



**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
WATER RESOURCES DIVISION
PERMIT**

Issued To:

**Louis Padnos Iron & Metal
Attn: Craig Schrottenboer
117 West 7th Street
Holland, Michigan 49423**

**Permit No: WRP031167 v.1
Submission No.: HNW-YFKN-4HT87
Site Name: 47-Lucy Road-Howell
Issued: October 19, 2021
Revised:
Expires: October 19, 2026**

This permit is being issued by the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division, under the provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); specifically:

- | | |
|--|---|
| <input type="checkbox"/> Part 301, Inland Lakes and Streams | <input type="checkbox"/> Part 323, Shorelands Protection and Management |
| <input checked="" type="checkbox"/> Part 303, Wetlands Protection | <input type="checkbox"/> Part 325, Great Lakes Submerged Lands |
| <input type="checkbox"/> Part 315, Dam Safety | <input type="checkbox"/> Part 353, Sand Dunes Protection and Management |
| <input type="checkbox"/> Part 31, Water Resources Protection (Floodplain Regulatory Authority) | |

Permission is hereby granted, based on permittee assurance of adherence to State of Michigan requirements and permit conditions, to:

Authorized Activity:

Excavate approximately 52 cubic yards of material from 0.175 acre of wetland. Place approximately 4,626 cubic yards of fill in 0.82 acre of wetland to construct foundation for a car shredding facility.

Excavate approximately 42 cubic yards of material from an existing access road to remove two 37-foot long, 48-inch diameter culverts. Place approximately 144 cubic yards of fill material and install two 72-foot long, 48-inch diameter culverts, buried 9-inches below the bed, in wetland to widen the existing access road through wetland.

Construct a sediment basin in upland and install an Aquip Filtration System with a 42-inch diameter outlet pipe discharging to wetland. Excavate approximately 18.5 cubic yards from 250 square feet of wetland and place approximately 18.5 cubic yards of riprap at the base of the outlet pipe outfall.

Project will permanently impact a total of 0.85 acres of emergent wetland.

All work shall be completed in accordance with the approved plans and specifications of this permit.

**EGLE-WRD
WRP031167 v1.0
Approved
Issued On:10/19/2021
Expires On:10/19/2026**

Waterbody Affected: Wetland
Property Location: Livingston County, City of Howell, Town 02N, Range 05E, Section 06,
Property Tax No. 4717-06-100-005, 4717-06-100-002, 4717-06-300-005

Authority granted by this permit is subject to the following limitations:

- A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
- B. The permittee, in exercising the authority granted by this permit, shall not cause unlawful pollution as defined by Part 31 of the NREPA.
- C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
- D. All work shall be completed in accordance with the approved plans and specifications submitted with the application and/or plans and specifications attached to this permit.
- E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved.
- F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with 2013 PA 174 (Act 174) and comply with each of the requirements of Act 174.
- G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits, or complying with other state statutes.
- H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
- I. Permittee shall notify EGLE within one week after the completion of the activity authorized by this permit by completing and forwarding the attached preaddressed postcard to the office addressed thereon.
- J. This permit shall not be assigned or transferred without the written approval of EGLE.
- K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific state act, federal act, and/or rule under which this permit is granted.
- L. All dredged or excavated materials shall be disposed of in an upland site (outside of floodplains, unless exempt under Part 31 of the NREPA, and wetlands).
- M. In issuing this permit, EGLE has relied on the information and data that the permittee has provided in connection with the submitted application for permit. If, subsequent to the issuance of a permit, such information and data prove to be false, incomplete, or inaccurate, EGLE may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.
- N. The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents, and representatives for any and all claims or causes of action arising from acts or omissions of the permittee, or employees, agents, or representative of the permittee, undertaken in connection with this permit. The permittee's obligation to indemnify the State of Michigan applies only if the state: (1) provides the permittee or its designated representative written notice of the claim or cause of action within 30 days after it is received by the state, and (2) consents to the permittee's participation in the proceeding on the claim or cause of action. It does not apply to contested case proceedings under the Administrative Procedures Act, 1969 PA 306, as amended, challenging the permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.
- O. Noncompliance with these terms and conditions and/or the initiation of other regulated activities not specifically authorized shall be cause for the modification, suspension, or revocation of this permit, in whole or in part. Further, EGLE may initiate criminal and/or civil proceedings as may be deemed necessary to correct project deficiencies, protect natural resource values, and secure compliance with statutes.
- P. If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity from EGLE. Such revision request shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by EGLE prior to being implemented.

- Q. This permit may be transferred to another person upon written approval of EGLE. The permittee must submit a written request to EGLE to transfer the permit to the new owner. The new owner must also submit a written request to EGLE to accept transfer. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties that includes all the above information may be provided to EGLE. EGLE will review the request and, if approved, will provide written notification to the new owner.
- R. Prior to initiating permitted construction, the permittee is required to provide a copy of the permit to the contractor(s) for review. The property owner, contractor(s), and any agent involved in exercising the permit are held responsible to ensure that the project is constructed in accordance with all drawings and specifications. The contractor is required to provide a copy of the permit to all subcontractors doing work authorized by the permit.
- S. Construction must be undertaken and completed during the dry period of the wetland. If the area does not dry out, construction shall be done on equipment mats to prevent compaction of the soil.
- T. Authority granted by this permit does not waive permit requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA, or the need to acquire applicable permits from the County Enforcing Agent (CEA).
- U. Authority granted by this permit does not waive permit requirements under the authority of Part 305, Natural Rivers, of the NREPA. A Natural Rivers Zoning Permit may be required for construction, land alteration, streambank stabilization, or vegetation removal along or near a natural river.
- V. The permittee is cautioned that grade changes resulting in increased runoff onto adjacent property is subject to civil damage litigation.
- W. Unless specifically stated in this permit, construction pads, haul roads, temporary structures, or other structural appurtenances to be placed in a wetland or on bottomland of the water body are not authorized and shall not be constructed unless authorized by a separate permit or permit revision granted in accordance with the applicable law.
- X. For projects with potential impacts to fish spawning or migration, no work shall occur within fish spawning or migration timelines (i.e., windows) unless otherwise approved in writing by the Michigan Department of Natural Resources, Fisheries Division.
- Y. Work to be done under authority of this permit is further subject to the following special instructions and specifications:
1. The permittee shall, as a primary condition of this permit, mitigate the loss of 0.85 acre of wetland, consisting of emergent (0.85 acre) wetland by acquiring the following credits from the Sanstone Wetland Mitigation Bank: 1.28 emergent acres.

The permittee shall submit documentation of credit acquisition to EGLE prior to signature of this permit by EGLE.


2. Prior to the start of construction, all adjacent non-work wetland areas shall be protected by properly trenched sedimentation barrier to prevent sediment from entering the wetland. Orange construction fencing shall be installed as needed to prohibit construction personnel and equipment from entering or performing work in these areas. Fence shall be maintained daily throughout the construction process. Upon project completion, the accumulated materials shall be removed and disposed of at an upland site, the sedimentation barrier shall then be removed in its entirety and the area restored to its original configuration and cover.
3. Prior to the initiation of any permitted construction activities, a sedimentation barrier shall be constructed immediately down gradient of the construction site. Sedimentation barriers shall be specifically designed to handle the sediment type, load, water depth, and flow conditions of each construction site throughout the anticipated time of construction and unstable site conditions. The sedimentation barrier shall be maintained in good working order throughout the duration of the project. Upon project completion, the accumulated materials shall be removed and disposed of at an upland (non-wetland, non-floodplain) site and stabilized with seed and mulch. The sedimentation barrier shall then be removed in its entirety and the area restored to its original configuration and cover.

4. All raw areas in uplands resulting from the permitted construction activity shall be effectively stabilized with sod and/or seed and mulch (or other technology specified by this permit or project plans) in a sufficient quantity and manner to prevent erosion and any potential siltation to surface waters or wetlands. Temporary stabilization measures shall be installed before or upon commencement of the permitted activity and shall be maintained until permanent measures are in place. Permanent measures shall be in place within five (5) days of achieving final grade.
5. All raw earth within 100 feet of a lake, stream, or wetland that is not brought to final stabilization by the end of the active growing season shall be temporarily stabilized with mulch blankets in accordance with the following dates: September 20th for the Upper Peninsula, October 1st for the Lower Peninsula north of US-10, and October 10th for the Lower Peninsula south of US-10.
6. All fill/backfill shall consist of clean inert material that will not cause siltation nor contain soluble chemicals, organic matter, pollutants, or contaminants. All fill shall be contained in such a manner so as not to erode into any surface water, floodplain, or wetland. All raw areas associated with the permitted activity shall be stabilized with sod and/or seed and mulch, riprap, or other technically effective methods as necessary to prevent erosion.
7. Road fill side slopes shall not be steeper than 1-on-2 (one (1) vertical to two (2) horizontal) except where headwalls of reinforced concrete, mortar masonry, dry masonry, or other acceptable methods are used.
8. Road fill side slopes terminating in the wetland shall be stabilized with temporary measures in accordance with appropriate Best Management Practices based on site conditions, and if necessary, may be riprapped extending above the ordinary high-water mark, before or upon commencement of the permitted activity. Temporary stabilization measures shall be maintained until permanent measures are in place.
9. Equalization culverts shall be installed at the proper elevation for the purpose of water level equalization and must be buried 20 percent of the culvert diameter. The culvert shall provide for the free flow of surface water or the movement of organisms between portions of a wetland system. The culvert shall not increase drainage of any existing wetland areas.
10. All storm water sediment/detention basins, treatment chambers and outlets shall be designed and constructed to capture and treat (at a minimum) the "first flush," the first one (1) inch of runoff from the contributing drainage area. The basins and outlets shall be designed and constructed in accordance with the Guidebook of Best Management Practices (BMPs) for Michigan Watersheds, including the use of a perforated riser pipe/stone filter controlled discharge structures. Basins and treatment chambers shall be maintained in good working order so as to function properly.
11. No discharge is authorized from the storm water basins or treatment chambers until the contributing drainage area is properly stabilized, or soil erosion measures are in place, to avoid uncontrolled sediment discharges.
12. Excavated/Dredged material, including organic and inorganic sediment, vegetation, and other material removed from wetlands, shall not be placed in any wetland, floodplain, or critical dune, or below the ordinary high-water mark of any inland lake, Great Lake, or stream. Excavated/Dredged material placed on upland shall be stabilized in such a manner to prevent erosion of any material into any waterbody, including wetlands, or floodplain.

13. The permittee acknowledges that the excavated material has not been classified as to contaminant status. Disposal of the excavated sediments shall be to uplands. If the excavated materials are determined to be contaminated at a future date, permittee and excavated materials disposal location landowner are considered potentially responsible parties and remain liable for any and all necessary site restoration and clean up under Part 115, Solid Waste Management, and Part 201, Environmental Remediation, of the NREPA.
14. Issuance of this permit does not waive the permit requirements under Part 31, Water Resources Protection, of the NREPA. Contact Justin Tinker of EGLE, Water Resources Division, Industrial Storm Water Permit Program, Lansing District Office, 525 West Allegan, Lansing, Michigan 48933, by phone at 517-242-1193 or e-mail at TinkerJ@Michigan.gov.
15. Authority granted by this permit does not waive permit or program requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA or the need to acquire applicable permits from the CEA. To locate the Soil Erosion Program Administrator for your county, visit www.mi.gov/eglestormwater and select "Soil Erosion and Sedimentation Control Program" under "Related Links."
16. A storm water discharge permit may be required under the Federal Clean Water Act for construction activities that disturb one or more acres of land and discharge to surface waters. For sites over five (5) acres, the permit coverage may be obtained by a Part 91, Soil Erosion and Sedimentation Control (SESC) permit, or coverage as an Authorized Public Agency (APA) and filing a "Notice of Coverage" form to EGLE's Water Resource Division. For sites with disturbance from one (1) acre up to five (5) acres, storm water coverage is automatic once the SESC permit is obtained or if work is being conducted by an APA. These one-to-five-acre sites are not required to apply for coverage but are required to comply with storm water discharge permit requirements. Information on the storm water discharge permit is available from the Water Resource Division's Storm Water Permit Program at www.michigan.gov/soilerosion under the "Construction Storm Water Info".
17. The authority to conduct the activity as authorized by this permit is granted solely under the provisions of the governing act as identified above. This permit does not convey, provide, or otherwise imply approval of any other governing act, ordinance, or regulation, nor does it waive the permittee's obligation to acquire any local, county, state, or federal approval or authorization necessary to conduct the activity.
18. No fill, excess soil, or other material shall be placed in any wetland, floodplain, or surface water area not specifically authorized by this permit, its plans, and specifications.
19. This permit does not authorize or sanction work that has been completed in violation of applicable federal, state, or local statutes.
20. The permit placard shall be kept posted at the work site in a prominent location at all times for the duration of the project or until permit expiration.
21. This permit is being issued for the maximum time allowed and no extensions of this permit will be granted. Initiation of the construction work authorized by this permit indicates the permittee's acceptance of this condition. The permit, when signed by EGLE, will be for a five-year period beginning on the date of issuance. If the project is not completed by the expiration date, a new permit must be sought.

22. Upon signing by the permittee named herein, this permit must be returned to EGLE's Water Resources Division, Lansing District Office, for final execution. This permit shall become effective on the date of the EGLE representative's signature.

Permittee hereby accepts and agrees to comply with the terms and conditions of this permit.

X  10/19/2021
Permittee Date

X CRAIG SCHROTENBERG PROJECT MANAGER
Printed Name and Title of Permittee

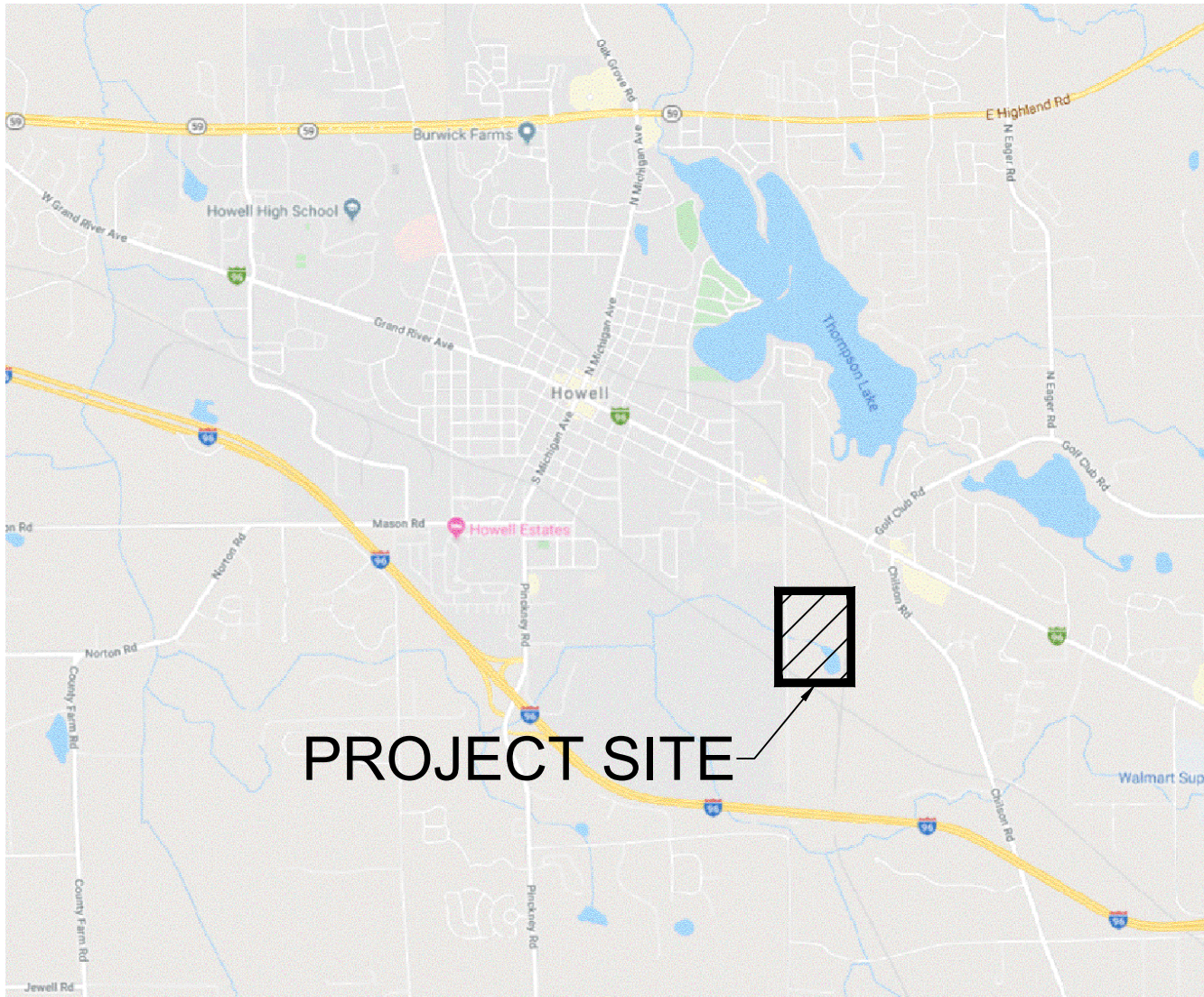


Issued By: _____
Jeff Pierce
Lansing District Office
Water Resources Division
517-416-4297

cc: City of Howell Clerk
Livingston County Drain Commissioner
Livingston County SESC
James Smit, Environmental Resource Management, Inc.
Mike Pennington, EGLE



616.796.0200
www.gmb.com



PROJECT SITE

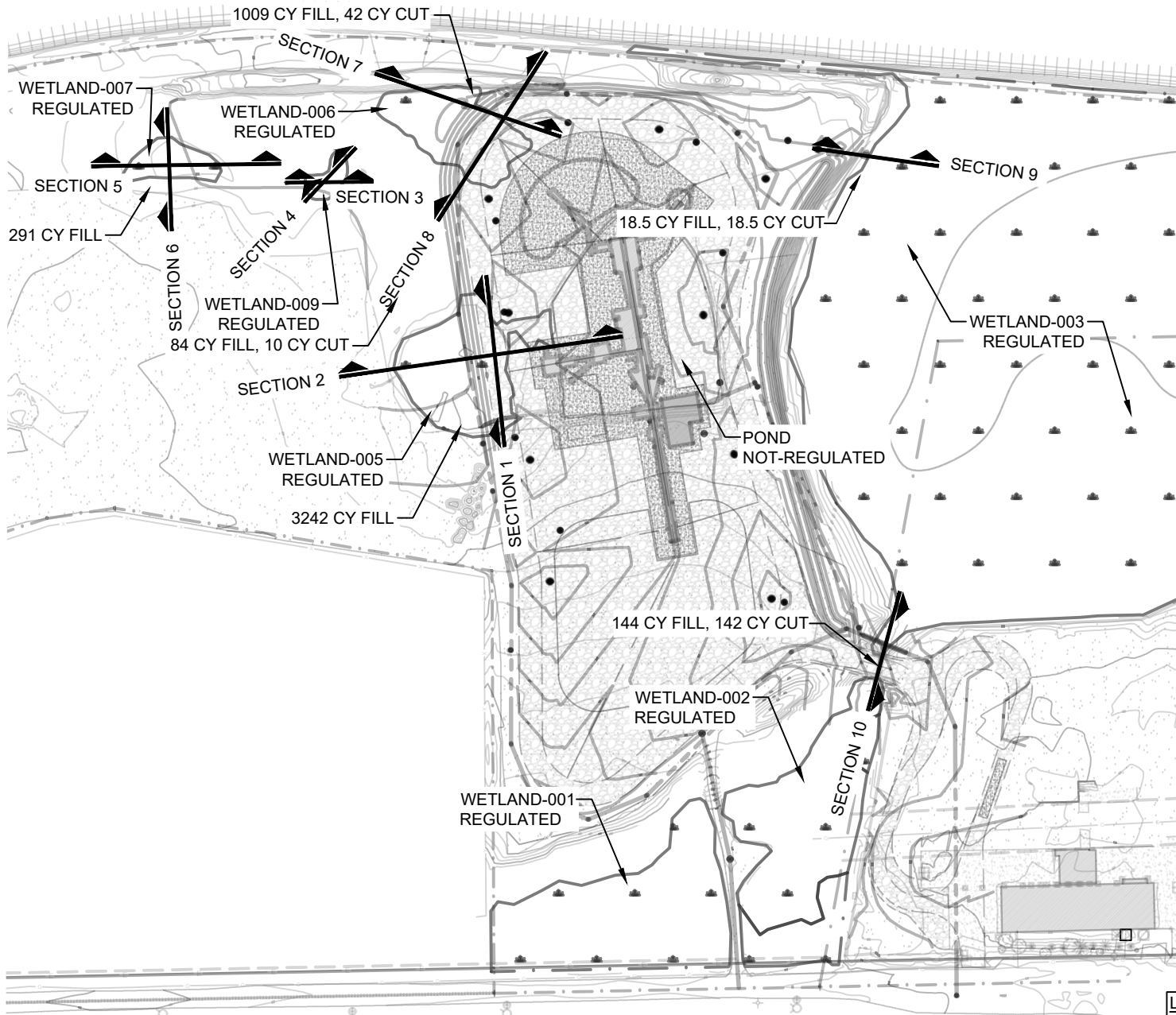
LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 1 OF 18
DATE: 03.02.2020

EGLE-WRD
WRP031167 v1.0
Approved
Issued On: 10/19/2021
Expires On: 10/19/2026



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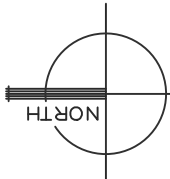
SUMMARY OF ACTIVITIES

- WETLAND FILL (SECTIONS 1-6)
 - 32,068 SQ. FEET
 - 3,607 CUBIC YARDS
- WETLAND FILL & EXCAVATION (SECTIONS 7 & 8)
 - 7,270 SQ. FEET
 - 42 CUBIC YARDS CUT/EXCAVATION
 - 1,009 CUBIC YARDS FILL
- WETLAND FILL & EXCAVATION (SECTIONS 9)
 - 250 SQ. FEET
 - 18.5 CUBIC YARDS CUT/EXCAVATION
 - 18.5 CUBIC YARDS FILL
- WETLAND FILL & EXCAVATION (SECTIONS 10)
 - 952 SQ. FEET
 - 42 CUBIC YARDS CUT/EXCAVATION
 - 144 CUBIC YARDS FILL

LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 2 OF 18
DATE: 03.02.2020

EGLE-WRD
WRP031167 v1.0
Approved
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Expires On: 10/19/2026



OVERALL PLAN

SCALE 1" = 200'-0"

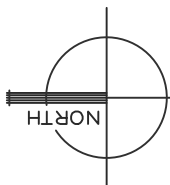


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WET-005e

VOLUME OF FILL
ONSITE SOIL = 3028 CY
GRAVEL = 209 CY
CONCRETE = 5 CY
TOTAL = 3242 CY



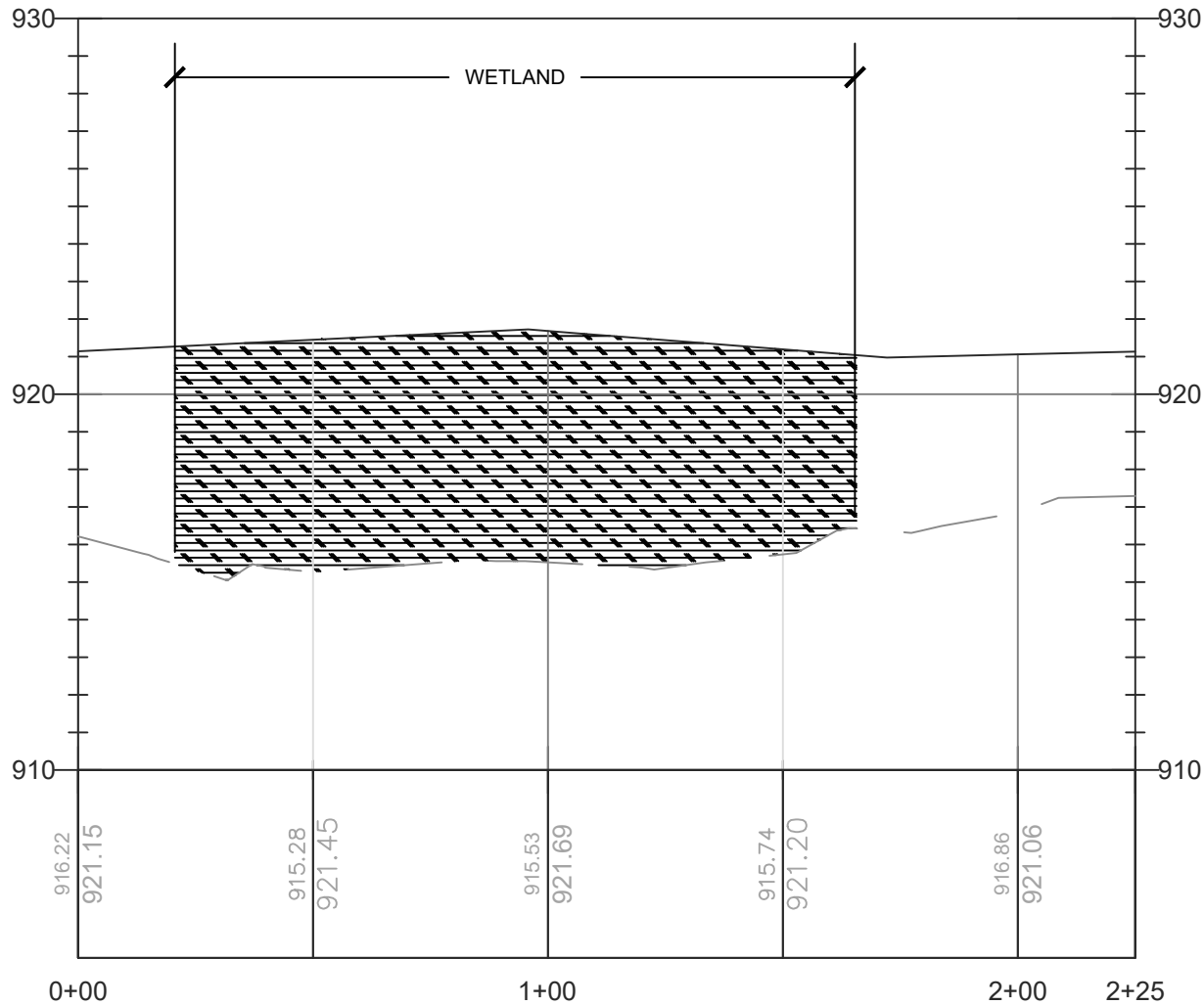
SECTION 1 & 2 PLAN

SCALE 1" = 40'-0"

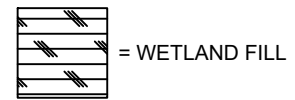
LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 3 OF 18
DATE: 03.02.2020

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Approved
Issued On: 10/19/2021
Expires On: 10/19/2026



WET-005e



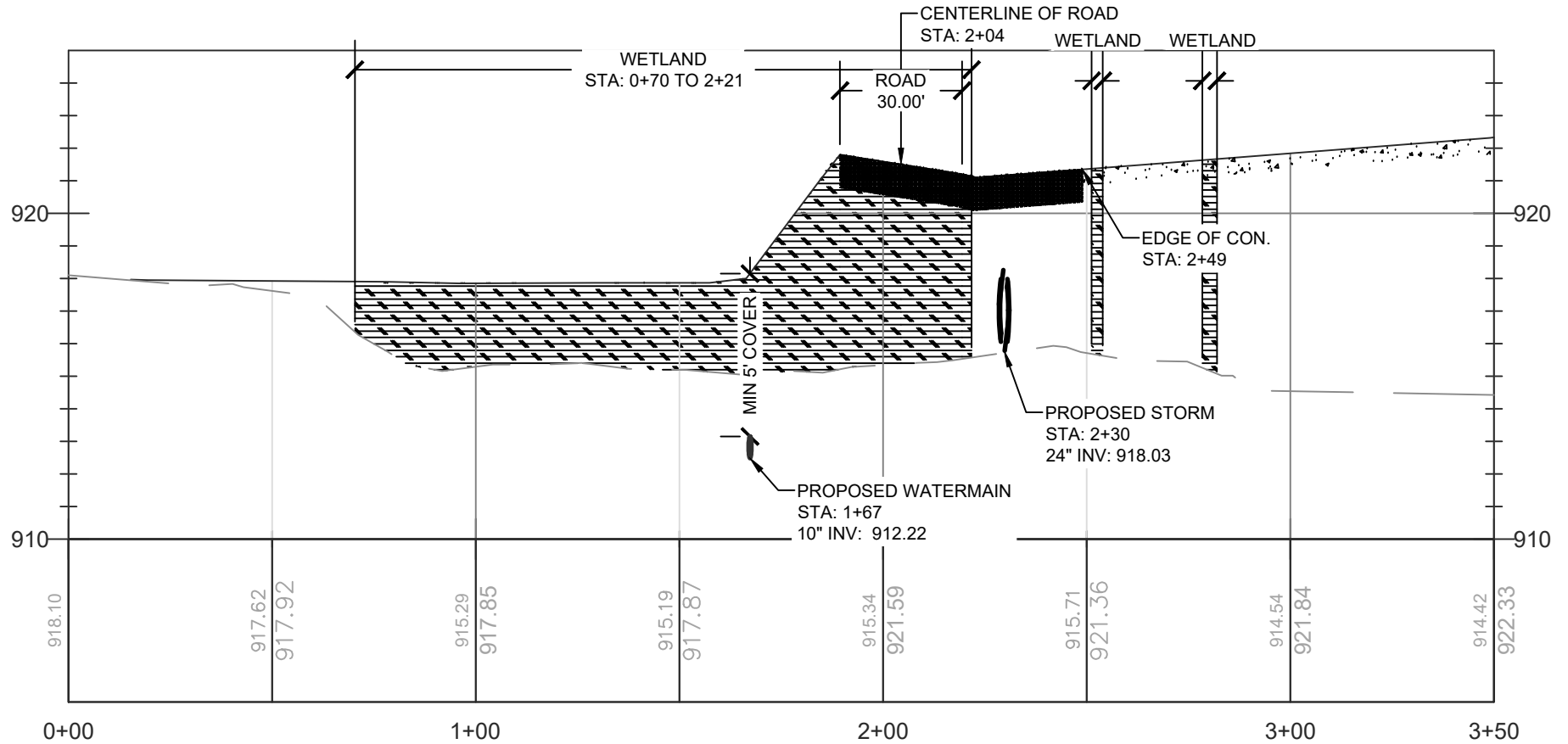
SECTION 1 PROFILE

HORIZ. SCALE: 1" = 40'-0"
VERT. SCALE: 1" = 5'-0"

LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 4 OF 18
DATE: 03.02.2020

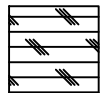
EGLE-WRD
WRP031167 v1.0
Approved
Issued On: 10/19/2021
Expires On: 10/19/2026



SECTION 2 PROFILE

HORIZ. SCALE: 1" = 40'-0"
VERT. SCALE: 1" = 5'-0"

WET-005e



= WETLAND FILL

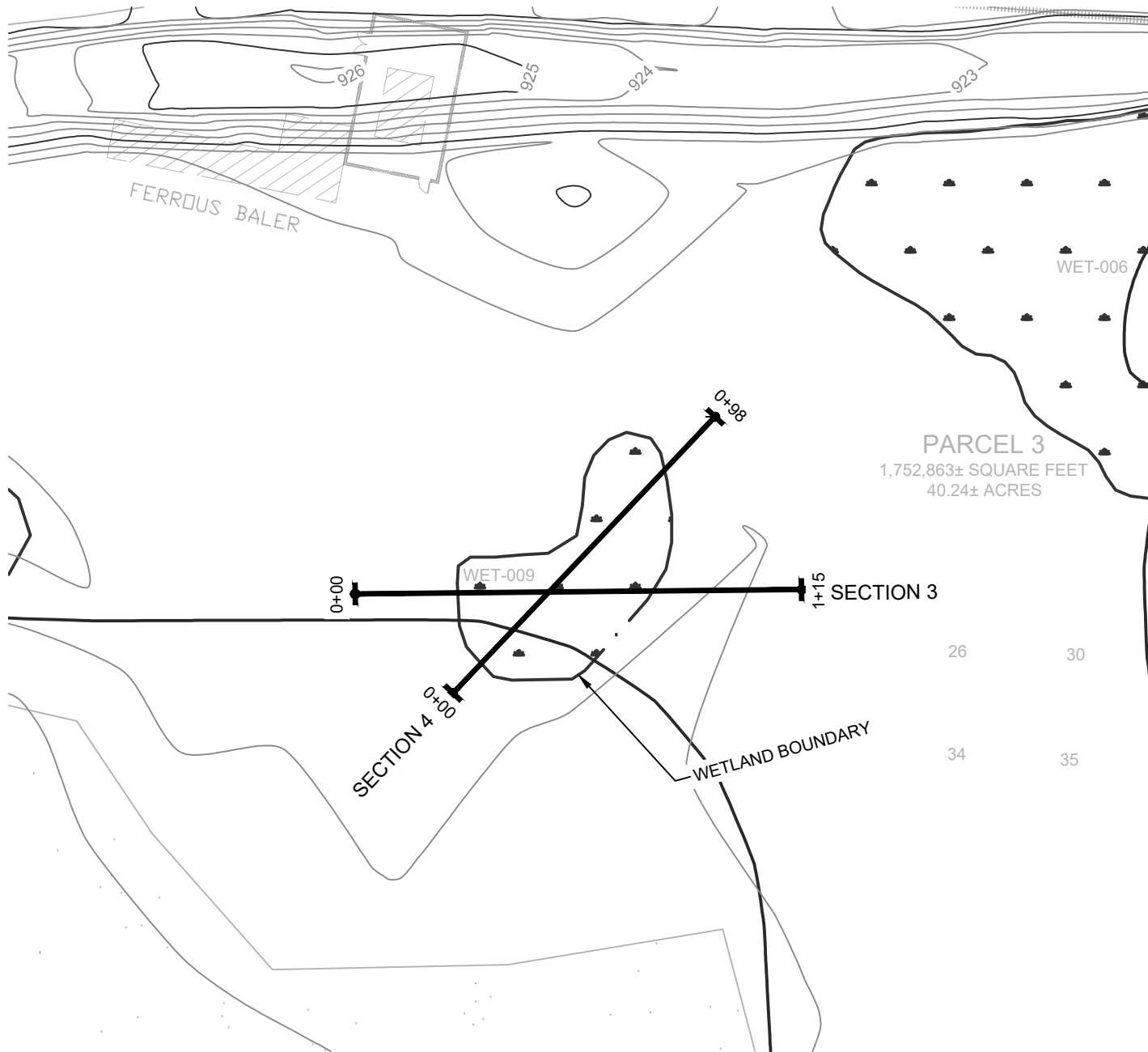
LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 5 OF 18
DATE: 03.02.2020

EGLE-WRD
WRP031167 v1.0
Approved
Issued On: 10/19/2021
Expires On: 10/19/2026





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PARCEL 3
1,752,863± SQUARE FEET
40.24± ACRES

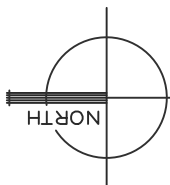
WET-009e

 = WETLAND CUT
10 CY

 = WETLAND FILL

VOLUME OF FILL
ONSITE SOIL = 84 CY
TOTAL = 84 CY

| | |
|----|----|
| 26 | 30 |
| 34 | 35 |



SECTION 3 & 4

SCALE 1" = 40'-0"

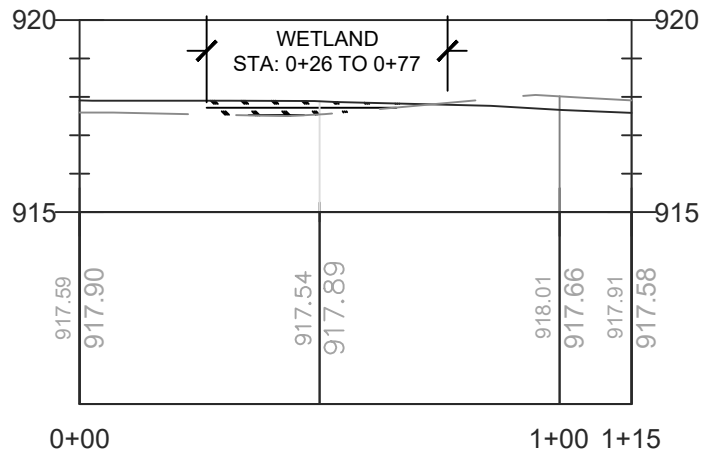
LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
 WATERWAY: COUNTY DRAIN
 CITY: HOWELL
 COUNTY: LIVINGSTON
 NUMBER OF SHEETS: 6 OF 18
 DATE: 03.02.2020

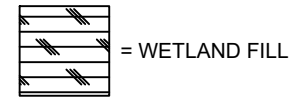
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WET-009e



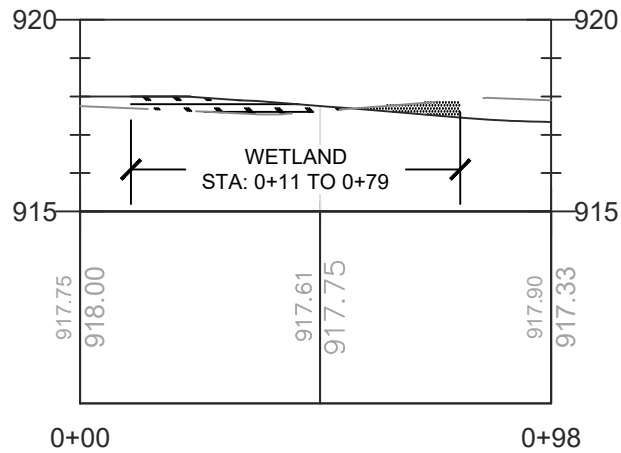
SECTION 3 PROFILE

HORIZ. SCALE: 1" = 40'-0"
VERT. SCALE: 1" = 5'-0"

LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 7 OF 18
DATE: 03.02.2020

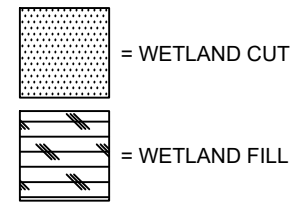
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Expires On: 10/19/2026



SECTION 4 PROFILE

HORIZ. SCALE: 1" = 40'-0"
VERT. SCALE: 1" = 5'-0"

WET-009e



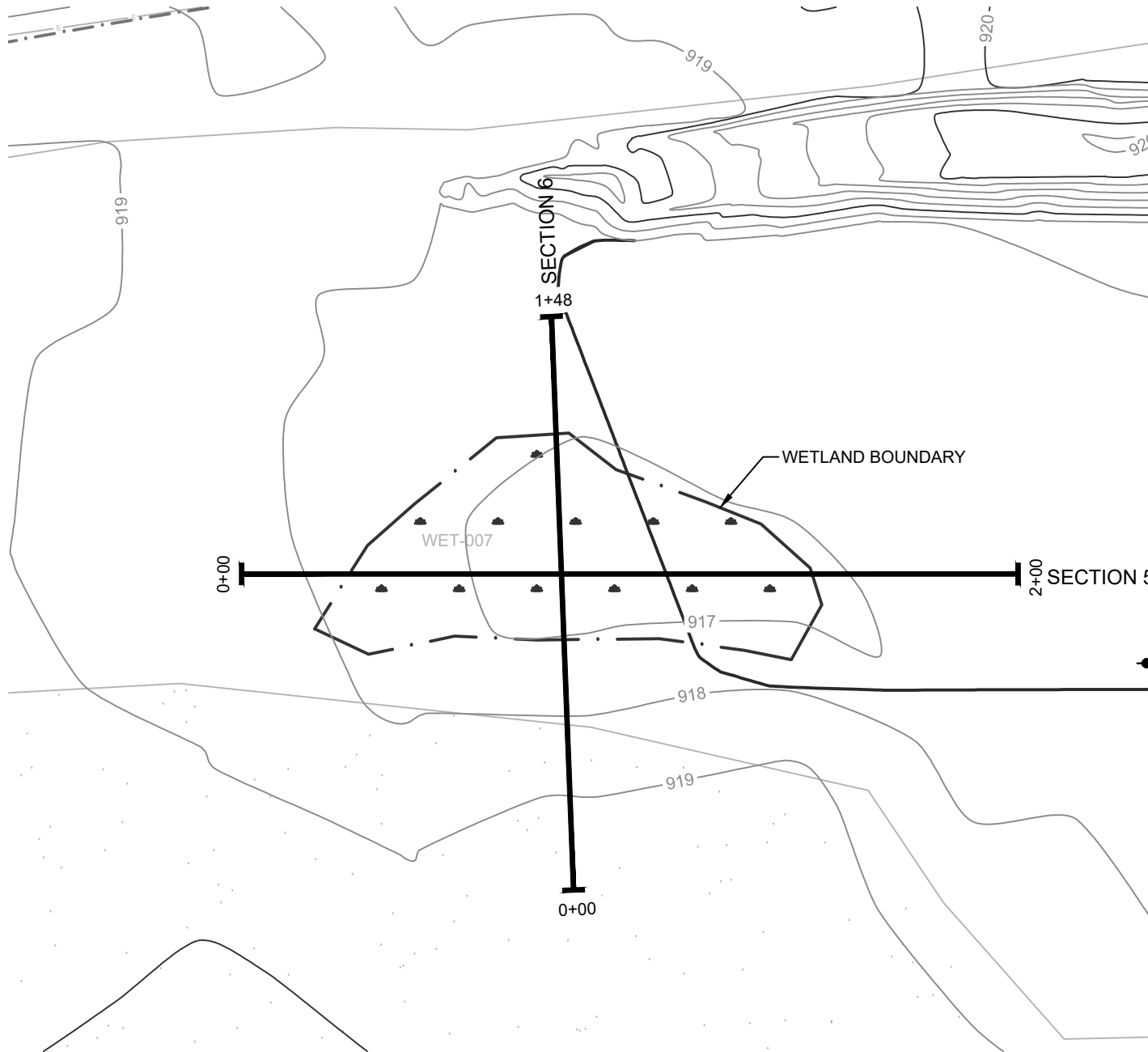
LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 8 OF 18
DATE: 03.02.2020

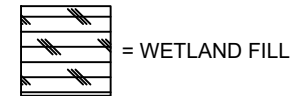
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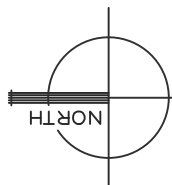
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WET-007e



VOLUME OF FILL
ON-SITE SOIL = 291 CY
TOTAL = 291 CY



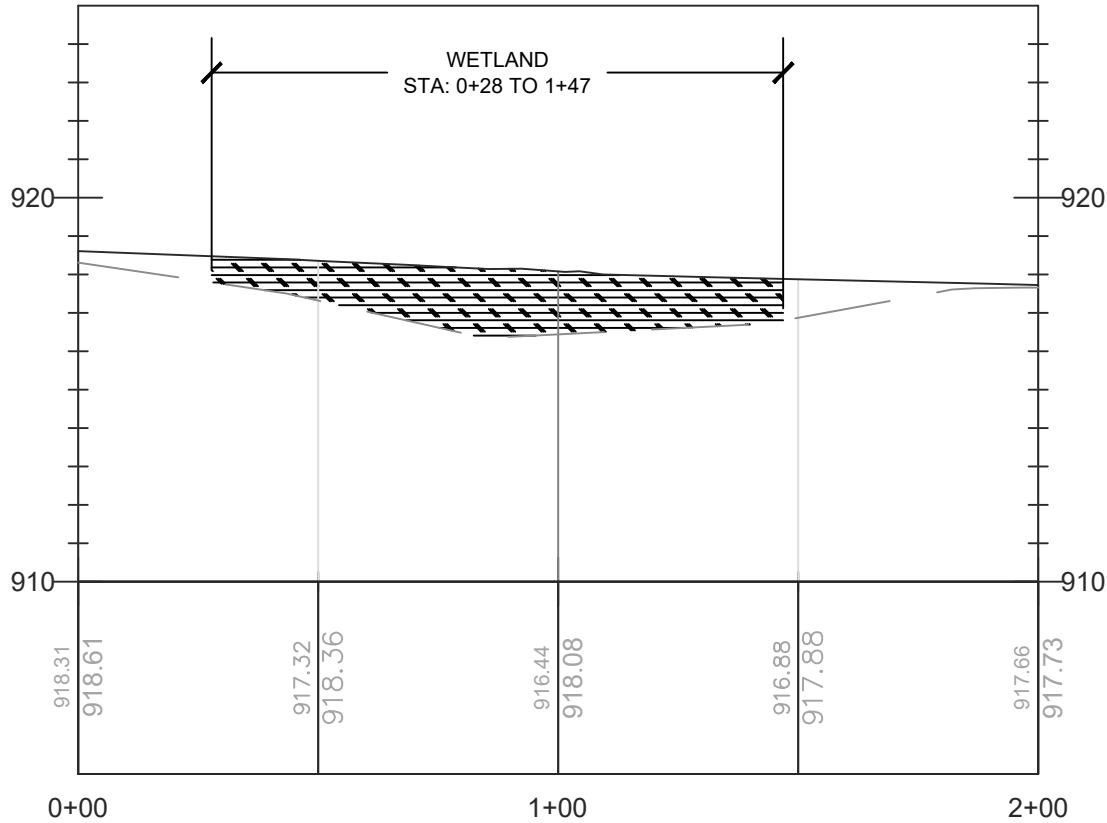
SECTION 5 & 6 PLAN

SCALE 1" = 40'-0"

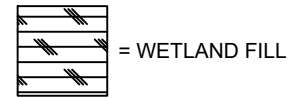
LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 9 OF 18
DATE: 03.02.2020

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WET-007e



SECTION 5 PROFILE

HORIZ. SCALE: 1" = 40'-0"
VERT. SCALE: 1" = 5'-0"

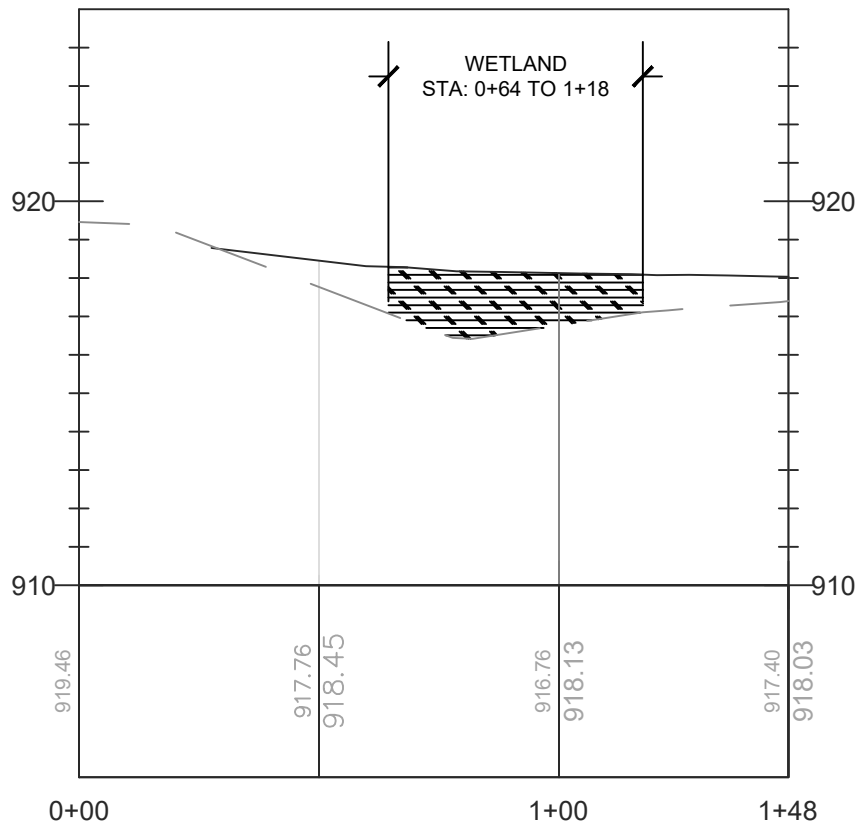
LOCATION MAP

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WATERWAY: COUNTY DRAIN
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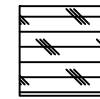
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SECTION 6 PROFILE

HORIZ. SCALE: 1" = 40'-0"
VERT. SCALE: 1" = 5'-0"

WET-007e



= WETLAND FILL

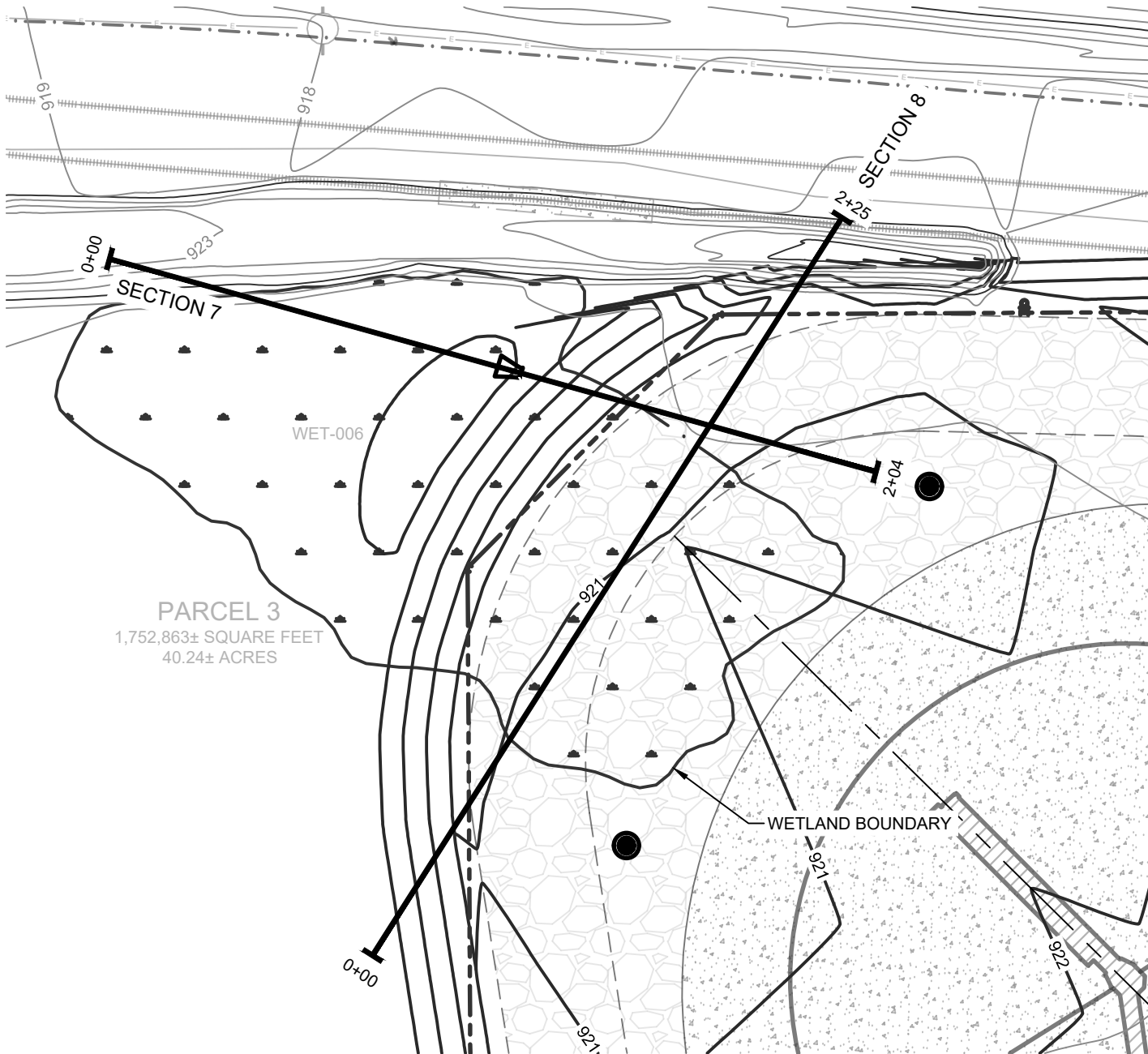
LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 11 OF 18
DATE: 03.02.2020

EGLE-WRD
WRP031167 v1.0
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Issued On: 10/19/2021
Expires On: 10/19/2026

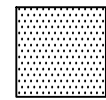


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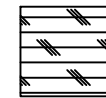
PARCEL 3
1,752,863± SQUARE FEET
40.24± ACRES

WET-006e



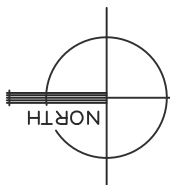
= WETLAND CUT

VOLUME OF CUT
TOTAL = 42 CY



= WETLAND FILL

VOLUME OF FILL
ONSITE SOIL = 815 CY
GRAVEL = 172 CY
RIPRAP = 22
TOTAL = 1,009 CY



SECTION 7 & 8 PLAN

SCALE 1" = 40'-0"

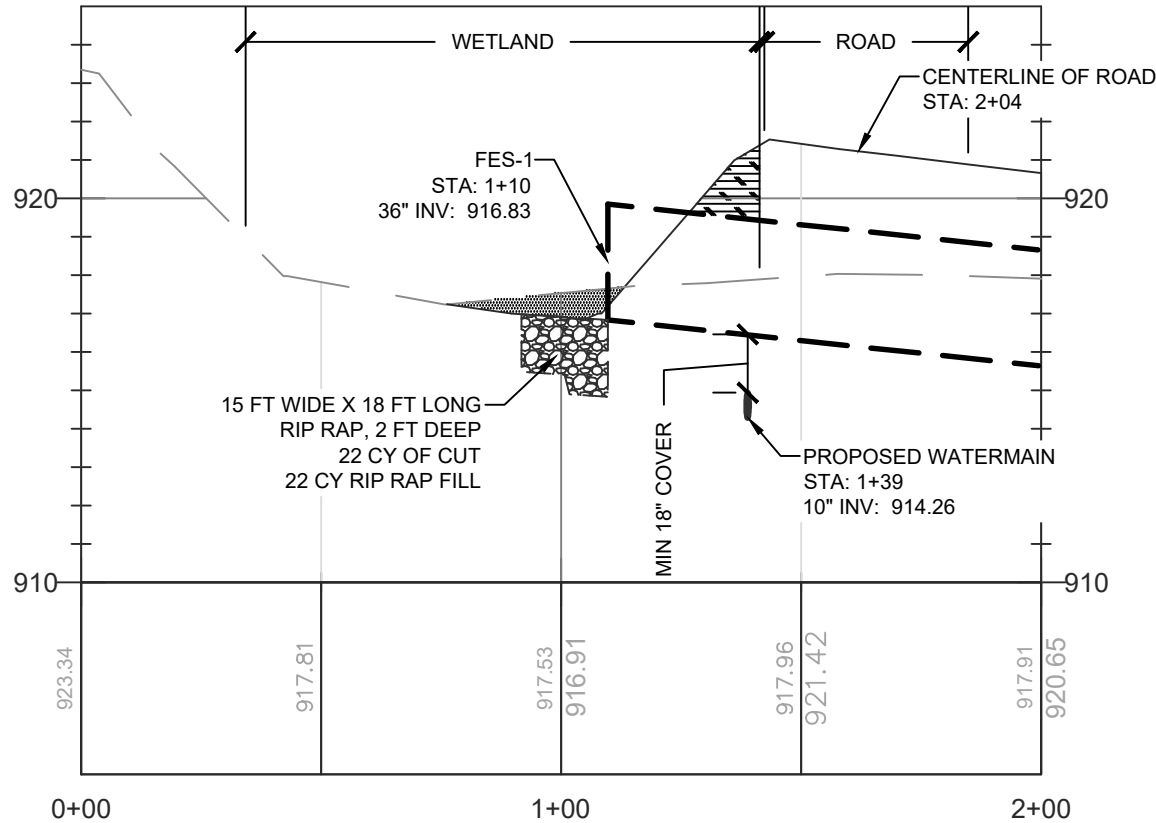
LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 12 OF 18
DATE: 03.02.2020

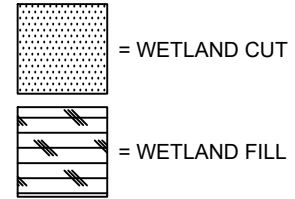
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WET-006e



SECTION 7 PROFILE

HORIZ. SCALE: 1" = 40'-0"
VERT. SCALE: 1" = 5'-0"

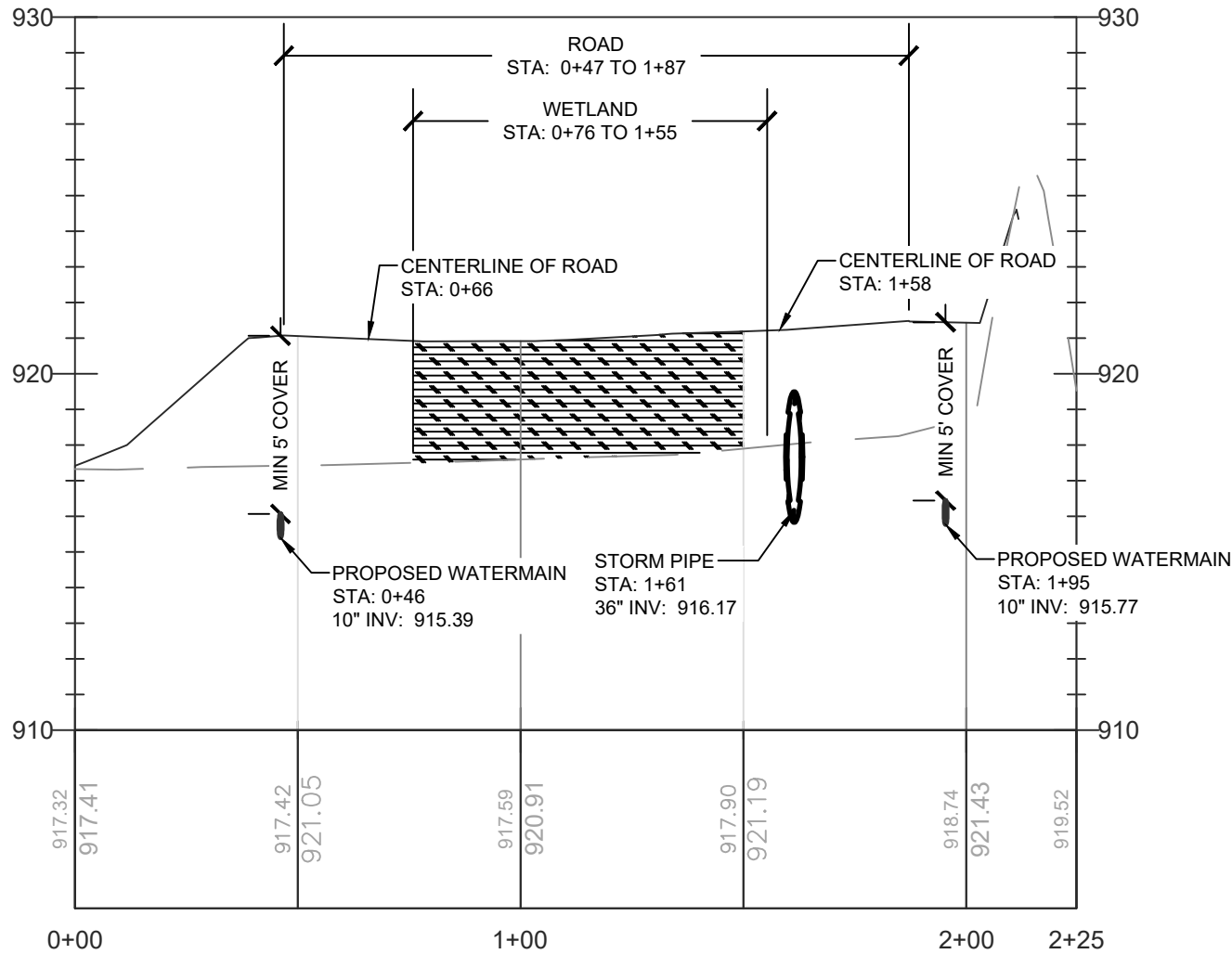
LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 13 OF 18
DATE: 03.02.2020

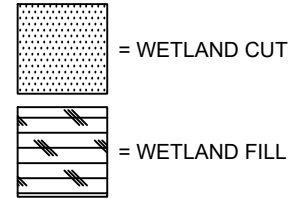
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WET-006e



SECTION 8 PROFILE

HORIZ. SCALE: 1" = 40'-0"
VERT. SCALE: 1" = 5'-0"

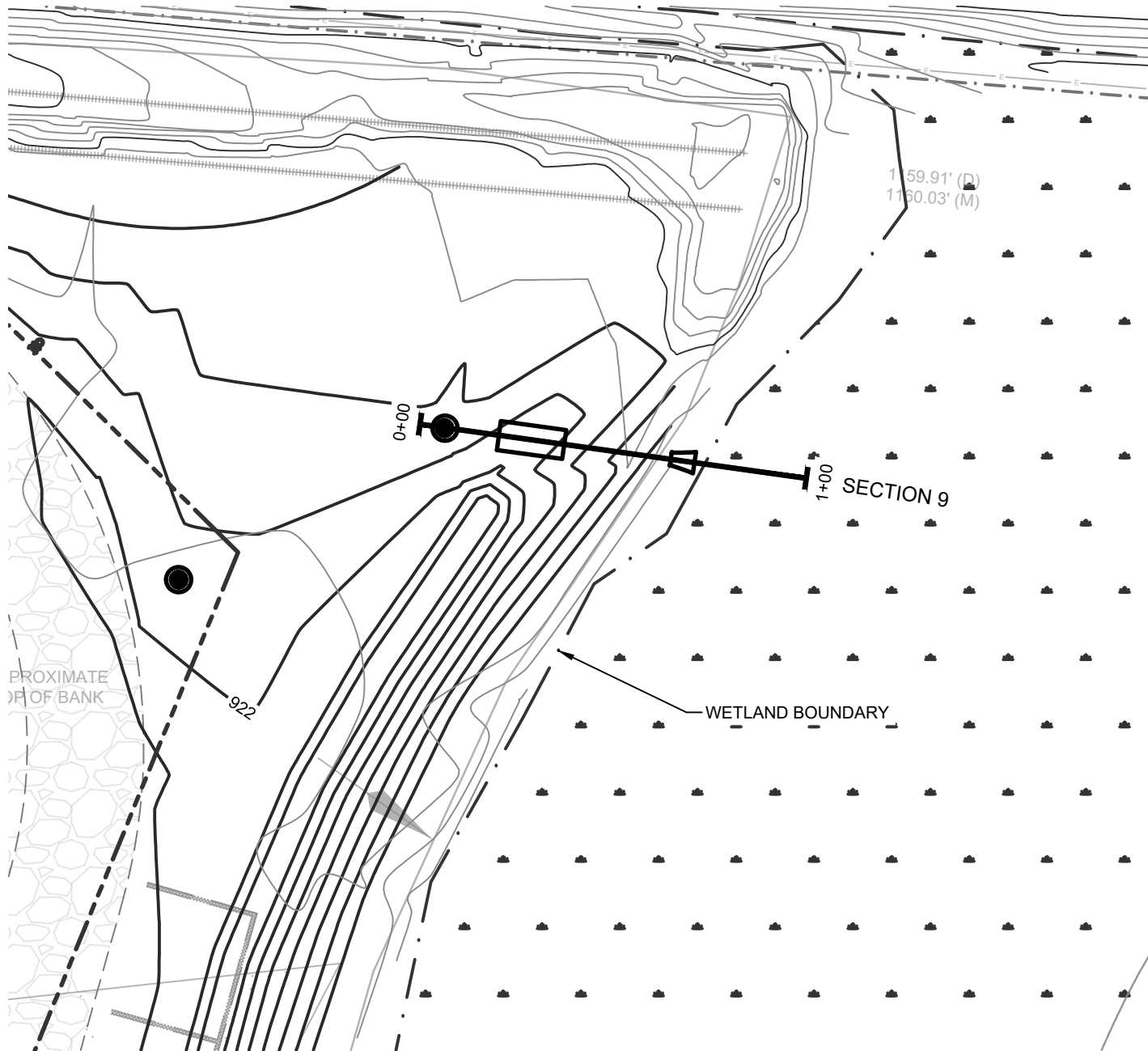
LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
 WATERWAY: COUNTY DRAIN
 CITY: HOWELL
 COUNTY: LIVINGSTON
 NUMBER OF SHEETS: 14 OF 18
 DATE: 03.02.2020

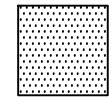
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WRP031167 v1.0
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Issued On: 10/19/2021
Expires On: 10/19/2026



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WET-003e



= WETLAND CUT

VOLUME OF CUT
TOTAL = 18.5 CY



= WETLAND FILL

VOLUME OF FILL
RIP RAP = 18.5 CY
TOTAL = 18.5 CY

PROXIMATE
POINT OF BANK

922

WETLAND BOUNDARY

SECTION 9

SECTION 9 PLAN

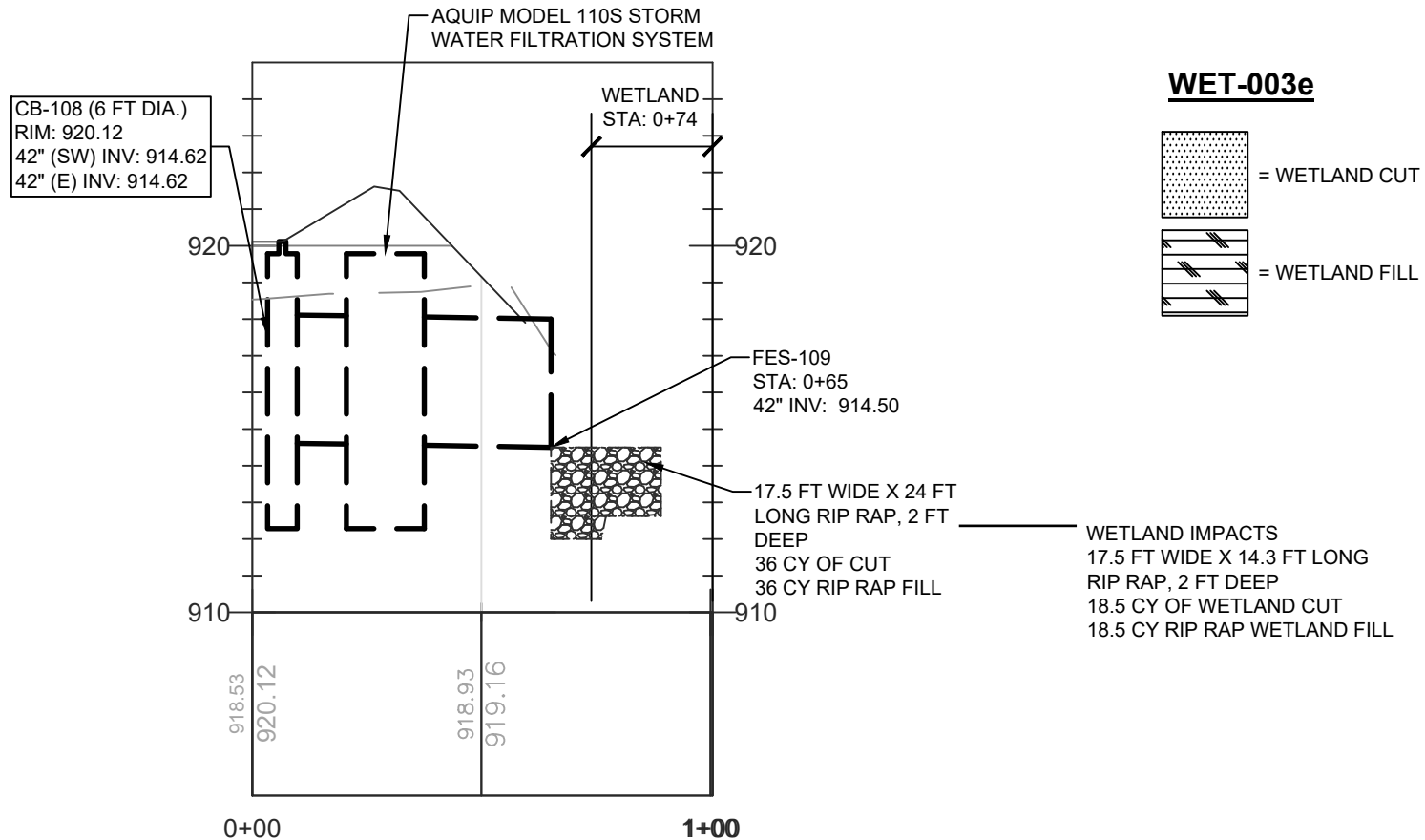
SCALE 1" = 40'-0"



LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 15 OF 18
DATE: 03.02.2020

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Issued On: 10/19/2021
Expires On: 10/19/2026



SECTION 9 PROFILE

HORIZ. SCALE: 1" = 40'-0"
VERT. SCALE: 1" = 5'-0"

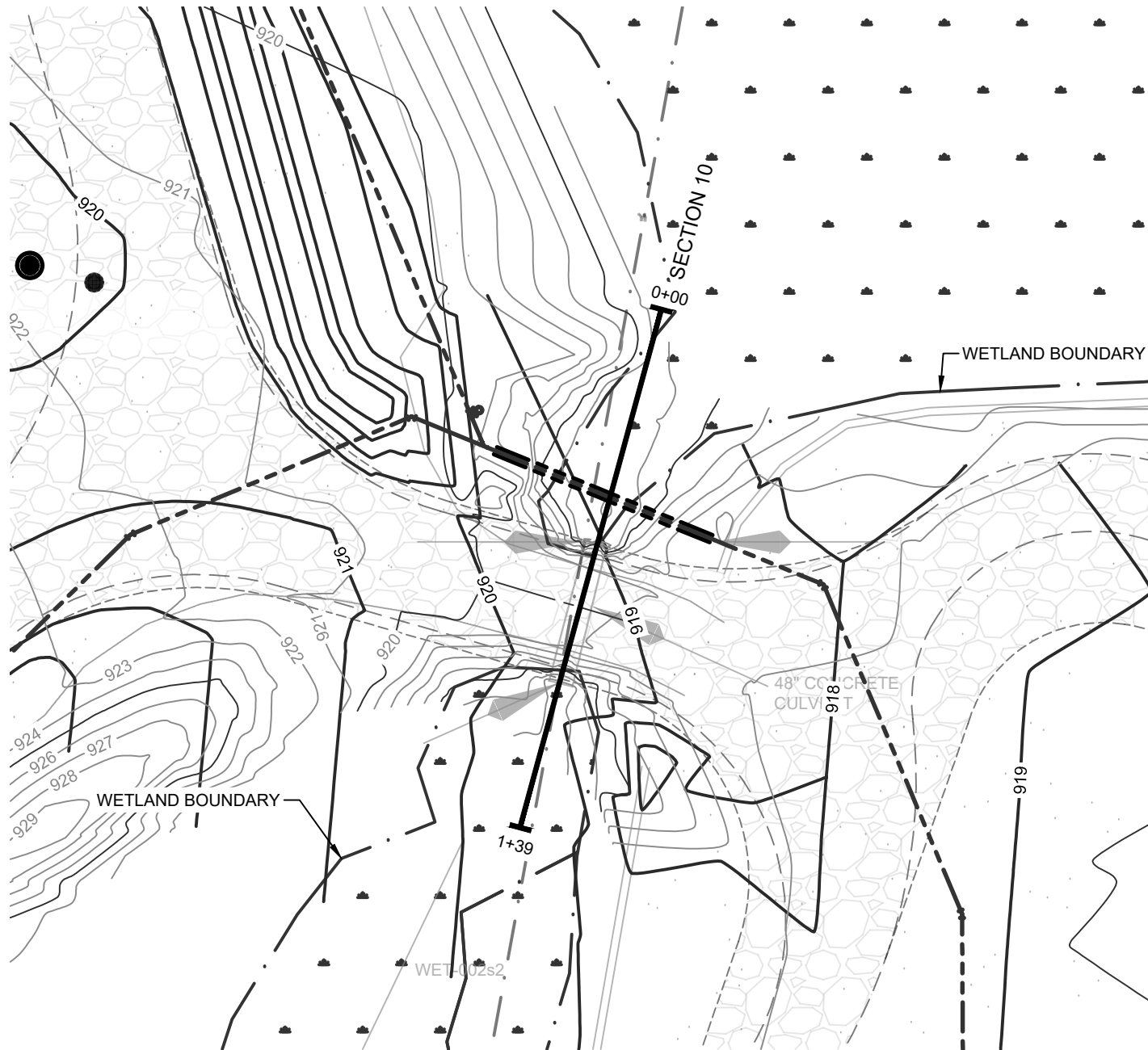
LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 16 OF 18
DATE: 03.02.2020

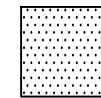
EGLE-WRD
WRP031167 v1.0
Approved
Issued On: 10/19/2021
Expires On: 10/19/2026



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WET-002e and WET-003e



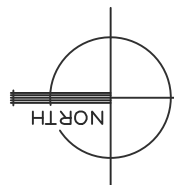
= WETLAND CUT

VOLUME OF CUT
42 CY



= WETLAND FILL

VOLUME OF FILL
144 CY



SECTION 10 PLAN

SCALE 1" = 40'-0"

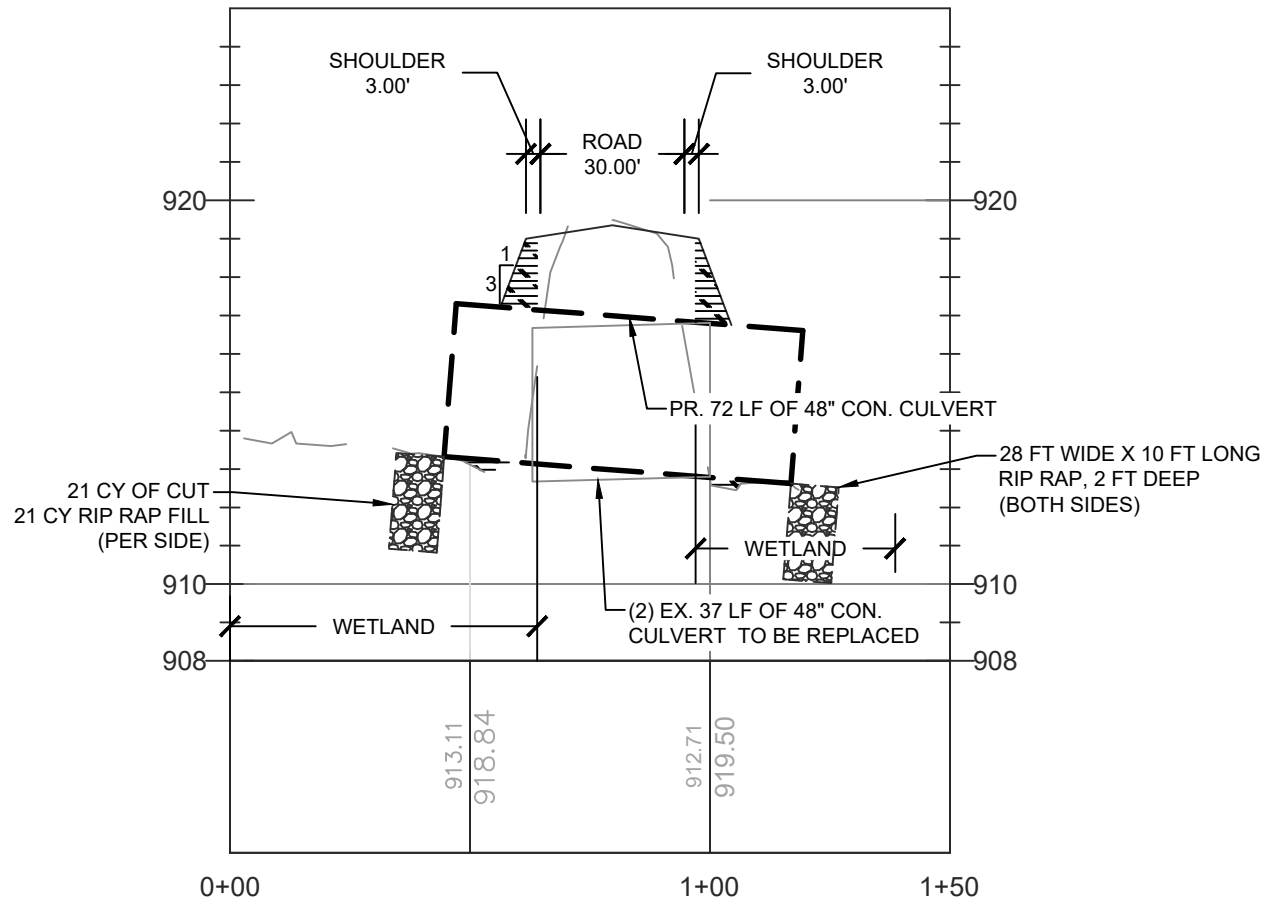
LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 17 OF 18
DATE: 03.02.2020

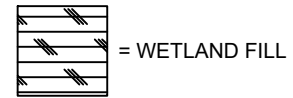
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WRP031167 v1.0
Approved
Issued On: 10/19/2021
Expires On: 10/19/2026



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WET-002e and WET-003e



SECTION 10 PROFILE

HORIZ. SCALE: 1" = 40'-0"
VERT. SCALE: 1" = 5'-0"

LOCATION MAP

APPLICANT: LOUIS PADNOS IRON & METAL CO.
WATERWAY: COUNTY DRAIN
CITY: HOWELL
COUNTY: LIVINGSTON
NUMBER OF SHEETS: 18 OF 18
DATE: 03.02.2020

EGLE-WRD
WRP031167 v1.0
Approved
Issued On: 10/19/2021
Expires On: 10/19/2026

| PROJECT WETLAND IMPACTS | | | | | | | | | |
|--------------------------------|-----------------------------|-----------------------|-----------------|-------------|----------------|----------------|------------|----------|-------------|
| Feature | Activity | Site Plan Pg # (s) | Area of impact | | Cut/Excavation | Fill | | | |
| | | | sq ft | acres | Volume (cu yd) | Volume (cu yd) | | | |
| | | | | | | Onsite Soil | Gravel | Concrete | Riprap |
| WET-005e | General Fill | 3, 4, 5 | 21863 | 0.50 | 0.00 | 3028 | 209 | 5 | 0 |
| WET-006e | General Cut/Fill, Riprap | 12, 13, 14 | 7270 | 0.17 | 42.00 | 815 | 172 | 0 | 22 |
| WET-007e | General Fill | 9, 10, 11 | 4834 | 0.11 | 0.00 | 291 | 0 | 0 | 0 |
| WET-009e | General Cut/Fill | 6, 7, 8 | 1981 | 0.05 | 10.00 | 84 | 0 | 0 | 0 |
| WET-003e (Stormwater Outfall) | Riprap | 15, 16 | 250.25 | 0.01 | 18.5 | 0 | 0 | 0 | 18.5 |
| WET-003e (Culvert Replacement) | Riprap | 17, 18 | 280 | 0.01 | 21.00 | 0 | 0 | 0 | 21 |
| WET-002e (Culvert Replacement) | Riprap | 17, 18 | 280 | 0.01 | 21.00 | 0 | 0 | 0 | 21 |
| WET-003e (Road Widening) | General Fill | 17, 18 | 196 | 0.004 | 0.00 | 0 | 51 | 0 | 0 |
| WET-002e (Road Widening) | General Fill | 17, 18 | 196 | 0.004 | 0.00 | 0 | 51 | 0 | 0 |
| Total | | | 37150.25 | 0.85 | 112.5 | 4218 | 483 | 5 | 82.5 |

PRELIMINARY NOT FOR CONSTRUCTION

SITE DEVELOPMENT & SHREDDER INSTALLATION
LOUIS PADNOS IRON & METAL CO.
 HOWELL, MICHIGAN

| Issuances | |
|------------|------------|
| 05.27.2021 | FOR PERMIT |
| | |
| | |
| | |
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| | |
| | |
| | |
| | |

| | |
|----------|-----|
| DRAWN | HAB |
| REVIEWED | TDV |

PROJECT NO. 5-4982

GMBae
 ARCHITECTURE ♦ ENGINEERING

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 Holland, Michigan 49423

GRAND RAPIDS LAB
 646 Monroe Avenue NW, Suite 500
 Grand Rapids, Michigan 49503

ROYAL OAK LAB
 225 South Main Street, Suite 200
 Royal Oak, Michigan 48067

INDIANAPOLIS LAB
 310 North Alabama Street, Suite 230
 Indianapolis, Indiana 46204

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 www.gmbae.com

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SOUTH UTILITY PLAN

C4.02

DATE: WED
 WRP031167 v1.0
 Approved
 Issued On: 10/19/2021
 Expires On: 10/19/2021

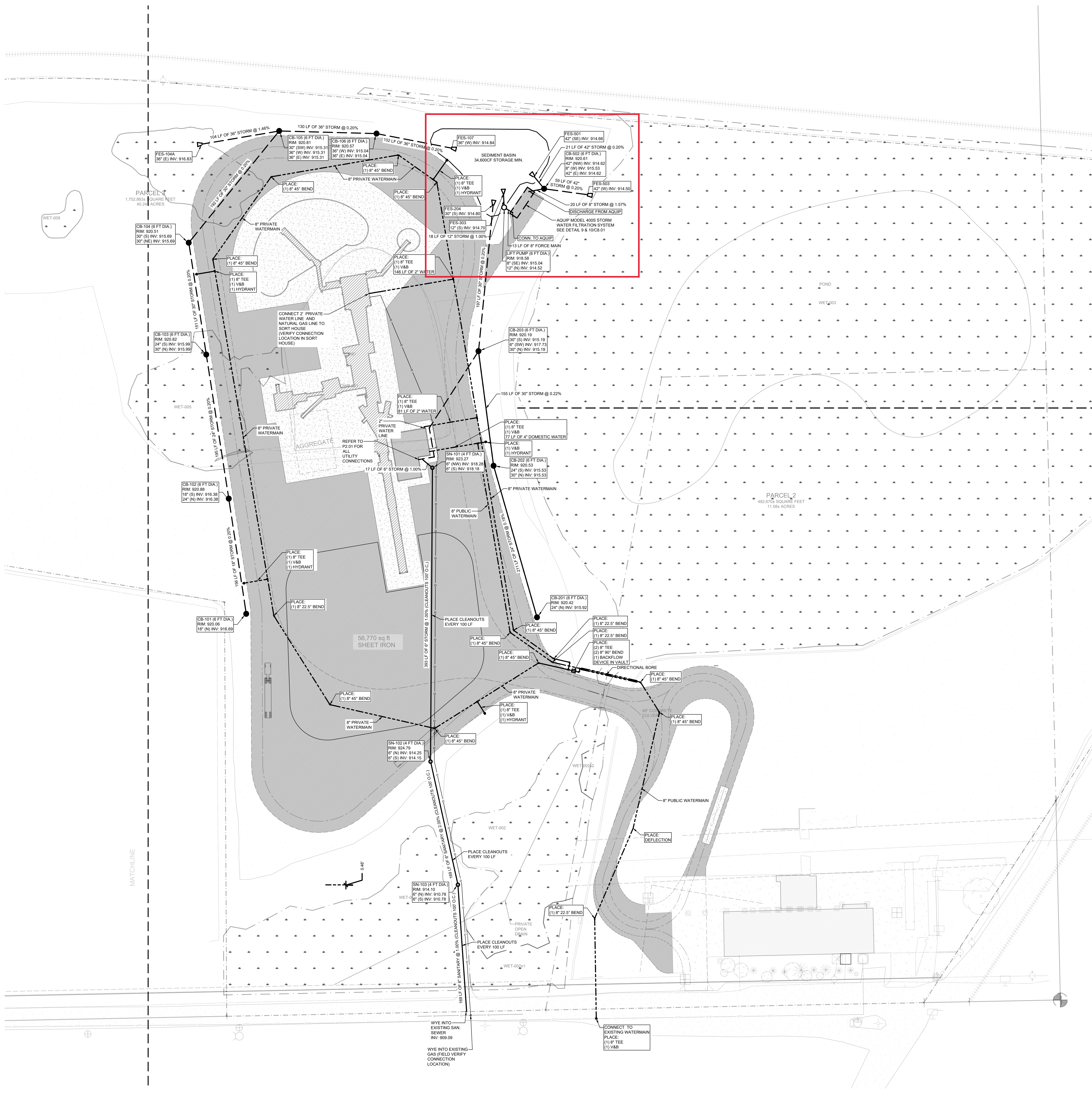
| UTILITY SYMBOL LEGEND | | |
|-----------------------|--|--------------------------|
| SYMBOL | DESCRIPTION | DETAIL/SPEC |
| | CATCH BASIN OR STORM MANHOLE - REFER TO UTILITY TAG FOR ADDITIONAL INFO | 1/C8.01 SPEC 33 05 13 |
| | SANITARY MANHOLE - REFER TO UTILITY TAG FOR ADDITIONAL INFORMATION | 2/C8.01 SPEC 33 05 13 |
| | SANITARY OR STORM CLEANOUT W/ FROST SLEEVE | 4/C8.01 SPEC 33 31 11 |
| | WATERMAIN FITTINGS & APPURTENANCES - REFER TO PLAN FOR SIZE | SPEC 33 11 16 |
| | FLARED END SECTION - STORM - REFER TO UTILITY TAG FOR ADDITIONAL INFORMATION | 5/C8.01 SPEC 33 41 11 |

| UTILITY LINETYPE LEGEND | | |
|-------------------------|-----------------------------|---------------|
| SYMBOL | DESCRIPTION | DETAIL/SPEC |
| | SANITARY SEWER | SPEC 33 31 11 |
| | STORM SEWER | SPEC 33 41 11 |
| | WATERMAIN | SPEC 33 11 16 |
| | UNDERDRAIN | SPEC 33 46 00 |
| | GAS SERVICE | |
| | ELECTRIC SERVICE | |
| | HORIZONTAL DIRECTIONAL BORE | |
| | EX. GAS SERVICE | |
| | EX. STORM SEWER | |
| | EX. SANITARY SEWER | |
| | EX. WATERMAIN | |
| | EX. ELECTRICAL | |

- UTILITY NOTES:**
- ALL WORK SHALL COMPLY WITH APPLICABLE REQUIREMENTS OR THE LOCAL CODE, ORDINANCES AND ACCIDENT/FIRE PREVENTION REGULATIONS.
 - PROTECT THE SITE, ADJACENT PROPERTY AND UTILITY SERVICES FROM DAMAGE OR DISRUPTION OF SERVICE/ACCESS. DAMAGE TO EXISTING STRUCTURES, SITE OR UTILITIES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
 - UTILITIES SHOWN (IF ANY) ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THIS MAP IS NOT TO BE INTERPRETED AS SHOWING EXACT LOCATIONS OR SHOWING ALL UTILITIES IN THE AREA. SIZE AND INVERTS OF EXISTING PIPE TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO COMMENCING WORK ON NEW UTILITY CONNECTIONS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FOR WORK IN ROW AND ON ANY UTILITY CONNECTIONS OR ABANDONMENT PRIOR TO START OF CONSTRUCTION.
 - CONTRACTOR SHALL COORDINATE ANY UTILITY/SERVICE INTERRUPTIONS WITH OWNER AT LEAST ONE WEEK IN ADVANCE. CONTRACTOR SHALL ALSO NOTIFY LOCAL UTILITY PROVIDER WHERE APPLICABLE FOR OPERATION/DISCONNECTION OF PUBLIC OWNED EQUIPMENT.
 - CONTRACTOR SHALL ADEQUATELY PROTECT/SHORE ALL OPEN TRENCHES AS REQUIRED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
 - EXISTING SEWER AND WATERMAIN LINES SHALL BE PROTECTED FROM DEBRIS AND CONSTRUCTION.
 - WATERMAIN CONSTRUCTION IS TO BE INSPECTED BY UTILITY OWNER. PRESSURE TESTING AND CHLORINATION OF THE WATERMAIN TO BE PERFORMED BY THE CONTRACTOR. WITNESSING OF INSTALLATION, PRESSURIZATION, CHLORINATION AND GATHERING OF WATER SAMPLES WILL BE PERFORMED BY THE UTILITY OWNER.
 - MAINTAIN A MINIMUM OF 5'-0" FROM FINISH GRADE TO CENTERLINE OF WATERMAIN PIPE. MAINTAIN A MINIMUM OF 10'-0" CLEARANCE OF SANITARY SEWER MAIN.
 - HYDRANTS AND FITTINGS SHALL BE TIED AND BLOCKED. HYDRANTS AND VALVES SHALL BE COORDINATED WITH UTILITY OWNER TO OPEN PER UTILITY OWNERS DEVELOPMENT STANDARDS.
 - CONTRACTOR SHALL BE REQUIRED TO CONTACT MGS DIG PRIOR TO STARTING ANY WORK. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS FOR WORK IN ROW AS WELL AS NOTIFYING LOCAL UTILITY OWNERS OF WORK IF PERMITS ARE NOT REQUIRED.
 - LOCATION OF LATERALS TO BE DETERMINED IN THE FIELD AT THE DIRECTION OF THE OWNER. AVOID CONFLICT WITH PROPOSED AND/OR EXISTING FACILITIES.
 - QUANTITIES SHOWN ARE FOR INFORMATION ONLY AND CONTRACTOR IS RESPONSIBLE FOR CHECKING ALL LINES, LEVELS AND DIMENSIONS.
 - CONTRACTOR IS TO VERIFY EXISTING UTILITY ELEVATIONS PRIOR TO STARTING CONSTRUCTION.
 - CONTRACTORS TO REVIEW ALL SHEETS FOR RELATED INFORMATION.
 - LIST OF STANDARD ABBREVIATIONS -

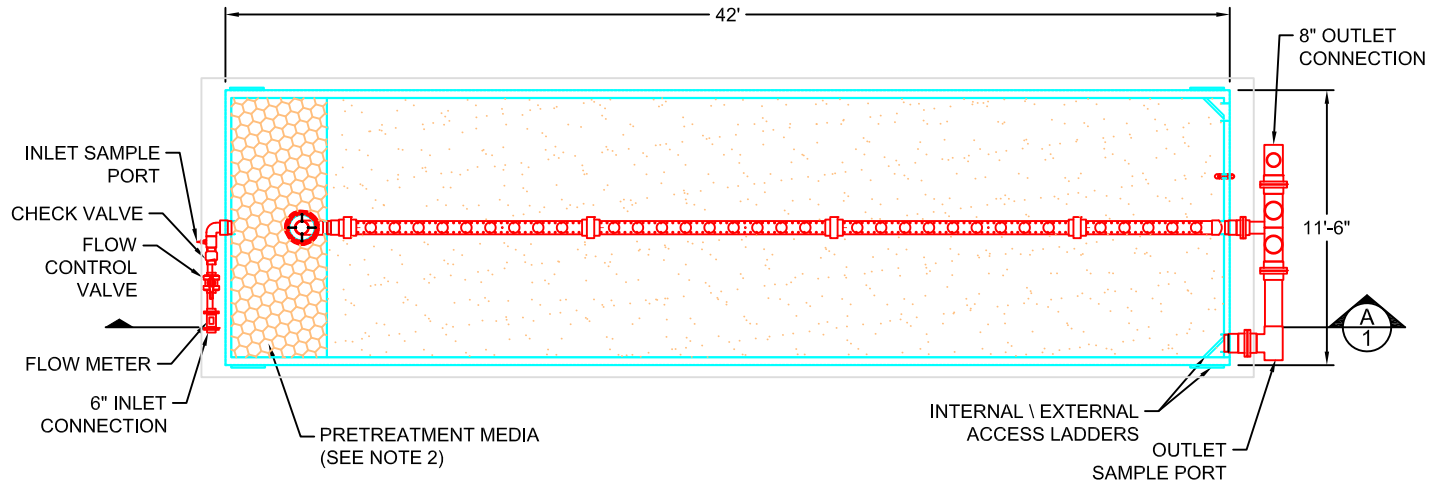
| | |
|------------|-----------------------------------|
| "A.F.F." | = ABOVE FINISHED FLOOR |
| "CB" | = CATCH BASIN |
| "CL" | = CENTER LINE |
| "C.O." | = CLEAN OUT (INCL. FROST SLEEVE) |
| "CY" | = CUBIC YARDS |
| "D.I.W.M." | = DUCTILE IRON WATER MAIN |
| "F.F.S." | = FLARED END SECTION (CONC. ONLY) |
| "F.F.F.E." | = FINISHED FLOOR ELEVATION |
| "F.V." | = FIELD VERIFY |
| "INV." | = INVERT |
| "L.B." | = LEACHING BASIN |
| "L.F." | = LINEAL FEET |
| "RCP" | = REINFORCED CONCRETE PIPE |
| "SAN" | = SANITARY |
| "SAN.MH" | = SANITARY SEWER MANHOLE |
| "S.C." | = SQUARE FEET |
| "S.MH" | = STORM MANHOLE |
| "S.M." | = STORM |
| "S.Y." | = SQUARE YARDS |
| "U.N.O." | = UNLESS NOTED OTHERWISE |
| "V.D." | = YARD DRAIN |

811
 Know what's below.
 Call before you dig.

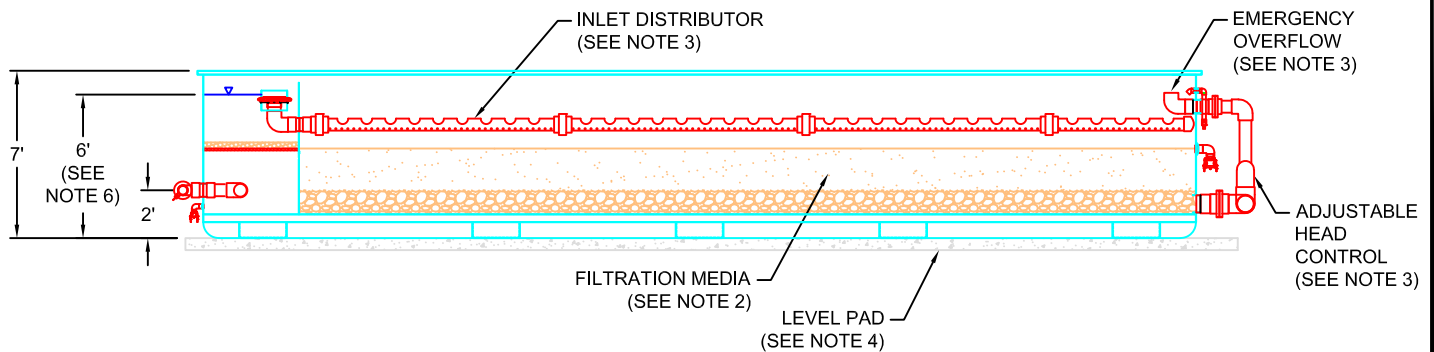


GENERAL NOTES

1. AQUIP® FILTRATION SYSTEM BY STORMWATERX LLC - PORTLAND, OREGON - 800.680.3543 (U.S. PATENT NO. 8,002,974).
2. PRETREATMENT AND FILTER MEDIA COMBINATION DEPENDENT ON POLLUTANT REMOVAL REQUIREMENTS. MODELS: SBE: OMNIPLEX & INERT/SORPTIVE MEDIA, SXI:SETTLING PRETREATMENT & INERT MEDIA.
3. INTERNAL APPURTENANCES BY STORMWATERX INCLUDING INLET AND OUTLET SAMPLE PORTS, INLET FLOW CONTROL & CHECK VALVES, INLET DISTRIBUTOR, UNDERDRAIN SYSTEM, EMERGENCY OVERTFLOW AND ADJUSTABLE HEAD CONTROL.
4. SYSTEM REQUIRES LEVEL SURFACE FOR 44' x 12.5' FOOTPRINT AND LOAD BEARING CAPACITY OF 230,000 LBS. SYSTEM INSTALLATION REQUIRES A CRANE TO OFFLOAD AND SET TANK IN PLACE.
5. INLET AND OUTLET PIPING CONNECTION SIZE AS NOTED. CONNECTION PIPING PROVIDED BY OTHERS. CENTER INLET STANDARD, INLET CONNECTION LEFT OR RIGHT (RIGHT SHOWN). OPTIONAL LEFT OR RIGHT OUTLET (LEFT OUTLET SHOWN).
6. THE OPERATING WATER SURFACE HEIGHT IS 6' ABOVE BOTTOM OF STRUCTURE.



TOP VIEW (1/1)



SECTION VIEW (A/1)



800.680.3543 | stormwaterRx.com

AQUIP MODEL 400S STORMWATER FILTRATION SYSTEM STANDARD DETAIL

SHEET

1

DATE:
1/21/2020

SCALE:
NONE

FILE NAME:
SRX-AQUIP-400S-DTL

DRAWN:
TL

CHECKED:
RC

EGLE-WRD
WRP031157 v1.0
Approved

1 OF 1

Issued On:10/19/2021
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