960 as Document Number 256301 in Deed Record Book 1144, Pages 390 through 393
- Grant of Easement to Northern Indiana Public Service Company recorded July 19, 1963 as Document Number 495652 in Miscellaneous Record Book 1239, Pages 565 through 570
- Various United States Public Land Survey System (USPLSS) section corner and quarter section monument records available from the Lake County Surveyor's Office.

Degree of Precision & Accuracy:

The results of this survey conform to the standards for an Urban Survey or 0.07 feet ±50ppm

Physical Possession:

Visible physical evidence encountered and observed at the time of the field site visit is depicted upon the hereon drawn plat and the positional relationship of the physical evidence encountered and observed is noted in relationship to the lines of the survey as drawn hereon.

Surveyor's Report:

This is a retracement survey of land held in title by East Chicago Housing Authority (Parcels 1, 3, 4, 5 and 9), The City of East Chicago Housing Authority (Parcel 6), City of East Chicago (Parcels 7 and 8), City of East Chicago for the use and benefit of its Department of Parks and Recreation (Parcel 2). The survey is conducted for Industrial Development Advantage of East Chicago, LLC, an Indiana limited liability company for the purpose of defining the limits of the real estate and determining to what extent any matters of record impact the real estate described hereon as well as to show any physical evidence of matters potentially affecting the real estate described hereon.

The boundary of the parcels of land depicted hereon were established based upon the following theory of location. Monuments that were called for on ALTA survey prepared by John Stuart Allen recorded as Doc. No. 2017-002663 were located and held for the southerly boundary of this survey. The north line of said ALTA survey is purportedly the south line of Block 4 of this survey.

Very limited monuments were found in Block 12 in Part of East Chicago Book 2 Page 25. Using this limited number of monuments together with utilization of the physical occupation of the streets in the East Chicago Land Association Subdivision Book 8 Page 16, the northern limits of this survey was developed. Block 4 in East Chicago Book 4 Page 4 and Blocks 12 and 13 in East Chicago Book 2 Page 25 were calculated by apportionment and appear to agree substantially with the record dimensional data.

The following discrepancies are noted:

Section lines have been shown and noted based on monuments found based upon Section Corner records available through the Office of the Lake County Surveyor. No record was available for the southwest corner of Section 28, Township 37 North, Range 9 West, also being the northwest corner of Section 33, Township 37 North, Range 9 West. This corner was calculated double proportionate measurements from the information available on the government township plat.

Section lines have been also noted based upon various recorded subdivision plat references. The north line of Block 4 in East Chicago Book 4 Page 4 is called for as the north line of Section 33, Township 37 North, Range 9 West The south line of Block 13 in East Chicago Book 2 Page 25 is called for as the South line of Section 28, Township 37 North, Range 9 West. The center line of 149th Street in East Chicago Land Association Addition Book 8 Page 16 is called for as the north line of Section 33, Township 37 North, Range 9 West and the south line of Section 28, Township 37 North, Range 9 West.

The uncertainty due to the position of the found monuments as related to the boundaries of the parcel as established is as indicated at various locations where monuments were found and could be as much as ±2.00 feet.

The uncertainties associated with the legal descriptions for the real estate herein described are negligible, at best, and do not appear to create any ambiguities.

The uncertainties due to the position of found monuments is noted in relationship to the established lines of the survey where the monuments are available.

As to the Optional Items from Table A:

Item 1: Monuments placed or found shown upon the hereon drawn plat are relative to previous survey dated August 31, 2020, finding 5/8" (#5) diameter steel reinforcing rods with green plastic caps bearing the name and license number of the issuing Indiana professional land surveyor. Where the (#5) diameter steel reinforcing rods could not be found, other suitable semi-permanent monuments were placed as noted.
Item 2: Address(es) of the surveyed property was not provided to or observed by the surveyor during the site visit of the survey.
Item 3: A portion of the surveyed property appears to be located in Zone AE; The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights), Zone AE (Special flood hazard areas subject inundation by the 1% annual chance flood where base flood elevations are determined), Zone X (Other flood areas; Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood), and Zone X (Areas determined to be outside of the 0.2% annual chance floodplain. The areas located within Zone AE (Floodway Areas in Zone AE) and Zone AE are primarily located along the northern and western boundary of Parcel 2 and along the western boundary of Parcel 6 as depicted hereon. These areas are adjacent to the Indiana Harbor Canal. This is as indicated on Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency for Lake County, Indiana and incorporated areas, panel 38 of 480 Map Number 18089C0038E, panel 39 of 480 Map Number 18089C0039E, panel 126 of 480 Map Number 18089C0126E, and panel 127 of 480 Map Number 18089C0127E, all with community number 180130 (City of East Chicago), all with an effective date of January 18, 2012. Subject to the uncertainties due to the scale of the FIRMs as well as the uncertainties due to scaling from the FIRMs.
Item 4: The land area described in the title description for the surveyed property is 2,288,644 square feet or 52.540 acres more or less.
Item 7a: No buildings were observed on the subject property in the process of conducting the fieldwork.
Item 8: Substantial features that were observed in the process of conducting the fieldwork have been indicated upon the hereon drawn plat
Item 11: The location of utilities existing on or serving the surveyed property have been indicated upon the hereon drawn plat pursuant only to Section 5.E.iv (evidence on or above the surface of the surveyed property observed in the process of conducting fieldwork). No plans were provided to or obtained by the surveyor from utility companies indicating evidence of utilities on the surveyed property. No markings were provided to or requested by the surveyor pursuant to an 811 utility locate or similar request. Utility markings indicated hereon were found during the normal course of the fieldwork being conducted. Please note the location of several pipeline markers that are located in areas where no documentation was provided indicating the existence of easements.
Item 13: Adjacent owner information is based upon available tax assessment records for Lake County, Indiana
Item 14: The property is bounded generally by 151st Street on the south and on the west by the Indiana Harbor Canal. Other streets are shown in proximity to the real estate described hereon.

As to items from Schedule B of Title Commitment from Fidelity National Title Insurance Company Order Number FNW2000863 Revision 2 effective date March 25, 2022:

Part I

Items 1 through 17 do not appear to be matters related to the survey as drawn hereon.

Part II

Item 1: visible evidence encountered during the site visit for the survey of parties potentially in possession of a portion of the real estate described hereon has been depicted where possible
Item 2: visible evidence encountered during the site visit for the survey of easements or claims of easements affecting the real estate described hereon and not shown by the public records has been depicted where possible
Item 3: visible evidence encountered during the site visit for the survey of potential encroachments, violations, variations, or adverse circumstances affecting the title of the real estate described hereon has been depicted where possible
Item 4 through 20: do not appear to be matters related to the survey as drawn hereon
Item 21: visible evidence encountered during the site visit for the survey of potential rights of the public, the State of Indiana and/or the municipality, and others entitled thereto in and to that part of the land taken and used for road purposes has been depicted where possible except in the vicinity of 148th Street where this was omitted
Item 22: visible evidence encountered during the site visit for the survey of potential rights of way for drainage tiles, ditches, feeders and laterals has been depicted where possible
Item 23: intentionally deleted no response made
Item 24: property that does not lie within the limits of this survey
Item 25: intentionally deleted no response made
Item 26: document provided does not contain a legal description and could not be delineated upon the survey drawn hereon
Item 27: easement has been delineated and noted hereon
Item 28: easement affects Parcel 2 & 6, however, there is no defined location as easement is to be 7.5 feet on either side of utilities as installed
Item 29: easement appears to potentially impact real estate lying north of what is identified as Parcel 2; but may impact that portion of Parcel 1, 3 and 5 in the vicinity of 148th Street; legal description does not provide finite as to the eastern limits as it only describes a "manhole" in the "center" of 148th Street without providing dimensions or widths for easement
Item 30: dedication for public highway has been delineated and noted hereon
Item 31: intentionally deleted no response made
Item 32: intentionally deleted no response made
Item 33: easement is for air rights only and has been noted hereon and affects Parcel 7 and Parcel 8
Item 34 and 35: do not appear to be matters related to the survey as drawn hereon

To:

East Chicago Housing Authority
The City of East Chicago Housing Authority
City of East Chicago
City of East Chicago for the use and benefit of its Department of Parks and Recreation
Industrial Development Advantage of East Chicago, LLC, an Indiana limited liability company
Fidelity National Title Company, LLC
Harris Law Firm, PC

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 7, 8, 11(pursuant only to Section 5.E.iv), 13 and 14 of Table A thereof. The fieldwork was completed on July 1, 2022.

Randell E. Gann
Indiana Registered Land Surveyor #LS29600023
Expires July 31, 2024

RANDELL E. GANN REGISTERED NO. LS 29600023 STATE OF INDIANA LAND SURVEYOR

This plat dated July 11, 2022

Notes:

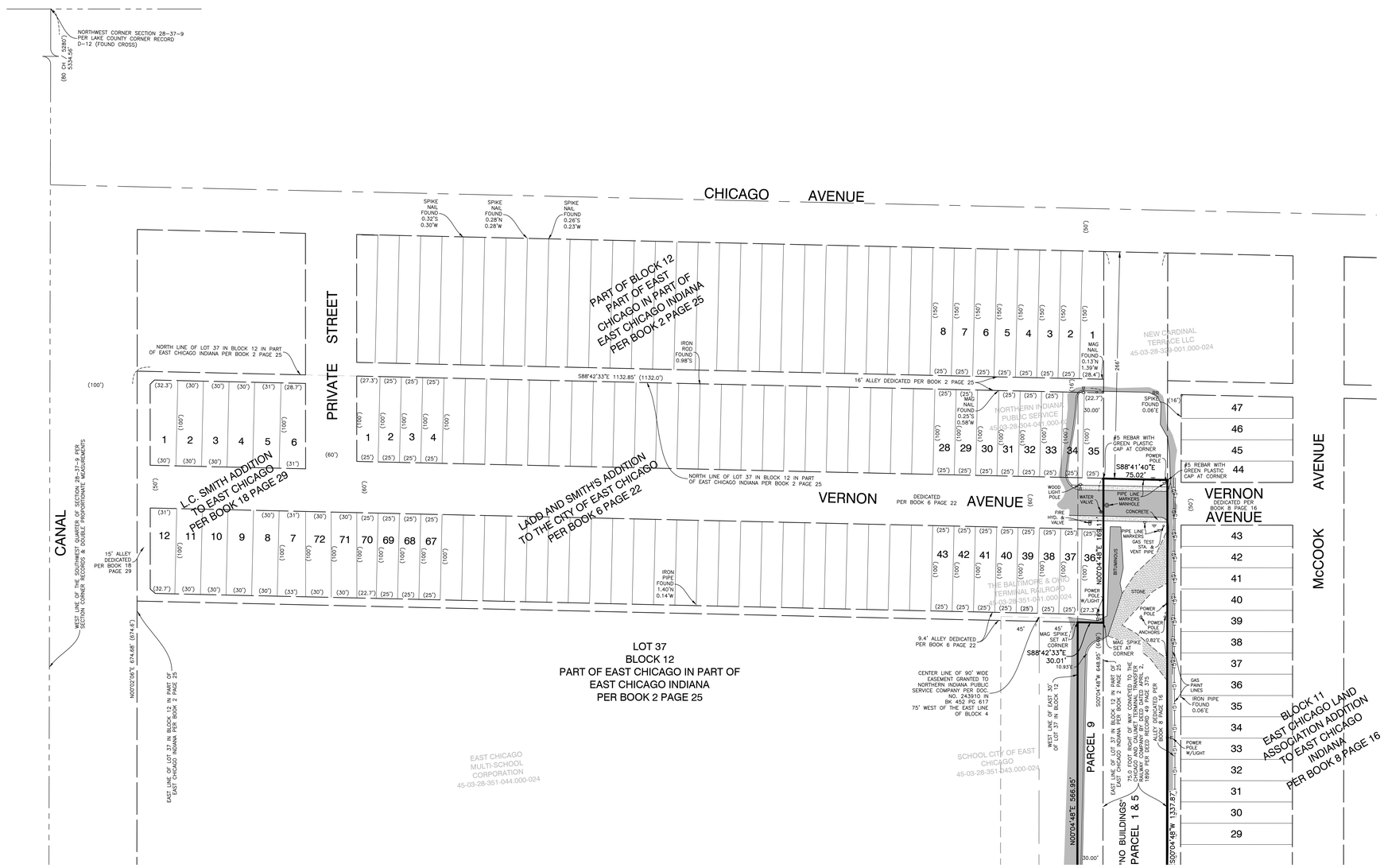
1. The ground coordinate system used and bearings provided for on this plat are derived from Global Navigation Satellite System (GNSS) measurements. The values shown on the hereon drawn plat are estimated Indiana State Plane Western Zone North American Datum 1983 (2011) (GEOID 18) GROUND coordinates based upon an average location for the project having the following parameters:

   41°37'40.510514336" North Latitude (WGS '84)
   87°20'11.962416547" West Longitude (WGS '84)
   472.241 Ellipsoid Height U.S. Survey Feet (WGS '84)
   582.297 Orthometric Height U.S. Survey Feet (NAVD '88)

   Use of the above information should yield a combined factor of 1.000043095036 7

   Ground distances should be divided by the combined factor to arrive at grid distances.
   Grid distances should be multiplied by the combined factor to arrive at ground distances.

2. (XXX.XX') Denotes record dimension or dimension computed from record dimension values.
   XXX.XX' Denotes measured dimension or dimension computed from measured dimension values.



22-R0517

ROBINSON ENGINEERING, LTD.
CONSULTING REGISTERED PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS
17000 SOUTH PARK AVENUE SOUTH HOLLAND, ILLINOIS 60473
(708) 331-6700 FAX (708) 331-3826

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FOR: INDUSTRIAL DEVELOPMENT ADVANTAGE OF EAST CHICAGO, LLC
C/O CHRIS FOX, ATTORNEY AT LAW
516 EAST 86TH STREET
MERRILVILLE, INDIANA 46410-6213

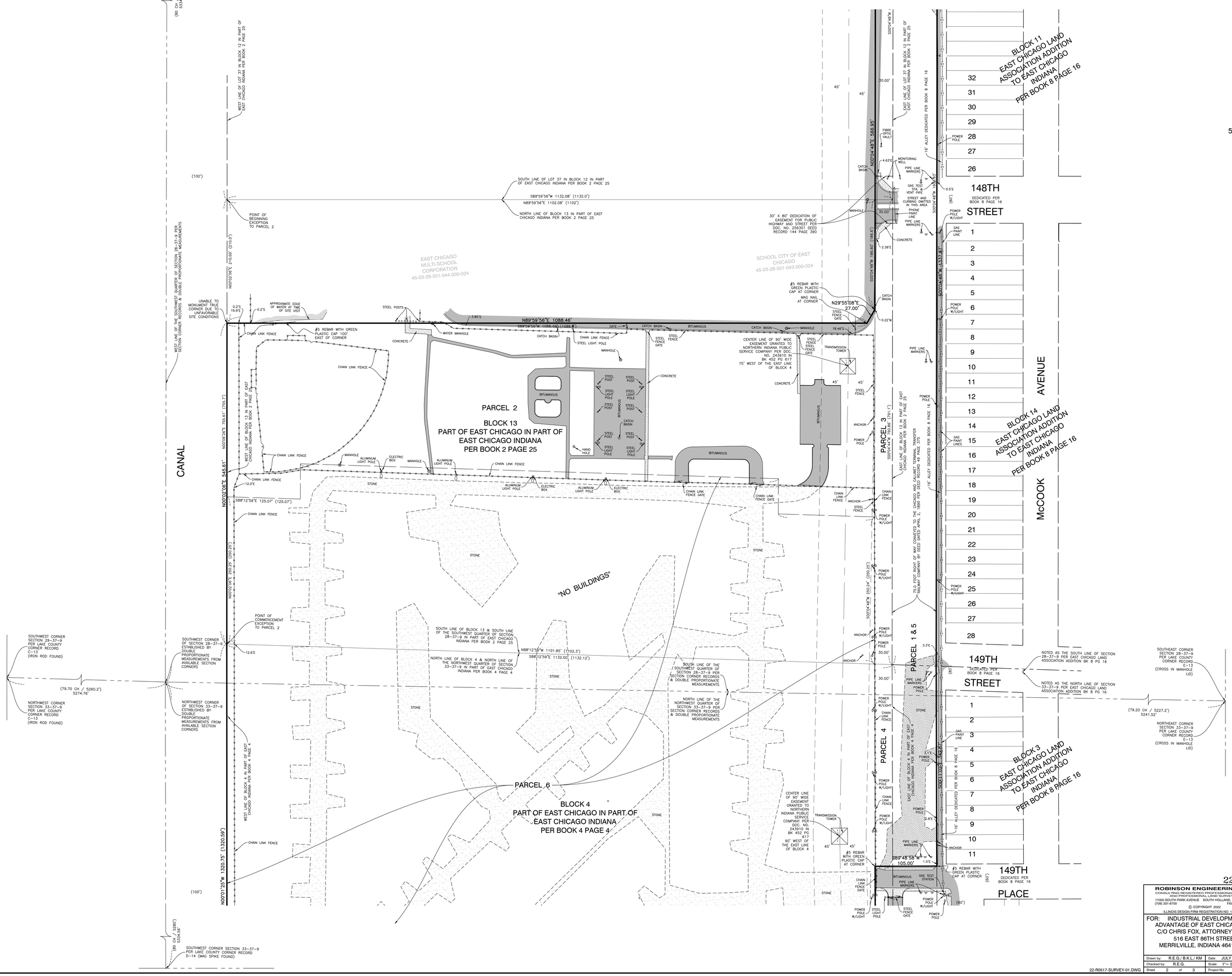
Drawn by:	R.E.G./ B.K.L./ KM	Date:	JULY 11, 2022
Checked by:	R.E.G.	Scale:	1"= 50'
Sheet	1 of 3	Project No.	22-R0517

22-R0517-SURVEY-01.DWG

REVISIONS

No.	Date	Remarks

ALTA/NSPS LAND TITLE SURVEY



22-R0517

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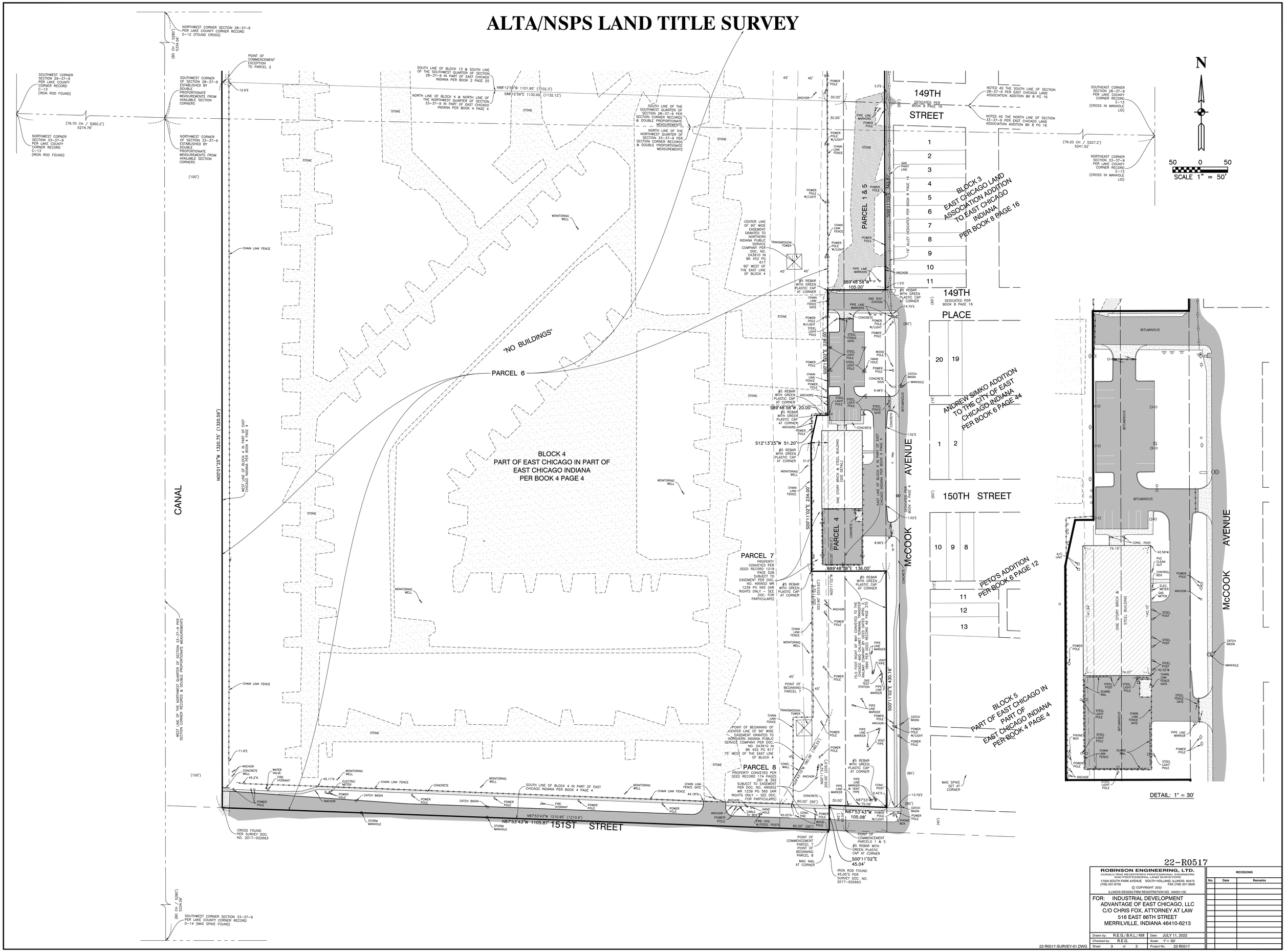
C/O CHRIS FOX, ATTORNEY AT LAW
516 EAST 86TH STREET
MERRILLVILLE, INDIANA 46410-6213

Drawn by:	R.E.G./ B.K.L./ KM	Date:	JULY 11, 2022
Checked by:	R.E.G.	Scale:	1"= 50'
Sheet	2 of 3	Project No.	22-R0517

22-R0517-SURVEY-01.DWG

REVISIONS		
No.	Date	Remarks

ALTA/NSPS LAND TITLE SURVEY



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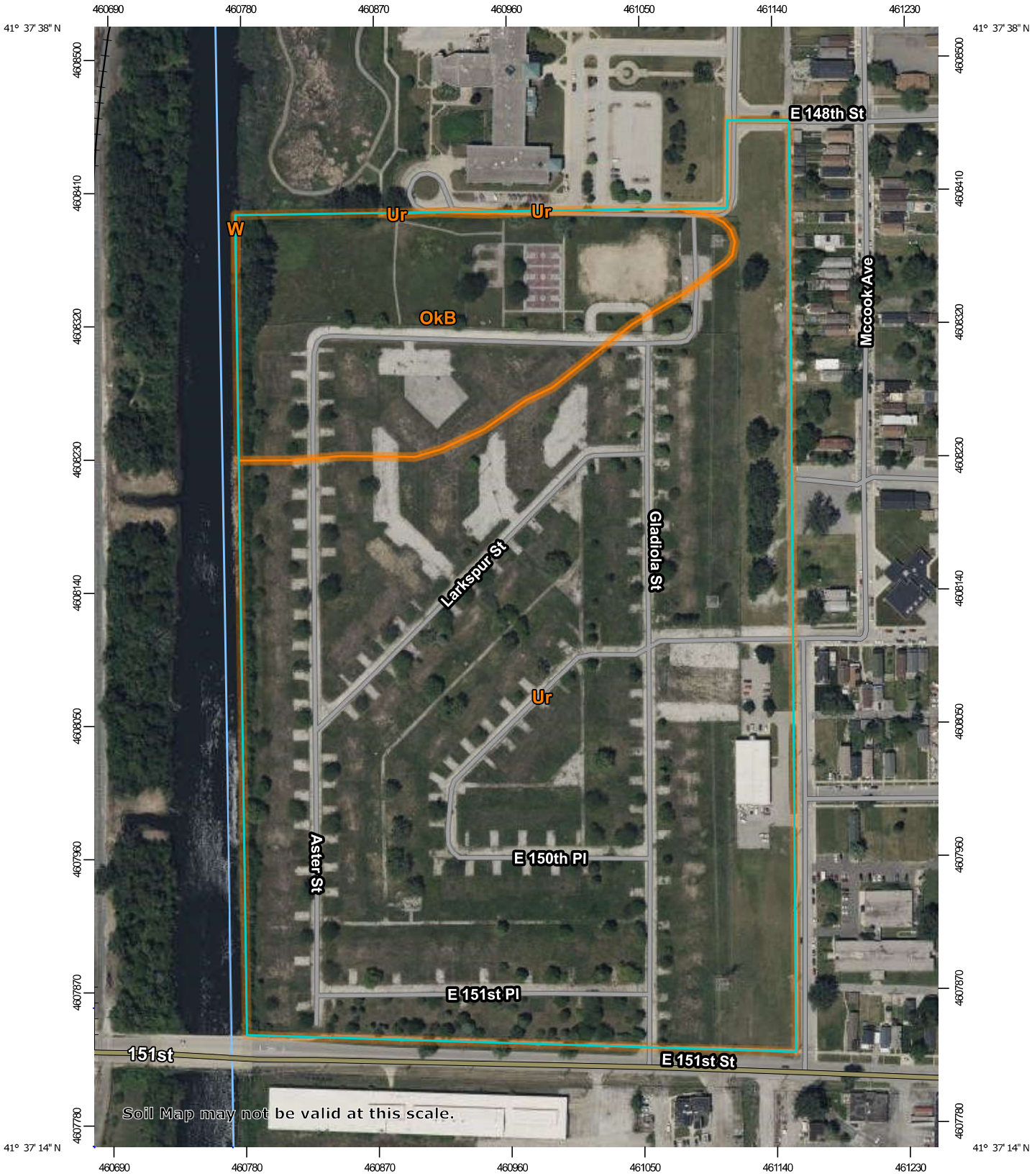
Sheet	3 of 3	Project No.	22-R0517

REVISIONS

No.	Date	Remarks

22-R0517-SURVEY-01.DWG

Soil Map—Lake County, Indiana
(USS Lead Superfund Site - OU1 Modified Zone 1 Remediation Project)



Map Scale: 1:3,690 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

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

Special Point Features

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

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

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

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

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

Soil Survey Area: Lake County, Indiana
Survey Area Data: Version 25, Sep 3, 2022

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

Date(s) aerial images were photographed: Jun 16, 2022—Jun 27, 2022

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

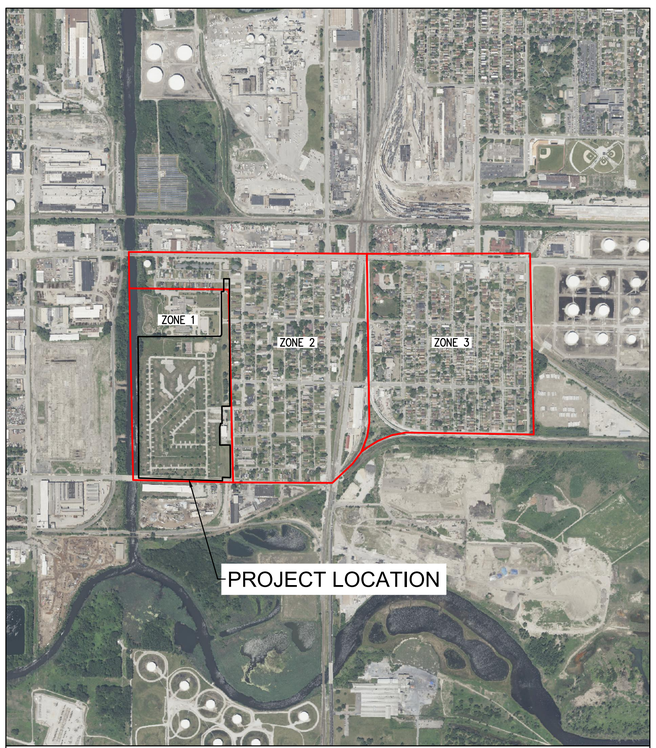
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
OkB	Oakville-Adrian complex, 0 to 6 percent slopes	10.5	19.9%
Ur	Urban land	42.3	80.1%
W	Water	0.0	0.0%
Totals for Area of Interest		**52.8**	**100.0%**

USS LEAD SUPERFUND SITE - OU1 MODIFIED ZONE 1 REMEDIATION PROJECT

EAST CHICAGO, LAKE COUNTY, INDIANA

APRIL 2023



OPERABLE UNIT (OU) ZONE MAP

1000′ 0 1000′ 2000′
DRAWING SCALE 1″ = 1000′

VICINITY MAP

500′ 0 500′ 1000′
DRAWING SCALE 1″ = 500′

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NOTE:
THESE PLANS ARE INTENDED TO BE PRINTED IN COLOR.

PREPARED FOR:

INDUSTRIAL DEVELOPMENT ADVANTAGE OF EAST CHICAGO, LLC (IDA)
2105 WEST 1800 NORTH
FARR WEST, UT 84404
(801) 732-2034

PREPARED BY:

VERDANTAS LLC (VERDANTAS)
6397 EMERALD PARKWAY, SUITE 200
DUBLIN, OH 43016
(614) 793-8777

OTHER RELEVANT AGENCIES:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM)
100 NORTH SENATE AVE.
INDIANAPOLIS, IN 46204
(800) 451-6027

U.S. ENVIRONMENTAL PROTECTION AGENCY (USEPA)
US EPA REGION 5
77 W. JACKSON BLVD.
CHICAGO, IL 60604-3590
(800) 621-8431

verdantas
PEOPLE FOCUSED FUTURE
6397 EMERALD PKWY, SUITE 200
DUBLIN, OH 43016
TEL 614.793.8777
FAX 614.360.0023

MARK JOSEPH BENIGNI
REGISTERED
No. 21010608047
STATE OF INDIANA
PROFESSIONAL ENGINEER

DATE: 4/5/23

DESIGNED BY:	DRAWN BY:	CHECKED BY:	PROJECT NO.
JRS	JRS	HQP/DBM	15773

No.	REVISION	CHK'D BY DATE
1	ISSUED FOR CONSTRUCTION	4/5/23

EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT
TITLE SHEET

APPLICATION NO.

DATE: 4/5/2023

SCALE: AS NOTED

SHEET: 1

z:\project files\15000\15773\working\design\cad\sheets and plans\east chicago\15773_title sheet.dwg

GENERAL NOTES

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, PROCEDURES, AND/OR TECHNIQUES.

2. ANY MODIFICATION TO THE SPECIFICATIONS OR CHANGES TO THE WORK AS SHOWN ON THE DRAWINGS MUST HAVE PRIOR WRITTEN APPROVAL BY THE SUPERVISING CONTRACTOR.

3. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS ASSOCIATED WITH THESE IMPROVEMENTS.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDITION OF ALL WORK PERFORMED WITHIN THE RIGHT-OF-WAY, PUBLIC EASEMENTS AND WITHIN THE WORK LIMITS FOR A PERIOD OF (1) ONE YEAR FROM THE FINAL ACCEPTANCE OF THE WORK, AND SHALL MAKE ANY NECESSARY REPAIRS AT NO COST TO THE OWNER.

5. THESE PLANS HAVE BEEN PREPARED USING THE MOST ACCURATE INFORMATION AND DATA AVAILABLE AT THE TIME OF PREPARATION. LOCATIONS OF FEATURES SHOWN IN THESE PLANS ARE APPROXIMATE, AND IS NOT INTENDED TO BE AN ACCURATE PROPERTY SURVEY. FIELD CONDITIONS MAY BE ENCOUNTERED DURING CONSTRUCTION WHICH VARIES FROM THOSE DEPICTED HEREIN. AS SUCH, THESE PLANS SHOULD BE USED AS A CONSTRUCTION CONTROL REFERENCE, NOT A PRECISE CONSTRUCTION DOCUMENT. MODIFICATIONS TO THE IMPROVEMENTS AS SHOWN MAY BE REQUIRED BASED ON FIELD CONDITIONS AT THE TIME OF CONSTRUCTION.

6. THE CONTRACTOR SHALL CONFINE ACTIVITIES TO THE PROJECT SITE, EXISTING RIGHTS-OF-WAY, TEMPORARY EASEMENTS AND PERMANENT EASEMENTS, AND SHALL NOT TRESPASS UPON OTHER PROPERTIES WITHOUT WRITTEN PERMISSION OF THOSE OWNER(S).

7. EXCEPT AS OTHERWISE PROVIDED IN THESE PLANS, FLOW IN EXISTING SEWERS, CULVERTS, STREAMS AND DITCHES SHALL BE MAINTAINED AT ALL TIMES DURING AND AFTER CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING SEWER SYSTEM RESULTING FROM THEIR OPERATIONS OR NEGLIGENCE.

8. ALL EXISTING PUBLIC AND QUASI-PUBLIC FEATURES IN THE EXISTING PUBLIC RIGHTS-OF-WAY THAT ARE DISTURBED BY THE CONTRACTOR DUE TO THE PROSECUTION OF THE WORK SUCH AS, BUT NOT LIMITED TO: MAIL BOXES, CURB, GUARDRAILS, DRIVEWAYS, SWALES, SEWERS, DITCHES, CATCH BASINS, BERMS, SEEDED AREAS, SIDEWALKS, FENCING, ETC., SHALL BE REPLACED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AND TO THE SATISFACTION OF THE OWNER AND SUPERVISING CONTRACTOR, AND AT NO ADDITIONAL COST TO THE OWNER.

9. NO NONRUBBER TIRE VEHICLES SHALL BE MOVED ON STATE, COUNTY, CITY OR VILLAGE STREETS. EXCEPTIONS MAY ONLY BE GRANTED BY THE APPROPRIATE JURISDICTION WHERE SHORT DISTANCES AND SPECIAL CIRCUMSTANCES ARE INVOLVED. GRANTING OF EXCEPTIONS MUST BE IN WRITING AND ANY DAMAGE MUST BE REPAIRED TO THE SATISFACTION OF THE APPROPRIATE JURISDICTION. THE CONTRACTOR SHALL USE EXTREME CARE WHEN OPERATING NONRUBBER TIRE VEHICLES ON STREETS OR DRIVEWAYS TO AVOID MARKING OR DAMAGING THE PAVEMENT. PROTECTION OF THE PAVEMENT FROM DAMAGE RESULTING FROM THE TRACKS OF NONRUBBER TIRE VEHICLES UTILIZED IN THE EXCAVATION SHALL BE REQUIRED. A WOOD PLANK SYSTEM, USED TIRES, RUBBER MATS OR OTHER MEANS AS APPROVED BY THE APPROPRIATE JURISDICTION SHALL BE USED TO PROTECT THE PAVEMENT.

10. THE TRACKING OR SPILLAGE OF MUD, DIRT, OR DEBRIS UPON STATE, COUNTY, TOWNSHIP, CITY OR VILLAGE ROADWAYS IS PROHIBITED, AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR.

11. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL AND MAINTAIN TRAFFIC CONTROL DEVICES FOR PROTECTION OF PEDESTRIANS AND VEHICULAR TRAFFIC. CONTROLS MAY CONSIST OF, BUT ARE NOT LIMITED TO, FLAGGERS, DRUMS, BARRIERS, SIGNS, LIGHTS, FENCING, AND UNIFORMED TRAFFIC CONTROLLERS IN ACCORDANCE WITH INDIANA DEPARTMENT OF TRANSPORTATION REQUIREMENTS. ALL TRAFFIC CONTROL IMPLEMENTATION AND COST IS THE RESPONSIBILITY OF THE CONTRACTOR.

12. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SITE BY DISPOSING OF ALL CONSTRUCTION RUBBISH, TRASH AND DEBRIS IN ACCORDANCE WITH STATE SOLID WASTE DISPOSAL REGULATIONS. IN ADDITION, SAID CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL PEDESTRIAN BARRICADES AND FENCING AROUND ACTIVE WORK ZONES TO PROHIBIT THE TRESPASS OF PEDESTRIANS INTO THE WORK ZONE DURING WORKING HOURS AND NON-WORKING HOURS.

13. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED SURVEYS TO COMPLETE THE PROJECT INCLUDING REESTABLISHMENT OF CONTROL POINTS, PROPERTY LAYOUT, AND STAKING OF EASEMENTS. THE CONTRACTOR SHALL REFERENCE ALL IRON PINS AND MONUMENTS BEFORE EXCAVATING AT OR NEAR SAID IRON PINS OR MONUMENTS. IF ANY PINS OR MONUMENTS ARE DESTROYED OR DAMAGED BY THE CONTRACTOR, THEY SHALL BE ACCURATELY REPLACED BY A REGISTERED SURVEYOR IN THE STATE OF INDIANA AT THE COMPLETION OF THE PROJECT.

14. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND MATERIAL SUBMITTALS FOR ALL SITE IMPROVEMENT PRODUCTS AND MATERIALS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. ANY MATERIALS PURCHASED AND INSTALLED WITHOUT APPROVED SUBMITTALS CAN BE REJECTED BY THE OWNER AND ORDERED TO BE REMOVED FROM THE SITE AT NO COST TO THE OWNER. OTHER SUBMITTALS MAY ALSO BE REQUESTED BY THE ENGINEER OR OWNER, INCLUDING, BUT NOT LIMITED TO: HEALTH AND SAFETY PLAN, 811 CALL DOCUMENTATION, PROJECT SCHEDULE, AND SCHEDULE OF VALUES.

15. THE CONTRACTOR IS HEREBY NOTIFIED THAT UNAUTHORIZED USE OF FIRE HYDRANTS WILL NOT BE PERMITTED AND THAT UNAUTHORIZED USE OF FIRE HYDRANTS WILL RESULT IN THE CONTRACTOR'S PROSECUTION FOR THEFT OF A PUBLIC UTILITY. IF NEEDED, CONTRACTOR SHALL COORDINATE WITH THE CITY OF EAST CHICAGO FOR AUTHORIZATION TO ACCESS PUBLIC FIRE HYDRANTS.

16. ALL FUEL/LIQUID TANKS AND DRUMS SHALL BE STORED IN A MARKED STORAGE AREA. SECONDARY CONTAINMENT SHALL BE PROVIDED FOR ALL FUEL OIL STORAGE TANKS, VEHICLE FUELING AND MAINTENANCE SHALL OCCUR IN DESIGNATED AREAS. THESE DESIGNATED AREAS SHALL BE LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS, OR OTHER STORM WATER DRAINAGE AREAS.

17. IN THE EVENT OF A SMALL RELEASE (LESS THAN THE REPORTABLE QUANTITY OF 25 GALLONS) OF PETROLEUM WASTE, THE CITY OF EAST CHICAGO FIRE DEPARTMENT SHALL BE CONTACTED. IN THE EVENT OF A LARGER RELEASE (25 OR MORE GALLONS) OF PETROLEUM WASTE, CONTACT INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AT 800-451-6027, THE CITY OF EAST CHICAGO FIRE DEPARTMENT AT 219-391-8472, AND THE CROWN POINT EMERGENCY MANAGEMENT AGENCY AT 219-662-3254.

18. ALL REQUIREMENTS DESCRIBED WITHIN THE GENERAL NOTES SECTION AND CONTRACT DOCUMENTS, UNLESS OTHERWISE INDICATED, SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT WITH NO ASSOCIATED PAY ITEM AND NO ADDITIONAL COMPENSATION TO BE AWARDED TO THE CONTRACTOR.

HEALTH AND SAFETY

1. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. THE CONTRACTOR SHALL COMPLY WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 DURING THE CONDUCT AND PERFORMANCE ON AND IN CONNECTION WITH THIS PROJECT. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR EXERCISING REASONABLE CARE IN OPERATING EQUIPMENT IN THE VICINITY OF UTILITIES, WHETHER OVERHEAD, AT GROUND LEVEL, OR BURIED, AND SHALL SAVE AND HOLD HARMLESS THE SUPERVISING CONTRACTOR, THE OWNER, AND ANY OF THEIR DESIGNATED AGENTS FROM AND AGAINST ANY AND ALL CLAIMS AND DAMAGES OF ANY KIND OF INJURY TO, OR DEATH TO, ANY PERSON OR PERSONS AND FROM DAMAGE TO OR LOSS OF PROPERTY, ARISING OUT OF, OR ATTRIBUTED TO THE NEGLIGENCE OF CONTRACTOR'S OPERATIONS.

3. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIAR WITH THE REGULATIONS OF THE U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), THE U.S. DEPARTMENT OF TRANSPORTATION (DOT), AND SIMILAR STATE AND OTHER AGENCIES HAVING JURISDICTION OVER THE WORK BEING PERFORMED.

4. THE CONTRACTOR SHALL PROVIDE NECESSARY HEALTH AND SAFETY TRAINING FOR ALL OF THE CONTRACTOR'S ON-SITE PERSONNEL.

5. THE CONTRACTOR SHALL AT ALL TIMES MEET ALL SAFETY REQUIREMENTS SET FORTH IN THEIR HEALTH & SAFETY PLAN (HASP) FOR THE SITE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONDITIONS AT THE SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY WHILE PERFORMING THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL COMPLY WITH THE CONSTRUCTION SAFETY COMMISSION "GENERAL SAFETY RULES AND REGULATIONS FOR THE CONSTRUCTION INDUSTRY," 29 CFR 1926 AND SAFETY RULES. THE CONTRACTOR SHALL REQUIRE ALL PERSONNEL TO WEAR APPROPRIATE PROTECTIVE CLOTHING, HARD HATS, ETC., AS REQUIRED BY LAW.

6. CONTRACTOR'S SITE-SPECIFIC HASP SHALL INCLUDE DONNING OF LEVEL C FULL-FACE ATMOSPHERIC AIR PURIFYING RESPIRATORS, AS THEY MAY BE REQUIRED DURING CERTAIN PROPOSED REMEDIAL EXCAVATION ACTIVITIES.

7. WOOD AND OTHER WASTE SHALL NOT BE BURNED AT THE SITE, BUT SHALL BE REMOVED WITH OTHER DEBRIS.

8. IN ACCORDANCE WITH GENERALLY ACCEPTED PRACTICES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATTERS RELATING TO THE HEALTH AND SAFETY OF ITS PERSONNEL AND EQUIPMENT AND THE PUBLIC IN PERFORMANCE OF THE WORK. THIS INCLUDES RECOGNITION OF THE POTENTIAL HEALTH AND SAFETY HAZARDS ASSOCIATED WITH THE WORK AND INCLUDES COMPLIANCE WITH THE MINIMUM REQUIREMENTS OF THE HEALTH AND SAFETY PLAN IN FORCE FOR THE WORK, IF APPLICABLE. IT IS UNDERSTOOD THAT PROTECTIVE MEASURES SPECIFIED IN ANY HEALTH AND SAFETY PLAN ARE MINIMUM REQUIREMENTS FOR THE WORK.

9. ALL REQUIREMENTS DESCRIBED WITHIN THE HEALTH AND SAFETY NOTES SECTION, UNLESS OTHERWISE INDICATED, SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT WITH NO ASSOCIATED PAY ITEM AND NO ADDITIONAL COMPENSATION TO BE AWARDED TO THE CONTRACTOR.

PRE-CONSTRUCTION DOCUMENTATION

1. PRIOR TO MOBILIZATION, THE CONTRACTOR SHALL TAKE PRE-CONSTRUCTION PHOTOGRAPHS AND VIDEO TO DOCUMENT THE CONDITION OF THE WORK AREAS, ECHA MAINTENANCE BUILDING AND PARKING LOT, AND ADJACENT ROADWAYS. THESE ROADWAYS WILL INCLUDE, BUT ARE NOT LIMITED TO EAST 151ST STREET AND MCCOOK STREET SECTIONS USED TO HAUL MATERIALS FROM THE SITE TO THE OFF-SITE DISPOSAL FACILITY.

DUST CONTROL AND AIR MONITORING

1. DUST CONTROL SHALL BE IMPLEMENTED THROUGHOUT THE PROJECT. USED OIL SHALL NOT BE USED AS A DUST SUPPRESSANT. DUST CONTROLS SHALL INCLUDE THE USE OF WATER TRUCKS TO WET DISTURBED AREAS, TARPING STOCKPILES, TEMPORARY STABILIZATION OF DISTURBED AREAS, AND REGULATION OF THE SPEED OF VEHICLES ON SITE.

2. CONTINUOUS AIR MONITORING AT THE SITE SHALL BE PERFORMED AND MANAGED BY THE SUPERVISING CONTRACTOR DURING REMEDIAL EXCAVATION ACTIVITIES. AIR MONITORING ACTIVITIES SHALL COMPLY WITH THE REQUIREMENTS OF THE AIR MONITORING PLAN, HASP, AND RD/RA WORK PLAN.

PROJECT SUPPORTING DOCUMENTATION

1. CONTRACTOR SHALL COMPLY WITH THE WITH THE FOLLOWING SUPPORTING DOCUMENTATION:

- RD/RA WORK PLAN
- HEALTH AND SAFETY PLAN (HASP)
- AIR MONITORING PLAN
- CONSTRUCTION QUALITY ASSURANCE PLAN (CQAP)
- EMERGENCY RESPONSE PLAN (ERP)
- TRANSPORTATION AND OFF-SITE DISPOSAL PLAN (TODP)
- GROUNDWATER MONITORING WELL ABANDONMENT AND INSTALLATION PLAN
- STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
- CONTRACT SPECIFICATIONS

DEMOLITION NOTES

1. PROPOSED DEMOLITION AND SITE CLEARING WORK SHALL BE PERFORMED TO FACILITATE REMEDIAL EXCAVATION WORK. REFER TO THE DEMOLITION PLAN ON SHEET 7 AND SITE CLEARING PLAN ON SHEET 6.

2. ALL WASTE, DEBRIS, RUBBLE, AND UNUSABLE MATERIALS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND PROPERLY DISPOSED OF AT FACILITIES APPROVED FOR THE PERTINENT MATERIAL. SURFACE DEBRIS SHALL BE PICKED UP AND DISPOSED OF PRIOR TO DEMOBILIZATION.

3. ALL CONSTRUCTION AND DEMOLITION DEBRIS (C&DD) SHALL BE DISPOSED OF IN AN EPA APPROVED C&DD LANDFILL. ANTICIPATED DEMOLITION DEBRIS INCLUDES, BUT IS NOT LIMITED TO, ASPHALT AND CONCRETE PAVEMENTS, FENCING, POSTS, BOLLARDS, LIGHT POLES, ETC.

4. EXISTING GRAVEL TO BE REMOVED SHALL BE PLACED IN EITHER OF THE TWO PROPOSED ON-SITE GRAVEL STOCKPILE OPTION AREAS SHOWN ON SHEET 7 FOR FUTURE RE-USE. REFER TO SHEET 7 FOR EXTENTS OF GRAVEL REMOVAL. CONTRACTOR SHALL EXCAVATE GRAVEL WITH EXTREME CAUTION TO PREVENT COMINGLING WITH SITE SOILS, AND IN NO WAY SHALL STOCKPILED GRAVEL FOR FUTURE RE-USE CONTAIN COMINGLED SITE SOILS. SHOULD REMOVED GRAVEL BE COMINGLED, IT SHALL BE HANDLED AS PART OF REMEDIAL EXCAVATION BASED ON ITS CORRESPONDING DECISION UNIT TYPE DEFINED ON SHEETS 8 AND 9. NO EXCAVATED GRAVEL IS PERMITTED TO LEAVE THE SITE.

REMEDIAL EXCAVATION & BACKFILLING NOTES

1. PROPOSED REMEDIAL EXCAVATION SHALL BE PERFORMED TO REMOVE LEAD AND ARSENIC CONTAMINATED SOILS THAT EXCEED THE INDUSTRIAL/COMMERCIAL REMEDIAL ACTION LEVELS (RALs) WITHIN THE UPPER 12 INCHES ACROSS THE SITE. SEE REMEDIATION PLANS ON SHEETS 8 AND 9 FOR LOCATION OF PROPOSED REMEDIAL EXCAVATION AREAS (YELLOW AND RED SHADED DECISION UNITS). NOTE THAT RED SHADED DECISION UNITS ALSO REQUIRE IN-SITU STABILIZATION.

2. IN-SITU STABILIZATION SHALL BE PERFORMED WITHIN AREAS EXCEEDING THE TOXICITY CHARACTERISTICS THRESHOLD OF 5 MG/L FOR LEAD (RED SHADED DECISION UNITS SHOWN ON REMEDIATION PLAN SHEETS 8 AND 9) TO MEET OFF-SITE DISPOSAL REQUIREMENTS. ONCE SOILS HAVE BEEN CHEMICALLY STABILIZED/TREATED, THEY CAN BE REMEDIALLY EXCAVATED AND DISPOSED OFF-SITE, IF REQUIRED. AREAS NOT REQUIRING EXCAVATION AND DISPOSAL, BUT EXCEEDS TCLP LEAD, SHALL BE STABILIZED AND LEFT IN PLACE (GREEN HATCHED DECISION UNITS C3 AND E7). SEE NOTE 2.1 BELOW.

2.1. THE FORGEN TREATABILITY STUDY CONCLUDED THAT MIX DESIGN OF 2% TRIPLE SUPERPHOSPHATE BY DRY WEIGHT IS RECOMMENDED FOR SOIL TREATMENT. THE REPORT RECOMMENDS THAT PRIOR TO IMPLEMENTING FULL SCALE TREATMENT, THE SELECTED CONTRACTOR SHOULD TREAT AT LEAST 100 CY OF IMPACTED SOIL IN DECISION UNITS B6, B9, AND E9 (EXHIBITING THE HIGHEST LEAD CONTAMINATION) AND DEMONSTRATE SUCCESSFUL TREATMENT. REFER TO THE REMEDIATION PLANS ON SHEETS 8 AND 9 FOR LOCATIONS OF THESE DECISION UNITS.

3. ALL NON-DEDICATED SAMPLING EQUIPMENT THAT HAS, OR WILL, COME INTO CONTACT WITH THE ENVIRONMENTAL MEDIA WILL BE DECONTAMINATED IN ACCORDANCE WITH VERDANTAS SOP NO. VDTSGLK.SOP.F1000.

4. CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED CONFIRMATION SAMPLING POST-STABILIZATION ACTIVITIES FOR VERIFICATION THAT REMEDIATED SOILS MEET REQUIREMENTS SET FORTH IN THE RD/RA WORK PLAN. CONTRACTOR SHALL PROVIDE A MINIMUM 2 DAYS NOTICE TO THE OWNER AND SUPERVISING CONTRACTOR PRIOR TO SAMPLING.

5. SOIL BACKFILLING OF ALL REMEDIAL EXCAVATED AREAS (12 INCH DEPTH) SHALL BE PERFORMED USING CLEAN ON-SITE BORROW MATERIAL. THIS MATERIAL TO BE PROVIDED BY THE OWNER, AND WILL BE STOCKPILED IN THE DESIGNATED AREA SHOWN ON SHEET 7 FOR CONTRACTOR'S USE. CONTRACTOR SHALL PLACE AND COMPACT ALL SOIL BACKFILL IN TWO EQUAL LIFTS OVER THE PROPOSED GEOTEXTILE DEMARCATION BARRIER. CONTRACTOR IS RESPONSIBLE FOR ALL COMPACTION TESTING TO VERIFY A MINIMUM 98% COMPACTION LEVEL OF ALL REMEDIATED AREAS AFTER BACKFILLING.

6. CONTRACTOR IS RESPONSIBLE FOR COVERING AND PROTECTING ALL STOCKPILED MATERIALS THAT ARE NOT BEING ACTIVELY USED, INCLUDING THE OWNER'S ON-SITE BORROW STOCKPILE. DURING THE COURSE OF THE BORROW OPERATION, CONTRACTOR SHALL BE RESPONSIBLE FOR MANAGING AND MAINTAINING THE OPERATION OF THE OWNER'S ON-SITE BORROW STOCKPILE. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION AND MAINTAINING ALL ACCESS ROADS AND HAUL ROUTES USED. UPON COMPLETION OF SITE BORROW ACTIVITIES, THE CONTRACTOR SHALL PERFORM GRADING AND SURFACE RESTORATION IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS. COORDINATION AND APPROVAL BY THE OWNER AND THE SUPERVISING CONTRACTOR SHALL BE REQUIRED PRIOR TO CONSTRUCTION AND/OR USE OF ACCESS ROADS AND HAUL ROUTES.

7. CONTRACTOR SHALL PROVIDE LAYOUT STAKING OF THE PROPOSED LIMITS OF THE REMEDIAL EXCAVATION AREAS. CONTRACTOR SHALL ALSO PROVIDE A POST EXCAVATION TOPOGRAPHICAL SURVEY OF THE REMEDIATION AREAS, WHICH WILL BE USED TO VERIFY THAT VERTICAL AND HORIZONTAL LIMITS OF THE REMEDIATION AREAS HAVE BEEN MET.

8. CONTRACTOR SHALL WORK FROM EXISTING PAVED SURFACES AND LOAD TRUCKS ON EXISTING PAVED OR GRAVEL SURFACES AS MUCH AS PRACTICABLE TO PREVENT TRACKING OF SOILS OFFSITE.

9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO IMPLEMENT "BEST MANAGEMENT PRACTICES" TO CONTROL SEDIMENT LADEN STORMWATER RUNOFF. CONTRACTOR SHALL COMPLY WITH THE PROJECT SPECIFIC STORM WATER POLLUTION PREVENTION PLAN (SWP3) PREPARED BY VERDANTAS LLC.

10. ALL REMEDIATION VOID AREAS SHALL BE BACKFILLED OR PROTECTED BY TEMPORARY FENCING OR APPROVED BARRICADES AT THE END OF EACH WORK DAY AS DIRECTED BY THE SUPERVISING CONTRACTOR.

11. SHOULD ACCUMULATED WATER WITHIN REMEDIATION AREAS BE ENCOUNTERED, THE CONTRACTOR SHALL FURNISH AND OPERATE SUITABLE PUMPING EQUIPMENT OF SUCH CAPACITY ADEQUATE TO DEWATER ACCUMULATED WATER WITHIN REMEDIAL AREAS. AREAS SHALL BE SUFFICIENTLY DEWATERED SO THAT THE PLACEMENT OF BACKFILL IS MADE IN AN AREA FREE OF STANDING WATER. THE CONTRACTOR SHALL PROPERLY CONTAINERIZE, CHARACTERIZE AND DISPOSE OF WATER AS DESCRIBED IN THE CONTRACT DOCUMENTS.

12. ALL CONTAMINATED SOILS MUST BE TREATED AND/OR DISPOSED IN EPA APPROVED SOLID WASTE MANAGEMENT FACILITIES OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITIES (TSDFS). RUNOFF FROM CONTAMINATED SOILS SHALL NOT BE DISCHARGED FROM THE SITE. PROPER PERMITS SHALL BE OBTAINED FOR DEVELOPMENT PROJECTS ON SOLID WASTE LANDFILL SITES OR REDEVELOPMENT SITES.

13. THE CONTRACTOR SHALL VISIT THE SITE TO VERIFY ALL SITE CONDITIONS ILLUSTRATED TO BE DEMOLISHED OR REMEDIATED. IF THERE ARE PRE-BID QUESTIONS OR PERCEIVED AND REAL CONFLICTS REGARDING CONSTRUCTION DOCUMENTS COMPARED TO ACTUAL FIELD CONDITIONS, SAID CONTRACTOR SHALL NOTIFY THE ENGINEER OR OWNER PRIOR TO BIDDING. IF CONFLICTS EXIST, APPROPRIATE REVISIONS WILL BE MADE TO THE BIDDING DOCUMENTS VIA AN ADDENDUM.

14. SEE SHEET 4 FOR LOCATION OF EXISTING MONITORING WELL "ECHA-MW-01" TO BE PROTECTED, AND ACCOMPANYING NOTES.

SITE UTILITIES

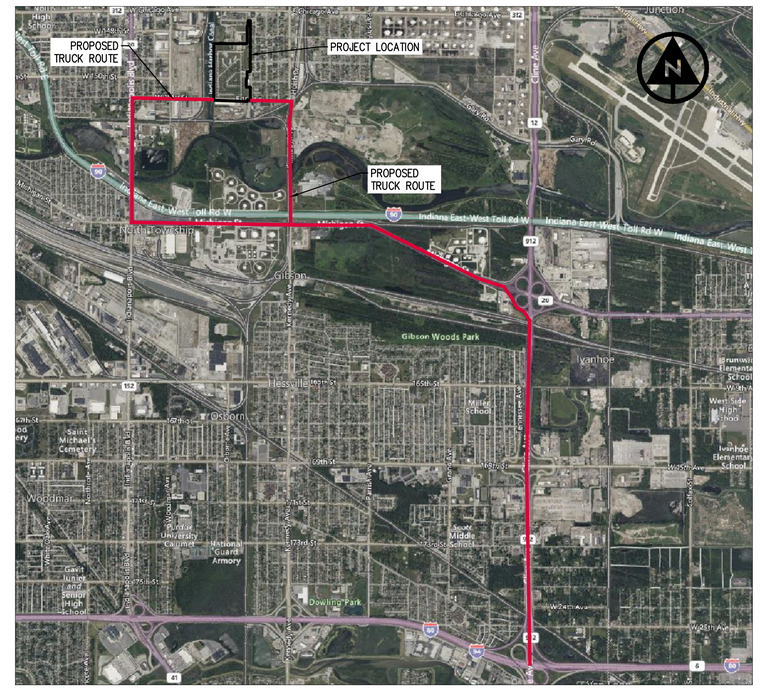
1. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION, INVESTIGATION, LOCATION, SUPPORT, AND PROTECTION OF ALL EXISTING ACTIVE UTILITIES AND APPURTENANCES WHETHER SHOWN ON THESE PLANS OR NOT. IF EXCAVATING AROUND EXISTING ACTIVE UTILITIES TO REMAIN, THE CONTRACTOR SHALL CAREFULLY PERFORM HAND-DIGGING TO EXPOSE THESE UTILITIES OR STRUCTURES TO VERIFY THE VERTICAL AND HORIZONTAL EFFECT ON THE PROPOSED WORK, AND PROVIDE PROPER BRACING TO SUPPORT/PROTECT THESE UTILITIES.

2. THE CONTRACTOR SHALL NOT INTERRUPT ANY EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER. IF A UTILITY INTERRUPTION IS REQUIRED THE CONTRACTOR SHALL COORDINATE THE INTERRUPTION WITH THE OWNER A MINIMUM OF 72 HOURS IN ADVANCE.

LIST OF MAJOR CONSTRUCTION ACTIVITIES

CONSTRUCTION ACTIVITIES AT THE SITE INCLUDE BUT ARE NOT LIMITED TO:

1. PREPARE AND INSTALL EROSION & SEDIMENT CONTROLS.
2. ESTABLISH LAYOUT AND STAKING OF ALL PROPOSED REMEDIAL EXCAVATION AREAS.
3. PERFORM SITE CLEARING AND DEMOLITION OF EXISTING VEGETATION AND TREES, ASPHALT AND CONCRETE SURFACES, FENCES, LIGHT POLES, POSTS, ETC. LOCATED WITHIN PROPOSED REMEDIAL EXCAVATION AREAS. DISPOSE OF ALL DEMOLISHED AND CLEARED MATERIALS OFF SITE.
4. REMOVE ALL EXISTING GRAVEL MATERIAL WITHIN PROPOSED REMEDIAL EXCAVATION AREAS, AND RE-LOCATE GRAVEL MATERIAL TO THE DESIGNATED ON-SITE STOCKPILE AREA FOR FUTURE RE-USE.
5. PERFORM TEST TREATMENT OF IMPACTED SOILS PRIOR TO IMPLEMENTING FULL SCALE IN-SITU TREATMENT.
6. PERFORM IN-SITU TREATMENT OF EXISTING CONTAMINATED SOILS WITHIN PROPOSED STABILIZATION AREAS. ONCE STABILIZED, SOIL CAN BE REMOVED AND DISPOSED OF OFF-SITE, IF REQUIRED, AS PART OF REMEDIAL EXCAVATION.
7. PERFORM REMEDIAL EXCAVATION, OFF-SITE DISPOSAL, AND CLEAN SOIL BACKFILLING OF ALL DESIGNATED AREAS TO A DEPTH UP TO 12 INCHES BELOW GRADE.
8. PERFORM FINAL GRADING TO PROMOTE POSITIVE DRAINAGE THROUGHOUT THE SITE.
9. SEED ALL DISTURBED AREAS.
10. COMPLETE AS-BUILT SURVEY.



TRUCK ROUTE MAP NOTES:

1. ALL CONSTRUCTION RELATED TRAFFIC SHALL USE EITHER E. 151ST ST. TO KENNEDY AVE. TO MICHIGAN ST. (US-20), OR W. 151ST ST. TO INDIANAPOLIS BLVD. TO US-20. USE US-20 TO CLINE AVE. (SR-912) TO THE INTERSTATE AND DESIGNATED TRUCK ROUTES.
2. NO CONSTRUCTION RELATED TRAFFIC PERMITTED THROUGH RESIDENTIAL NEIGHBORHOODS OR ON ANY OTHER LOCAL ROADS WITHOUT PRIOR AUTHORIZATION FROM ENGINEER AND MUNICIPAL JURISDICTION.
3. TRAFFIC SPEEDS ON UNPAVED SURFACES WITHIN THE PROJECT BOUNDARY WILL BE LIMITED TO 15MPH OR LESS TO REDUCE DUST EMISSIONS.
4. ALL TRUCKS WILL BE COVERED AND LEAVE 1-FOOT OF FREEBOARD.
5. ALL VEHICLES LEAVING THE SITE WILL BE CLEANED ACCORDING TO THE SPECIFICATION.
6. REFER TO SITE TRAFFIC PLAN ON SHEET 13.

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MARK JOSEPH BENNETT
REGISTERED
No. 10600047
STATE OF INDIANA
PROFESSIONAL ENGINEER

DATE: 4/5/23

DESIGNED BY:	DRAWN BY:	CHECKED BY:	PROJECT NO.
JRS	JRS	HQP/DBM	15773

No.	REVISION	CHK'D BY DATE
1	ISSUED FOR CONSTRUCTION	4/5/23

EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT
GENERAL NOTES

APPLICATION NO.

DATE: 4/5/2023

SCALE: AS NOTED

SHEET: 2

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LEGEND

EXISTING PROPERTY LINE

NOTES:

1. EXISTING PROPERTY LINE SHOWN WAS OBTAINED FROM A TOPOGRAPHIC FIELD SURVEY COMPLETED BY ROBINSON ENGINEERING, LTD. BETWEEN 11/4/2022 AND 11/29/2022. TOPOGRAPHIC SURVEY CAD FILE RECEIVED BY ROBINSON ENGINEERING, LTD. ON 12/21/2022.
2. EXISTING AERIAL IMAGERY SHOWN CONSISTS OF A 0.22 METER RESOLUTION, PROCESSED AND RETRIEVED FROM SKYWATCH ONLINE DATABASE ON 12/16/2022. AERIAL IMAGERY CAPTURED ON 11/23/2022.

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MARK JOSEPH BONITO
REGISTERED
No. 21010608047
STATE OF INDIANA
PROFESSIONAL ENGINEER

DATE: 4/5/23

DESIGNED BY: JRS	DRAWN BY: JRS	CHECKED BY: HQP/DBM	PROJECT NO. 15773

No.	REVISION	CHK'D BY DATE
1	ISSUED FOR CONSTRUCTION	4/5/23

EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT

SITE MAP WITH AERIAL

APPLICATION NO.

DATE: 4/5/2023

SCALE: AS NOTED

SHEET: 3

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LEGEND

EXISTING MAJOR CONTOUR	EXISTING POST
EXISTING MINOR CONTOUR	EXISTING GUY WIRE ANCHOR
EXISTING PROPERTY LINE	EXISTING POWER POLE
EXISTING RIGHT-OF-WAY	EXISTING LIGHT POLE
EXISTING UTILITY EASEMENT	EXISTING POWER POLE WITH LIGHT
EXISTING FENCE	EXISTING TRANSMISSION TOWER
EXISTING EDGE OF PAVEMENT	EXISTING DECIDUOUS TREE
EXISTING EDGE OF GRAVEL	EXISTING CONIFEROUS TREE
EXISTING OVERHEAD POWER LINE	EXISTING BUSH
EXISTING GAS LINE MARKER	
EXISTING MONITORING WELL	
EXISTING MONITORING WELL TO BE PROTECTED	

80' 0 80' 160'
DRAWING SCALE 1" = 80'

SURVEYOR NOTES:
VISIBLE EVIDENCE AVAILABLE AT THE TIME OF THE TOPOGRAPHIC SURVEY SITE VISIT WAS COLLECTED. THIS INCLUDES BUT IS NOT LIMITED TO POWER POLES, UTILITY JUNCTION BOXES, UTILITY MANHOLES, ETC. HOWEVER, THERE MAY EXIST OTHER UTILITY INFRASTRUCTURE WITHIN THE SITE WHERE NO VISIBLE EVIDENCE WAS AVAILABLE AT THE TIME OF THE SITE VISIT. THERE IS NO WARRANTY OR GUARANTEE THAT ALL UTILITIES HAVE BEEN INDICATED UPON THE TOPOGRAPHIC SURVEY.

THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED SURVEYS TO COMPLETE THE PROJECT INCLUDING REESTABLISHMENT OF CONTROL POINTS, DAMAGED R/W PINS AND STAKING OF EASEMENTS. THE CONTRACTOR SHALL REFERENCE ALL IRON PINS AND MONUMENTS BEFORE EXCAVATING AT OR NEAR SAID IRON PINS OR MONUMENTS. IF ANY PINS OR MONUMENTS ARE DESTROYED OR DAMAGED BY THE CONTRACTOR, THEY SHALL BE ACCURATELY REPLACED BY A REGISTERED SURVEYOR IN THE STATE OF INDIANA AT THE COMPLETION OF THE PROJECT.

DATE OF TOPOGRAPHIC SURVEY FIELD WORK: 11/4/2022 - 11/29/2022
SURVEY PERFORMED BY: ROBINSON ENGINEERING, LTD.

THE CONTRACTOR AND/OR HIS SURVEYOR SHALL BE RESPONSIBLE TO CROSS CHECK ALL CONTROL FOR DISTURBANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

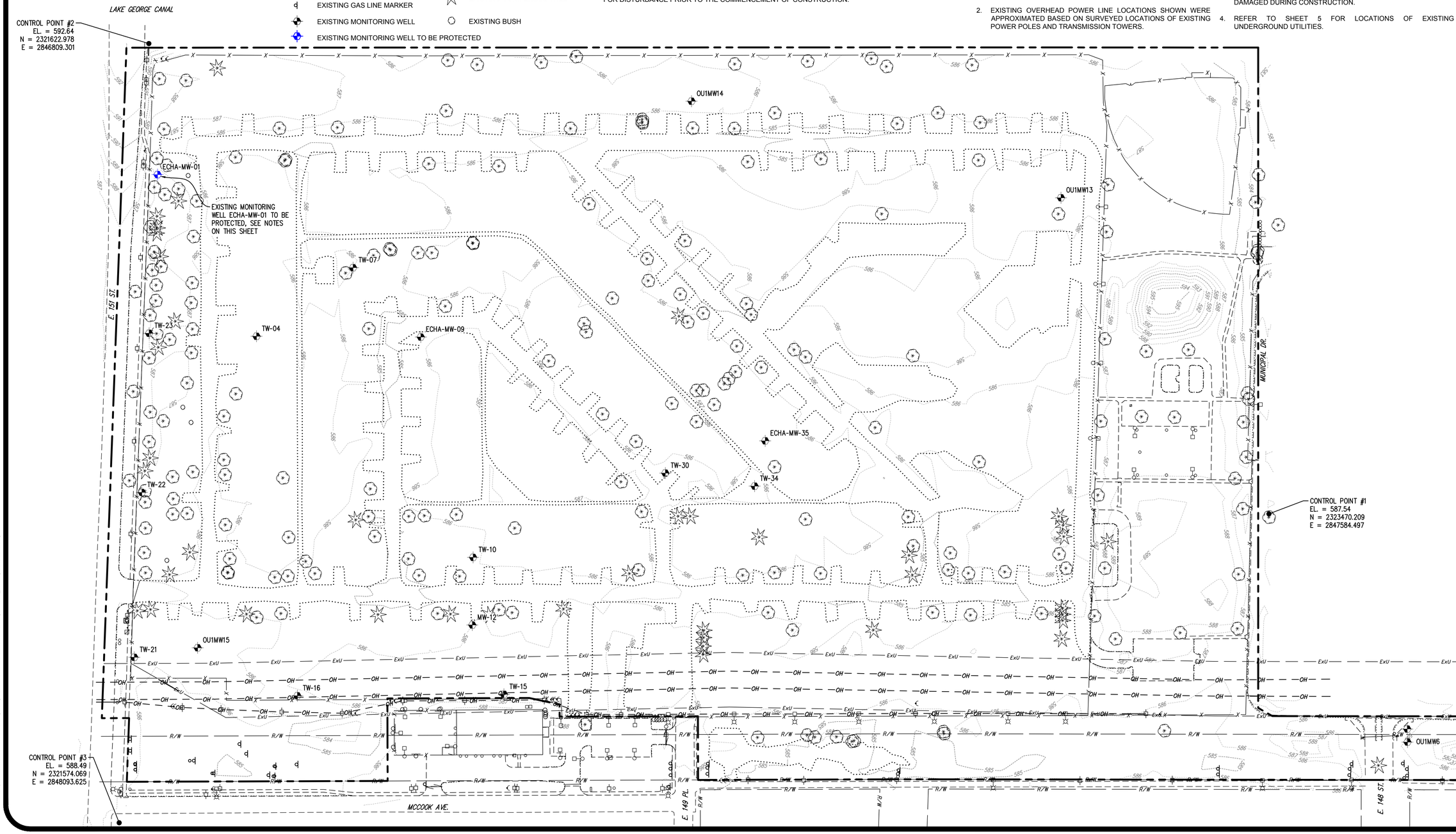
CONTROL POINTS:
BASIS OF BEARING: TRUE NORTH, BASED ON OBSERVATIONS, GPS DATA COLLECTED ON INDIANA STATE PLANE WEST COORDINATE SYSTEM, NAD83, NAVD88, GEOID 18.

CONTROL POINTS SET BY ROBINSON ENGINEERING, LTD. ARE AS FOLLOWS:

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	2323470.209	2847584.497	587.54	SOUTH CAP BOLT OF FIRE HYDRANT
2	2321622.978	2846809.301	592.64	BRASS DISK ON TOP OF CONCRETE WALL
3	2321574.069	2848093.625	588.49	ARROW ON FLANGE OF FIRE HYDRANT

NOTES:

1. EXISTING PROPERTY LINE, SITE FEATURES, AND GRADES SHOWN ARE BASED ON A TOPOGRAPHIC FIELD SURVEY COMPLETED BY ROBINSON ENGINEERING, LTD. BETWEEN 11/4/2022 AND 11/29/2022. TOPOGRAPHIC SURVEY CAD FILE RECEIVED BY ROBINSON ENGINEERING, LTD. ON 12/21/2022.
2. EXISTING OVERHEAD POWER LINE LOCATIONS SHOWN WERE APPROXIMATED BASED ON SURVEYED LOCATIONS OF EXISTING POWER POLES AND TRANSMISSION TOWERS.
3. CONTRACTOR SHALL PROTECT AND AVOID DISTURBANCE TO EXISTING MONITORING WELL "ECHA-MW-01" THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL MAINTAIN A 2'X2' NO WORK ZONE AROUND THIS MONITORING WELL DURING CONSTRUCTION ACTIVITIES. CONTRACTOR IS RESPONSIBLE FOR ANY REPAIR OR REPLACEMENT SHOULD THE WELL GET DAMAGED DURING CONSTRUCTION.
4. REFER TO SHEET 5 FOR LOCATIONS OF EXISTING UNDERGROUND UTILITIES.



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STATE OF INDIANA
PROFESSIONAL ENGINEER

DATE: 4/5/23

DESIGNED BY: JRS	DRAWN BY: JRS	CHECKED BY: HQP/DBM	PROJECT NO. 15773

No.	REVISION	CHK'D BY DATE
1	ISSUED FOR CONSTRUCTION	4/5/23

EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT
EXISTING CONDITIONS

APPLICATION NO.
DATE: 4/5/2023
SCALE: AS NOTED
SHEET: 4

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80' 0 80' 160'

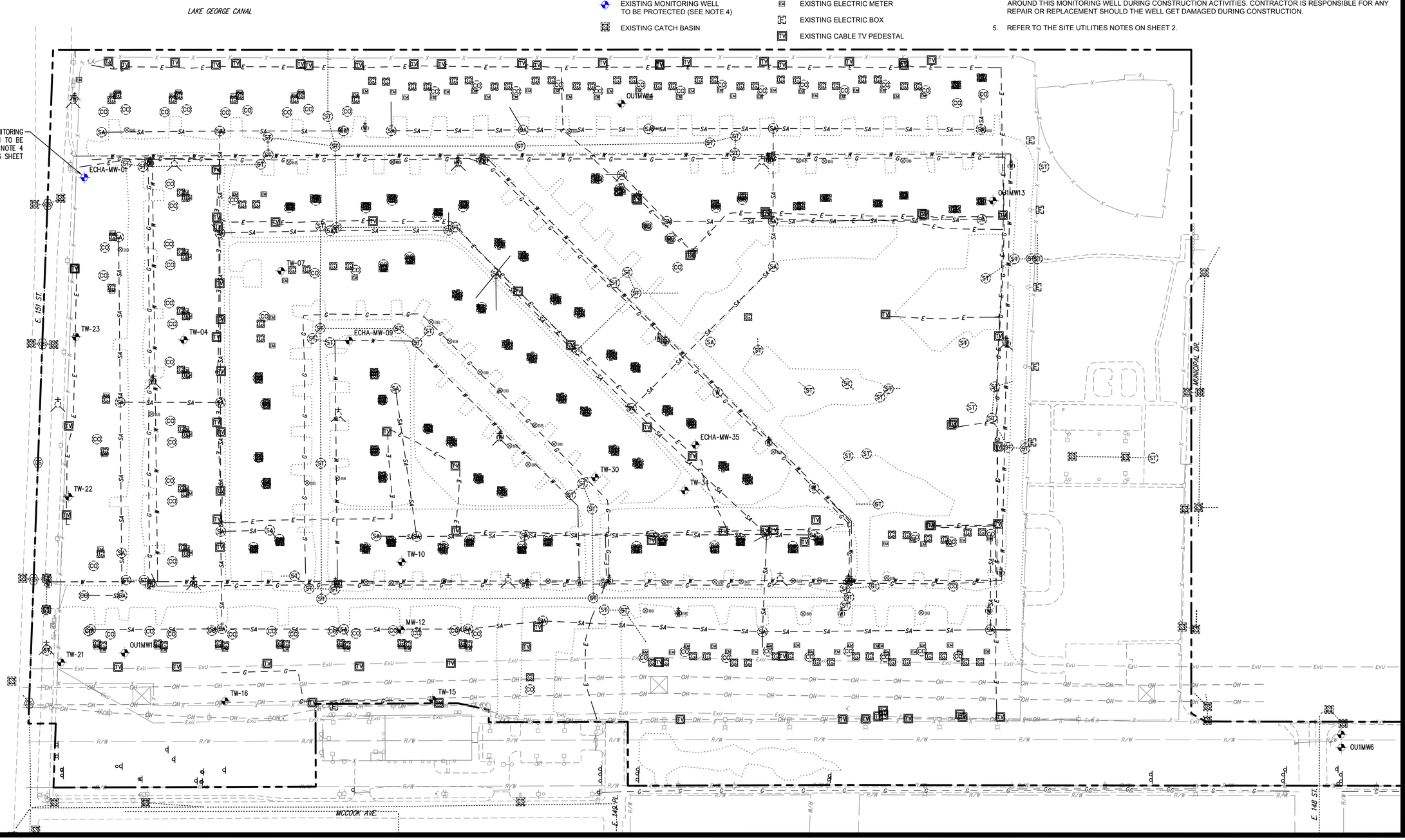
DRAWING SCALE 1" = 80'

LEGEND

- EXISTING PROPERTY LINE
- EXISTING STORM SEWER PIPE
- EXISTING SANITARY SEWER PIPE
- EXISTING ELECTRIC LINE (APPROX.)
- EXISTING GAS LINE (APPROX.)
- EXISTING WATER LINE (APPROX.)
- EXISTING GAS LINE MARKER
- EXISTING GAS METER
- EXISTING MONITORING WELL
- EXISTING MONITORING WELL TO BE PROTECTED (SEE NOTE 4)
- EXISTING CATCH BASIN
- EXISTING STORM MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING COMBINATION SEWER MANHOLE
- EXISTING SANITARY CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING WATER MANHOLE
- EXISTING WATER BUFFALO BOX
- EXISTING ELECTRIC METER
- EXISTING ELECTRIC BOX
- EXISTING CABLE TV PEDESTAL

NOTES:

1. EXISTING PROPERTY LINE SHOWN IS BASED ON A TOPOGRAPHIC FIELD SURVEY COMPLETED BY ROBINSON ENGINEERING, LTD. BETWEEN 11/4/2022 AND 11/29/2022. TOPOGRAPHIC SURVEY CAD FILE RECEIVED BY ROBINSON ENGINEERING, LTD. ON 12/21/2022.
2. EXISTING UNDERGROUND UTILITIES SHOWN ON THIS SHEET WERE OBTAINED FROM A COMBINATION OF THE TOPOGRAPHIC SURVEY DESCRIBED IN NOTE 1 ON THIS SHEET, THE WEST CALUMET HOUSING COMPLEX DEMOLITION PLANS BY AMERECO, INC., DATED DECEMBER 2017, AND HISTORICAL SITE DRAWINGS. EXISTING UNDERGROUND ELECTRIC AND GAS LINES SHOWN ARE APPROXIMATE BASED ON POINT LOCATIONS PROVIDED IN AMERECO'S DEMOLITION PLAN CAD FILE (RECEIVED BY AMERECO ON 1/25/2023). EXISTING WATER LINES ARE APPROXIMATE BASED ON HISTORICAL SITE DRAWINGS.
3. IT IS THE INTENT THAT ALL EXISTING UNDERGROUND UTILITIES SHOWN LOCATED WITHIN THE PROJECT AREA HAVE BEEN PREVIOUSLY ABANDONED/CAPPED/PLUGGED AND LEFT IN PLACE. CONTRACTOR SHALL FIELD VERIFY UTILITY LOCATIONS WITHIN THE PROJECT AREA.
4. CONTRACTOR SHALL PROTECT AND AVOID DISTURBANCE TO EXISTING MONITORING WELL "ECHA-MW-01" THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL MAINTAIN A 2'X2' NO WORK ZONE AROUND THIS MONITORING WELL DURING CONSTRUCTION ACTIVITIES. CONTRACTOR IS RESPONSIBLE FOR ANY REPAIR OR REPLACEMENT SHOULD THE WELL GET DAMAGED DURING CONSTRUCTION.
5. REFER TO THE SITE UTILITIES NOTES ON SHEET 2.



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MARK JOSEPH BANISTER REGISTERED No. 910608047 STATE OF INDIANA PROFESSIONAL ENGINEER

DATE: 4/5/23

DESIGNED BY: JRS	DRAWN BY: JRS	CHECKED BY: HQP/DBM	PROJECT NO. 15773

No.	REVISION	CHK'D BY DATE
1	ISSUED FOR CONSTRUCTION	4/5/23

EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT

EXISTING UNDERGROUND UTILITIES

APPLICATION NO.

DATE: 4/5/2023

SCALE: AS NOTED

SHEET: 5

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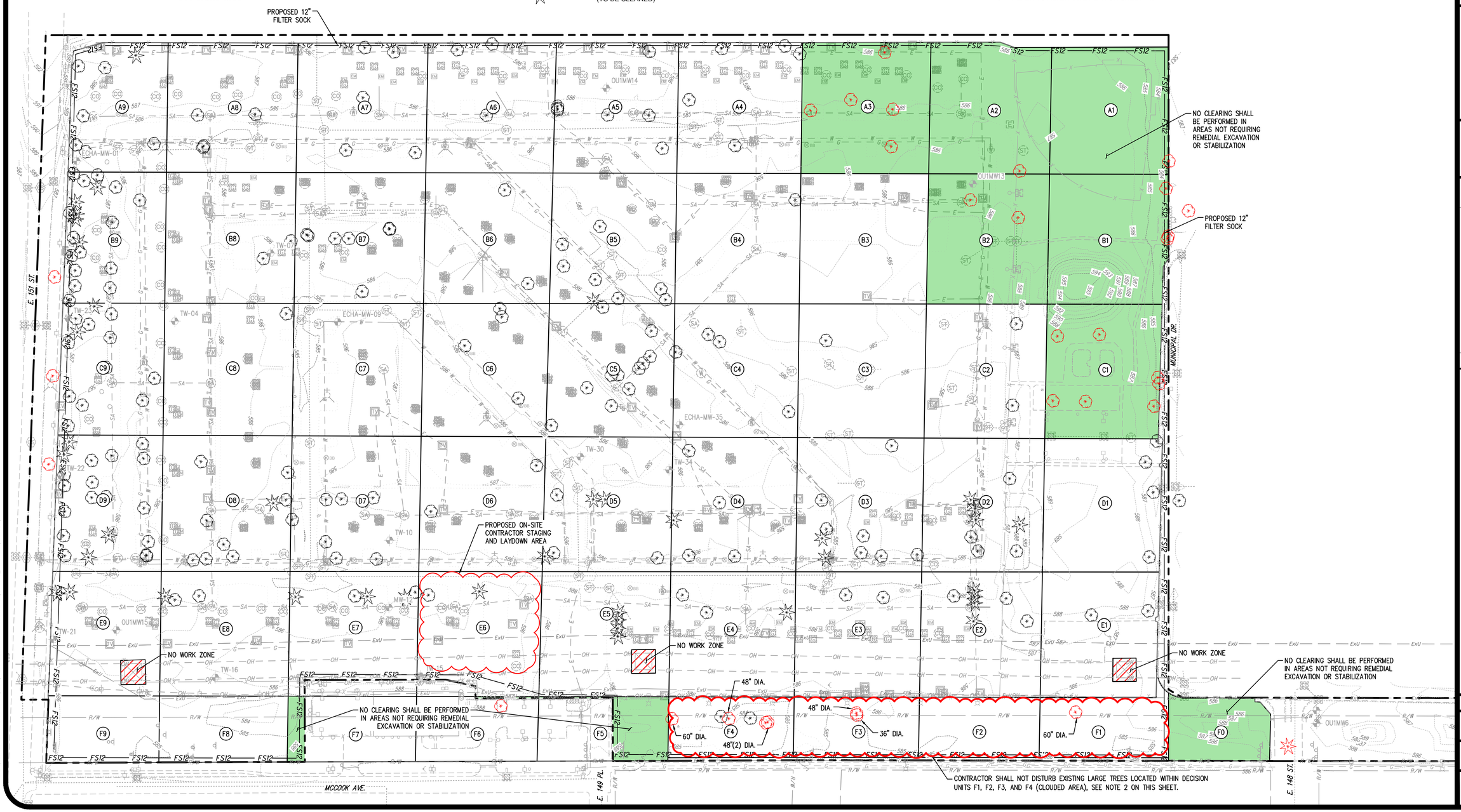
80′ 0 80′ 160′
DRAWING SCALE 1" = 80′

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING PROPERTY LINE
- EXISTING DECIDUOUS TREE (DO NOT DISTURB)
- EXISTING DECIDUOUS TREE (TO BE CLEARED)
- EXISTING CONIFEROUS TREE (DO NOT DISTURB)
- EXISTING CONIFEROUS TREE (TO BE CLEARED)
- FS12 — PROPOSED 12" FILTER SOCK
- A1 DECISION UNIT ID
- NO WORK ZONE
- NO CLEARING WITHIN AREAS NOT REQUIRING REMEDIAL EXCAVATION OR STABILIZATION (SEE NOTE 4)

NOTES:

1. NO EXCAVATION SHALL BE PERFORMED WITHIN THE NO WORK ZONES. THESE ZONES ARE LOCATED AT THE EXISTING ELECTRIC TRANSMISSION TOWERS, WHICH ARE OWNED AND MAINTAINED BY NORTHERN INDIANA PUBLIC SERVICE COMPANY (NIPSCO). PER NIPSCO REQUIREMENTS, CONTRACTOR SHALL MAINTAIN A DISTANCE OF AT LEAST 6' BACK FROM THE OUTERMOST POINT OF TOWER LEG/FOUNDATION WHEN EXCAVATING.
2. CONTRACTOR SHALL PERFORM SITE CLEARING OF ALL TREES LOCATED WITHIN PROPOSED REMEDIAL EXCAVATION AREAS, WITH THE EXCEPTION OF THE EXISTING LARGE TREES (3' DIAMETER OR LARGER) LOCATED WITHIN DECISION UNITS F1, F2, F3, AND F4 (SEE RED CLOUDED AREA ON THIS SHEET). CONTRACTOR SHALL CAREFULLY HAND DIG AROUND THESE LARGE TREES IN A MANNER AS TO MAINTAIN THEIR ROOT INTEGRITY.
3. SITE CLEARING WITHIN PROPOSED REMEDIAL EXCAVATION AREAS SHALL INCLUDE REMOVAL OF ANY VEGETATION PRIOR TO ANY SOILS EXCAVATION. FOR TREE CLEARING, STUMPS SHALL BE GROUND DOWN TO 12-INCHES OR MORE BELOW GRADE. TREE ROOT BULBS SHALL BE COMPLETELY REMOVED AND DISPOSED OF AS PART OF ALTERNATE WORK, IF IMPLEMENTED. ALL WOODED MATERIAL SHALL BE CHIPPED AND DISPOSED OF OFF SITE.
4. NO SITE CLEARING SHALL BE PERFORMED WITHIN GREEN DECISION UNITS NOT REQUIRING EXCAVATION AND IN-SITU STABILIZATION. REFER TO THE REMEDIATION PLANS ON SHEETS 8 AND 9.
5. REFER TO ALTERNATE PLAN ON SHEET 14.



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MARK JOSEPH BENIGNI REGISTERED No. 21010608047 STATE OF INDIANA PROFESSIONAL ENGINEER

DATE: 4/5/23

DESIGNED BY:	DRAWN BY:	CHECKED BY:	PROJECT NO.
JRS	JRS	HQP/DBM	15773

No.	REVISION	CHK'D BY DATE
1	ISSUED FOR CONSTRUCTION	4/5/23

EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT

SITE CLEARING PLAN

APPLICATION NO.

DATE: 4/5/2023

SCALE: AS NOTED

SHEET: 6

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80' 0 80' 160'

DRAWING SCALE 1" = 80'

LEGEND

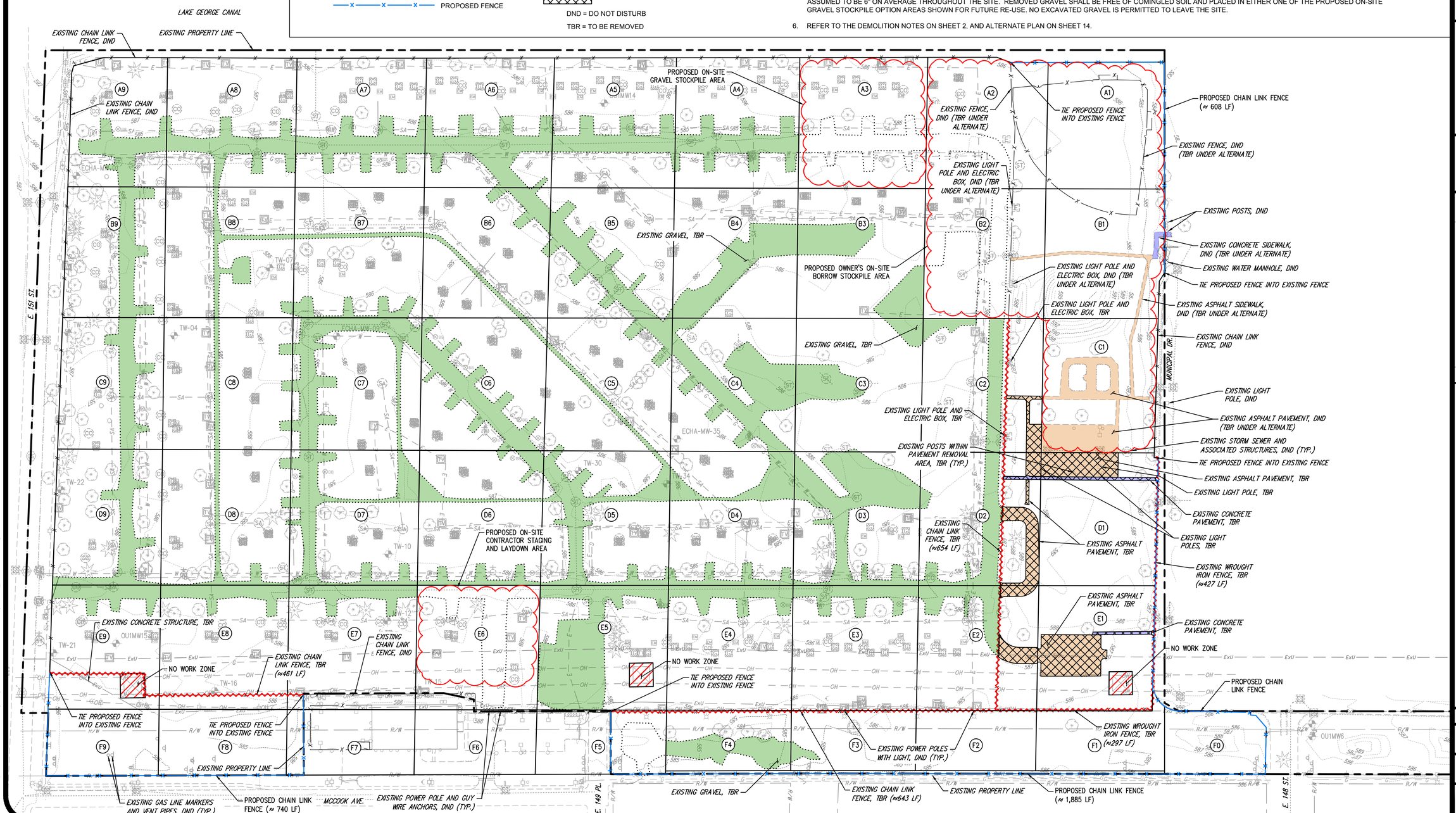
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING PROPERTY LINE
- EXISTING EDGE OF GRAVEL
- EXISTING FENCE
- PROPOSED FENCE REMOVAL
- PROPOSED FENCE
- A1 DECISION UNIT ID
- NO WORK ZONE (SEE NOTE 1)
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT
- PROPOSED GRAVEL REMOVAL
- PROPOSED PAVEMENT REMOVAL

DND = DO NOT DISTURB

TBR = TO BE REMOVED

NOTES:

1. NO EXCAVATION SHALL BE PERFORMED WITHIN THE NO WORK ZONES. THESE ZONES ARE LOCATED AT EXISTING ELECTRIC TRANSMISSION TOWERS, WHICH ARE OWNED AND MAINTAINED BY NORTHERN INDIANA PUBLIC SERVICE COMPANY (NIPSCO). PER NIPSCO REQUIREMENTS, CONTRACTOR SHALL MAINTAIN A DISTANCE OF AT LEAST 6' BACK FROM THE OUTERMOST POINT OF TOWER LEG/FOUNDATION WHEN EXCAVATING. PROPOSED FENCE REMOVAL AND PAVEMENT DEMOLITION IS THE ONLY WORK TO BE PERFORMED WITHIN THE NO WORK ZONES.
2. THE INTENT OF THIS DEMOLITION PLAN IS TO REMOVE ALL SITE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO, EXISTING PAVEMENT, GRAVEL, FENCING, STRUCTURES, LIGHT POLES, POSTS, ETC. WITHIN THE PROPOSED REMEDIAL EXCAVATION AREA DECISION UNITS, AS DEFINED ON SHEETS 8 AND 9, TO FACILITATE REMEDIAL EXCAVATION WORK.
3. NO DEMOLITION ACTIVITIES SHALL OCCUR WITHIN DECISION UNITS NOT REQUIRING EXCAVATION OR STABILIZATION (DECISION UNITS A1, A2, A3, B1, B2, C1, E6, F0, F5, F6, AND F7). SAW CUTS SHALL BE MADE TO PROTECT EXISTING PAVEMENT TO REMAIN, AS APPLICABLE.
4. EXISTING FENCE TO BE REMOVED INCLUDES BOTH ALUMINUM CHAIN LINK FENCING WITH BARBED WIRE, AND WROUGHT IRON FENCING. EXISTING ALUMINUM CHAIN LINK FENCE TO BE REMOVED SHALL BE EVALUATED BY IDA FOR RE-PURPOSING FOR PROPOSED FENCE SECTIONS IF UNDAMAGED AND IN GOOD CONDITION. CONTRACTOR MAY ADJUST LOCATION OF PROPOSED FENCE ALONG EASTERN PROPERTY LINE TO AVOID EXISTING POWER POLES. ALL PROPOSED FENCING SHALL BE ALUMINUM CHAIN LINK.
5. THE LIMITS OF EXISTING GRAVEL AREAS IS APPROXIMATE. IN ADDITION, EXISTING GRAVEL DEPTH VARIES BASED ON BORINGS COMPLETED BY VERDANTAS LLC (FORMERLY HULL & ASSOCIATES, LLC) ON 11/9/2020 THROUGH 11/17/2020. SEE REMEDIATION PLAN B ON SHEET 9 FOR BORING LOCATIONS. FOR PURPOSES OF THIS PLAN, GRAVEL DEPTH IS ASSUMED TO BE 6" ON AVERAGE THROUGHOUT THE SITE. REMOVED GRAVEL SHALL BE FREE OF COMINGLED SOIL AND PLACED IN EITHER ONE OF THE PROPOSED ON-SITE GRAVEL STOCKPILE OPTION AREAS SHOWN FOR FUTURE RE-USE. NO EXCAVATED GRAVEL IS PERMITTED TO LEAVE THE SITE.
6. REFER TO THE DEMOLITION NOTES ON SHEET 2, AND ALTERNATE PLAN ON SHEET 14.



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MARK JOSEPH BONIFAS REGISTERED LS No. LS21010600047 STATE OF INDIANA PROFESSIONAL ENGINEER

DATE: 4/5/23

DESIGNED BY: JRS	DRAWN BY: JRS	CHECKED BY: HQP/DBM	PROJECT NO. 15773

No.	REVISION	CHK'D BY DATE
1	ISSUED FOR CONSTRUCTION	4/5/23

EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT

DEMOLITION PLAN

APPLICATION NO.

DATE: 4/5/2023

SCALE: AS NOTED

SHEET: 7

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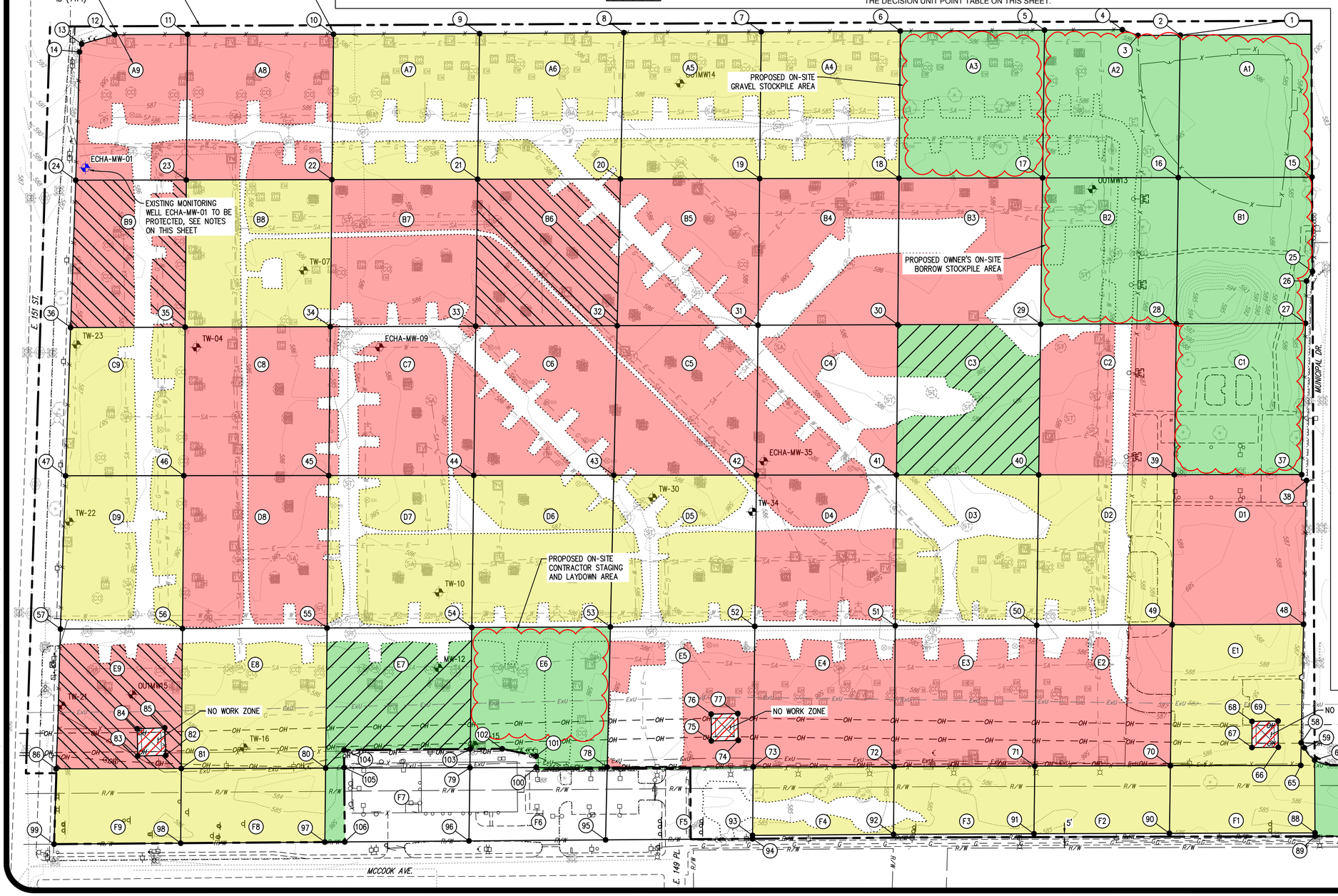
LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING PROPERTY LINE
- EXISTING EDGE OF GRAVEL
- A1 DECISION UNIT ID
- 1 DECISION UNIT POINT LOCATION (SEE TABLE ON THIS SHEET)
- EXISTING MONITORING WELL TO BE PROTECTED (SEE NOTE 8)
- AREA NOT REQUIRING REMEDIAL EXCAVATION OR STABILIZATION
- PROPOSED REMEDIAL EXCAVATION AREA WITH NO STABILIZATION
- PROPOSED REMEDIAL EXCAVATION AND STABILIZATION AREA
- PROPOSED STABILIZATION AREA WITH NO EXCAVATION (EXCEEDS TCLP LEAD)
- PROPOSED SOIL TREATMENT TEST AREA (SEE NOTE 7)
- NO WORK ZONE (SEE NOTE 3)

NOTES:

1. EXISTING PROPERTY LINE, SITE FEATURES, AND GRADES SHOWN ARE BASED ON A TOPOGRAPHIC FIELD SURVEY COMPLETED BY ROBINSON ENGINEERING, LTD. BETWEEN 11/4/2022 AND 11/29/2022. TOPOGRAPHIC SURVEY CAD FILE RECEIVED BY ROBINSON ENGINEERING, LTD. ON 12/21/2022.
2. EXISTING OVERHEAD POWER LINE LOCATIONS SHOWN WERE APPROXIMATED BASED ON SURVEYED LOCATIONS OF EXISTING POWER POLES AND TRANSMISSION TOWERS.
3. NO EXCAVATION SHALL BE PERFORMED WITHIN THE NO WORK ZONES. THESE ZONES ARE LOCATED AT EXISTING ELECTRIC TRANSMISSION TOWERS, WHICH ARE OWNED AND MAINTAINED BY NORTHERN INDIANA PUBLIC SERVICE COMPANY (NIPSCO). PER NIPSCO REQUIREMENTS, CONTRACTOR SHALL MAINTAIN A DISTANCE OF AT LEAST 6' BACK FROM THE OUTERMOST POINT OF TOWER LEG/FOUNDATION WHEN EXCAVATING.
4. REMEDIAL EXCAVATION SHALL BE OFFSET A DISTANCE OF 1' FROM EXISTING FENCE LINES TO REMAIN, AND 4' FROM EDGE OF EXISTING POWER POLES, GUY WIRE ANCHORS, AND UTILITY STICKUPS TO REMAIN. CONTRACTOR SHALL BRACE POWER POLES AS NECESSARY DURING EXCAVATION.
5. THE EASTERN BOUNDARY OF DECISION UNITS F1, F2, F3, AND F4 SHALL BE OFFSET 5' FROM THE PROPERTY LINE TO MINIMIZE DISTURBANCE TO TOE OF EXISTING ROADWAY. REFER TO THE DECISION UNIT POINT TABLE ON THIS SHEET.
6. CONTRACTOR SHALL SUBMIT TO THE ENGINEER POST-EXCAVATION SURVEY DOCUMENTATION DEMONSTRATING REMEDIAL EXCAVATION HAS BEEN COMPLETED PER THE DESIGN. THIS DOCUMENTATION MUST BE APPROVED BY THE SUPERVISING CONTRACTOR PRIOR TO STARTING BACKFILLING ACTIVITIES.
7. REFER TO THE REMEDIAL EXCAVATION & BACKFILLING NOTES ON SHEET 2. PRIOR TO IMPLEMENTING FULL SCALE TREATMENT (IN-SITU STABILIZATION), CONTRACTOR SHALL TREAT AT LEAST 100 CY OF IMPACTED SOILS WITHIN THE PROPOSED SOIL TREATMENT TEST AREAS (DECISION UNITS B6, B9, E9) SHOWN ON THIS SHEET, AND DEMONSTRATE SUCCESSFUL TREATMENT.
8. CONTRACTOR SHALL PROTECT AND AVOID DISTURBANCE TO EXISTING MONITORING WELL "ECHA-MW-01" THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL MAINTAIN A 2'X2' NO WORK ZONE AROUND THIS MONITORING WELL DURING CONSTRUCTION ACTIVITIES. CONTRACTOR IS RESPONSIBLE FOR ANY REPAIR OR REPLACEMENT SHOULD THE WELL GET DAMAGED DURING CONSTRUCTION.
9. REFER TO SHEET 2 FOR NOTES REGARDING DECONTAMINATION.

80' 0 80' 160'
DRAWING SCALE 1" = 80'



DECISION UNIT POINT LOCATION TABLE

Point #	Northing	Easting	Point #	Northing	Easting
1	2323452.29	2846835.77	54	2322206.15	2847708.11
2	2323258.36	2846836.36	55	2321992.13	2847707.97
3	2323195.95	2846836.42	56	2321778.11	2847707.84
4	2323172.72	2846827.74	57	2321597.58	2847707.72
5	2323057.62	2846827.92	58	2323432.64	2847884.28
6	2322844.13	2846827.95	59	2323437.38	2847893.45
7	2322638.35	2846828.59	60	2323452.45	2847910.03
8	2322435.02	2846828.92	61	2323595.97	2847918.77
9	2322221.61	2846829.26	62	2323596.06	2847924.64
10	2322005.30	2846829.33	63	2323604.73	2847925.12
11	2321789.57	2846828.46	64	2323622.11	2847945.27
12	2321681.84	2846828.56	65	2323431.87	2847917.78
13	2321632.73	2846842.15	66	2323398.79	2847890.67
14	2321629.56	2846853.83	67	2323359.76	2847891.01
15	2323452.44	2847047.42	68	2323360.07	2847852.37
16	2323254.59	2847047.01	69	2323398.53	2847852.04
17	2323053.77	2847046.60	70	2323238.99	2847917.45
18	2322841.32	2847046.16	71	2323038.44	2847917.11
19	2322635.04	2847045.73	72	2322830.12	2847916.76
20	2322429.17	2847045.31	73	2322621.77	2847916.40
21	2322217.82	2847044.87	74	2322599.87	2847877.03
22	2322002.23	2847044.42	75	2322559.93	2847877.64
23	2321786.76	2847043.98	76	2322559.90	2847838.06
24	2321623.08	2847043.64	77	2322599.23	2847837.38
25	2323452.45	2847186.95	78	2322405.65	2847916.04
26	2323443.68	2847200.96	79	2322202.50	2847915.69
27	2323441.84	2847263.52	80	2321988.98	1847915.33
28	2323250.71	2847263.32	81	2321775.42	2847914.80
29	2323049.96	2847263.12	82	2321752.49	2847895.51
30	2322838.53	2847262.90	83	2321711.12	2847896.15
31	2322631.74	2847262.69	84	2321710.44	2847855.92
32	2322423.31	2847262.48	85	2321751.22	2847854.64
33	2322214.00	2847262.26	86	2321590.02	2847914.65
34	2321998.92	2847262.04	87	2323620.37	2848023.00
35	2321783.92	2847261.82	88	2323452.46	2848022.76
36	2321614.54	2847261.65	89	2323452.46	2848017.76
37	2323435.23	2847487.44	90	2323237.15	2848017.46
38	2323442.25	2847496.08	91	2323036.68	2848017.18
39	2323246.71	2847486.77	92	2322828.83	2848017.09
40	2323046.03	2847486.07	93	2322620.23	2848017.76
41	2322835.67	2847485.33	94	2322620.15	2848022.76
42	2322628.35	2847484.60	95	2322402.75	2848023.46
43	2322417.33	2847483.86	96	2322200.59	2848024.10
44	2322210.11	2847483.13	97	2321987.31	2848024.79
45	2321995.56	2847482.38	98	2321773.99	2848025.47
46	2321781.06	2847481.62	99	2321586.64	2848026.07
47	2321606.13	2847481.01	100	2322300.45	2847915.38
48	2323436.95	2847708.90	101	2322300.40	2847898.78
49	2323242.73	2847708.78	102	2322250.36	2847887.94
50	2323042.11	2847708.65	103	2322202.99	2847888.10
51	2322832.80	2847708.52	104	2322016.36	2847888.69
52	2322624.94	2847708.38	105	2322016.45	2847915.24
53	2322411.27	2847708.24	106	2322016.80	2848024.69

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MARK JOSEPH BENINATI REGISTERED No. 10600047 STATE OF INDIANA PROFESSIONAL ENGINEER

DATE: 4/5/23

DESIGNED BY: JRS	DRAWN BY: JRS	CHECKED BY: HQP/DBM	PROJECT NO. 15773

No.	REVISION	CHK'D BY DATE
1	ISSUED FOR CONSTRUCTION	4/5/23

EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT

REMEDIATION PLAN A

APPLICATION NO.

DATE: 4/5/2023

SCALE: AS NOTED

SHEET: 8

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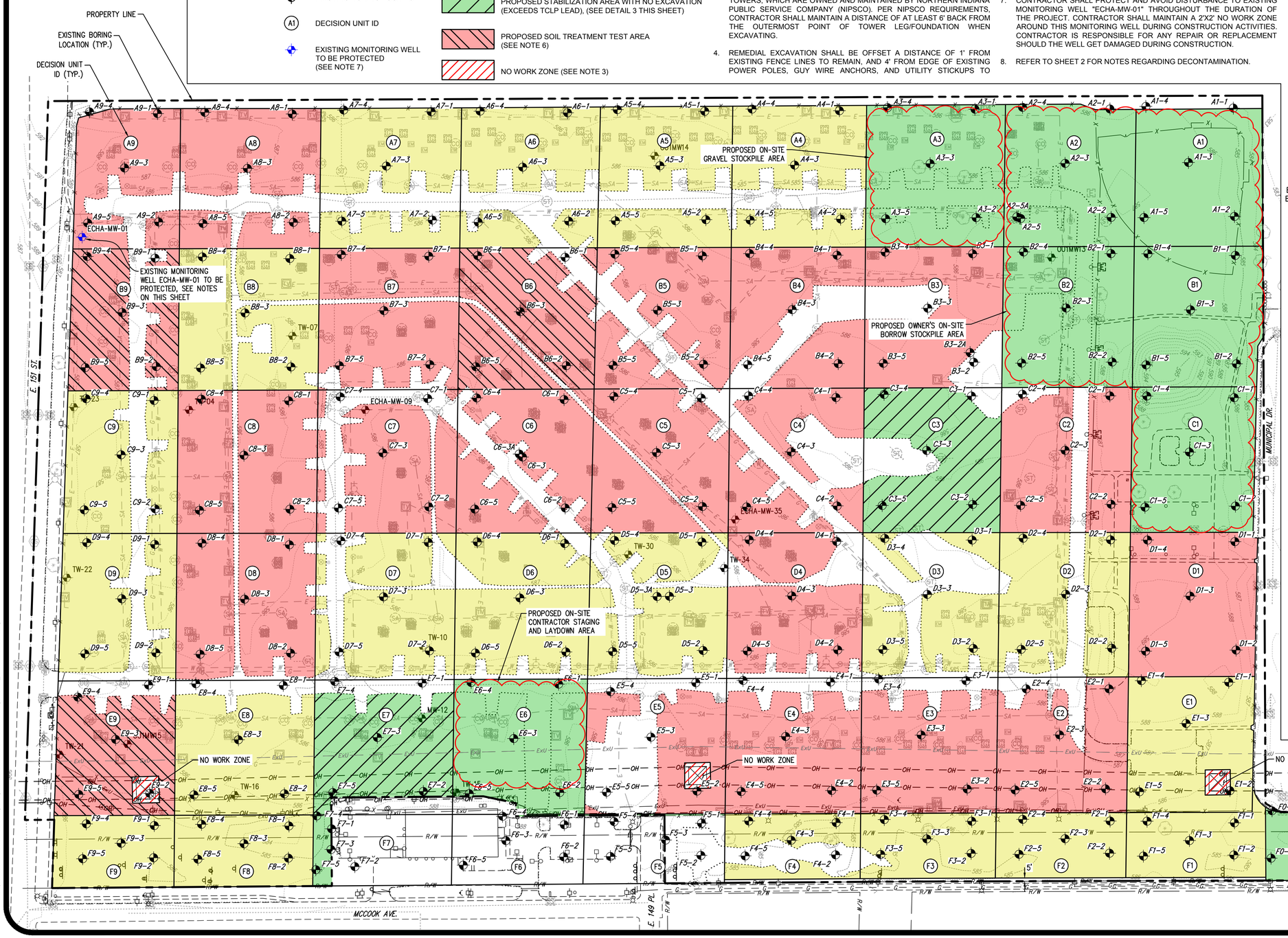
LEGEND

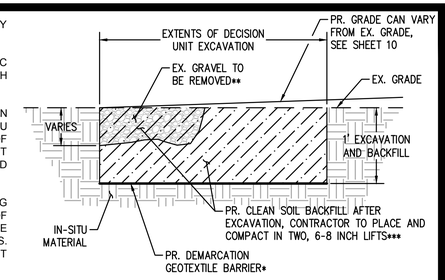
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING PROPERTY LINE
- EXISTING EDGE OF GRAVEL
- EXISTING BORING LOCATION
- (A1) DECISION UNIT ID
- EXISTING MONITORING WELL TO BE PROTECTED (SEE NOTE 7)
- AREA NOT REQUIRING REMEDIAL EXCAVATION OR STABILIZATION
- PROPOSED REMEDIAL EXCAVATION AREA WITH NO STABILIZATION, (SEE DETAIL 1 THIS SHEET)
- PROPOSED REMEDIAL EXCAVATION AND STABILIZATION AREA, (SEE DETAIL 2 THIS SHEET)
- PROPOSED STABILIZATION AREA WITH NO EXCAVATION (EXCEEDS TCLP LEAD), (SEE DETAIL 3 THIS SHEET)
- PROPOSED SOIL TREATMENT TEST AREA (SEE NOTE 6)
- NO WORK ZONE (SEE NOTE 3)

80' 0 80' 160'
DRAWING SCALE 1" = 80'

NOTES:

1. EXISTING PROPERTY LINE, SITE FEATURES, AND GRADES SHOWN ARE BASED ON A TOPOGRAPHIC FIELD SURVEY COMPLETED BY ROBINSON ENGINEERING, LTD. BETWEEN 11/4/2022 AND 11/29/2022. TOPOGRAPHIC SURVEY CAD FILE RECEIVED BY ROBINSON ENGINEERING, LTD. ON 12/21/2022.
2. EXISTING OVERHEAD POWER LINE LOCATIONS SHOWN WERE APPROXIMATED BASED ON SURVEYED LOCATIONS OF EXISTING POWER POLES AND TRANSMISSION TOWERS.
3. NO EXCAVATION SHALL BE PERFORMED WITHIN THE NO WORK ZONES. THESE ZONES ARE LOCATED AT EXISTING ELECTRIC TRANSMISSION TOWERS, WHICH ARE OWNED AND MAINTAINED BY NORTHERN INDIANA PUBLIC SERVICE COMPANY (NIPSCO). PER NIPSCO REQUIREMENTS, CONTRACTOR SHALL MAINTAIN A DISTANCE OF AT LEAST 6' BACK FROM THE OUTERMOST POINT OF TOWER LEG/FOUNDATION WHEN EXCAVATING.
4. REMEDIAL EXCAVATION SHALL BE OFFSET A DISTANCE OF 1' FROM EXISTING FENCE LINES TO REMAIN, AND 4' FROM EDGE OF EXISTING POWER POLES, GUY WIRE ANCHORS, AND UTILITY STICKUPS TO REMAIN. CONTRACTOR SHALL BRACE POWER POLES AS NECESSARY DURING EXCAVATION.
5. EXISTING BORINGS SHOWN WERE COMPLETED BY VERDANTAS LLC (FORMERLY HULL & ASSOCIATES, LLC) ON 11/9/2020 THROUGH 11/17/2020.
6. REFER TO THE REMEDIAL EXCAVATION & BACKFILLING NOTES ON SHEET 2. PRIOR TO IMPLEMENTING FULL SCALE TREATMENT (IN-SITU STABILIZATION), CONTRACTOR SHALL TREAT AT LEAST 100 CY OF IMPACTED SOILS WITHIN THE PROPOSED SOIL TREATMENT TEST AREAS (DECISION UNITS B6, B9, E9) SHOWN ON THIS SHEET, AND DEMONSTRATE SUCCESSFUL TREATMENT.
7. CONTRACTOR SHALL PROTECT AND AVOID DISTURBANCE TO EXISTING MONITORING WELL "ECHA-MW-01" THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL MAINTAIN A 2'X2' NO WORK ZONE AROUND THIS MONITORING WELL DURING CONSTRUCTION ACTIVITIES. CONTRACTOR IS RESPONSIBLE FOR ANY REPAIR OR REPLACEMENT SHOULD THE WELL GET DAMAGED DURING CONSTRUCTION.
8. REFER TO SHEET 2 FOR NOTES REGARDING DECONTAMINATION.





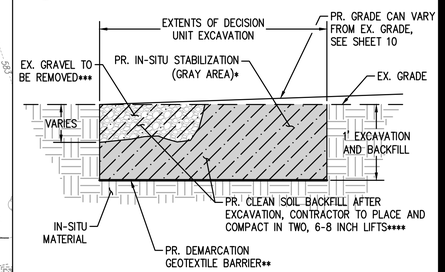
* DEMARCATION GEOTEXTILE BARRIER SHALL BE OF WOVEN MATERIAL ALLOWING FOR DRAINAGE TO UNDERLYING LAYERS.

** REFER TO DEMOLITION NOTES ON SHEET 2.

*** REFER TO REMEDIAL EXCAVATION & BACKFILLING NOTES ON SHEET 2.

1 REMEDIAL EXCAVATION - NO STABILIZATION

Scale: NTS



* GRAY SHADED AREA REPRESENTS EXISTING CONTAMINATED SOILS TO RECEIVE IN-SITU STABILIZATION PRIOR TO EXCAVATION.

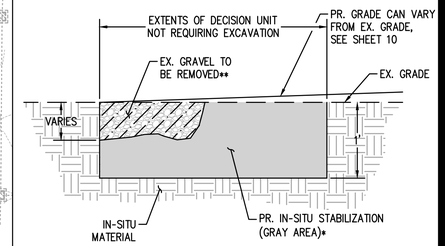
** DEMARCATION GEOTEXTILE BARRIER SHALL BE OF WOVEN MATERIAL ALLOWING FOR DRAINAGE TO UNDERLYING LAYERS.

*** REFER TO DEMOLITION NOTES ON SHEET 2.

**** REFER TO REMEDIAL EXCAVATION & BACKFILLING NOTES ON SHEET 2.

2 REMEDIAL EXCAVATION - WITH STABILIZATION

Scale: NTS



* GRAY SHADED AREA REPRESENTS EXISTING CONTAMINATED SOILS TO RECEIVE IN-SITU STABILIZATION, THEN LEFT IN PLACE.

** FOLLOWING REMOVAL OF EXISTING GRAVEL AND IN-SITU STABILIZATION, CONTRACTOR TO BACKFILL VOID WITH CLEAN SOIL MATERIAL. BACKFILL SHALL BE PLACED AND COMPACTED IN TWO, 6-8 INCH LIFTS. REFER TO DEMOLITION NOTES, AND REMEDIAL EXCAVATION & BACKFILLING NOTES ON SHEET 2.

3 STABILIZATION - NO REMEDIAL EXCAVATION

Scale: NTS

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MARK JOSEPH BENINATI REGISTERED No. 21010606047 STATE OF INDIANA PROFESSIONAL ENGINEER

DATE: 4/5/23

DESIGNED BY: JRS	DRAWN BY: JRS	CHECKED BY: HQP/DBM	PROJECT NO. 15773

No.	REVISION	CHK'D BY DATE
1	ISSUED FOR CONSTRUCTION	4/5/23

EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT

REMEDIATION PLAN B

APPLICATION NO.

DATE: 4/5/2023

SCALE: AS NOTED

SHEET: 9

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80′ 0 80′ 160′

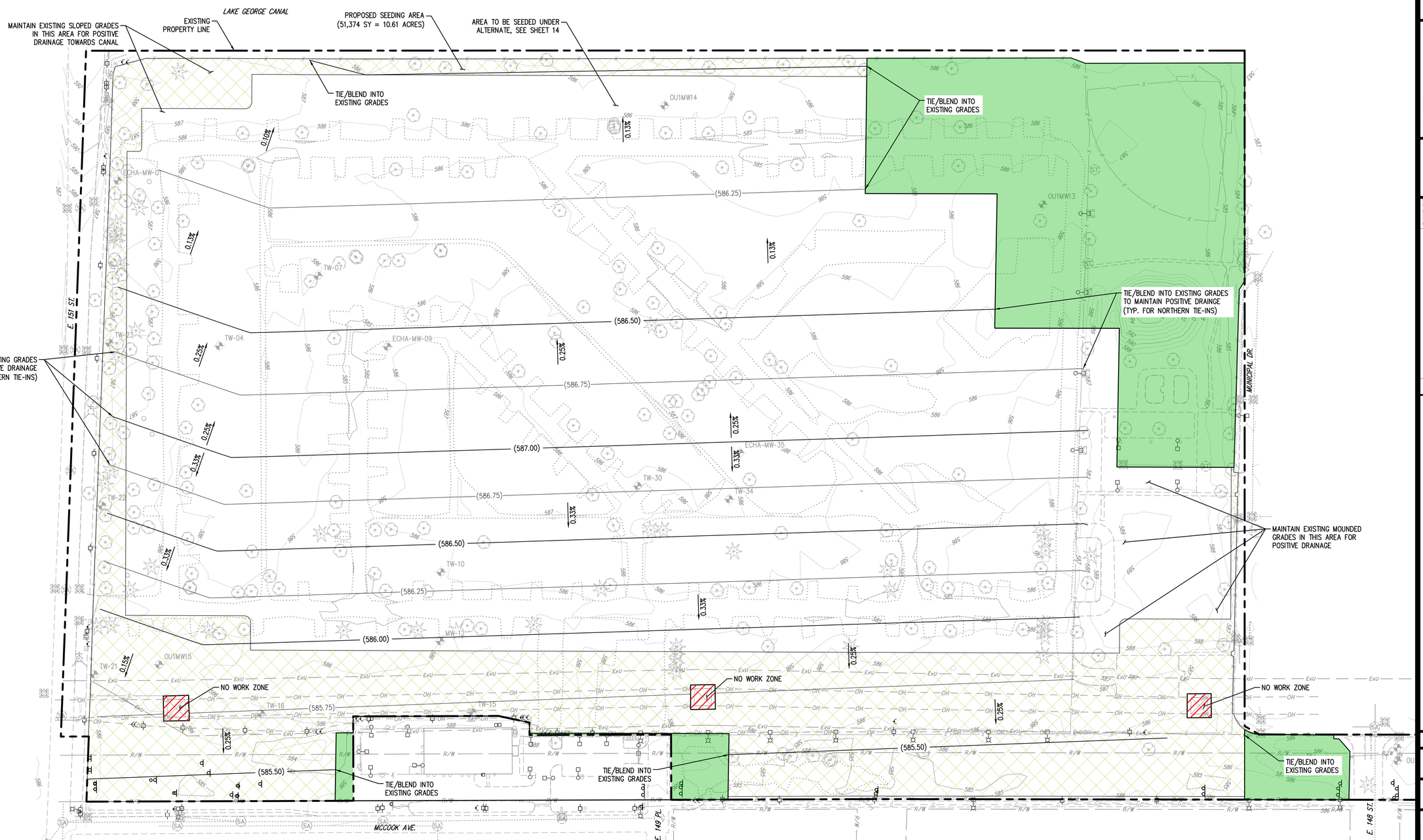
DRAWING SCALE 1" = 80′

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING PROPERTY LINE
- PROPOSED MAJOR CONTOUR (0.50′ INTERVALS)
- PROPOSED MINOR CONTOUR (0.25′ INTERVALS)
- PROPOSED SEEDING AREA
- NO GRADING OR SEEDING WITHIN AREAS NOT REQUIRING REMEDIAL EXCAVATION OR STABILIZATION
- NO WORK ZONE

NOTES:

1. EXISTING PROPERTY LINE, SITE FEATURES, AND GRADES SHOWN ARE BASED ON A TOPOGRAPHIC SURVEY COMPLETED BY ROBINSON ENGINEERING, LTD. BETWEEN 11/4/2022 AND 11/29/2022.
2. CONTRACTOR SHALL FIELD ADJUST/BLEND PROPOSED GRADES AS NEEDED TO PROVIDE PROPER TIE-IN TO EXISTING GRADES, AND TO PROMOTE POSITIVE DRAINAGE THROUGHOUT THE SITE.
3. THE LIMITS OF PROPOSED SEEDING SHOWN IS BASED ON AREAS NOT REQUIRING REMEDIAL EXCAVATION OR STABILIZATION, AS WELL AS THE APPROXIMATE LOCATION OF FUTURE DEVELOPMENT OF THE PROPERTY, WHICH DOES NOT REQUIRE SEEDING. SEE SHEET 12 FOR PROPOSED SEED MIXES.
4. REFER TO ALTERNATE PLAN ON SHEET 14.



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MARK JOSEPH BANDY REGISTERED LE No. 710600047 STATE OF INDIANA PROFESSIONAL ENGINEER

DATE: 4/5/23

DESIGNED BY:	DRAWN BY:	CHECKED BY:	PROJECT NO.
JRS	JRS	HQP/DBM	15773

No.	REVISION	CHK'D BY DATE
1	ISSUED FOR CONSTRUCTION	4/5/23

EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT

GRADING & SEEDING PLAN

APPLICATION NO.

DATE: 4/5/2023

SCALE: AS NOTED

SHEET: 10

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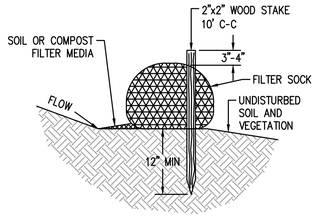


MAXIMUM SLOPE LENGTHS AND RECOMMENDED FILTER SOCK DIAMETER					
SLOPE	8"	12"	18"	24"	32"
0% - 2%	125'	250'	300'	350'	400'
2% - 10%	100'	125'	200'	250'	300'
10% - 20%	75'	100'	150'	200'	250'
20% - 33%	25'	50'	75'	100'	125'
>33%	10'	25'	50'	75'	100'

GENERAL NOTES

1. INSTALL AND SIZE FILTER SOCKS IN ACCORDANCE WITH THE RECOMMENDATIONS OF CHAPTER 7 OF THE INDIANA STORM WATER QUALITY MANUAL BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.
2. MATERIALS - COMPOST USED FOR FILTER SOCKS SHALL BE WEED, PATHOGEN, AND INSECT FREE AND FREE OF ANY REFUSE, CONTAMINANTS, OR OTHER MATERIALS TOXIC TO PLANT GROWTH. THEY SHALL BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER AND CONSIST OF PARTICLES RANGING FROM ⅜" TO 2".
3. FILTER SOCKS SHALL BE 3 TO 5 MIL CONTINUOUS, TUBULAR, HDPE ⅜" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST PASSING THE ABOVE SPECIFICATIONS FOR COMPOST MATERIAL,

INSTALLATION

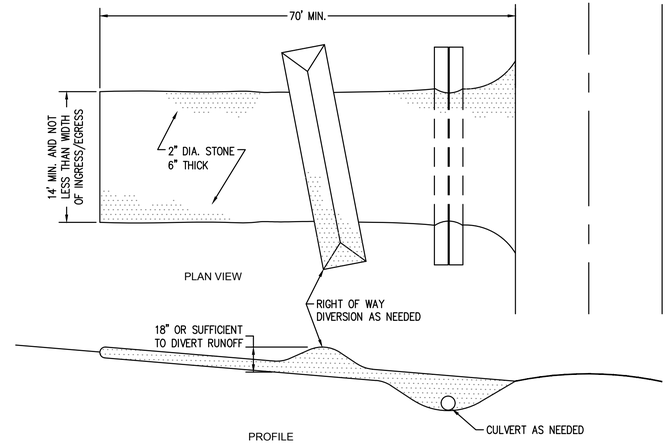
1. FILTER SOCKS SHALL BE PLACED ON A LEVEL LINE, GENERALLY PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA. ON SLOPES APPROACHING 2:1, ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEEDED MID-SLOPE, END SHALL BE WINGED UPSLOPE FOR A MINIMUM OF 4 FEET TO PREVENT CIRCUMVENTION.
2. FILTER SOCKS INTENDED TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE SHALL BE SEEDED AT THE TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION.
3. WOODEN STAKES MAY BE PLACED EITHER FILTER SOCKS OR ON THE DOWNHILL SIDE OF FILTER SOCKS, CONTRACTOR TO ENSURE STABILITY WITH ENTER PLACEMENT.

MAINTENANCE

1. ROUTINELY INSPECT FILTER SOCKS AFTER EACH SIGNIFICANT RAIN, MAINTAINING FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES.
2. REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE FILTER SOCK WHEN THEY REACH ½ OF THE EXPOSED HEIGHT OF THE CONTROL.
3. WHERE THE FILTER SOCK DETERIORATES OR FAILS, IT SHALL BE REPAIRED OR REPLACED WITH A MORE EFFECTIVE ALTERNATIVE.
4. FILTER SOCKS SHALL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED IN SUCH A WAY AS TO FACILITATE AND NOT OBSTRUCT SEEDINGS.

FS FILTER SOCK DETAIL

Scale: NTS

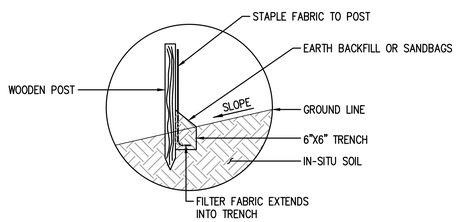


NOTES:

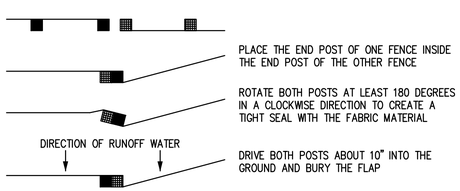
1. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
2. MAINTENANCE - TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
3. BEDDING - A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL HAVE A GRAB TENSILE STRENGTH OF AT LEAST 200 LBS., AND A MULLEN BURST STRENGTH OF AT LEAST 190 LBS.

CE CONSTRUCTION ENTRANCE

Scale: NTS



SLOPE CHECK



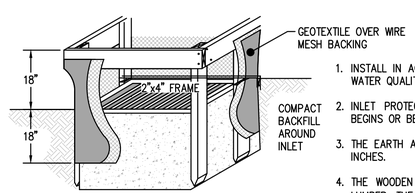
ATTACHING TWO SILT FENCES

SILT FENCE NOTES:

1. SILT FENCE TO BE INSTALLED PARALLEL TO SLOPE.
2. USE SILT FENCE AS NEEDED TO PREVENT THE TRANSPORT OF SEDIMENT-LADEN WATER.

SF SILT FENCE DETAIL

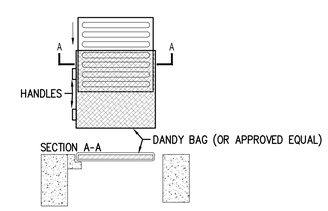
Scale: NTS



1. INSTALL IN ACCORDANCE WITH THE RECOMMENDATIONS OF CHAPTER 7 OF THE INDIANA STORM WATER QUALITY MANUAL BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.
2. INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE INLET BECOMES FUNCTIONAL.
3. THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH AT LEAST 18 INCHES.
4. THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2-INCH BY 4-INCH CONSTRUCTION GRADE LUMBER. THE 2-INCH BY 4-INCH POSTS SHALL BE DRIVEN ONE (1) FT. INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2-INCH BY 4-INCH FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WILL POSE A SAFETY HAZARD TO TRAFFIC.
5. WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME.
6. GEOTEXTILE MATERIAL SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18 INCHES BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.
7. BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6-INCH LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.
8. A COMPACTED EARTH DIKE OR CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION. THE TOP OF THE DIKE SHALL BE AT LEAST 6 INCHES HIGHER THAN THE TOP OF THE FRAME.

GP GEOTEXTILE INLET PROTECTION

Scale: NTS



INSPECTION:

1. REMOVE THE UNIT WITH GRATE INSIDE BAG USING HANDLES, INSPECT CATCH BASIN OR MANHOLE AND REPLACE.

MAINTENANCE:

1. REMOVE DRIED SEDIMENT FROM SURFACE OF UNIT AS NEEDED WITH STIFF BROOM OR SQUARE POINT SHOVEL. REMOVE FINE MATERIAL FROM INSIDE ENVELOPE AS NEEDED.

DB DANDY BAG INLET PROTECTION

Scale: NTS

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EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT

EROSION & SEDIMENT CONTROL DETAILS

APPLICATION NO.

DATE: 4/5/2023

SCALE: AS NOTED

SHEET: 11

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PROJECT DATA

PROJECT DESCRIPTION:	SOILS REMEDIATION, IN-SITU STABILIZATION, AND EXCAVATION, SITE DEMOLITION, FENCE CONSTRUCTION, AND GRADING.
PROJECT DISTURBED AREA:	42.39 ACRES
SITE LOCATION:	USS LEAD SUPERFUND SITE KNOWN AS MODIFIED ZONE 1 CITY OF EAST CHICAGO LAKE COUNTY, INDIANA
SOIL DATA:	URBAN LAND & OAKVILLE-ADRIAN COMPLEX (USDA WEB SOIL SURVEY), AND VARIOUS TYPES OF FILL
IMMEDIATE RECEIVING WATERS:	OFF-SITE STORM SEWERS
SUBSEQUENT RECEIVING WATERS:	LAKE GEORGE CANAL, LAKE MICHIGAN
PRIOR LAND USE:	COMMERICAL / RESIDENTIAL

THERE WILL BE A DECREASE IN THE PERCENT IMPERVIOUSNESS OF THE SITE AT COMPLETION OF THE PROJECT.

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED BY VERDANTAS LLC FOR THIS PROJECT. THE SWPPP AND GENERAL PERMIT SHALL GOVERN THE WORK WHICH IS THE RESPONSIBILITY OF THE CONTRACTOR. THE SWPPP SHALL GOVERN FOR ANY DISCREPANCY BETWEEN IT AND EROSION & SEDIMENT CONTROLS DESCRIBED IN THESE PLANS.

BMP SELECTION FOR PROJECT IMPROVEMENTS
BMP TREATMENTS FOR THE PROJECT AREA CONSIST OF FILTER SOCKS, SILT FENCE, AND INLET PROTECTION.

GENERAL EROSION AND SEDIMENT CONTROL NOTES
EROSION CONTROL SHALL CONSIST OF TEMPORARY CONTROL MEASURES AS DETAILED ON THE PLANS OR ORDERED BY THE CITY OF EAST CHICAGO DURING THE TERM OF CONSTRUCTION TO CONTROL SOIL EROSION AND SEDIMENTATION THROUGH THE USE OF EROSION CONTROL BEST MANAGEMENT PRACTICES (BMP'S).

TEMPORARY EROSION AND SEDIMENT CONTROL ITEMS, THE LOCATION AND SIZE OF WHICH ARE DETAILED ON THE PLANS, SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY CLEARING OR DEMOLITION OPERATIONS. CONDITIONS THAT DEVELOP DURING CONSTRUCTION THAT WERE NOT FORESEEN DURING DESIGN STAGE, THAT REQUIRE ADDITIONAL OR MODIFIED TEMPORARY OR PERMANENT BMP'S SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE OR SUPERVISING CONTRACTOR.

PERIMETER SEDIMENT CONTROLS, SHALL BE IMPLEMENTED PRIOR TO GRADING AND WITHIN 7 DAYS FROM THE START OF GRUBBING. THEY SHALL CONTINUE TO FUNCTION UNTIL THE UP SLOPE DEVELOPMENT AREAS ARE RE-ESTABLISHED WITH VEGETATION.

SEDIMENT LADEN WATER SHALL NOT BE DISCHARGED TO STREAMS, WATER RESOURCES, OR THE STORM SEWER SYSTEM.

ADDITIONAL EROSION AND SEDIMENT CONTROL BMP'S MAY BE REQUIRED BY THE CITY OF EAST CHICAGO AS UNFORSEEN SITUATIONS MAY ARISE THAT REQUIRE ADDITIONAL EROSION AND SEDIMENT CONTROL PRACTICES.

CLEARING AND GRUBBING
LIMITS OF DISTURBANCE FOR CLEARING AND GRADING SHALL BE CLEARLY MARKED ON THE SITE BY THE CONTRACTOR WITH SIGNAGE, FLAGGING AND/OR ORANGE CONSTRUCTION FENCING.

THE CONTRACTOR SHALL LIMIT THE SURFACE AREA OF ERODIBLE EARTH MATERIAL EXPOSED BY EXCAVATION, BORROW AND FILL OPERATIONS AND PROVIDE IMMEDIATE PERMANENT OR TEMPORARY CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT STREAMS, WATER RESOURCES, WETLANDS, OR OTHER AREAS OF WATER IMPOUNDMENT.

STABILIZATION
PERMANENT AND TEMPORARY STABILIZATION SHALL OCCUR AS REQUIRED IN THE FOLLOWING TABLES:

TABLE 1: PERMANENT STABILIZATION

PERMANENT STABILIZATION	
AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROL
ANY AREA THAT WILL LIE DORMANT FOR ONE YEAR OR MORE	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE
ANY AREA WITHIN 50 FT. OF A STREAM AND AT FINAL GRADE	WITHIN 2 DAYS OF REACHING FINAL GRADE
ANY OTHER AREAS AT FINAL GRADE	WITHIN 7 DAYS OF REACHING FINAL GRADE WITHIN THAT AREA

TEMPORARY SEEDING
SEEDED AREAS SHALL BE INSPECTED AND WHERE THE SEED HAS NOT PRODUCED 70% COVER SHALL BE RESEEDED BY THE CONTRACTOR. AREAS SHALL BE STABILIZED WITH STRAW MULCH WHEN CONDITIONS PROHIBIT SEEDING.

STRAW MULCH SHALL BE APPLIED AT A RATE OF 2-3 STANDARD 45 LB. BALES PER 1000 SQ. FT. OF DISTURBED AREA OR 2 TONS PER ACRE. ALL HYDROSEEDING MUST BE STRAW MULCHED ACCORDING TO THE ABOVE SPECIFICATIONS UNLESS IT IS WATERED WEEKLY.

ALL DETENTION PONDS, RETENTION PONDS, WATER QUALITY STRUCTURES, SEDIMENT PONDS, SEDIMENT TRAPS, EARTHEN DIVERSIONS, OR EMBANKMENTS SHALL BE SEEDED AND STRAW MULCHED WITHIN 7 DAYS OF COMPLETED CONSTRUCTION.

TABLE 2: TEMPORARY STABILIZATION

TEMPORARY STABILIZATION	
AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROL
ANY DISTURBED AREAS WITHIN 50 FEET OF A STREAM AND NOT AT FINAL GRADE	WITHIN 2 DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS
FOR ALL CONSTRUCTION ACTIVITIES, ANY DISTURBED AREA, INCLUDING SOIL STOCKPILES THAT WILL BE DORMANT FOR MORE THAN 21 DAYS BUT LESS THAN 1 YEAR, AND NOT WITHIN 50 FEET OF A STREAM	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA
DISTURBED AREAS THAT WILL REMAIN IDLE OVER WINTER	PRIOR TO THE ONSET OF WINTER WEATHER (NOV. 1) STRAW MULCH 2-3 BALES PER 1000 SQ. FT. OR 2 TONS PER ACRE

SEEDING AND MULCHING
SEDIMENT CONTROL SHALL BE ACCOMPLISHED BY SEEDING AND MULCHING UPON COMPLETION OF EXCAVATION OR FILL AND ALL DISTURBED AREAS IN ACCORDANCE WITH THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARD SPECIFICATIONS 2022 OR AS DIRECTED BY THE SUPERVISING CONTRACTOR. THE FOLLOWING MIXTURES SHALL BE USED FOR SEEDING:

TEMPORARY SEED MIX:	SECTION 205.04, SPRING MIX (IF CONSTRUCTION JANUARY 1 - JUNE 15) SECTION 205.04, FALL MIX (IF CONSTRUCTION SEPTEMBER 1 - DECEMBER 31) SECTION 205.04, MULCH TYPE A ONLY (IF CONSTRUCTION JUNE 16 - AUGUST 31)
PERMANENT SEED MIX:	SECTION 621.06, SEED MIXTURE R

PERMANENT STABILIZATION OF CONVEYANCE CHANNELS
THE CONTRACTOR SHALL UNDERTAKE SPECIAL MEASURES TO STABILIZE CHANNELS AND OUTFALLS AND PREVENT EROSIVE FLOWS. MEASURES MAY INCLUDE SEEDING, DORMANT SEEDING, MULCHING, EROSION CONTROL MATTING, SODDING, RIPRAP, NATURAL CHANNEL DESIGN WITH BIO-ENGINEERING TECHNIQUES, OR ROCK CHECK DAMS, ALL AS DEFINED IN THE MOST RECENT EDITION OF THE INDIANA STORM WATER QUALITY MANUAL PUBLISHED BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.

SOIL TRANSPORT ONTO PUBLIC ROADS
WHERE SOIL IS TRANSPORTED ONTO PUBLIC ROAD SURFACES, THE ROADS SHALL BE CLEANED THOROUGHLY BY EITHER SWEEPING OR SCRAPING AT THE END OF EACH WORK DAY OR MORE FREQUENTLY IF NEEDED IN ORDER TO ENSURE PUBLIC SAFETY. STREET WASHING IS NOT PERMITTED. IF APPLICABLE, THE CATCH BASINS NEAREST TO ANY SITE WORK SHALL BE CLEANED WEEKLY.

ADDITIONAL REQUIREMENTS TO CONTROL SOIL TRANSPORT ONTO PUBLIC ROADS MAY INCLUDE:
1. COMPOST FILTER SOCK, SILT FENCE OR CONSTRUCTION FENCE INSTALLED AROUND THE PERIMETER OF THE DEVELOPMENT AREA TO ENSURE ALL VEHICLE TRAFFIC ADHERES TO DESIGNATED CONSTRUCTION ENTRANCES.

CREDIBLE MATERIAL RAMPS IN STREETS TO ENABLE EQUIPMENT TO CROSS CURBS SHALL BE PROPERLY REMOVED IMMEDIATELY AFTER USE.

COMPOST FILTER SOCK, SILT FENCE AND DIVERSIONS
SHEET FLOW RUNOFF FROM DENUDED AREAS SHALL BE INTERCEPTED BY COMPOST FILTER SOCK, SILT FENCE OR DIVERSIONS TO PROTECT ADJACENT PROPERTIES, WATER RESOURCES, AND WETLANDS FROM SEDIMENT TRANSPORTED VIA SHEET FLOW. WHERE INTENDED TO PROVIDE SEDIMENT CONTROL, COMPOST FILTER SOCK/SILT FENCE SHALL BE PLACED ON A LEVEL CONTOUR AND SHALL BE CAPABLE OF TEMPORARILY PONDING RUNOFF.

INLET PROTECTION
INLET PROTECTION IS MANDATORY. INLET PROTECTION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENT VERSION OF THE INDIANA STORM WATER QUALITY MANUAL BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT. STRAW OR HAY BALES ARE NOT ACCEPTABLE FORMS OF INLET PROTECTION.

NON-SEDIMENT POLLUTANTS CONTROLS
NO SOLID OR LIQUID WASTE, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED IN STORM WATER RUNOFF. ALL NECESSARY BMP'S MUST BE IMPLEMENTED TO PREVENT THE DISCHARGE OF NON-SEDIMENT POLLUTANTS TO THE DRAINAGE SYSTEM OF THE SITE, WATER RESOURCES, OR WETLANDS. UNDER NO CIRCUMSTANCE SHALL CONCRETE TRUCKS WASH OUT DIRECTLY INTO A DRAINAGE CHANNEL, STREET, STORM SEWER, OR OTHER PUBLIC FACILITY OR NATURAL RESOURCE. EXPOSURE OF WASTE MATERIALS TO STORM WATER IS NOT RECOMMENDED.

TRENCH AND GROUNDWATER CONTROL
THERE SHALL BE NO SEDIMENT LADEN OR TURBID DISCHARGES TO WATER RESOURCES OR WETLANDS RESULTING FROM DEWATERING ACTIVITIES. IF TRENCH OR GROUND WATER CONTAINS SEDIMENT, IT MUST PASS THROUGH A SEDIMENT SETTLING POND OR OTHER EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE PRIOR TO BEING DISCHARGED FROM THE CONSTRUCTION SITE. ALTERNATIVELY, SEDIMENT MAY BE REMOVED BE SETTLING IN PLACE OR BY DEWATERING INTO A SUMP PIT, FILTER BAG, OR COMPARABLE PRACTICE. GROUND WATER DEWATERING WHICH DOES NOT CONTAIN SEDIMENT OR OTHER POLLUTANTS IS NOT REQUIRED TO BE TREATED PRIOR TO DISCHARGE. HOWEVER, CARE MUST BE TAKEN WHEN DISCHARGING GROUND WATER TO ENSURE THAT IT DOES NOT BECOME POLLUTANT LADEN BY TRAVERSING OVER DISTURBED SOILS OR OTHER POLLUTANT SOURCES.

INSPECTION
ALL CONTROLS ON THE SITE SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN ONE-HALF INCH OF RAIN PER 24 HOUR PERIOD. THE CONTRACTOR SHALL ASSIGN QUALIFIED INSPECTION PERSONNEL TO CONDUCT THESE INSPECTIONS TO ENSURE THAT THE CONTROL PRACTICES ARE FUNCTIONAL AND TO EVALUATE WHETHER THE SWP3 IS ADEQUATE, OR WHETHER ADDITIONAL CONTROL MEASURES ARE REQUIRED. QUALIFIED INSPECTION PERSONNEL ARE INDIVIDUALS WITH KNOWLEDGE AND EXPERIENCE IN THE INSTALLATION AND MAINTENANCE OF SEDIMENT AND EROSION CONTROLS.

INSPECTIONS SHALL MEET THE FOLLOWING REQUIREMENTS:
1. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM.

2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. THE CONTRACTOR SHALL UTILIZE AN INSPECTION FORM TO DOCUMENT INSPECTIONS. THE INSPECTION FORM SHALL INCLUDE:

   a. THE INSPECTION DATE.
   b. NAMES, TITLES AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION.
   c. WEATHER INFORMATION FOR THE PERIOD SINCE THE LAST INSPECTION, INCLUDING A BEST ESTIMATE OF THE BEGINNING OF EACH STORM EVENT, DURATION OF EACH STORM EVENT AND APPROXIMATE AMOUNT OF RAINFALL FOR EACH STORM EVENT IN INCHES, AND WHETHER ANY DISCHARGES OCCURRED.
   d. LOCATIONS OF:
   - DISCHARGES FROM SEDIMENT OR OTHER POLLUTANTS FROM THE SITE.
   - BMP'S THAT NEED TO BE MAINTAINED.
   - BMP'S THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION.
   - WHERE ADDITIONAL BMP'S ARE NEEDED THAT DID NOT EXIST AT THE TIME OF THE INSPECTION.

3. DISCHARGE LOCATIONS SHALL BE INSPECTED TO DETERMINE WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO THE RECEIVING WATER RESOURCE OR WETLANDS.

4. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE VEHICLE TRACKING.

MAINTENANCE
ALL CONTROL PRACTICES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION UNTIL FINAL STABILIZATION. ALL SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED IN A FUNCTIONAL CONDITION UNTIL ALL UP SLOPE AREAS THEY CONTROL REACH FINAL STABILIZATION. THE CONTRACTOR SHALL COMPLY WITH THE MAINTENANCE SCHEDULE CONTAINED IN THE APPROVED PLANS FOR THE PROPOSED EROSION CONTROLS.

WHEN INSPECTIONS REVEAL THE NEED FOR REPAIR, REPLACEMENT, OR INSTALLATION OF EROSION AND SEDIMENT CONTROL BMP'S, THE FOLLOWING PROCEDURES SHALL BE FOLLOWED:

1. WHEN PRACTICES REQUIRE REPAIR OR MAINTENANCE: CONTROL PRACTICES IN NEED OF REPAIR OR MAINTENANCE, MUST BE REPAIRED OR MAINTAINED WITHIN 3 DAYS OF THE INSPECTION.

2. WHEN PRACTICES FAIL TO PROVIDE THEIR INTENDED FUNCTION: CONTROL PRACTICES THAT FAIL TO PERFORM THEIR INTENDED FUNCTION SHALL BE REPLACED WITH ANOTHER MORE APPROPRIATE CONTROL WITHIN 10 DAYS.

WASTE DISPOSAL
A COVERED DUMPSTER SHALL BE MADE AVAILABLE FOR THE PROPER DISPOSAL OF GARBAGE, PLASTER, DRYWALL, GROUT, GYPSUM, AND OTHER WASTE MATERIALS. ALL CONTAINERS MUST BE LEAK PROOF. ALL WASTE MATERIALS INCLUDING TOXIC OR HAZARDOUS WASTE SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THE PERTINENT MATERIAL.

CONSTRUCTION AND DEMOLITION DEBRIS (C&DD)
ALL C&DD SHALL BE DISPOSED OF IN AN EPA APPROVED C&DD LANDFILL. MATERIALS WHICH CONTAIN ASBESTOS MUST COMPLY WITH STATE AIR POLLUTION REGULATIONS.

OPEN BURNING
OPEN BURNING IS NOT PERMITTED.

DUST CONTROLS AND SUPPRESSANTS
DUST CONTROL SHALL BE INTEGRATED THROUGHOUT THE PROJECT. USED OIL SHALL NOT BE USED AS A DUST SUPPRESSANT. DUST CONTROLS MAY INCLUDE THE USE OF WATER TRUCKS TO WET DISTURBED AREAS, TARPING STOCKPILES, TEMPORARY STABILIZATION OF DISTURBED AREAS, AND REGULATION OF THE SPEED OF VEHICLES ON THE SITE.

PERMITS
THIS SITE IS COVERED UNDER INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT CONSTRUCTION STORMWATER GENERAL PERMIT (INRA00000).

STRUCTURAL BMP'S
PERMANENT BMP'S FOR POST CONSTRUCTION TREATMENT OF STORM WATER (CONVERSION OF SEDIMENT LAND TO STORM WATER POND) SHALL NOT BE INSTALLED UNTIL 70% OF THE DISTURBED AREA IS STABILIZED.

SWPPP FORMS AND LOGS
SWPPP FORMS AND LOGS TO BE COMPLETED AND MAINTAINED BY THE CONTRACTOR AS PART OF THE SWPPP (PREPARED BY VERDANTAS LLC), AND PROVIDED IN THE ACCOMPANYING CONTRACT DOCUMENTS. THESE FORMS AND LOGS CONSIST OF THE FOLLOWING:

1. STORM WATER CONSTRUCTION SITE INSPECTION REPORT
2. CORRECTIVE ACTION LOG
3. GRADING AND STABILIZATION ACTIVITIES LOG

ALL ADDITIONAL FORMS, REPORTS, LOGS, ETC. AS MAY BE REQUIRED TO COMPLY WITH THE SWPPP ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

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STATE OF INDIANA
PROFESSIONAL ENGINEER
DATE: 4/5/23

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EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT
EROSION & SEDIMENT CONTROL NOTES

APPLICATION NO.

DATE: 4/5/2023

SCALE: AS NOTED

SHEET: 12

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LEGEND

EXISTING PROPERTY LINE

PROPOSED SITE TRAFFIC FLOW ARROW

NOTES:

1. EXISTING PROPERTY LINE AND SITE FEATURES SHOWN ARE BASED ON A TOPOGRAPHIC SURVEY COMPLETED BY ROBINSON ENGINEERING, LTD. BETWEEN 11/4/2022 AND 11/29/2022. TOPOGRAPHIC SURVEY CAD FILE RECEIVED BY ROBINSON ENGINEERING, LTD. ON 12/21/2022.
2. EXISTING AERIAL IMAGERY SHOWN CONSISTS OF A 0.22 METER RESOLUTION, PROCESSED AND RETRIEVED FROM SKYWATCH ONLINE DATABASE ON 12/16/2022. AERIAL IMAGERY CAPTURED ON 11/23/2022.
3. THIS SITE TRAFFIC PLAN IS FOR PLANNING PURPOSES ONLY. HOWEVER, CONTRACTOR SHALL ONLY UTILIZE EXISTING ENTRANCE FROM E. 151 ST. FOR SITE INGRESS AND EGRESS. CONTRACTOR MAY CHOOSE TO MODIFY THIS PLAN BASED ON SEQUENCE AND/OR METHODS OF CONSTRUCTION ACTIVITIES AFTER SUBMITTAL TO THE SUPERVISING CONTRACTOR FOR APPROVAL.
4. ALL NON-DEDICATED SAMPLING EQUIPMENT THAT HAS, OR WILL, COME INTO CONTACT WITH THE ENVIRONMENTAL MEDIA WILL BE DECONTAMINATED IN ACCORDANCE WITH VERDANTAS SOP NO. VDTSGLK.SOP.F1000.
5. CONTRACTOR SHALL INSTALL EITHER A TRUCK WHEEL WASH, RUMBLE PADS/STRIPS, OR BOTH, TO REMOVE LOOSE DIRT/DEBRIS FROM TRUCK WHEELS TO MINIMIZE OFF-SITE TRACKING ONTO PUBLIC ROADWAYS.
6. CONTRACTOR MAY USE APPROVED CLEAN NATURAL GRAVEL OR QUARRIED CRUSHED AGGREGATE MATERIALS TO IMPROVE HAUL ROADS AND ACCESS THROUGHOUT THE SITE, IF NEEDED.

verdantas
PEOPLE FOCUSED FUTURE
6397 EMERALD PKWY, SUITE 200
DUBLIN, OH 43016
TEL 614.793.8777
FAX 614.300.0023

MARK JOSEPH BENNETT
REGISTERED
No. 21010606047
STATE OF INDIANA
PROFESSIONAL ENGINEER

DATE: 4/5/23

DESIGNED BY:	DRAWN BY:	CHECKED BY:	PROJECT NO.
JRS	JRS	HQP/DBM	15773

No.	REVISION	CHK'D BY DATE
1	ISSUED FOR CONSTRUCTION	4/5/23

EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT

SITE TRAFFIC PLAN

APPLICATION NO.

DATE: 4/5/2023

SCALE: AS NOTED

SHEET: 13

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80' 0 80' 160'

DRAWING SCALE 1" = 80'

LEGEND

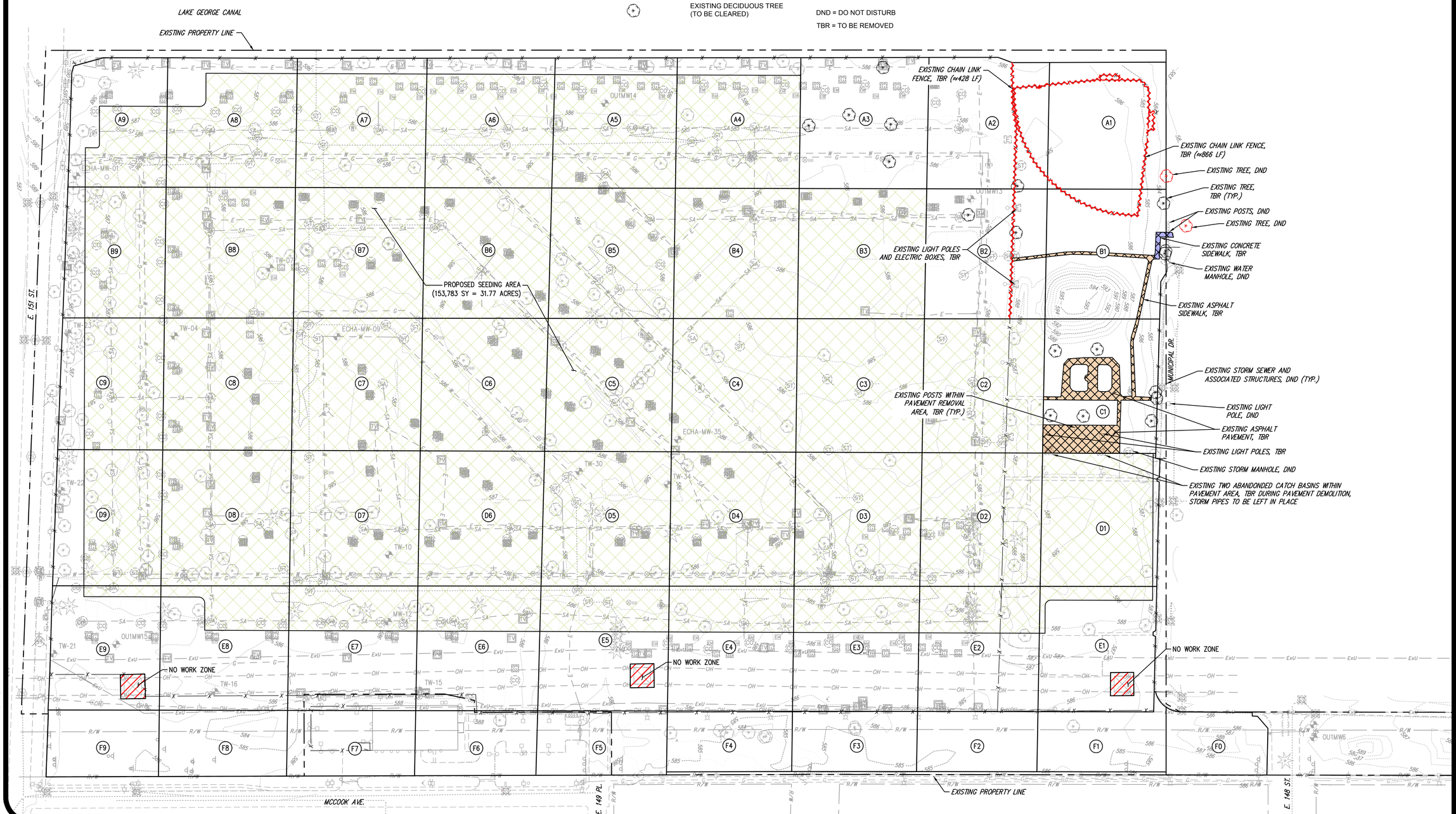
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING PROPERTY LINE
- EXISTING FENCE
- PROPOSED FENCE REMOVAL
- EXISTING DECIDUOUS TREE (DO NOT DISTURB)
- EXISTING DECIDUOUS TREE (TO BE CLEARED)
- A1 DECISION UNIT ID
- NO WORK ZONE
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT
- PROPOSED PAVEMENT REMOVAL
- PROPOSED SEEDING AREA

DND = DO NOT DISTURB

TBR = TO BE REMOVED

NOTES:

1. THIS ALTERNATE PLAN INCLUDES AN ALTERNATE SITE CLEARING AND DEMOLITION AREA (DECISION UNITS A1, A2, A3, B1, B2, AND C1), WHICH IS NOT INCLUDED WITHIN THE BASE BID PROJECT AREA. REFER TO THE BASE BID SITE CLEARING PLAN AND NOTES ON SHEET 6, AND THE BASE BID DEMOLITION PLAN AND NOTES ON SHEET 7.
2. THIS ALTERNATE PLAN INCLUDES AN ALTERNATE SEEDING AREA, WHICH REPRESENTS SEEDING NOT INCLUDED IN THE BASE BID PROJECT AREA. REFER TO THE BASE BID GRADING & SEEDING PLAN AND NOTES ON SHEET 10.



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MARK JOSEPH BONITATIBUS REGISTERED No. 21010606047 STATE OF INDIANA PROFESSIONAL ENGINEER

DATE: 4/5/23

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JRS	JRS	HQP/DBM	15773

No.	REVISION	CHK'D BY DATE
1	ISSUED FOR CONSTRUCTION	4/5/23

EAST CHICAGO, LAKE COUTY, IN
USS LEAD SUPERFUND SITE
OU1 MODIFIED ZONE 1
REMEDIATION PROJECT

ALTERNATE PLAN

APPLICATION NO.

DATE: 4/5/2023

SCALE: AS NOTED

SHEET: 14

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APPENDIX D

ADDITIONAL MEASURES NOT INCLUDED IN THE PLAN

APPENDIX E

INDIANA STORM WATER QUALITY MANUAL

Manual can be downloaded using the following link:
https://www.in.gov/idem/stormwater/resources/indiana-storm-water-quality-manual/

Hard Copy to be available and Included with the Property's Copy of the SWP3

APPENDIX F

RECORD OF DATES OF ACTIVITIES

USS LEAD SUPERFUND SITE – OU1 MODIFIED ZONE 1 REMEDIATION PROJECT
RECORD OF DATES OF ACTIVITIES COMPLETED

DATE OF ACTIVITY	ACTIVITY COMPLETED	SIGNATURE	NOTES

APPENDIX G

MAINTENANCE AND INSPECTION FORMS

USS LEAD SUPERFUND SITE – OU1 MODIFIED ZONE 1 REMEDIATION PROJECT
MAINTENANCE AND INSPECTION FORM

Inspector's Name: _____ Weather Conditions: _____

Inspector's Company: _____ Amount of Precipitation: _____

Inspector's Title: _____ Date: _____

Is Facility in Compliance with SWP3 and General Permit: ☐ Yes ☐ No

TIME OF INSPECTION	AREAS INSPECTED	ACTION NEEDED	RESPONSIBLE ENTITY	HOW WERE THEY INFORMED	WHEN IT NEEDS COMPLETED	DATE COMPLETED

I, _____, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ _____
Name Title

_____ _____
Company Date