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ENVIRONMENT
& HEALTH

Ms. Margaret Crawford
United States Army Corps of Engineers, Buffalo District
Auburn Field Office
7413 County House Road
Auburn, NY 13021

RE: Mathews Avenue Compensatory Wetland Mitigation Year 2 (2025) Annual Monitoring Report (USACE Permit No. 2006-01387)

Dear Ms. Crawford:

Date December 17, 2025

An electronic copy of the Mathews Avenue Compensatory Wetland Mitigation Year 2 (2025) Annual Monitoring Report (USACE Permit No. 2006-01387) is provided for your review.

Please contact me at kyle.buelow@ramboll.com if you have any questions or comments regarding this document.

Yours sincerely

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Intended for

U.S. Army Corps of Engineers (USACE) - (Buffalo District)

Document type

2025 Annual Wetland Monitoring Report
(USACE Permit No. 2006-01387)

Date

December 2025

Compensatory Wetland Mitigation

Mathews Avenue Landfill Remediation (USACE Permit No. 2006-01387)

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Bright ideas.
Sustainable change.

Compensatory Wetland Mitigation

Mathews Avenue Landfill Remediation (USACE Permit No. 2006-01387)

Project name	**Compensatory Wetland Mitigation – Mathews Avenue Landfill Remediation (USACE Permit No. 2006-01387)**
Project no.	**1940115784**
Recipient	**U.S. Army Corps of Engineers (USACE) - Buffalo District**
Document type	**2025 Annual Wetland Monitoring Report**
Version	**Final**
Date	**December 16, 2025**
Prepared by	**Christopher Perrotta**
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1 Introduction

1.1 Project Background

The Mathews Avenue Landfill (Site) is a 66-acre site located at 101 Belle Isle Road in the Village of Solvay, Onondaga County, New York. The Site was previously owned and operated by the Solvay Process Company and Allied Chemical Corporation (predecessors to Honeywell International, Inc.), and includes the former Mathews Avenue Landfill, a land-locked section of the former Erie Canal, the Northern Drainage Swale, and the relatively flat, low-lying area between the Mathews Avenue Landfill and Geddes Brook (Figure 1). Currently, the Site is divided into two parcels: Parcel A and Parcel B.

Looking southwest across the wetland mitigation area.

As early as 1925, the Site was utilized by the Solvay Process Company to dispose of unburned sandstone and limestone rock (spalls) from the Solvay soda ash lime kiln operation, and, more recently, demolition debris from Allied Chemical Corporation. 301 Belle Isle Road, LLC submitted an application to remediate the Site in accordance with the NYS Brownfield Cleanup Program (BCP) (6 New York Codes, Rules, and Regulation Subpart 375-3), which was approved by the New York State Department of Environmental Conservation (NYSDEC) on October 11, 2021.

The June 23, 2020, Remedial Action Work Plan (RAWP) (prepared by Ramboll Americas Engineering Solutions, Inc. [Ramboll] and approved by the NYSDEC Division of Environmental Remediation [DER] on July 19, 2021) outlines remedial actions (RAs) for Parcel A of the Site, which were completed in the summer of 2024, and therefore, the “Site” (as discussed, herein) comprises only Parcel A. The RAs consist of clearing and grubbing, grading, placement of a permanent cover over the landfill footprint (and associated areas within Parcel A), remediation of the former Erie Canal, Northern Drainage Swale, and Eastern Drainage Swale, construction of stormwater management facilities, and access enhancements to satisfy remedial requirements in accordance with the NYS BCP.

1.2 Regulatory Background

301 Belle Isle Road, LLC submitted a Joint Application for Permit (JAP) representing a Pre-Construction Notification (PCN) to the U.S. Army Corps of Engineers (USACE) and NYSDEC for the activities associated with remediation of Parcel A of the Mathews Avenue Landfill Site on October 11, 2021. The JAP/PCN package was submitted to:

- Request a preliminary jurisdictional determination (JD) from the USACE for wetlands and waters of the United States (WOTUS) delineated within the project area.
- Obtain authorization from the USACE under Section 404 of the Clean Water Act (CWA) for impacts to wetlands and WOTUS through Nationwide Permit No. 38 (NWP #38; Cleanup of Hazardous and Toxic Waste as Published in the Federal Register) and authorization from the NYSDEC under Section 401 of the CWA (Water Quality Certification).

- Obtain authorization from the NYSDEC under Article 24 of the Environmental Conservation Law (ECL) for impacts to mapped NYS Freshwater Wetlands and their associated 100-ft adjacent areas.

Permanent impacts to 0.73-acre of emergent wetland habitat and temporary impacts to 1.18-acre of emergent wetland habitat, 2.83-acre of open water habitat, and 0.31-acre to a drainage swale, were proposed as part of the RA for the Site. As such, mitigation alternatives were evaluated according to the USACE hierarchy.

At the request of the NYSDEC, a Compensatory Wetland Mitigation Plan (CWMP) (dated May 9, 2023) was prepared by Ramboll to evaluate alternative on-site mitigation strategies to the in-lieu fee program and Tully Farms Road Mitigation Design that was previously developed. The CWMP was developed to compensate for the functions and values associated with the 0.73-acre permanent impact to existing emergent wetland habitat and was prepared in accordance with CFR Part 332 – *Compensatory Mitigation for Losses of Aquatic Resources*.

Authorization from the USACE under NWP #38 was granted on May 31, 2023. In addition to the general conditions outlined by NWP #38, Special Conditions pertaining to the proposed compensatory mitigation were also specified (see Appendix A) and are discussed in Section 1.6, below.

1.3 Mitigation Plan

The CWMP was developed to compensate for the functions and values associated with the 0.73-acre permanent impact to existing emergent wetland habitat by creating the following:

Zone A – Shallow Emergent Wetland: This area supports a mix of vegetative species that thrive in shallow emergent (0- to 12-inch of water) areas and was seeded with the seed mix shown in **Table 2.1** at a rate of 30 pounds (lbs) per acre. Mulch was applied to this area at a rate of 2 tons per acre. Seed tags are included in Appendix B. Seeding of Zone A was completed in June of 2024.

Table 2.1 - Zone A: Shallow Emergent Seed Mix

Content (%)	Common Name	Botanical Name
28	Lurid sedge	*Carex lurida*
21	Fox sedge	*Carex vulpinoidea*
20	Virginia wild rye	*Elymus virginicus*
12	Blunt broom sedge	*Carex scoparia*
3.0	Blue vervain	*Verbena hastata*
2.4	Swamp milkweed	*Asclepias incarnata*
2.0	Soft rush	*Juncus effusus*
2.0	Golden alexanders	*Zizia aurea*
1.6	New England aster	*Aster novae-angliae*
1.3	Awl sedge	*Carex stipata*
1.0	Nodding bur marigold	*Bidens cernua*
1.0	Path rush	*Juncus tenuis*
0.8	Wrinkleleaf goldenrod	*Solidago rugosa*
0.6	White vervain	*Verbena urticifolia*
0.5	Fringed sedge	*Carex crinita*
0.5	Boneset	*Eupatorium perfoliatum*
0.5	Common sneezeweed	*Helenium autumnale*
0.5	Square-stemmed monkeyflower	*Mimulus ringens*
0.3	Great blue lobelia	*Lobelia siphilitica*
0.3	Woolgrass	*Scirpus cyperinus*
0.2	Mud plaintain	*Alisma subcordatum*
0.2	Purplestem aster	*Aster puniceus*
0.2	Flat-topped white aster	*Aster umbellatus*
0.1	Ditch stonecrop	*Penthorum sedoides*

Zone B – Scrub-Shrub Wetland: This area supports a mix of herbaceous and shrub species that thrive in intermittently exposed and shallow (0 to 6-inches) water. Individual size #2 pots of the woody species shown in **Table 2.2** were planted at a density of one plant per 100 square feet (436 trees per acre), alternating species such that equal numbers of each species are represented. Shrub plantings were completed in October of 2023.

Table 2.2 - Zone B: Shrub Plantings

Common Name	Botanical Name
Arrowwood	*Viburnum dentatum*
Silky dogwood	*Cornus amomum*
Smooth alder	*Alnus serrulata*
Northern spicebush	*Lindera benzoin*
Blackgum	*Nyssa sylvatica*
Red osier dogwood	*Cornus sericea*

Following the planting of shrubs, Zone B was seeded with the seed mix shown in **Table 2.3** at a rate of 30 lbs per acre. Mulch was applied in this area at a rate of 2 tons per acre. Seeding of Zone B was completed in June of 2024.

Table 2.3 - Zone B: Scrub-Shrub Seed Mix

Content (%)	Common Name	Botanical Name
25	Virginia wild rye	*Elymus virginicus*
15	Winterberry	*Ilex verticillate*
15	Silky dogwood	*Cornus amomum*
15	Grey dogwood	*Cornus racemose*
11	Oats	*Avena sativa*
4.0	Fox sedge	*Carex vulpinoidea*
3.0	Grass-leaved goldenrod	*Euthamia graminifolia*
2.0	Lurid sedge	*Carex lurida*
2.0	Blunt broom sedge	*Carex scoparia*
2.0	Awl sedge	*Carex stipata*
2.0	Path rush	*Juncus tenuis*
1.0	Calico aster	*Aster lateriflorus*
1.0	New England aster	*Aster novae-angliae*
1.0	Rough avens	*Geum laciniatum*
1.0	Nodding bur marigold	*Bidens cernua*

Figure 2 illustrates the as-built conditions within the WMA.

1.4 Baseline Information

The mitigation wetland, which totals 1.1-acre and includes a 100-foot upland buffer, was constructed in accordance with the USACE-approved CWMP (included in Appendix A).

Figure 2 provides as-built survey information as performed by Thew Associates PLLC in June 2024. This figure provides topographic contours for the wetland mitigation area (WMA), as well as the following information in accordance with the Permit:

- Location and direction of photographs which reflect current conditions within the WMA (included as Appendix C).
- Location of vegetation monitoring plots established within the WMA to quantitatively assess vegetative cover and woody survivorship observed during monitoring Years 1 through 5 (2024-2028).
- Location of piezometers and surface water monitoring points established within the WMA to quantitatively monitor hydrologic conditions during monitoring Years 1 through 5 (2024-2028).
- Location of the constructed spillways and the secondary capped outlet pipe used to manage water levels within the WMA.

1.5 Wetland Preservation

Pursuant to Special Condition 11 of the Permit, a Site Protection Instrument will be executed for the WMA to preserve the wetland and its wildlife resources, as created. Copies of the instrument will be submitted to the NYSDEC and USACE for approval prior to execution, and the instrument will be executed and recorded at the Onondaga County Clerk's Office.

1.6 Annual Monitoring

Pursuant to Special Condition 9 of the Permit, annual monitoring reports will be submitted to the USACE for the first five years following completion of construction of the WMA. Annual monitoring reports will include observed conditions and data collected during the growing season (approximately June to October) of each monitoring year and are to be prepared and submitted to the USACE no later than December 31 of each monitoring year. This is the second of five anticipated annual monitoring reports and presents the results of monitoring and maintenance activities conducted by Ramboll biologists on August 15, 2025, as part of the Year 2 (2025) monitoring period.

Annual monitoring will focus on evaluating the mitigation area against the following performance standards outlined in Special Condition 7 of the Permit:

a. Prevent establishment of invasive species identified in the *New York State Prohibited and Regulated Invasive Plants*, and reed canary grass (*Phalaris arundacea*) in excess of 5% areal cover for 5 years. If this threshold is exceeded during or at the end of each monitored year, corrective measures will be implemented to preclude the growth of the listed species within the mitigation areas. Corrective measures such as, but not limited to, herbicide application, mechanical/manual removal, etc. shall be implemented. Any corrective measures proposed will be coordinated and approved by USACE prior to implementation. Management and monitoring period extended up to 5 years if invasives establish on site.
b. The mitigation wetland will meet the vegetative and hydrology requirements specified in the 1987 Corps of Engineers Wetland Delineation Manual and Regional Supplement (USACE 1987; 2012).
c. Achieve 85% total areal coverage with more than 50% of the vegetation which are facultative (FAC), facultative wet (FACW) or obligate (OBL) species within the first year, no less than 80% of which are permanent perennial species.
d. 85% survival of woody plantings after 5 growing seasons.
e. Hydrology: “The permittee shall establish and maintain inundation and/or saturation within the upper 12 inches of the soil surface on consecutive days for at least 12.5% of the growing season (22 days) for at least 4 out of 5 monitoring years across each wetland mitigation basin and/or cover type.”
f. The mitigation area will be vegetated with no more than 50% areal cover of a single species, which will be demonstrated for each monitoring period.

2 2025 Wetland Mitigation Area Assessment

2.1 Vegetation Monitoring Plots

As shown on Figure 2, quantitative vegetation monitoring was performed within 5 x 10 m^2 representative plots established within the WMA during the Year 2 monitoring event. Percent cover of observed species within each plot was recorded and is summarized in **Table 2.4**, below. Quantitative vegetation monitoring will continue throughout future monitoring years. Photos of observed conditions within each vegetation monitoring plot are included in Appendix C.

Table 2.4 – Quantitative Vegetation Monitoring Data

	Common Name	Botanical Name	Wetland Indicator Status	Percent Cover (%)
Vegetation Plot 1 (VP1)	**Coontail**	*Ceratophyllum demersum*	OBL	20
	Filamentous green algae	--	--	5
	Leafy pondweed	*Potamogeton foliosus*	OBL	30
	Water celery	*Vallisneria americana*	OBL	2
VP1 - TOTAL				57
Vegetation Plot 2 (VP2)	**Path rush**	*Juncus tenuis*	FAC	30
	Arrowwood	*Viburnum dentatum*	FAC	5
	Eastern cottonwood	*Populus deltoides*	FAC	10
	Lady's thumb	*Persicaria maculosa*	FAC	5
	Creeping bentgrass	*Agrostis stolonifera*	FACW	5
	Ditch stonecrop	*Penthorum sedoides*	OBL	10
	Boxelder	*Acer negundo*	FAC	5
	Black willow	*Salix nigra*	OBL	15
	Curled dock	*Rumex crispus*	FAC	5
	Blue vervain	*Verbena hastata*	FACW	5
	Broad-leaved cattail	*Typha latifolia*	OBL	15
	Prostrate knotweed	*Polygonum aviculare*	FACU	1
	Square-stemmed monkeyflower	*3 Mimulus ringens*	OBL	10
	Shallow sedge	*Carex lurida*	OBL	5
	Common rush	*Juncus effusus*	OBL	30
	Broom sedge	*Carex scoparia*	FACW	10
	Fox sedge	*Carex vulpinoidea*	OBL	10
	Mud plantain	*Alisma subcordatum*	OBL	5
	Common boneset	*Eupatorium perfoliatum*	FACW	2
VP2 - TOTAL				183
Vegetation Plot 3 (VP3)	**Path rush**	*Juncus tenuis*	FAC	25
	Ditch stonecrop	*Penthorum sedoides*	OBL	5
	Eastern cottonwood	*Populus deltoides*	FAC	10
	Blue vervain	*Verbena hastata*	FACW	5
	Mud plantain	*Alisma subcordatum*	OBL	10
	Curled dock	*Rumex crispus*	FAC	5
	Redtop grass	*Agrostis gigantea*	FACW	10

Table 2.4 – Quantitative Vegetation Monitoring Data

	Black willow	*Salix nigra*	OBL	10
	Arrowwood	*Viburnum dentatum*	FAC	5
	Silky dogwood	*Cornus amomum*	FACW	5
	Smooth alder	*Alnus serrulata*	OBL	5
	Square-stemmed monkeyflower	*Mimulus ringens*	OBL	15
	Shallow sedge	*Carex lurida*	OBL	5
	Common boneset	*Eupatorium perfoliatum*	FACW	5
	Common rush	*Juncus effusus*	OBL	40
	Broom sedge	*Carex scoparia*	FACW	5
	Grass leaved goldenrod	*Solidago graminifolia*	FAC	5
VP3 - TOTAL				160
Vegetation Plot 4 (VP4)	**Red Clover**	*Trifolium pratense*	FACU	5
	Silky dogwood	*Cornus amomum*	FACW	10
	Common ragweed	*Ambrosia artemisiifolia*	FACU	2
	Bird's foot trefoil	*Lotus corniculatus*	FACU	10
	Northern spicebush	*Lindera benzoin*	FACW	5
	Redtop grass	*Agrostis gigantea*	FACW	5
	Curled dock	*Rumex crispus*	FAC	5
	Virginia wildrye	*Elymus virginicus*	FACW	30
	Eastern daisy fleabane	*Erigeron annuus*	FACU	25
	White sweet clover	*Melilotus officinalis*	FACU	20
	Canada goldenrod	*Solidago altissima*	FACU	10
	Queen Anne's lace	*Daucus carota*	UPL	5
	Common hawkweed	*Hieracium lachenalii*	UPL	5
VP4 - TOTAL				137
	Path rush	*Juncus tenuis*	FAC	30
Vegetation Plot 5 (VP5)	**Red clover**	*Trifolium pratense*	FACU	5
	Eastern cottonwood	*Populus deltoides*	FAC	5
	Creeping bentgrass	*Agrostis stolonifera*	FACW	10
	Ditch stonecrop	*Prenthorum sedoides*	OBL	10
	Common ragweed	*Ambrosia artemisiifolia*	FACU	5
	Broad-leaved cattail	*Typha latifolia*	OBL	15
	Broom sedge	*Carex scoparia*	FACW	15
	Common rush	*Juncus effusus*	OBL	10
	Square-stemmed monkeyflower	*Mimulus ringens*	OBL	10
	Black willow	*Salix nigra*	OBL	10
	Eastern daisy fleabane	*Erigeron annuus*	FACU	5
	Blue vervain	*Verbena hastata*	FACW	5
	Grass leaved goldenrod	*Solidago graminifolia*	FAC	5
	Virginia wildrye	*Elymus virginicus*	FACW	15
	Redtop grass	*Agrostis gigantea*	FACW	10
VP 5 - TOTAL				165

As illustrated by the quantitative vegetation monitoring data collected during the Year 2 monitoring event, the WMA has achieved 85% total areal coverage of FAC, FACW, and OBL species, and therefore, has met the areal coverage requirement of the Permit.

Looking northwest across the wetland mitigation area in August 2025.

2.2 Volunteer Species

As shown in the photographs included in Appendix C, volunteer eastern cottonwood, black willow, and boxelder seedlings and saplings have established throughout the WMA. Individuals generally range from 12-in (inches) to 18-in in height, with an average height of approximately 12-in. A number of volunteer herbaceous species were also observed throughout the WMA. It is anticipated that the areal coverage and relative abundance of these species will continue to increase as existing individuals mature and new individuals are recruited.

2.3 Planted Woody Stock Survivorship

Shrub species were planted in October 2023 at a density of one plant per 100 square feet (436 trees per acre), alternating species such that equal numbers of each species are represented. Survivorship of planted shrubs was evaluated by counting live specimens of each species and comparing results to the total number of individuals planted. As described in Section 2.2, volunteer woody plant species have established and are expected to augment the areal coverage of woody plant species provided by the planted stock. Inclusion of volunteer species in the survivorship evaluation is allowed under Special Condition 26 of the Permit if the individual specimen is greater than 12 inches and has an indicator status of FAC, FACW, or OBL. **Table 2.5** provides the number of live woody specimens observed, regardless of origin, as well as an estimate of total percent cover of each woody species throughout the WMA. The combined total areal cover provided by planted and volunteer woody species was estimated at approximately 62% of the WMA. While the areal cover has decreased for woody species from Year 1, it was expected due to an unseasonably dry summer leading to drier conditions within the WMA than usual. The areal cover is expected to rebound in the future with larger numbers of volunteer species continuing to establish within the WMA.

Table 2.5 – Woody Species Survivorship and Percent Cover

Common Name	Latin Name	Wetland Indicator Status	Number of Live Specimens	Number of Planted Specimens	Percent Survivorship (%)	Percent Cover (%)
Silky dogwood	*Cornus amomum*	FACW	129	115	112%	25%
Red osier dogwood	*Cornus sericea*	FACW	38	115	33%	8%
Smooth alder	*Alnus serrulata*	OBL	14	115	12%	3%
Northern spicebush	*Lindera benzoin*	FACW	19	115	17%	3%
Arrowwood	*Viburnum dentatum*	FAC	37	115	32%	8%
Blackgum	*Nyssa sylvatica*	FAC	10	115	9%	3%
Eastern cottonwood	*Populus deltoides*	FAC	3	--	--	<1%
Black willow	*Salix nigra*	OBL	74	--	--	12%

Common Name	Latin Name	Wetland Indicator Status	Number of Live Specimens	Number of Planted Specimens	Percent Survivorship (%)	Percent Cover (%)
Eastern black walnut	*Juglans nigra*	FACU	2	--	--	<1%
Boxelder	*Acer negundo*	FAC	4	--	--	<1%
American elm	*Ulmus americana*	FACW	1	--	--	<1%
TOTALS			247[1]	690[1]	48%[1]	62%[1]

It is expected that shrub plantings within the WMA will be augmented by the recruitment of new individuals from the planted stock, as well as the maturation and establishment of native volunteer species (e.g., eastern cottonwood and black willow, etc.). Total vegetative cover (herbaceous and woody species) across the WMA was estimated at 95%, with less coverage observed in sparsely vegetated depressions where surface water was persistent. **Appendix D** provides a qualitative list of herbaceous and woody plant species observed throughout the WMA during the Year 2 monitoring event.

2.4 Invasive Species

Common reed (*Phragmites australis*) was observed in the WMA, however it was not pervasive, as very few individuals were observed around the periphery of the WMA. The combined areal coverage of common reed was less than the permit-mandated 5%. Purple loosestrife (*Lythrum salicaria*) and reed canary grass were not observed in the WMA during the Year 2 monitoring event. Control measures will be implemented, as needed, to maintain permit-specified levels (i.e., less than 5% absolute percent areal cover in the WMA) of common reed, purple loosestrife, reed canary grass, and other invasive species.

2.5 Wildlife Observations

A variety of mammalian, avian, amphibian, and insect species were observed, either directly or by indirect evidence (scat, tracks, etc.), in and around the WMA. Faunal observations made during the 2025 monitoring event indicate that the WMA is developing habitat conditions suitable to support a diverse and robust community of terrestrial and aquatic wildlife and insect species. Faunal observations made by Ramboll biologists included the following biota:

- Wild turkey (*Meleagris gallopavo*)
- Killdeer (*Charadrius vociferous*)
- Song sparrow (*Melospiza melodia*)
- Red-winged blackbird (*Agelaius phoeniceus)*
- Alder flycatcher (*Empidonax alnorum*)
- American bullfrog (*Lithobates catesbeiana*)
- White-tailed deer (*Odocoileus virginianus*)
- Coyote (*Canis latrans*)
- Green heron (*Butorides virescens)*
- Mallard duck (*Anas platyrhynchos)*
- Dragonfly and damselfly species
- Multiple pollinator species

American toad eggs (*Anaxyrus americanus)* observed in the wetland mitigation area.

[1] Value excludes volunteer species counts.

3 Hydrologic Conditions

3.1 Surface Water

Surface water measurements were taken in four representative locations established throughout the WMA during the May 2024 Baseline Assessment (see Figure 2). Hydrologic conditions observed during the Year 2 monitoring event were consistent with those proposed in the CWMP, as well as those specified in the 1987 Corps of Engineers Wetland Delineation Manual and Regional Supplement (USACE 1987; 2012).

During the 2025 monitoring event the Syracuse area was in the middle of drought conditions, influencing the hydrologic conditions observed during the site visit. Zone A was inundated with water at depths of approximately one-inch to over one-foot. Zone B was not inundated during the Year 2 monitoring event but showed evidence of previous inundation. Surface water measurements across the four monitoring locations during the August 2025 monitoring event are shown in **Table 2.6**, below. These locations will continue to be evaluated during future monitoring events.

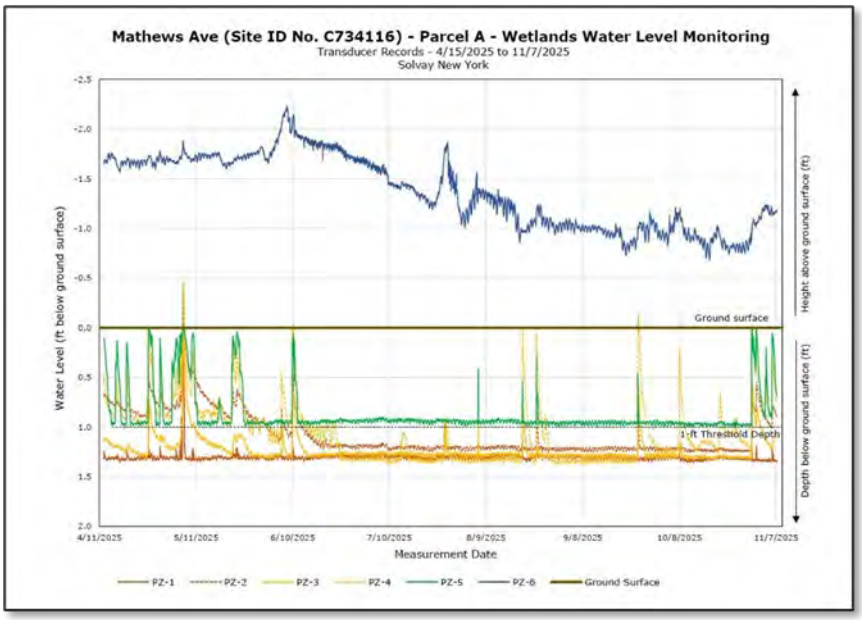
Table 2.6 - Surface Water Depth Measurements

Monitoring Location	Depth (inches)
SW1	12.5”
SW2	0”
SW3	0”
SW4	0”

As stated in Section 1.4, a secondary capped outlet pipe was installed within the WMA in the event that additional water level control is desired (see Figure 2). As of the 2025 monitoring event, the cap has remained closed.

3.2 Ground Water

As shown on Figure 2, piezometers equipped with transducers were established within the WMA and the constructed spillways in the spring of 2024. Piezometers were installed to monitor hydrologic conditions throughout the 2025 growing season. Piezometer data is summarized in the plot below.



Water level data gathered from piezometers equipped with transducers (April 2025 to November 2025).

The piezometers located within Zones A and B of the WMA (PZ-5 and PZ-6) demonstrate that the WMA is meeting the hydrologic requirement of the Permit (i.e., establish and maintain inundation and/or saturation within the upper 12 inches of the soil surface on consecutive days for at least 12.5% of the growing season (22 days) for at least 4 out of 5 monitoring years), as water levels ranged from a minimum of 1-ft below ground surface (bgs) to a maximum of 2-ft above ground surface (ags) throughout the 2025 growing season. The piezometers located within the constructed spillways (PZ-1, PZ-2, PZ-3, and PZ-4) demonstrate that the WMA is hydrologically connected to off-site wetlands, as the data plot shows that water (i.e., surface water or groundwater) is discharging from the WMA through the constructed spillways at certain times of the year (as represented by the “peaks” in the PZ-1-PZ-4 lines).

4 Summary

In accordance with USACE Permit No. 2006-01387, an assessment of vegetative and hydrologic conditions within the Mathews Ave WMA was performed during Year 2 (2025) of post-construction monitoring. Based on observations made during the Year 2 monitoring event, the WMA has achieved 85% total areal coverage of FAC, FACW, and OBL plant species, and therefore, has met the substantive areal coverage requirement of the Permit. Shrub count data collected during the Year 2 monitoring event indicate that the woody species survivorship will be augmented in future monitoring years by the establishment and proliferation of both new individuals from the planted stock and native volunteer species (e.g., eastern cottonwood and black willow, etc.). Hydrologic data collected in 2025 illustrate that the WMA is meeting the Special Conditions outlined by the Permit.

Based on the monitoring performed and the adaptive management techniques employed to date, the WMA currently represents a viable and robust system which compensates for the values and services provided by the impacted wetlands. It is expected the WMA will continue to develop towards its target ecological condition, and future monitoring will continue to assess such conditions and identify corrective measures needed to meet the Special Conditions outlined by the Permit.

Looking north across the wetland mitigation area in August 2025.

FIGURES

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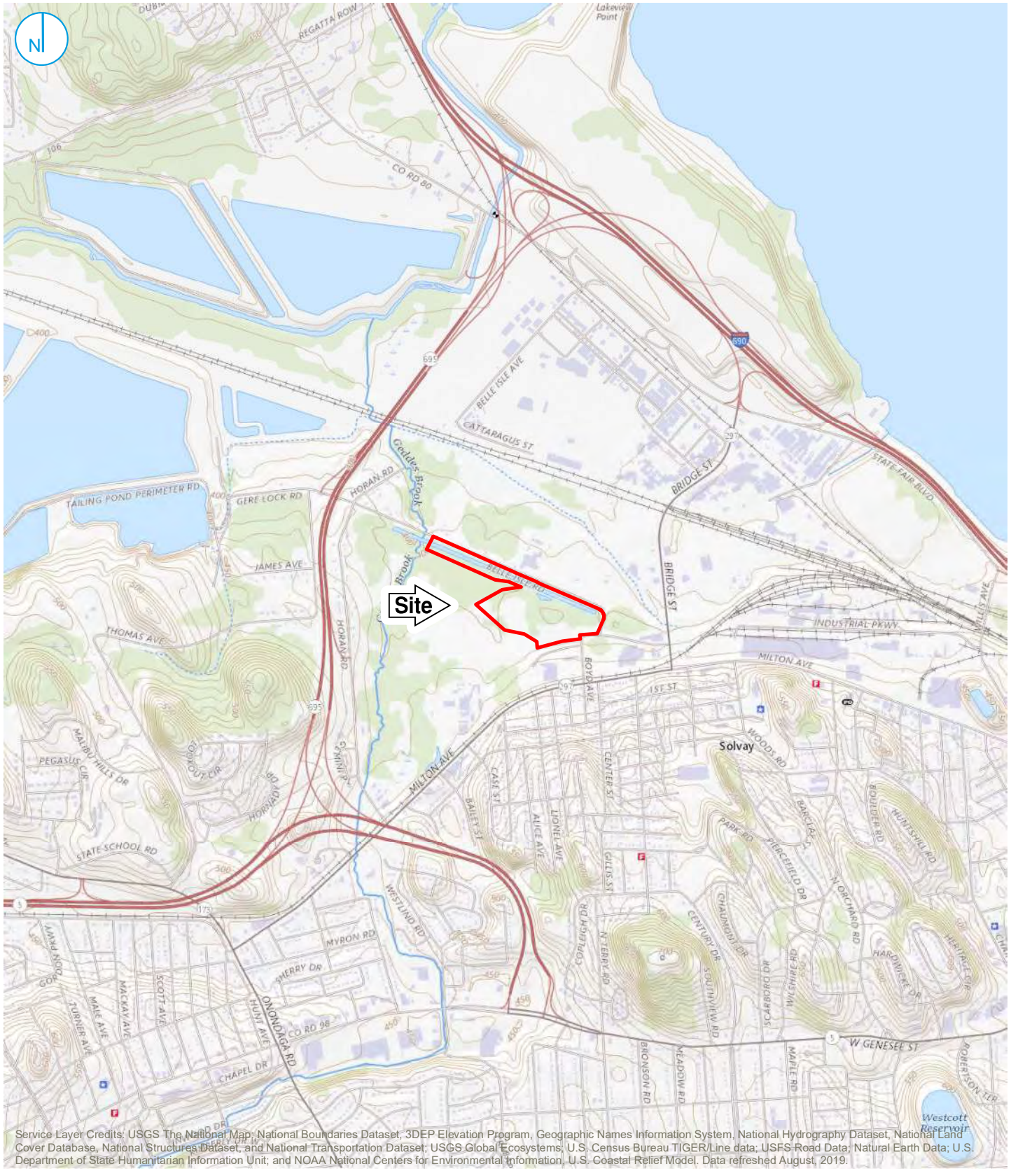
PROJECT: 1950100137 | DATED: 9/15/2021 | DESIGNER: MORTONAK



Map Scale: 1:24,000 | Map Center: 76°13'33"W 43°3'56"N

SITE LOCATION

FIGURE 1

KEY MAP

MATHEWS AVENUE
PARCEL A BOUNDARY

0 1,000 2,000 Feet

Mathews Avenue Landfill - Parcel A
301 Belle Isle Road, LLC
Syracuse, New York

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

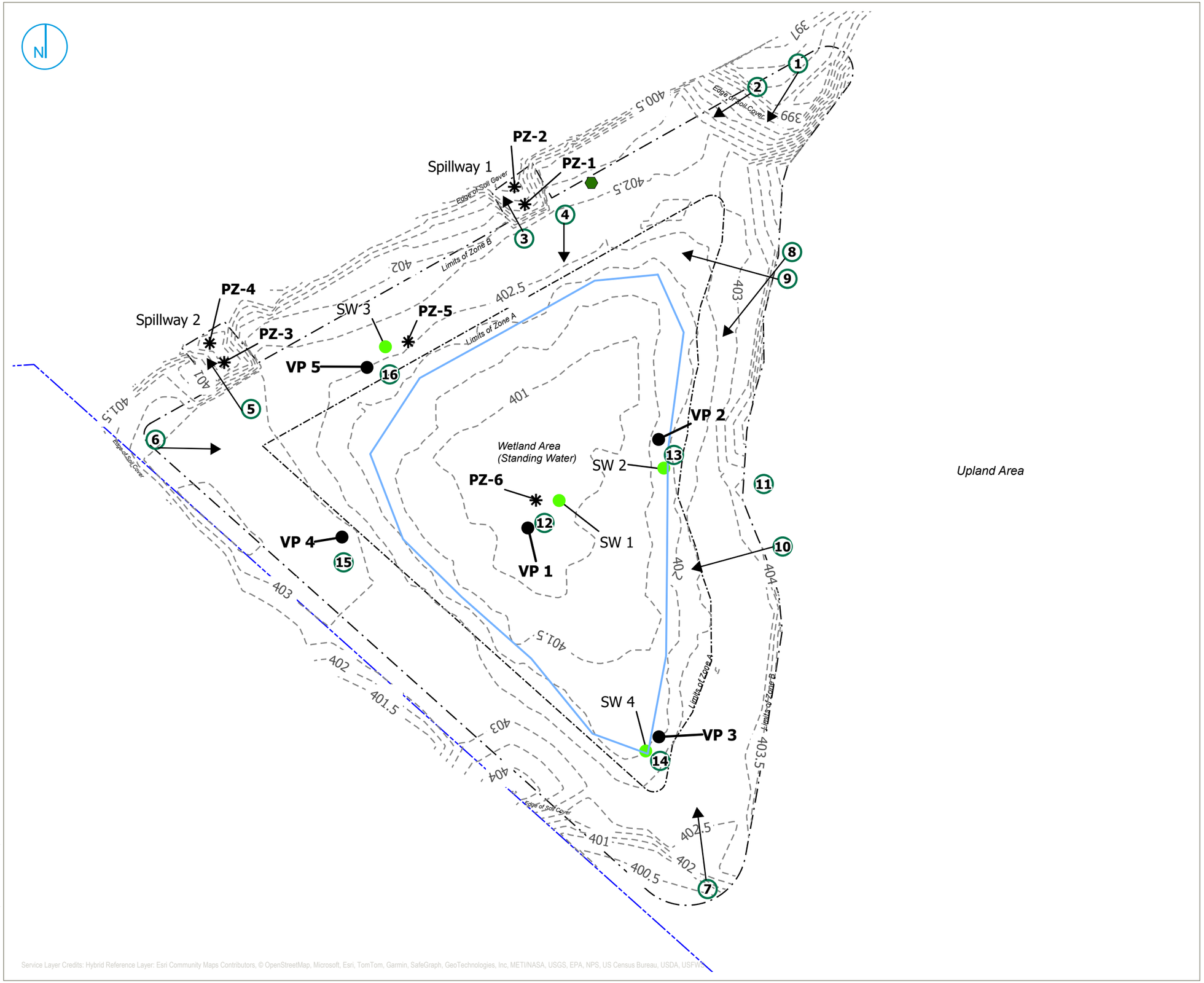


Photo Locations
Approximate Piezometer Locations
Vegetation Monitoring Plots
Surface Water Sampling Points
Approximate Capped Outlet Pipe Location
Property Line
Zone A
Zone B
Elevation Contours (ft)
Edge of Standing Water
Photograph Direction

Notes

1. This survey is referenced horizontally to the North American Datum of 1983, projected on the New York State Plane Coordinate System (Central Zone), and vertically to the North American Vertical Datum of 1988 (NAVD88).
2. North arrow as shown indicates Grid North referenced to NAD83 projected on the New York State Plane Coordinate System (Central Zone).
3. The reference horizontal and vertical control station is STA-4, a found Mag Nail set by C.T. Male Associates in 2006 in Belle Isle Road. Northing: 1117196.81 Easting: 916403.19 Elev. 392.88 feet
4. The property line shown hereon was provided by Ramboll.
5. The information shown hereon is based on an instrument survey completed on June 18, 2024.

0 50 100 Feet

WETLAND MITIGATION AREA MONITORING AND PHOTOGRAPH LOCATIONS

Mathews Ave Landfill- Parcel A
301 Belle Isle Road, LLC
Solvay, NY

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1690000XXXX | DATED: 11/20/2024 | DESIGNER: CAC/ACE.IM

APPENDICES

Appendix A

Agency Correspondence

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS, BUFFALO DISTRICT
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

May 31, 2023

Regulatory Branch

SUBJECT: Department of the Army No. LRB-2006-01387 Nationwide Permit No. NWP 38 Cleanup of Hazardous and Toxic Waste as Published in the Federal Register, Volume 86, No. 8 on Jan. 13, 2021 and No. 245 on Dec. 27, 2021

Christopher Calkins
301 Belle Isle Road, LLC
333 West Washington Street
Syracuse, New York 13202

Dear Mr. Calkins:

This pertains to your proposal to permanently impact 0.73 acres of wetland (0.03 acres of Wetland 1, 0.44 acres of Wetland 2, 0.17 acres of Wetland 3, 0.09 acres of Wetland 4) and temporarily impact 2.83 acres of open water, 1.18 PEM (Old Erie Canal) and 0.31 acres of a drainage swale for the remediation of a portion of the former Matthews Avenue Landfill in accordance with the NYS Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP). The project is located at the Mathews Ave Landfill, 101 Belle Isle Road, in the Village of Solvay, Onondaga County, New York.

I have evaluated the impacts associated with your proposal and have concluded that they are authorized by the enclosed Nationwide Permit (NWP) provided that the attached conditions are satisfied.

Verification of the applicability of this NWP is valid until March 14, 2026 unless the NWP is modified, suspended, revoked, or the activity complies with any subsequent permit modification. Please note in accordance with 33 CFR part 330.6(b), that if you commence or are under contract to commence an activity in reliance of the permit prior to the date this NWP expires, is suspended or revoked, or is modified such that the activity no longer complies with the terms and conditions, you have twelve months from the date of permit modification, expiration, or revocation to complete the activity under the present terms and conditions of the permit, unless the permit has been subject to the provisions of discretionary authority.

It is your responsibility to remain informed of changes to the NWP program. A public notice announcing any changes will be issued when they occur and will be available for viewing at our website: http://www.lrb.usace.army.mil/Missions/Regulatory.aspx. Finally, note that if your activity is not undertaken within the defined period or the project specifications have changed, you must immediately notify this office to determine the need for further approval or reverification.

Regulatory Branch

SUBJECT: Application No. LRB-2006-01387, Nationwide No. NWP 38 Cleanup of Hazardous and Toxic Waste as Published in the Federal Register, Volume 86, No. 8 on Jan. 13, 2021 and No. 245 on Dec. 27, 2021

Your initiation of work as authorized by the enclosed NWP acknowledges your acceptance of the general and special conditions contained therein. This affirmation is limited to the attached NWP and does not obviate the need to obtain any other project specific Federal, state, or local authorization. Specifically, you may need to obtain Article 15 (Protection of Water), Article 24 (Freshwater Wetland), and/or Article 34 (Coastal Erosion Management) authorization from the New York State DEC.

In addition to the general conditions attached to the NWP, your attention is directed to the following Special Conditions which are also appended at the end of the NWP:

1. The permittee must notify the Regulatory Branch, in writing, at least one day prior to the date the activities authorized in Waters of the United States, including wetlands, are scheduled to begin. Notification shall either be by: 1) e-mail sent to david.w.leput2@usace.army.mil AND LRB.Regulatory@usace.army.mil; or 2) mailed to the following address: Mr. David Leput, U.S. Army Corps of Engineers, Buffalo District, 1776 Niagara Street, Buffalo New York 14207-3199.

2. The permittee's responsibility to complete the required compensatory mitigation as set forth in the Special Conditions below will not be considered fulfilled until it has demonstrated compensatory project success and has received written verification of that success from the U.S. Army Corps of Engineers.

3. As compensatory mitigation to compensate for permanent impacts to 0.73 acres of emergent wetland, the permittee must establish at a minimum, 1.1 acres of emergent and scrub shrub wetland on-site. The mitigation must be constructed in accordance with the attached drawings as well as any permit conditions. The mitigation must be constructed prior to, or concurrent with, work associated with this permit authorization, and must be completed by November 15th of the year the mitigation construction begins, or by a Corps-approved extension date.

4. The compensatory wetland mitigation plan entitled Revised Final Compensatory Wetland Mitigation Plan and dated May 9, 2023, is hereby incorporated into and made part of the permit as "Appendix A". The permittee must implement the mitigation in accordance with the plan and any permit conditions. The mitigation performance standards listed in the Special Conditions supersede any conflicting standards listed in the compensatory mitigation plan as listed previously.

5. The permittee must begin construction of the wetland mitigation area prior to or concurrent with the filling authorized by this permit, and must be completed by November 15th of the year the mitigation construction begins, or by a Corps-approved extension date.

Regulatory Branch

SUBJECT: Application No. LRB-2006-01387, Nationwide No. NWP 38 Cleanup of Hazardous and Toxic Waste as Published in the Federal Register, Volume 86, No. 8 on Jan. 13, 2021 and No. 245 on Dec. 27, 2021

6. The permittee is required to provide financial assurance in the form of a performance bond in the amount of $160,305 to ensure the project will meet performance obligations of the compensatory mitigation project required under this permit, in accordance with the following:

a. The performance bond agreement must contain the information described in 33 CFR 332.3(n) and be executed and submitted to this office for review, and is required to be approved in writing by this office **prior to commencement** of the work associated with this permit authorization.
b. The permittee is referred to the performance bond template located at: http://www.lrb.usace.army.mil/Portals/45/docs/regulatory/MitandMon/Performance%20Bond%20Template%20Updated.pdf?ver=2017-10-25-051710-643 (If the website cannot be accessed, you are directed to contact the Corps Project Manager for an electronic copy of the template).
c. The original, executed performance bond document must be submitted to: David Leput, USACE Buffalo District, Regulatory Branch, US Army Corps of Engineers, 1776 Niagara Street, Buffalo, NY 14207.
d. Once executed, the performance bond will thereby be incorporated into and made part of the permit as Appendix B.
e. After review of all required monitoring reports and compliance with the terms and conditions of the permit, the DE will determine, in writing, when the permittee has completed its compensatory mitigation requirements and may be released from the financial assurance requirement.

7. The following performance standards are incorporated into this permit and are required to be met as follows:

a. Prevent establishment of invasive species identified in the *New York State Prohibited and Regulated Invasive Plants (*https://www.dec.ny.gov/animals/99141.html) (NYSDEC 2014), and reed canary grass (*Phalaris arundacea)* in excess of 5% areal cover for 5 years. If this threshold is exceeded during or at the end of each monitored year, corrective measures will be implemented to preclude the growth of the listed species within the mitigation areas. Corrective measures such as, but not limited to, herbicide application, mechanical/manual removal, etc. shall be implemented. Any corrective measures proposed will be coordinated and approved by USACE prior to implementation. Management and monitoring period extended up to 5 years if invasives establish on site.
b. The mitigation wetland will meet the vegetative and hydrology requirements specified in the 1987 Corps of Engineers Wetland Delineation Manual and Regional Supplement (USACE 1987; 2012).
c. Achieve 85% total areal coverage with more than 50% of the vegetation which are facultative (FAC), facultative wet (FACW) or obligate (OBL) species within the first year, no less than 80% of which are permanent perennial species.
d. 85% survival of woody plantings after 5 growing seasons.

e. Hydrology: "The permittee shall establish and maintain inundation and/or saturation within the upper 12 inches of the soil surface on consecutive days for at least 12.5% of the growing season (22 days) for at least 4 out of 5 monitoring years across each wetland mitigation basin and/or cover type."
f. The mitigation area will be vegetated with no more than 50% areal cover of a single species, which will be demonstrated for each monitoring period. If it is determined that standard is not met at any time, a corrective action plan will be submitted to the USACE for review and approval prior to implementation during the following growing season. A waiver may be granted by the USACE for sites that are in the initial monitoring seasons (1-2 years) and are not meeting the hydrophytic vegetation cover goal.

8. A baseline wetland construction report must be forwarded to this office by December 31 in the year of completion of all mitigation construction activities, or by an approved extension. For purposes of this special condition, "completion" means all activities associated with site grading and seeding and/or planting. The baseline report must include the following:

a. An "as-built" topographic survey of the mitigation area at 0.5 foot contour intervals.
b. Photographs from fixed locations with a photo-location map.
c. A list of plants introduced through seeding and/or planting.
d. Water depth and date of measurement from representative locations within the mitigation area. The sample points will be fixed locations and shall be plotted on a map.
e. A list of any modifications that were made from the original mitigation plan.

9. The permittee is required to submit annual monitoring and/or compliance reports for the wetland mitigation project to this office for the first five (5) years following completion of the mitigation construction based upon data collected during each monitored year between June and October. The reports must follow the requirements outlined in Regulatory Guidance Letter No. 08-03 (Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources). The first annual report is due by December 31 in the year following completion of mitigation construction, or by an approved extension date (Example – If mitigation construction is completed in 2023, the first year report would be due by Dec. 31, 2023). For purposes of this special condition, "completion" means all activities associated with site grading and seeding and/or planting. All reports must be submitted to LRB.Regulatory.PermitCompliance@usace.army.mil by December 31 of the year due, or by a Corps-approved extension date. This requirement may be waived for years 3 and 4 if, after the first two growing seasons, the mitigation is shown to meet performance criteria listed in the permit. These reports must include:

a. Comparison of site conditions to an as-built survey.
b. Wetland Delineation, including a map of wetland boundary.
c. Photographs (minimum 5) from fixed locations with a photo location reference map.

d. Plant species list with the following information: Wetland Indicator Status and strata; Dominant plants and percent cover.
e. A list of plants introduced through seeding or planting.
f. Water depth and date of measurement from representative locations within the mitigation area during the growing season. The sample points will be fixed locations and shall be plotted on a map.
g. Fish and wildlife observations at the mitigation site.
h. Summary statement regarding the perceived success of the wetland creation project. The report will evaluate the goals/performance standards as set forth in the permit or mitigation and monitoring plan as well as current wetland functions. These reports must also address any potential problem areas and include suggestions and timetable for correction if it is anticipated that projected goals may not be met.
i. Date(s) of field inspection(s).

10. The permittee assumes all liability for accomplishing corrective work. Should the District Engineer determine the compensatory mitigation to be unsuccessful at the end of the monitoring period or during the monitoring period where specific performance criteria must be met, the permittee will be required to undertake, and bear all costs associated with, additional mitigative or corrective measures. These actions may include, but are not limited to, regrading, additional planting, purchase of wetland credits from a bank, etc. Additional yearly monitoring of the site may be required at the discretion of the District Engineer.

11. Prior to conducting any work associated with this permit authorization, the permittee is required to place perpetual deed restrictions on the mitigation site and the designated upland buffers to guarantee their preservation for wetland and wildlife resources. The deed restriction shall specifically state: (1) the Department of the Army Permit number; 2) the permit date; 3) the restricted uses as identified in Special Conditions of this permit, 4) the contact information for the Buffalo District U.S. Army Corps of Engineers Regulatory Branch, 5) that the wetland and buffer areas are to be preserved and are not to be adversely impacted, 6) that the deed restriction runs with the land and burdens the property in perpetuity; and (7) that the deed restriction shall be transferred to subsequent property owners upon the sale, transfer, or reversion of the property. A map that is drafted by a professional surveyor and a legal description that defines the metes and bounds of the deed restricted area shall be attached to and referenced in the deed restriction. The permittee shall identify the location of federal jurisdictional boundaries on all documents recorded by the Onondaga County Recorder to include subdivision plats, deeds, and other legal real estate documents. A draft copy of the deed restriction language must be submitted to Margaret Crawford of this office and approved, in writing, prior to recordation. An approved, certified copy of the recorded deed restriction is required to be provided to LRB.Regulatory.PermitCompliance@usace.army.mil, BY DECEMBER 31ST OF THE YEAR WORK BEGAN, or by an extension authorized in writing from this office.

Regulatory Branch

SUBJECT: Application No. LRB-2006-01387, Nationwide No. NWP 38 Cleanup of Hazardous and Toxic Waste as Published in the Federal Register, Volume 86, No. 8 on Jan. 13, 2021 and No. 245 on Dec. 27, 2021

12. The permittee must ensure none of the following activities occur at the mitigation area(s): filling, excavating, dredging, mining or drilling, use of ATVs or other recreational motorized vehicles, removal of topsoil, sand, gravel, rock, minerals, or other materials, nor any building of roads or change in topography of the land in any manner (with the exception of the maintenance of small foot trails), construction or placement of buildings, camping accommodations or mobile homes, fences, signs, billboards or other advertising material, or other structures. There shall be no removal, destruction, or cutting of vegetation, spraying with herbicides, grazing of domestic animals, or disturbance or manipulation of the mitigation area without first obtaining Department of the Army authorization. Control of nuisance vegetation, or any other manipulation within the mitigation areas, shall only occur after Corps of Engineers concurrence that such management practices are necessary to ensure the long-term success of the mitigation program.

13. All reports required under this permit must be submitted to LRB.Regulatory.PermitCompliance@usace.army.mil, unless otherwise specified.

Questions pertaining to this matter should be directed to me at (315) 255-8090 X 3 by writing to the following address: U.S. Army Corps of Engineers Regulatory Branch 7413 County House Road, Auburn, New York 13021 or by e-mail at: Margaret.a.crawford@usace.army.mil.

Sincerely,

Margaret Crawford

Margaret Crawford
Biologist

Enclosures
cc: Kyle Buelow, Ramboll

COMPLETION FORM / COMPLIANCE CERTIFICATION

Each permittee who receives a Nationwide Permit (NWP) verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any compensatory mitigation.

APPLICANT:	POINT OF CONTACT:	File No.: LRB-2006-01387
301 Belle Isle Road, LLC	Kyle Buelow, Ramboll	File Closed: May 31, 2023
333 West Washington Street	333 West Washington Street	NWP No.: NWP 38 Cleanup of
Syracuse, New York 13202	Syracuse, NY 13202	Hazardous and Toxic Waste

Upon completion of the activity authorized by this permit and any required compensatory mitigation sign this certification and return it to the address listed below within 30 days of project completion.

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, revocation, and/or assessment of administrative penalties.

The permittee shall certify the completion of the authorized work and mitigation:

a. The authorized work was done in accordance with the NWP authorization, including any general, regional, or activity specific conditions.
b. The implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, this certification must include the documentation required by 33 CFR 332.3(1)(3) to confirm that the permittee secured the appropriate number and resource type of credits.

_____ _____

301 Belle Isle Road, LLC Date

Permittee Telephone Number: _____

Project location: Mathews Ave Landfill, 101 Belle Isle Rd, in the Village of Solvay, Onondaga County, NY

Project Description: to permanently impact 0.73 acres of wetland (0.03 acres of Wetland 1, 0.44 acres of Wetland 2, 0.17 acres of Wetland 3, 0.09 acres of Wetland 4) and temporarily impact 2.83 acres of open water, 1.18 PEM (Old Erie Canal) and 0.31 acres of a drainage swale for the remediation of a portion of the former Matthews Avenue Landfill in accordance with the NYS Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP).

Authorized Impacts (Waters of the U.S. Impacted by Project): permanently impact 0.73 acres of wetland (0.03 acres of Wetland 1, 0.44 acres of Wetland 2, 0.17 acres of Wetland 3, 0.09 acres of Wetland 4) and temporarily impact 2.83 acres of open water, 1.18 PEM (Old Erie Canal) and 0.31 acres of a drainage swale

Waterway and/or Project Setting: unnamed waters

Return completed form to: **LRB.Regulatory.PermitCompliance@usace.army.mil** (Preferred)

Or Mail to: Mr. David Leput
Regulatory Branch
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, NY 14207

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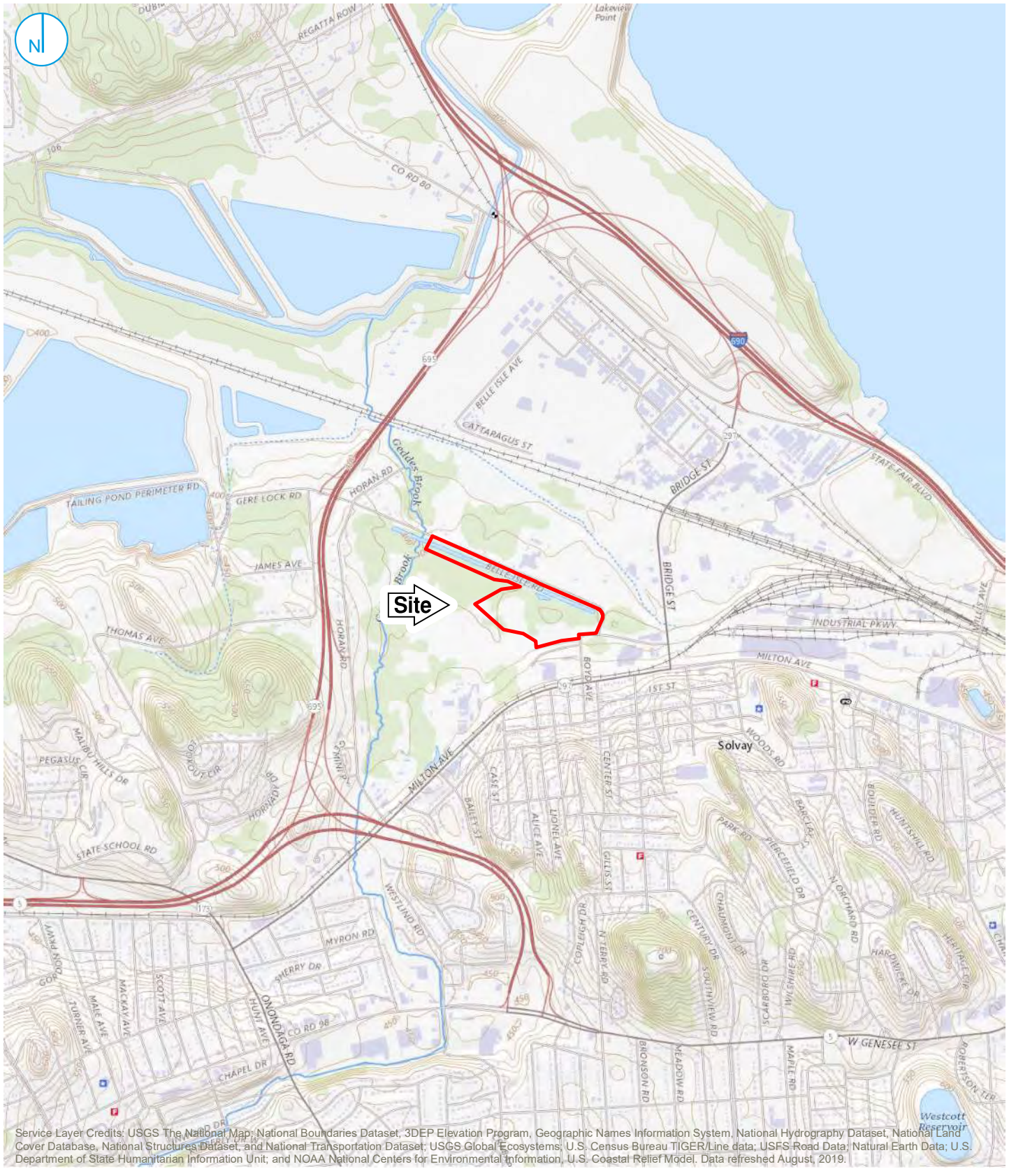


PROJECT: 1950100137 | DATED: 9/15/2021 | DESIGNER: MORTONAK

Map Scale: 1:24,000 | Map Center: 76°13'33"W 43°3'56"N

SITE LOCATION

FIGURE 1

KEY MAP

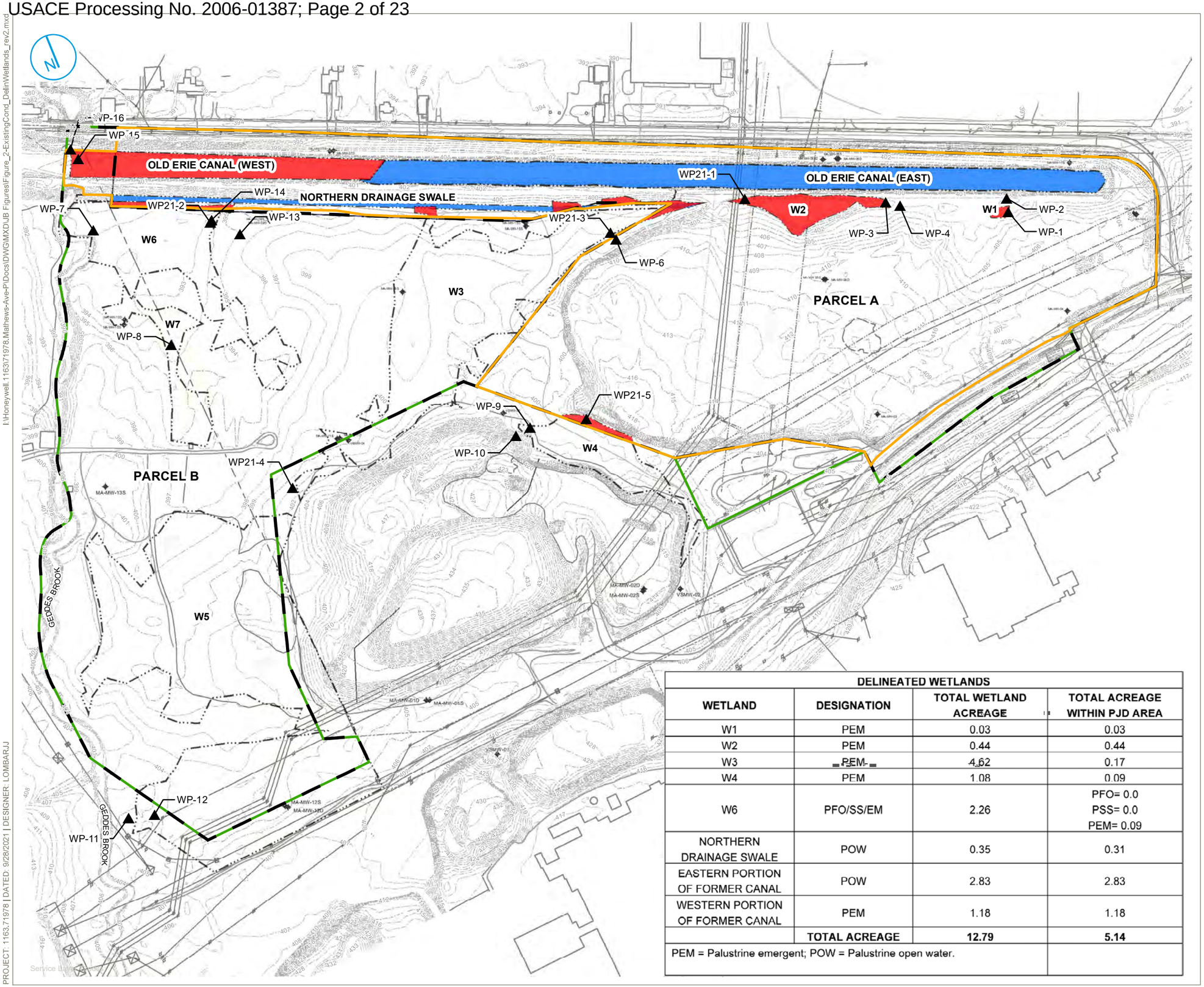
MATHEWS AVENUE
PARCEL A BOUNDARY

0 1,000 2,000 Feet

Mathews Avenue Landfill - Parcel A
301 Belle Isle Road, LLC
Syracuse, New York

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL



DELINEATED WETLANDS			
WETLAND	**DESIGNATION**	**TOTAL WETLAND ACREAGE**	**TOTAL ACREAGE WITHIN PJD AREA**
W1	PEM	0.03	0.03
W2	PEM	0.44	0.44
W3	PEM	4.62	0.17
W4	PEM	1.08	0.09
W6	PFO/SS/EM	2.26	PFO= 0.0 PSS= 0.0 PEM= 0.09
NORTHERN DRAINAGE SWALE	POW	0.35	0.31
EASTERN PORTION OF FORMER CANAL	POW	2.83	2.83
WESTERN PORTION OF FORMER CANAL	PEM	1.18	1.18
	TOTAL ACREAGE	**12.79**	**5.14**
PEM = Palustrine emergent; POW = Palustrine open water.			

- MATHEWS AVENUE PARCEL BOUNDARY
- MATHEWS AVENUE PROPERTY LINE
- PRELIMINARY JURISDICTIONAL DETERMINATION (PJD)
- PEM WETLAND
- POW WETLAND
- ▲ WETLAND PLOTS

0 250 500 Feet

EXISTING CONDITIONS AND DELINEATED WETLANDS

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

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PROJECT: 1163.71978 | DATED: 9/28/2021 | DESIGNER: LOMBARJJ

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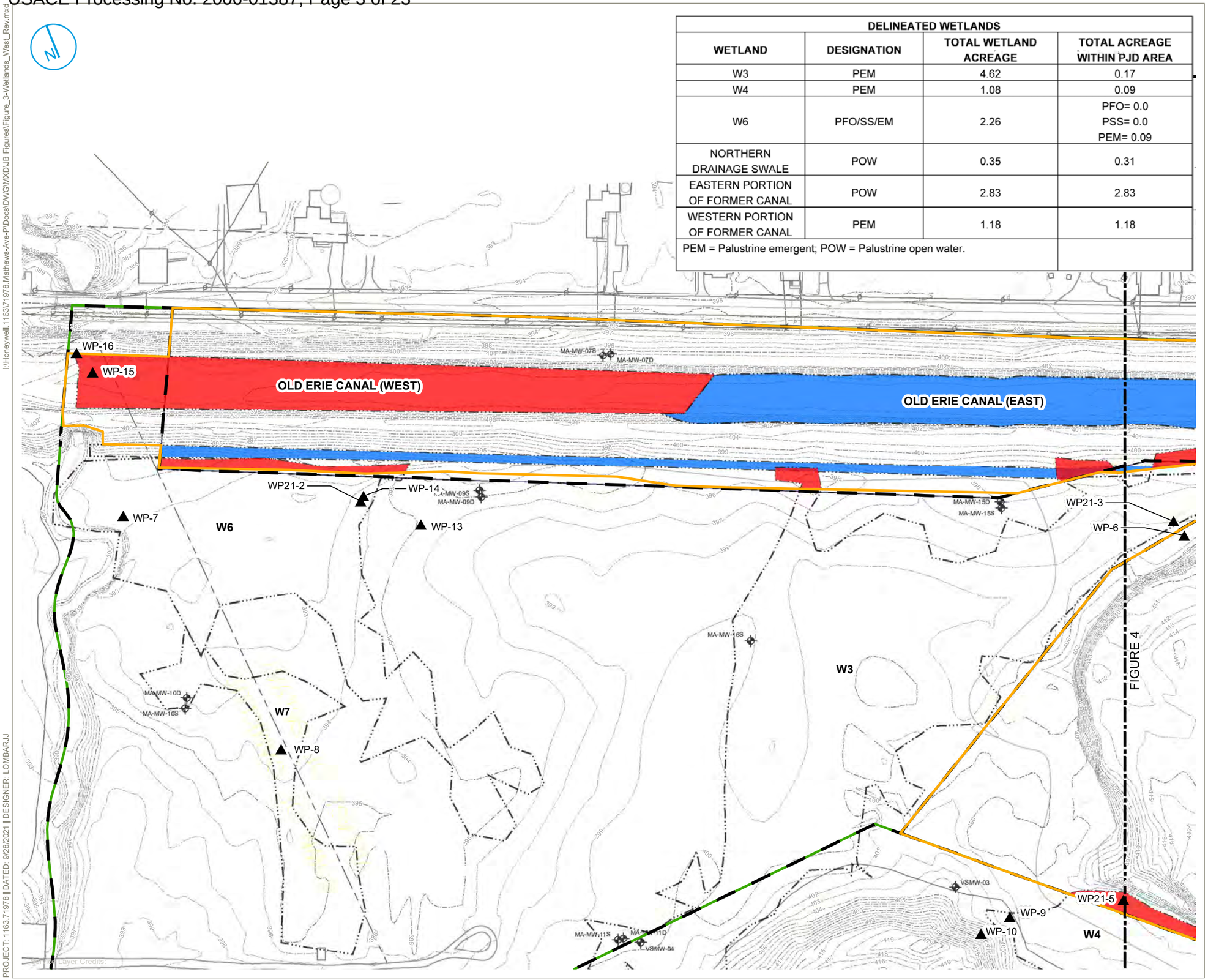
PROJECT: 1163.71978 | DATED: 9/28/2021 | DESIGNER: LOMBARJJ

DELINEATED WETLANDS

WETLAND	DESIGNATION	TOTAL WETLAND ACREAGE	TOTAL ACREAGE WITHIN PJD AREA
W3	PEM	4.62	0.17
W4	PEM	1.08	0.09
W6	PFO/SS/EM	2.26	PFO= 0.0 PSS= 0.0 PEM= 0.09
NORTHERN DRAINAGE SWALE	POW	0.35	0.31
EASTERN PORTION OF FORMER CANAL	POW	2.83	2.83
WESTERN PORTION OF FORMER CANAL	PEM	1.18	1.18
PEM = Palustrine emergent; POW = Palustrine open water.			



- MATHEWS AVENUE PARCEL BOUNDARY
- MATHEWS AVENUE PROPERTY LINE
- PRELIMINARY JURISDICTIONAL DETERMINATION (PJD)
- PEM WETLAND
- POW WETLAND
- WETLAND PLOTS

0 125 250 Feet

EXISTING CONDITIONS AND DELINEATED WETLANDS

FIGURE 3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

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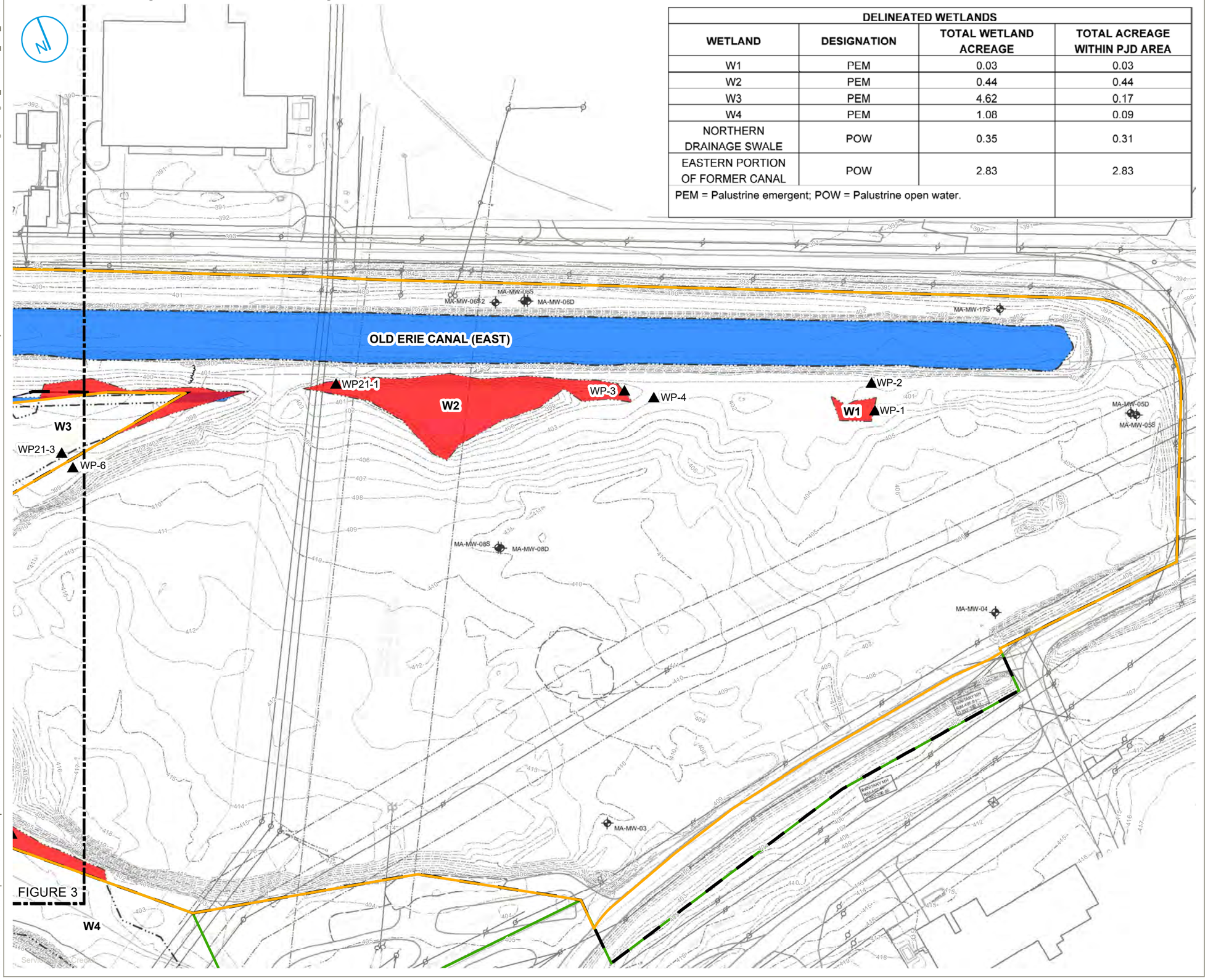
PROJECT: 169000XXXX | DATED: 9/28/2021 | DESIGNER: LOMBARJJ

DELINEATED WETLANDS

WETLAND	DESIGNATION	TOTAL WETLAND ACREAGE	TOTAL ACREAGE WITHIN PJD AREA
W1	PEM	0.03	0.03
W2	PEM	0.44	0.44
W3	PEM	4.62	0.17
W4	PEM	1.08	0.09
NORTHERN DRAINAGE SWALE	POW	0.35	0.31
EASTERN PORTION OF FORMER CANAL	POW	2.83	2.83

PEM = Palustrine emergent; POW = Palustrine open water.



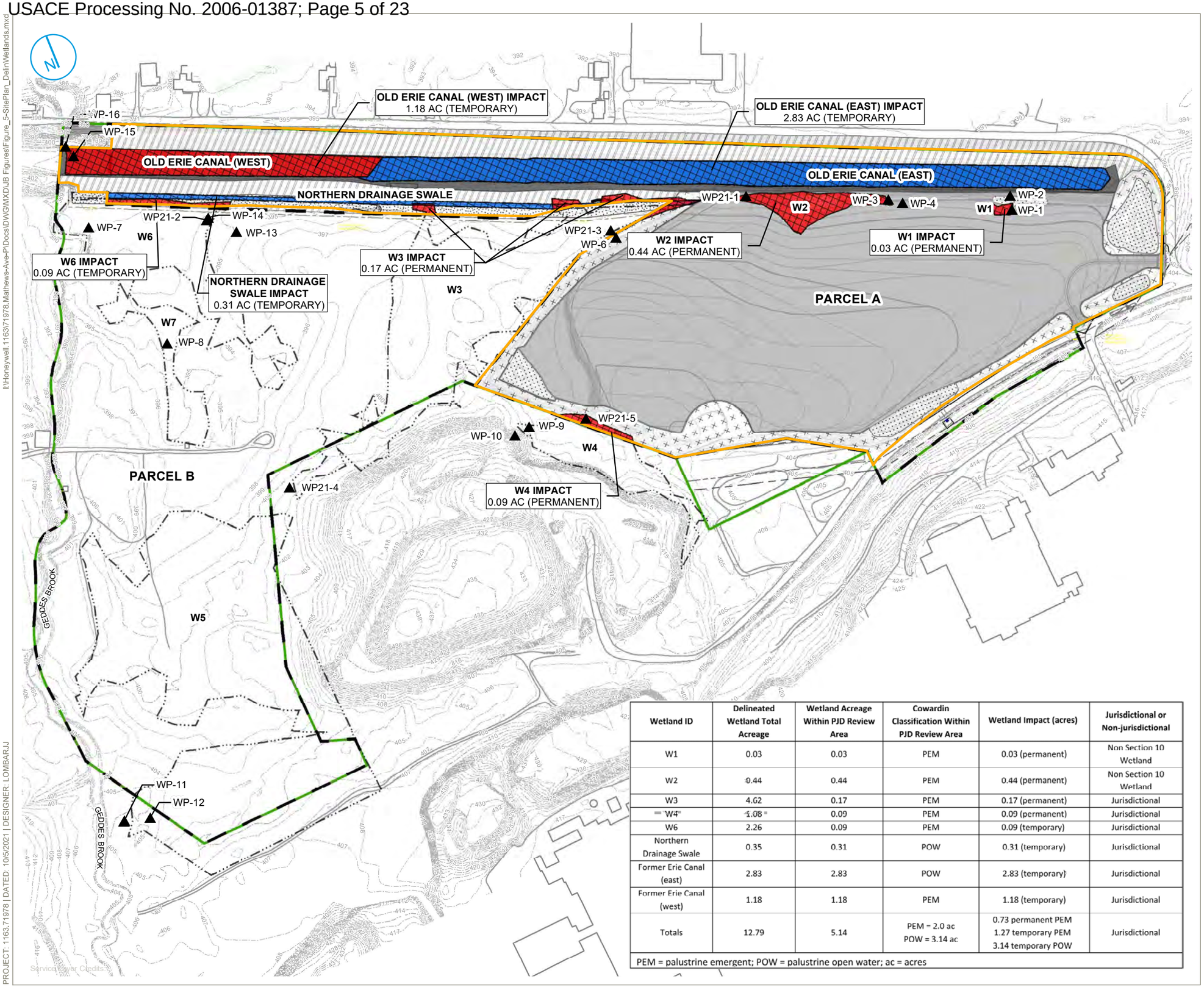
- MATHEWS AVENUE PARCEL BOUNDARY
- MATHEWS AVENUE PROPERTY LINE
- PRELIMINARY JURISDICTIONAL DETERMINATION (PJD)
- PEM WETLAND
- POW WETLAND
- WETLAND PLOTS

0 125 250 Feet

EXISTING CONDITIONS AND DELINEATED WETLANDS

FIGURE 4

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY



Wetland ID	Delineated Wetland Total Acreage	Wetland Acreage Within PJD Review Area	Cowardin Classification Within PJD Review Area	Wetland Impact (acres)	Jurisdictional or Non-jurisdictional
W1	0.03	0.03	PEM	0.03 (permanent)	Non Section 10 Wetland
W2	0.44	0.44	PEM	0.44 (permanent)	Non Section 10 Wetland
W3	4.62	0.17	PEM	0.17 (permanent)	Jurisdictional
W4	1.08	0.09	PEM	0.09 (permanent)	Jurisdictional
W6	2.26	0.09	PEM	0.09 (temporary)	Jurisdictional
Northern Drainage Swale	0.35	0.31	POW	0.31 (temporary)	Jurisdictional
Former Erie Canal (east)	2.83	2.83	POW	2.83 (temporary)	Jurisdictional
Former Erie Canal (west)	1.18	1.18	PEM	1.18 (temporary)	Jurisdictional
Totals	12.79	5.14	PEM = 2.0 ac POW = 3.14 ac	0.73 permanent PEM 1.27 temporary PEM 3.14 temporary POW	Jurisdictional

PEM = palustrine emergent; POW = palustrine open water; ac = acres

- WETLAND PLOTS
- MATHEWS AVENUE PARCEL BOUNDARY
- MATHEWS AVENUE PROPERTY LINE
- PRELIMINARY JURISDICTIONAL DETERMINATION (PJD)
- PEM WETLAND
- POW WETLAND
- IMPACTED WETLAND
- Wetland mitigation area (see mitigation detail)
- CANAL REMEDIATION
- 12" GRASS COVER
- 2' LOW PERMEABILITY VEGETATED COVER
- REMEDIATED NORTHERN SWALE
- 1' VEGETATED SOIL COVER

0 250 500 Feet

SITE PLAN AND DELINEATED WETLANDS

FIGURE 5

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

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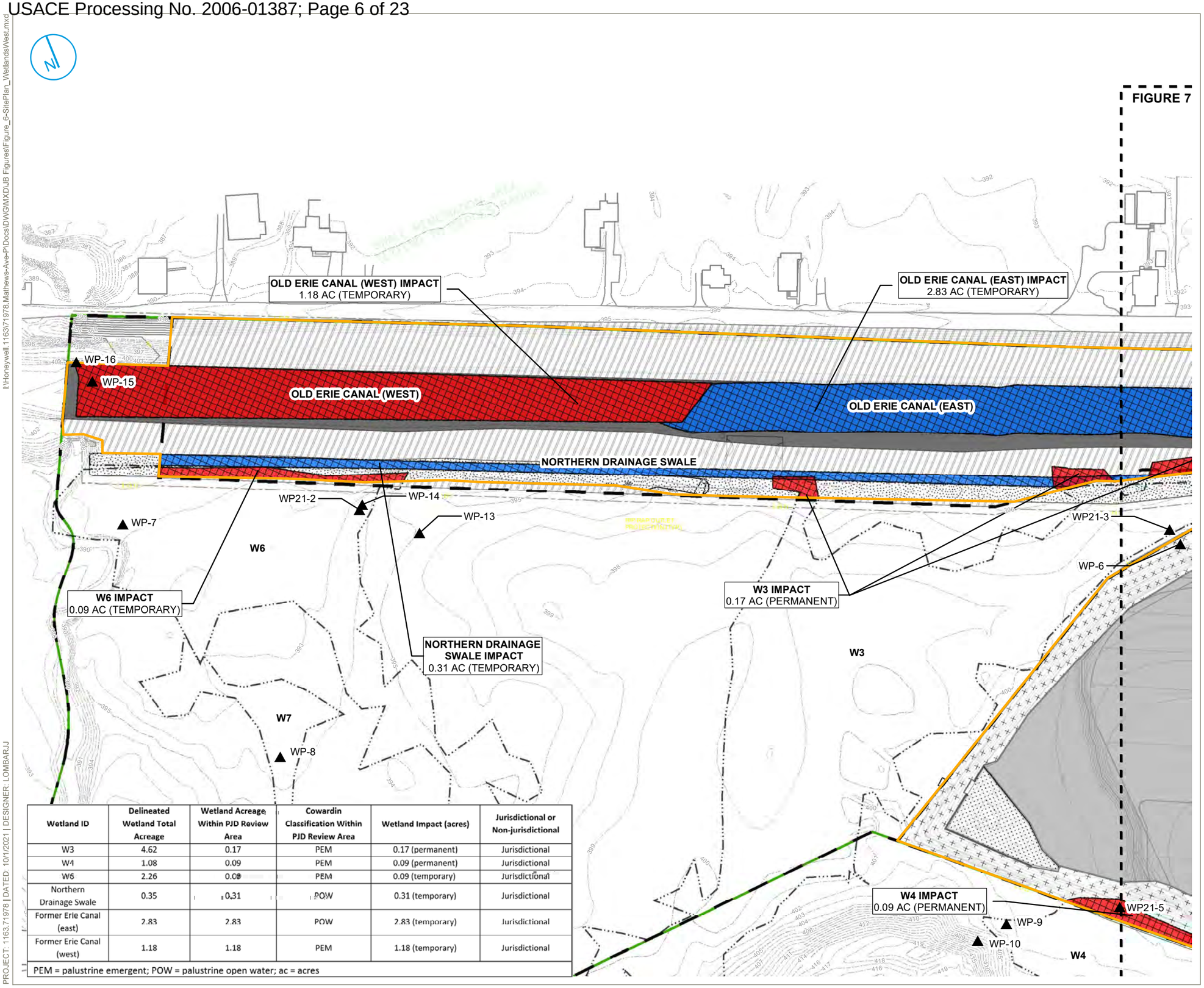
PROJECT: 1163.71978 | DATED: 10/5/2021 | DESIGNER: LOMBARJJ



Wetland ID	Delineated Wetland Total Acreage	Wetland Acreage Within PJD Review Area	Cowardin Classification Within PJD Review Area	Wetland Impact (acres)	Jurisdictional or Non-jurisdictional
W3	4.62	0.17	PEM	0.17 (permanent)	Jurisdictional
W4	1.08	0.09	PEM	0.09 (permanent)	Jurisdictional
W6	2.26	0.09	PEM	0.09 (temporary)	Jurisdictional
Northern Drainage Swale	0.35	0.31	POW	0.31 (temporary)	Jurisdictional
Former Erie Canal (east)	2.83	2.83	POW	2.83 (temporary)	Jurisdictional
Former Erie Canal (west)	1.18	1.18	PEM	1.18 (temporary)	Jurisdictional

PEM = palustrine emergent; POW = palustrine open water; ac = acres

- WETLAND PLOTS
- MATHEWS AVENUE PARCEL BOUNDARY
- MATHEWS AVENUE PROPERTY LINE
- PRELIMINARY JURISDICTIONAL DETERMINATION (PJD)
- PEM WETLAND
- POW WETLAND
- IMPACTED WETLAND
- STORMWATER MANAGEMENT AREA
- CANAL REMEDIATION
- 12" GRASS COVER
- 2' LOW PERMEABILITY VEGETATED COVER
- REMEDIATED NORTHERN SWALE
- 1' VEGETATED SOIL COVER

0 125 250 Feet

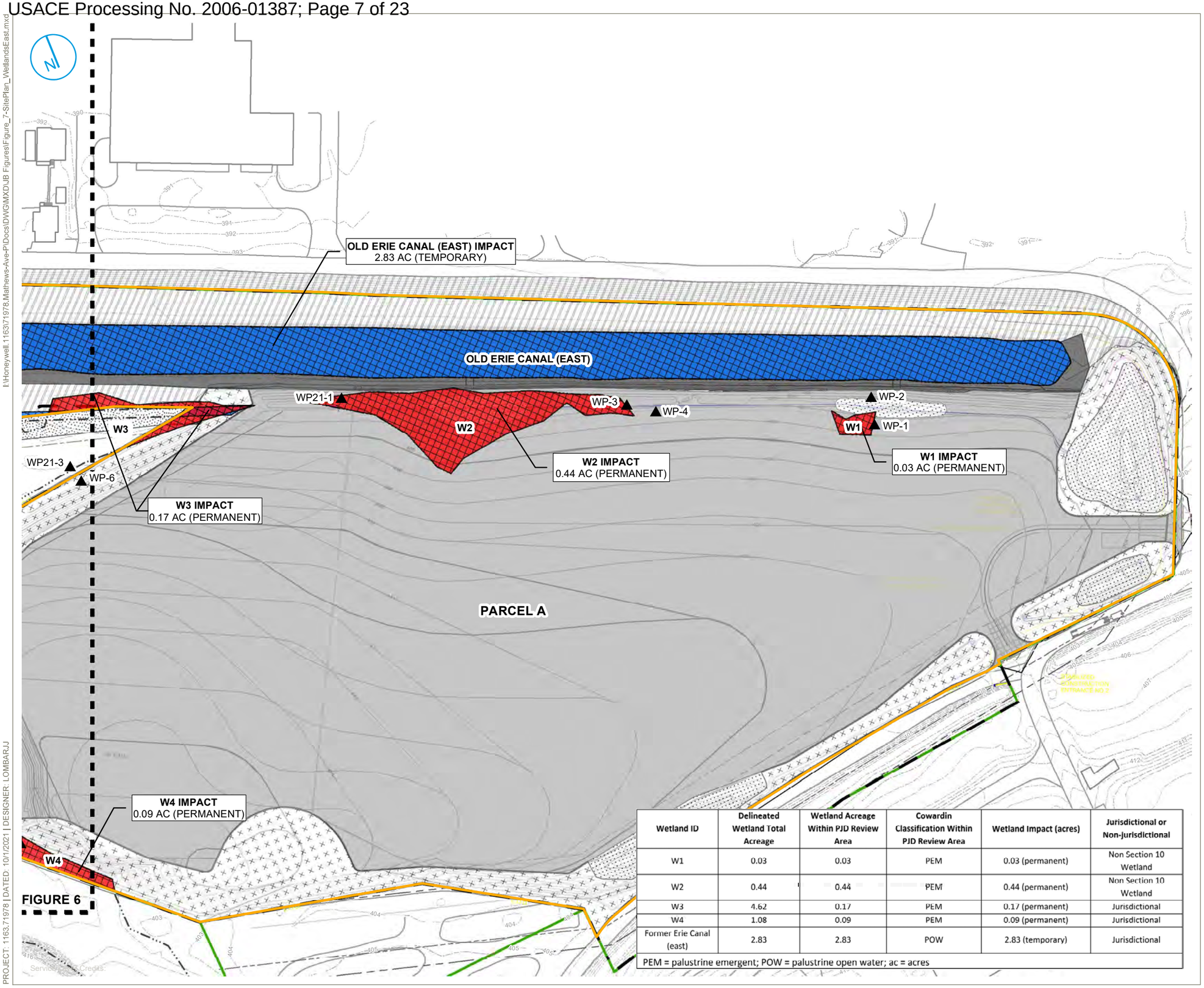
SITE PLAN AND DELINEATED WETLANDS

FIGURE 6

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1163.71978 | DATED: 10/1/2021 | DESIGNER: LOMBARJJ



Wetland ID	Delineated Wetland Total Acreage	Wetland Acreage Within PJD Review Area	Cowardin Classification Within PJD Review Area	Wetland Impact (acres)	Jurisdictional or Non-Jurisdictional
W1	0.03	0.03	PEM	0.03 (permanent)	Non Section 10 Wetland
W2	0.44	0.44	PEM	0.44 (permanent)	Non Section 10 Wetland
W3	4.62	0.17	PEM	0.17 (permanent)	Jurisdictional
W4	1.08	0.09	PEM	0.09 (permanent)	Jurisdictional
Former Erie Canal (east)	2.83	2.83	POW	2.83 (temporary)	Jurisdictional

PEM = palustrine emergent; POW = palustrine open water; ac = acres

- WETLAND PLOTS
- MATHEWS AVENUE PARCEL BOUNDARY
- MATHEWS AVENUE PROPERTY LINE
- PRELIMINARY JURISDICTIONAL DETERMINATION (PJD)
- PEM WETLAND
- POW WETLAND
- IMPACTED WETLAND
- STORMWATER MANAGEMENT AREA
- CANAL REMEDIATION
- 12" GRASS COVER
- 2' LOW PERMEABILITY VEGETATED COVER
- REMEDIATED NORTHERN SWALE
- 1' VEGETATED SOIL COVER

0 125 250 Feet

SITE PLAN AND DELINEATED WETLANDS

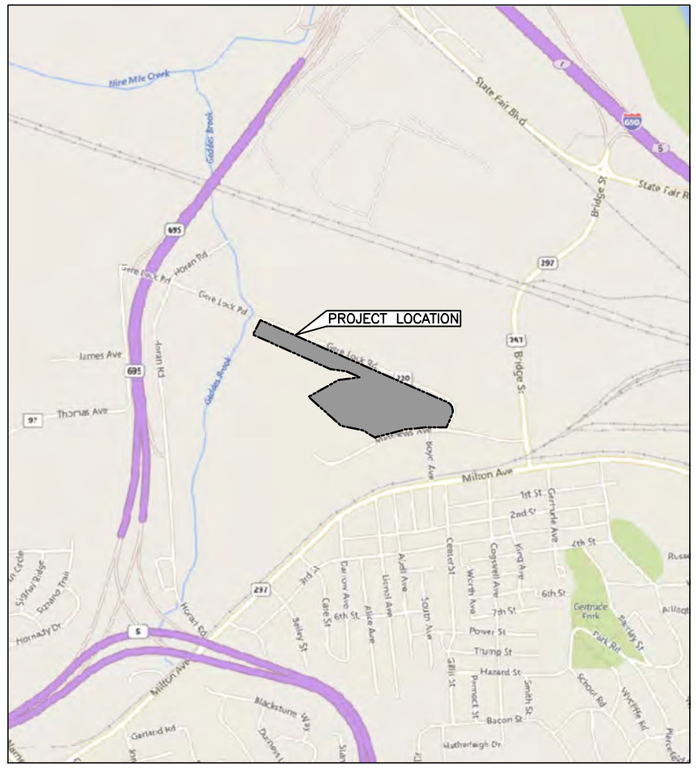
FIGURE 7

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

I:\Honeywell.1163\71978.Mathews-Ave-PI\Docs\DWG\MXD\JB Figures\Figure_7-SitePlan_WetlandsEast.mxd

PROJECT: 1163.71978 | DATED: 10/1/2021 | DESIGNER: LOMBARJJ



SITE LOCATION MAP
NOT TO SCALE

NORTH

DESIGN DRAWINGS

MATHEWS AVENUE LANDFILL - PARCEL A

REMEDIAL ACTION WORK PLAN

301 BELLE ISLE ROAD, LLC

SYRACUSE, NEW YORK

JULY 2021

RAMBOLL

O'BRIEN & GERE ENGINEERS, INC.
A RAMBOLL COMPANY
SYRACUSE, NEW YORK

INDEX TO DRAWINGS

TITLE SHEET

1163.71978
G-001

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SURVEY AND MAPPING NOTES:

1. EXISTING TOPOGRAPHIC FEATURES, BOUNDARY INFORMATION AND EXISTING UTILITY LOCATIONS TAKEN FROM A TOPOGRAPHIC MAP PROVIDED BY HONEYWELL, INC.; ELECTRONIC DRAWING ENTITLED MATHEWS AVE TOPO (LOCUS).DWG.
2. ADDITIONAL TOPOGRAPHIC SURVEY INFORMATION FOR PORTIONS OF THE OLD ERIE CANAL AREA, AND UTILITY INFORMATION ALONG GERELOCK ROAD, MATHEWS AVENUE AND BOYD AVENUE, INCLUDING HIGH VOLTAGE OVERHEAD ELECTRIC IS FROM SURVEY PREPARED BY C.T. MALE & ASSOCIATES, INC.; ENTITLED "UTILITY & CANAL SURVEY, PORTIONS OF BELLE ISLE ROAD, GERELOCK ROAD, MATHEWS AVE." DATED DEC. 11, 2006.
3. PROPERTY LINE, RIGHT-OF-WAY AND UTILITY EASEMENTS OBTAINED FROM PROPERTY SURVEY PREPARED BY HANNIG; ENTITLED "PT OF FARM LOTS 38, 39, 43, 44 & 46 - VILLAGE OF SOLVAY, PT OF FARM LOT 7 & 69 - TOWN OF CAMILLUS, ONONDAGA CO., N.Y.."; ELEC. FILE NO. PROJECTS/J851706/BASE PLAN/DWG/OVERALL MATHEWS-BELLE ISLE 3-17-06; DATED MARCH 15, 2006.
4. THE SURVEY IS IN REFERENCE TO THE FOLLOWING: HORIZONTAL DATUM IS: NAD 83, NYS PLANE, CENTRAL ZONE, US FOOT.
5. ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

REFERENCE DRAWINGS AND REPORTS:

1. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED BY RAMBOLL.
2. ENVIRONMENTAL REPORTS AND INVESTIGATIONS PERTAINING TO THE EXISTING SITE CONDITIONS ARE AVAILABLE FROM RAMBOLL.
3. REMEDIAL ACTION WORK PLAN (RAWP) PREPARED BY RAMBOLL (2019).

SITE NOTES:

1. THE CONTRACTOR MUST NOTIFY DIG SAFELY NEW YORK (CALL811) A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, INCLUDING ANY EXCAVATION, SOIL EXPLORATIONS OR TEST PITS.
2. THE CONTRACTOR SHALL COORDINATE ALL WORK AFFECTING UTILITIES WITH THE RESPECTIVE UTILITY OWNER. ALL DETAILS OF CONSTRUCTION AND/OR RELOCATION OF AFFECTED UTILITIES SHALL BE APPROVED BY THE UTILITY OWNER, THE OWNER AND OTHER APPROVING AGENCIES.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PERTINENT TO THE WORK OF THIS CONTRACT IN THE FIELD.
4. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE SWPPP, AND THE EROSION AND SEDIMENT CONTROL (ESC) PLAN, NOTES AND DETAILS.
5. ALL MATERIAL DEEMED AS "SPOIL" SHALL BE PROPERLY DISPOSED IN ACCORDANCE WITH THE RAWP.
6. NEW YORK STATE D.O.T. SPECIFICATIONS:
   A. EXCEPT AS MODIFIED HEREIN, SECTIONS 200 THROUGH 700 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS ISSUED BY THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION, OFFICE OF ENGINEERING, INCLUDING ALL REVISIONS AND ADDENDA ISSUED BY NYSDOT PRIOR TO THE DATE THE NOTICE TO BIDDERS IS ADVERTISED, HEREINAFTER REFERRED TO AS THE NYSDOT STANDARD SPECIFICATIONS, SHALL GOVERN THE WORK TO BE DONE WHERE REFERRED TO ON THE PLANS AND IN THE SPECIFICATIONS. IF A CONFLICT EXISTS BETWEEN THE NYSDOT STANDARD SPECIFICATIONS AND THESE CONTRACT DOCUMENTS, THE CONTRACT DOCUMENTS SHALL GOVERN.
   B. ANY REFERENCE TO NYSDOT STANDARD SPECIFICATIONS IS LIMITED IN SCOPE TO TECHNICAL ENGINEERING AND CONSTRUCTION WORK; MATERIALS, DETAILS, PROCEDURES, ETC.
   C. ALL REFERENCES TO THE STATE OR THE NYSDOT OR ADMINISTRATIVE OFFICERS OR EMPLOYEES THEREOF ARE NULL AND VOID WITH RESPECT TO LEGAL OR CONTRACTUAL RESPONSIBILITIES.
   D. WHERE THE STATE OF NEW YORK OR THE NYSDOT OR ADMINISTRATIVE OFFICERS OR EMPLOYEES THEREOF ARE NAMED IN THE STANDARD SPECIFICATIONS, SUCH REFERENCES SHALL BE TAKEN TO MEAN EITHER THE ENGINEER OR OWNER AS DEFINED BY THE REASONABLY IMPLIED BY THE CONTRACT.
7. UNLESS OTHERWISE NOTED, LIMITS OF CLEARING SHALL BE 10 FEET BEYOND THE LIMITS OF GRADING SHOWN ON THE CONTRACT DRAWINGS. LIMITS OF TOPSOIL AND SEEDING SHALL BE 10 FEET BEYOND LIMITS OF GRADING AND INCLUDE ALL DISTURBED AREAS.

ELECTRICAL UTILITIES:

1. CONTRACTOR SHALL COORDINATE WITH NATIONAL GRID REGARDING ALL WORK IN THE AREAS OF EXISTING OR FORMER OVERHEAD ELECTRIC TRANSMISSION LINES AND EASEMENTS.
2. CONTRACTOR SHALL COORDINATE WITH VILLAGE OF SOLVAY ELECTRIC (SOLVAY ELECTRIC) REGARDING ALL WORK IN THE AREAS OF THE EXISTING ELECTRICAL SERVICES WITHIN THE PROJECT LIMITS, AND FOR TEMPORARY ELECTRICAL SERVICE CONNECTIONS DURING CONSTRUCTION.

STORM SEWER:

1. STORM SEWER PIPING AND FITTINGS SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPING (SICPP) W/ WATERTIGHT BELL AND SPIGOT JOINTS (HANCOR BLUE-SEAL OR EQUAL).
2. STORM CATCH BASIN AND MANHOLE CONNECTIONS SHALL HAVE RESILIENT AND WATERTIGHT CONNECTIONS (KOR-N-SEAL W/ NPC CORRUGATION ADAPTERS, OR APPROVED EQUAL) TO STORM PIPING.

EROSION AND SEDIMENT CONTROL NOTES:

1. EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSTALLED AND MAINTAINED IN EFFECTIVE CONDITION UNTIL THE SITE HAS BEEN STABILIZED IN ACCORDANCE WITH NYSDEC SPDES GP-0-10-001, THE NEW YORK STATE STANDARDS & SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL DATED JULY 2016 OR CURRENT VERSION, AND THE SWPPP. A COPY OF THE SWPPP SHALL BE KEPT ON-SITE AT ALL TIMES FOR THE DURATION OF THE PROJECT AND FOR A MINIMUM OF THREE YEARS FROM THE DATE THE SITE IS FINALLY ACCEPTED BY THE OWNER AS BEING STABILIZED.
2. WASHDOWN WATER FROM CONTRACTOR'S STAGING AREA SHALL BE DIRECTED TO ADJACENT DRAINAGE SWALES/SEDIMENT BASINS IF TESTING INDICATES WATER MEETS NYS CASS C SURFACE WATER CRITERIA.
3. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PRECLUDE CONTAMINATION OF ANY WATERWAYS BY SUSPENDED SOLIDS, SEDIMENTS, FUELS, SOLVENTS, LUBRICANTS, EPOXY COATINGS, PAINTS, CONCRETE, LEACHATE, OR ANY OTHER ENVIRONMENTALLY DELETERIOUS MATERIALS ASSOCIATED WITH THE PROJECT WORK.
4. TEMPORARY SEDIMENT TRAPS SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF EARTHWORK. TRAPS SHALL BE SIZED TO ACCOMMODATE 3,600 CUBIC FEET OF STORAGE PER ACRE OF CONTRIBUTING DRAINAGE AREA, OR, IF USED TO ACCEPT DEWATERING DISCHARGE, BASED ON 16 CUBIC FEET PER GALLONS PER MINUTE. THESE TRAPS SHALL REMAIN IN PLACE UNTIL EARTHWORK IS COMPLETE AND THE SITE HAS BEEN STABILIZED. AFTER CONSTRUCTION, ACCUMULATED SEDIMENT SHALL BE REMOVED FROM TRAPS AND PROPOSED GRADES RE-ESTABLISHED FOR TRAPS TO FUNCTION AS A PERMANENT STORM FACILITY, WHERE APPLICABLE.
5. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO COMPLETE CONSTRUCTION OPERATIONS AS EXPEDITIOUSLY AS PRACTICAL TO MINIMIZE THE DURATION OF DISTURBANCE.
6. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL THE DUST CREATED BY ANY AND ALL OF HIS OPERATIONS TO SUCH A DEGREE THAT IT WILL NOT ENDANGER THE SAFETY AND WELFARE OF THE GENERAL PUBLIC.
7. CALCIUM CHLORIDE AND PETROLEUM PRODUCTS SHALL NOT BE USED FOR DUST CONTROL.

LEGEND

- 410 — EXISTING CONTOUR
- 410 — PROPOSED CONTOUR
- EXISTING EASEMENT
- G — EXISTING GAS LINE
- SMH — EXISTING SANITARY MANHOLE
- EXISTING ROADWAY
- S — EXISTING SANITARY SEWER LINE
- × 405.4 — EXISTING SPOT ELEVATION
- ST — EXISTING STORM LINE
- PROPOSED STORM LINE
- T — EXISTING TELEPHONE LINE
- EXISTING WATER EDGE
- W — EXISTING WATERLINE
- OHE — EXISTING OVERHEAD ELECTRIC
- OHE — PROPOSED OVERHEAD ELECTRIC
- EXISTING WETLANDS
- EXISTING UTILITY POLE
- PROPERTY LINE
- SF — SILT FENCE
- WV — EXISTING WATER VALVE
- STORM LINE & END SECTION
- PROPOSED SWALE ℄
- +409.9 — PROPOSED SPOT ELEVATION
- PROPOSED STONE CHECK DAM
- PROPOSED STORM WATER MANAGEMENT AREA
- TEMPORARY SEDIMENT TRAP
- PROPOSED BERM
- EXISTING WETLAND
- PROPOSED ROCK DAM
- VEGETATED SOIL COVER (OR EQUIVALENT)
- LOW PERMEABILITY VEGETATED SOIL COVER (OR EQUIVALENT)
- 12" GRASS COVER
- CANAL REMEDIATION

ABBREVIATIONS

@	AT
AC	ACRE
APPROX.	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BM	BENCH MARK
CB	CATCH BASIN
℄ OR CL	CENTER LINE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CSP	CORRUGATED STEEL PIPE
CULV	CULVERT
CU. YD.	CUBIC YARD
Δ	DELTA ANGLE
DEPT.	DEPARTMENT
DWG	DRAWING
E	EAST OR ELECTRIC
EL/ELEV	ELEVATION
ELEC	ELECTRIC OR ELECTRICAL
ESC	EROSION AND SEDIMENT CONTROL
EX/EXIST	EXISTING
FT	FOOT OR FEET (')
G	GAS
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HP	HIGH POINT
HYD	HYDRANT
INV	INVERT
LBS	POUNDS
LF	LINEAR FEET (')
LP	LIGHT POLE OR LOW POINT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MISC.	MISCELLANEOUS
MON.	MONUMENT
MW	MONITORING WELL
N	NORTH
NE	NORTH EAST
N/F	NOW OR FORMERLY
NO. OR #	NUMBER
N.T.L.	NOT TO SCALE
NW	NORTH WEST
NYS	NEW YORK STATE
NYSDEC	NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NYSDOH	NEW YORK STATE DEPARTMENT OF HEALTH
NYSDOT	NEW YORK STATE DEPARTMENT OF TRANSPORTATION
NYT	NEW YORK TELEPHONE COMPANY
OC	ON CENTER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
ℙ	PROPERTY LINE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RAWP	REMEDIAL ACTION WORK PLAN
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
R.O.W.	RIGHT OF WAY
S	SOUTH
SAN	SANITARY SEWER
SE	SOUTH EAST
SF	SILT FENCE
SICPP	SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE
SMH	STORM MANHOLE
SPEC	SPECIFICATION
ST	STREET OR STORM SEWER
SWMA	STORMWATER MANAGEMENT AREA
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
TOB	TOP OF BANK
TYP.	TYPICAL
USGS	UNITED STATES GEOLOGIC SURVEY
VERT.	VERTICAL
W	WATER OR WEST
W/	WITH
W/O	WITHOUT
WSE	WATER SURFACE ELEVATION
WV	WATER VALVE
YD.	YARD

IN CHARGE OF	J. REYMOND			
DESIGNED BY	S. JOHNSON			
CHECKED BY	T. STANIEC			
DRAWN BY	S. JOHNSON/D. KENT	0	07/21/2021	ISSUED FOR CONSTRUCTION
		NO.	DATE	REVISION

INT.

O'BRIEN & GERE ENGINEERS, INC
A RAMBOLL COMPANY
RAMBOLL

301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

GENERAL NOTES, LEGEND & ABBREVIATIONS

FILE NO. 1163.71978
DATE JUNE 2020

C-001

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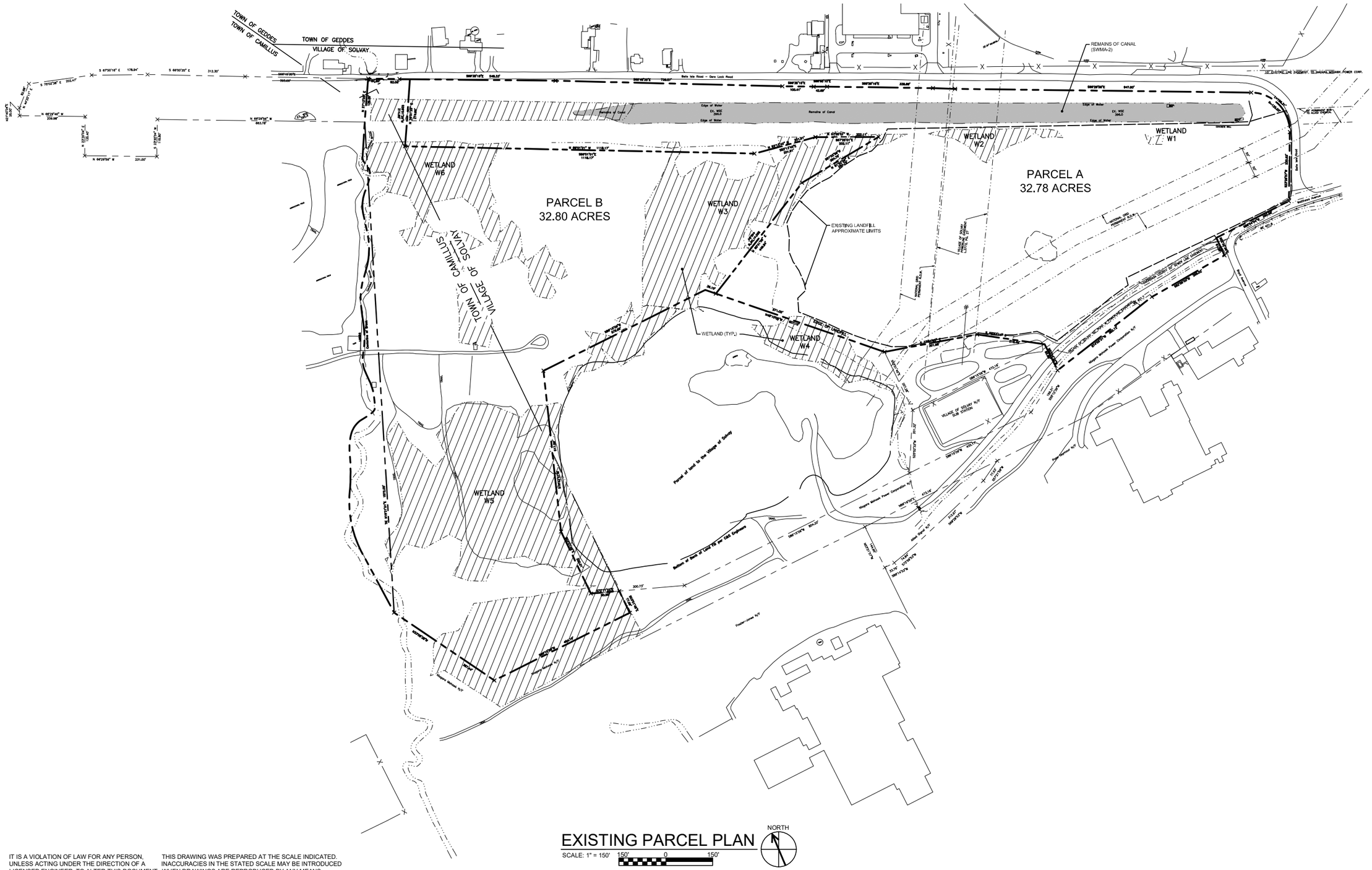

EXISTING PARCEL PLAN

SCALE: 1" = 150' 150' 0 150'

NORTH

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR TO DETERMINE THE ACTUAL SCALE. DRAWING IS NOT SCALABLE IF NO SCALE BAR IS PRESENT.

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		NO.	DATE	REVISION

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301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

EXISTING PARCEL PLAN

FILE NO. 1163.71978

DATE JUNE 2020

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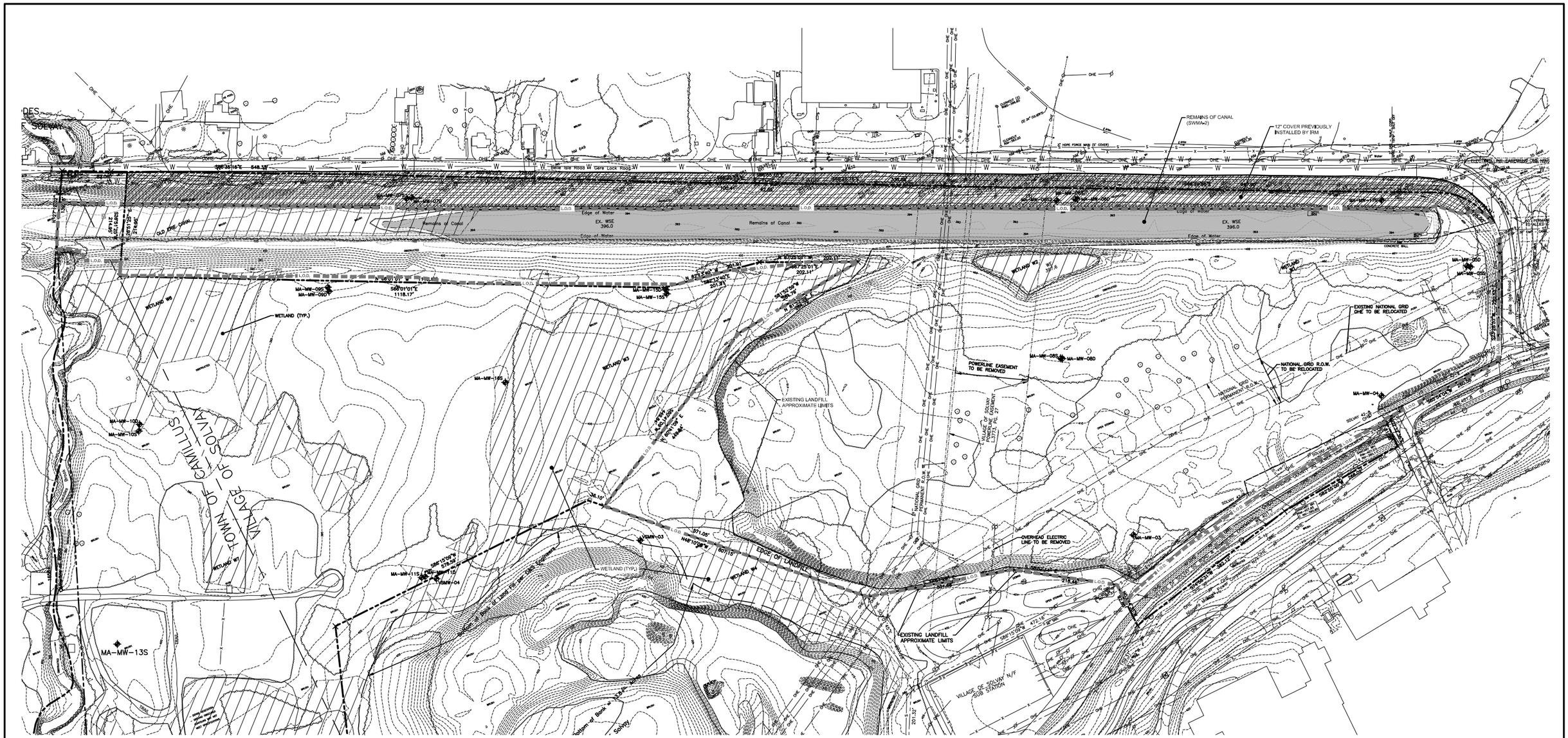

EXISTING SITE PLAN

SCALE: 1" = 100' 100' 0 100'

NORTH

LEGEND:

MA-MW-00S — MONITORING WELL

L.O.D. — LIMIT OF DISTURBANCE

SHEET NOTES:

1. CONTRACTOR SHALL CLEAR AND GRUB THE PROPOSED DISTURBANCE LIMITS AS NEEDED. VEGETATIVE MATERIALS, INCLUDING ROOTBALLS, MAY BE HAULED OFF SITE UNDER THE DIRECTION OF THE ENGINEER. ALL OTHER MATERIAL SHALL REMAIN ON SITE.

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CHECKED BY T. STANIEC				
DRAWN BY S. JOHNSON/D. KENT	0	07/21/2021	ISSUED FOR CONSTRUCTION	
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MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

EXISTING SITE PLAN

FILE NO. 1163.71978

DATE JUNE 2020

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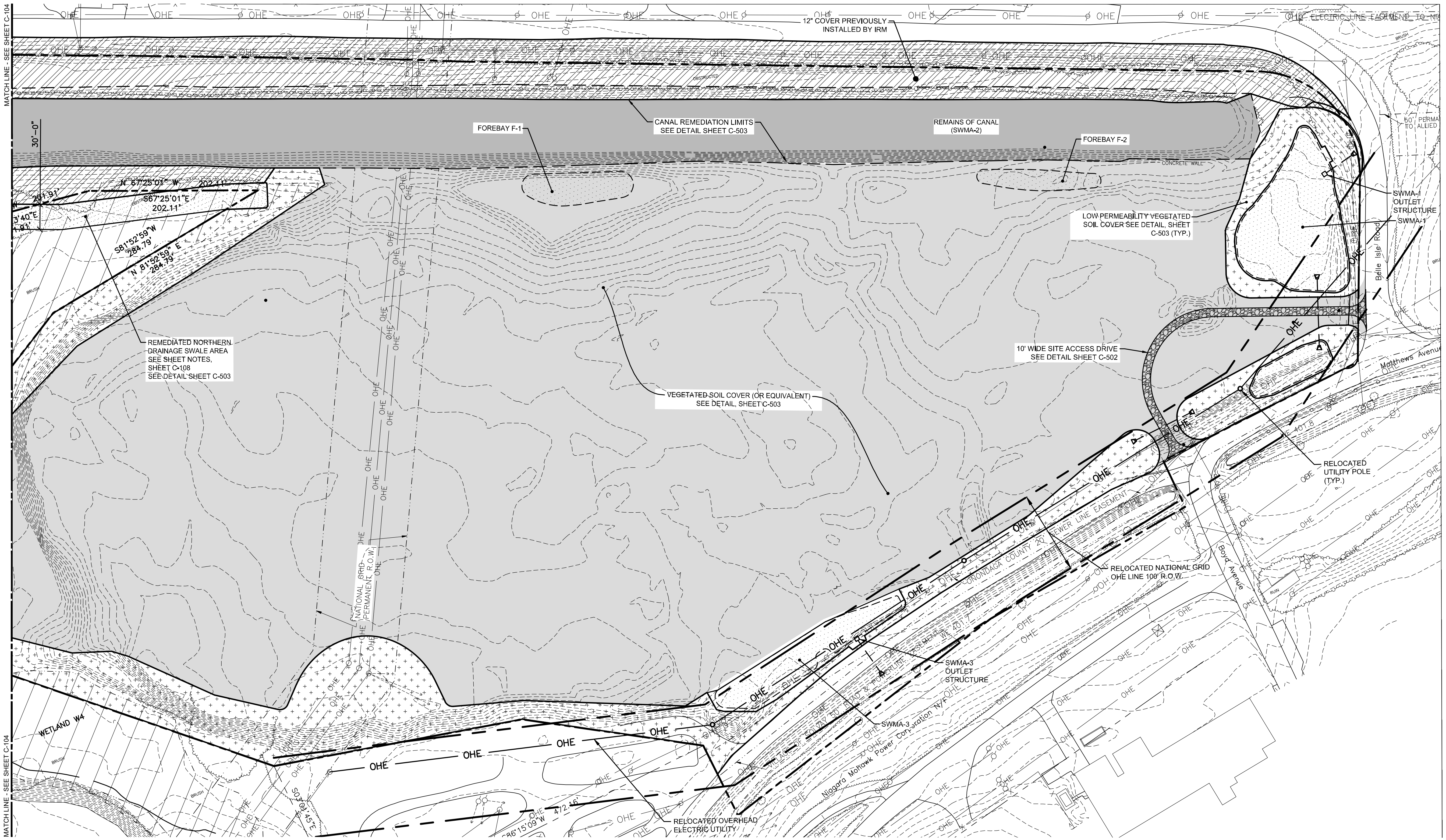

SITE PLAN - EAST

SCALE: 1" = 60'

NORTH

LEGEND

- VEGETATED SOIL COVER (OR EQUIVALENT)
- LOW PERMEABILITY VEGETATED SOIL COVER
- 12" GRASS COVER
- CANAL REMEDIATION

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NO.	DATE	REVISION	INT.
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A RAMBOLL COMPANY

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301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

SITE PLAN - EAST

FILE NO. 1163.71978

DATE JUNE 2020

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SITE PLAN - WEST

SCALE: 1" = 60' 60' 0 60'

NORTH

LEGEND

- VEGETATED SOIL COVER (OR EQUIVALENT)
- LOW PERMEABILITY VEGETATED SOIL COVER
- 12" GRASS COVER
- CANAL REMEDIATION

IN CHARGE OF	J. REYMOND			
DESIGNED BY	S. JOHNSON			
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DRAWN BY	S. JOHNSON/D. KENT	0	07/21/2021	ISSUED FOR CONSTRUCTION
		NO.	DATE	REVISION INT.

O'BRIEN & GERE ENGINEERS, INC
A RAMBOLL COMPANY

301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

SITE PLAN - WEST

FILE NO. 1163.71978

DATE JUNE 2020

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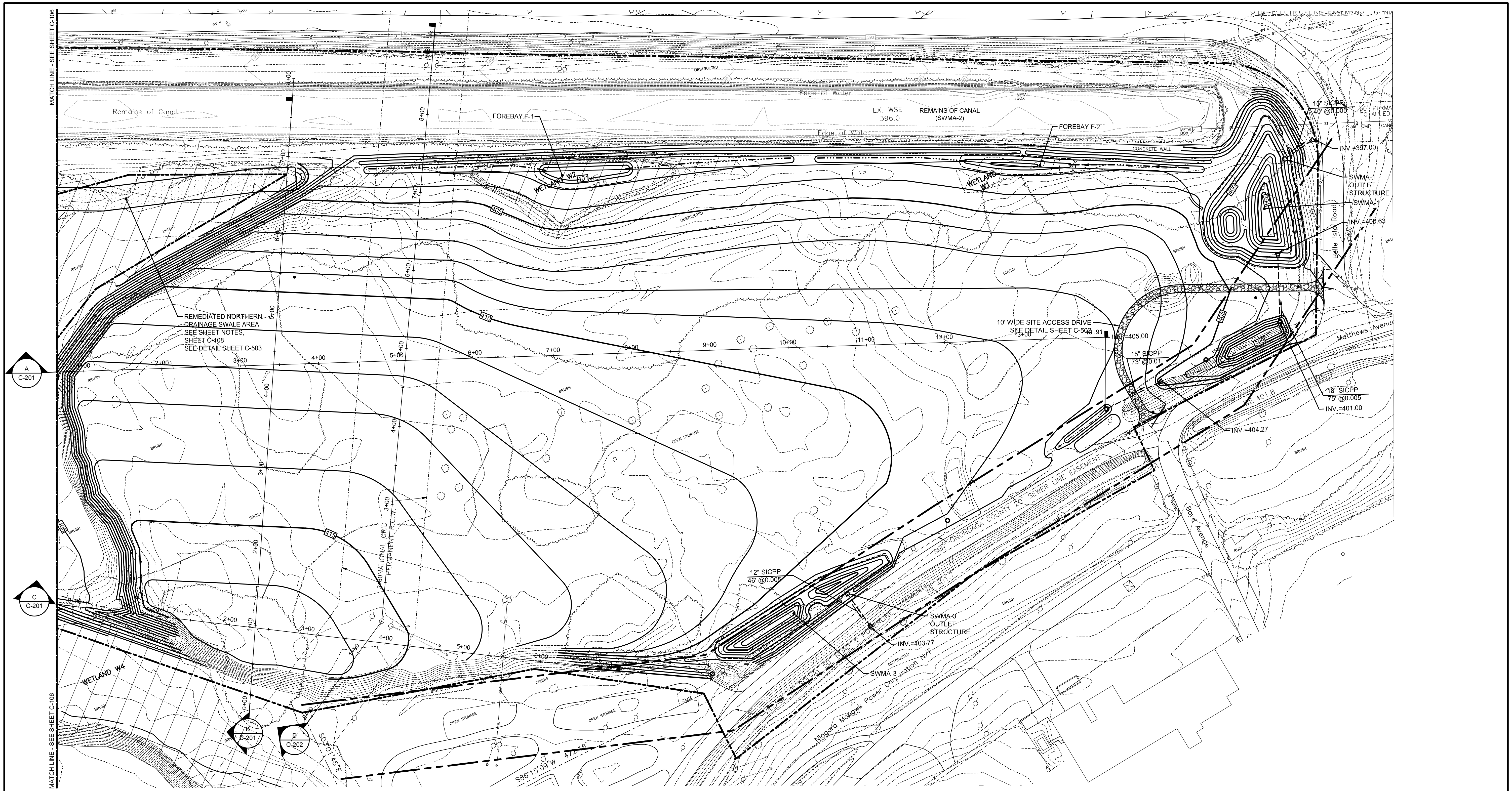

GRADING PLAN - EAST

SCALE: 1" = 60' 60' 0 60'

NORTH

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NO.	DATE	REVISION	INT.
0	07/21/2021	ISSUED FOR CONSTRUCTION	

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A RAMBOLL COMPANY

RAMBOLL

301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

GRADING PLAN - EAST

FILE NO. 1163.71978

DATE JUNE 2020

C-105

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GRADING PLAN - WEST

SCALE: 1" = 60' 60' 0 60'

NORTH

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	NO.	DATE	REVISION	INT.

O'BRIEN & GERE ENGINEERS, INC
A RAMBOLL COMPANY

RAMBOLL

301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

GRADING PLAN - WEST

FILE NO. 1163.71978

DATE JUNE 2020

C-106

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COVER PLAN

SCALE: 1" = 100'   100'   0   100'

NORTH

LEGEND

- VEGETATED SOIL COVER (OR EQUIVALENT)
- LOW PERMEABILITY VEGETATED SOIL COVER
- 12" GRASS COVER
- CANAL REMEDIATION

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IN CHARGE OF	J. REYMOND
DESIGNED BY	S. JOHNSON
CHECKED BY	T. STANIEC
DRAWN BY	S. JOHNSON/D. KENT

NO.	DATE	REVISION	INT.
0	07/21/2021	ISSUED FOR CONSTRUCTION	

O'BRIEN & GERE ENGINEERS, INC
A RAMBOLL COMPANY
RAMBOLL

301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

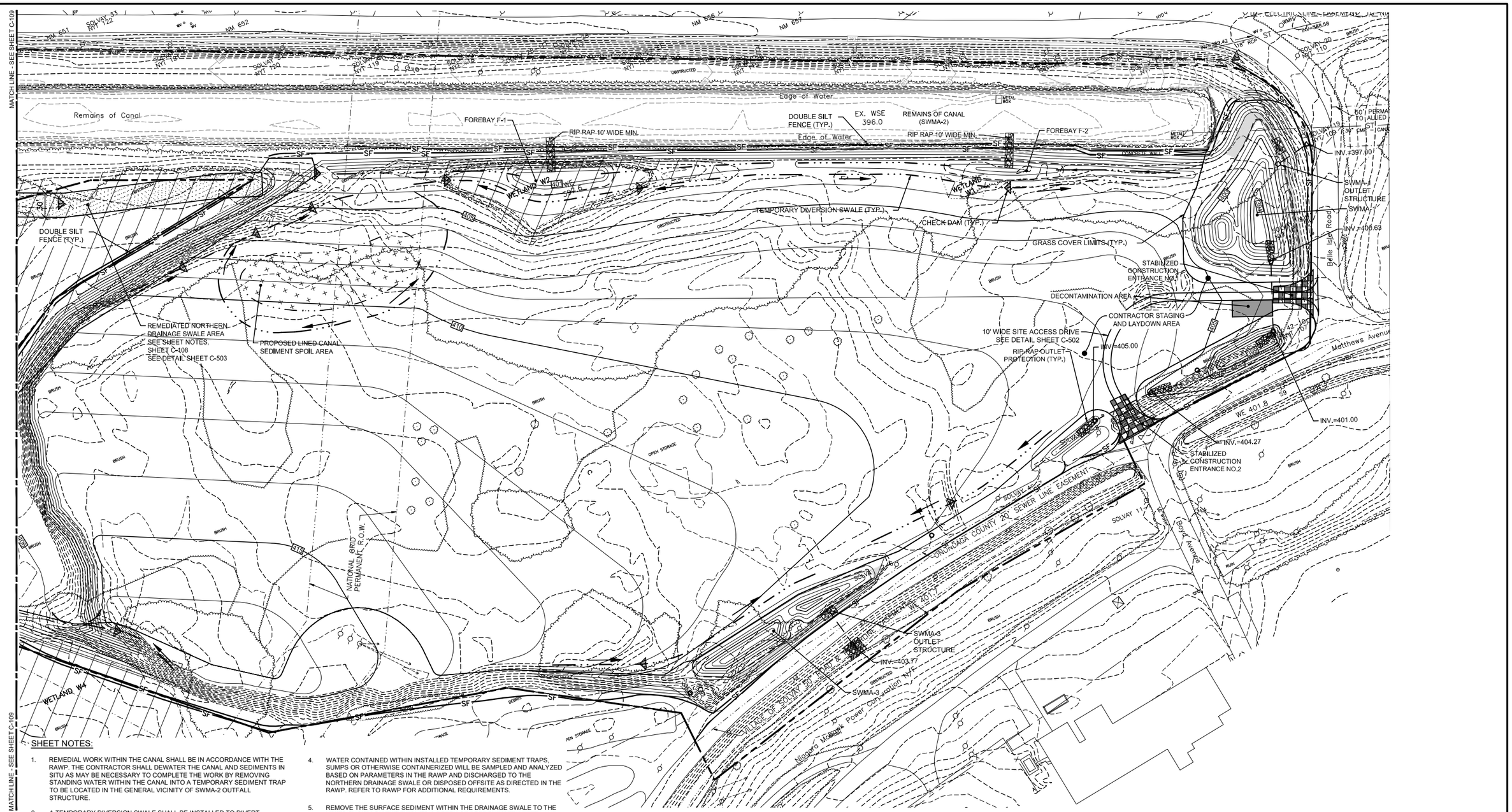
COVER PLAN

FILE NO. 1163.71978

DATE JUNE 2020

C-107

I:\HONEYWELL.1163\71978.MATHEWS-AVE-P\DOCS\DWG\SHEETS\PARCEL A RAWP\71978.C107.DWG



SHEET NOTES:

1. REMEDIAL WORK WITHIN THE CANAL SHALL BE IN ACCORDANCE WITH THE RAWP. THE CONTRACTOR SHALL DEWATER THE CANAL AND SEDIMENTS IN SITU AS MAY BE NECESSARY TO COMPLETE THE WORK BY REMOVING STANDING WATER WITHIN THE CANAL INTO A TEMPORARY SEDIMENT TRAP TO BE LOCATED IN THE GENERAL VICINITY OF SWMA-2 OUTFALL STRUCTURE.
2. A TEMPORARY DIVERSION SWALE SHALL BE INSTALLED TO DIVERT CONTRIBUTING RUNOFF AROUND AND AWAY FROM THIS SEDIMENT TRAP, AND PROVIDE A CONVEYANCE PATH TO GEDDES BROOK. STONE CHECK DAMS SHALL BE PLACED WITHIN THE DRAINAGE SWALE THROUGHOUT THE DEWATERING AND CONSTRUCTION PHASES, TO RESTRICT FLOW, REDUCE EROSION, AND MINIMIZE SOIL MIGRATION FROM THE SITE.
3. WATER COLLECTED FROM THE SPOILS AREA, AND OTHER WATER (E.G., INCIDENT PRECIPITATION) LIBERATED DURING EXCAVATION WILL BE PLACED IN AN ON-SITE FRAC TANK, SAMPLED AND ANALYZED BASED ON PARAMETERS DEFINED IN THE RAWP. REFER TO THE RAWP FOR ADDITIONAL REMEDIAL REQUIREMENTS.
4. WATER CONTAINED WITHIN INSTALLED TEMPORARY SEDIMENT TRAPS, SUMPS OR OTHERWISE CONTAINERIZED WILL BE SAMPLED AND ANALYZED BASED ON PARAMETERS IN THE RAWP AND DISCHARGED TO THE NORTHERN DRAINAGE SWALE OR DISPOSED OFFSITE AS DIRECTED IN THE RAWP. REFER TO RAWP FOR ADDITIONAL REQUIREMENTS.
5. REMOVE THE SURFACE SEDIMENT WITHIN THE DRAINAGE SWALE TO THE LIMITS SHOWN ON THE PLAN, TO A DEPTH OF APPROXIMATELY 1 FT. RESTORE BY PLACING AND COMPACTING A 1-FT COVER COMPRISING 8 INCHES OF LOW PERMEABILITY SOIL AND 4 INCHES OF TOPSOIL AND SEED. MAINTAIN UNTIL GRASS IS ESTABLISHED AND AREA IS STABILIZED.
6. CANAL ARMOR STONES WILL BE CLEANED OF SOILS AND DEBRIS BY "DRY CLEANING" METHODS
7. LINED SPOILS AREA SHOULD BE COVERED WITH LINER MATERIAL PRIOR TO PLACEMENT OF 1-FT COVER.

EROSION & SEDIMENT CONTROL PLAN - EAST

SCALE: 1" = 60' 60' 0 60'

NORTH

IN CHARGE OF	J. REYMOND		
DESIGNED BY	S. JOHNSON		
CHECKED BY	T. STANIEC		
DRAWN BY	S. JOHNSON/D. KENT		

NO.	DATE	REVISION	INT.
0	07/21/2021	ISSUED FOR CONSTRUCTION	

O'BRIEN & GERE ENGINEERS, INC
A RAMBOLL COMPANY

RAMBOLL

301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

EROSION & SEDIMENT CONTROL PLAN - EAST

FILE NO. 1163.71978

DATE JUNE 2020

C-108

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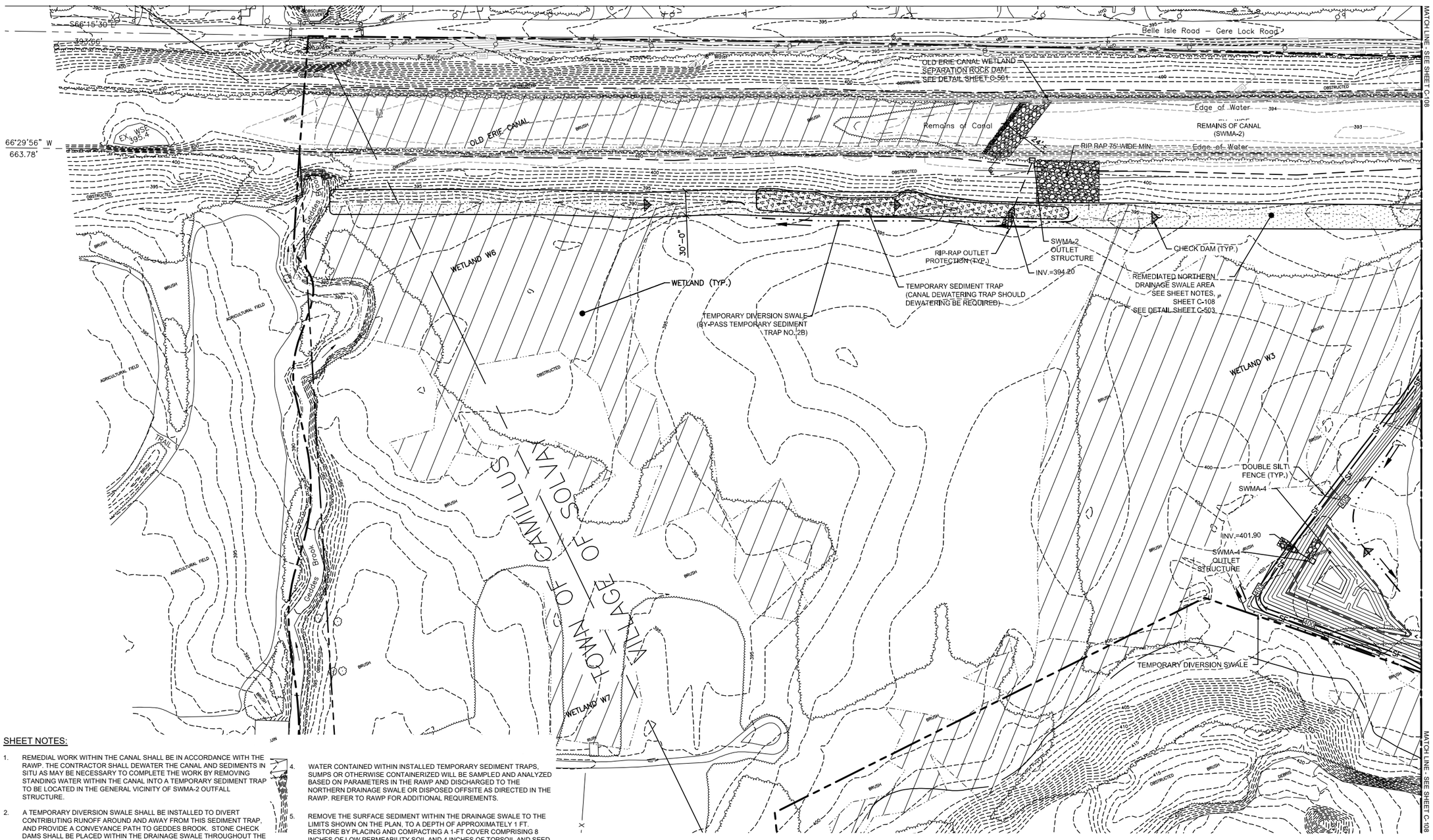

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6. CANAL ARMOR STONES WILL BE CLEANED OF SOILS AND DEBRIS BY "DRY CLEANING" METHODS

EROSION & SEDIMENT CONTROL PLAN - WEST

SCALE: 1" = 60' 60' 0 60'

NORTH

IN CHARGE OF J. REYMOND				
DESIGNED BY S. JOHNSON				
CHECKED BY T. STANIEC				
DRAWN BY S. JOHNSON/D. KENT	0	07/21/2021	ISSUED FOR CONSTRUCTION	
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O'BRIEN & GERE ENGINEERS, INC
A RAMBOLL COMPANY
RAMBOLL

301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

EROSION & SEDIMENT CONTROL PLAN - WEST

FILE NO. 1163.71978

DATE JUNE 2020

C-109

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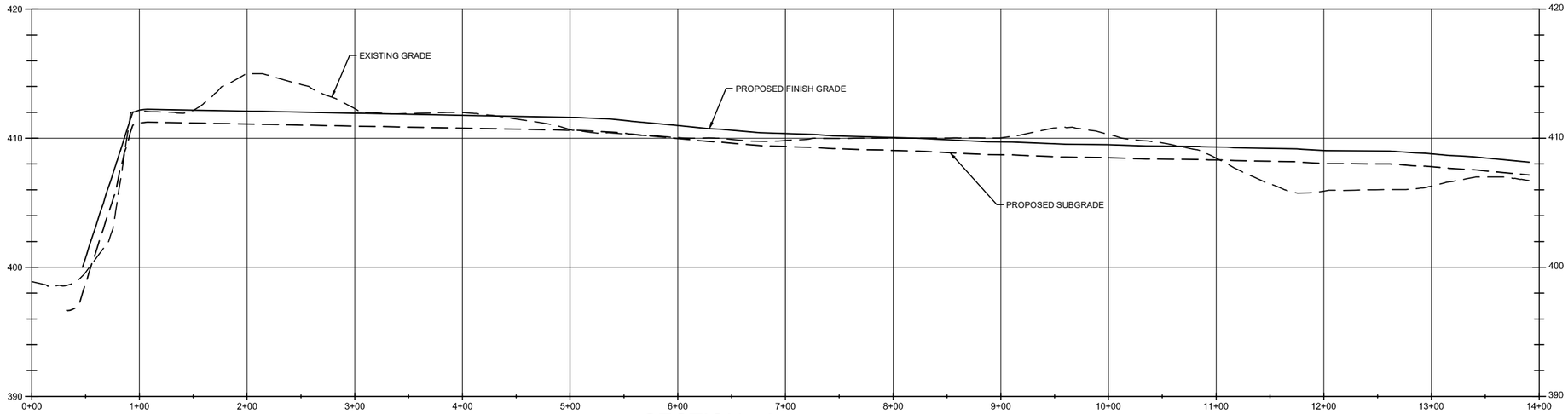
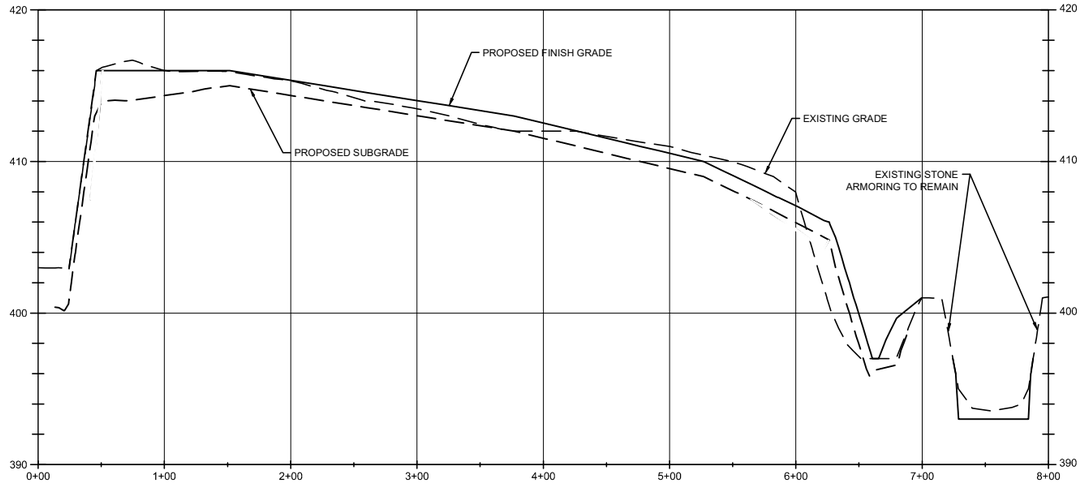


SECTION - A

SCALE: HORIZ. 1"=60' VERT. 1"=5'

60' 0 60'

5' 0 5'

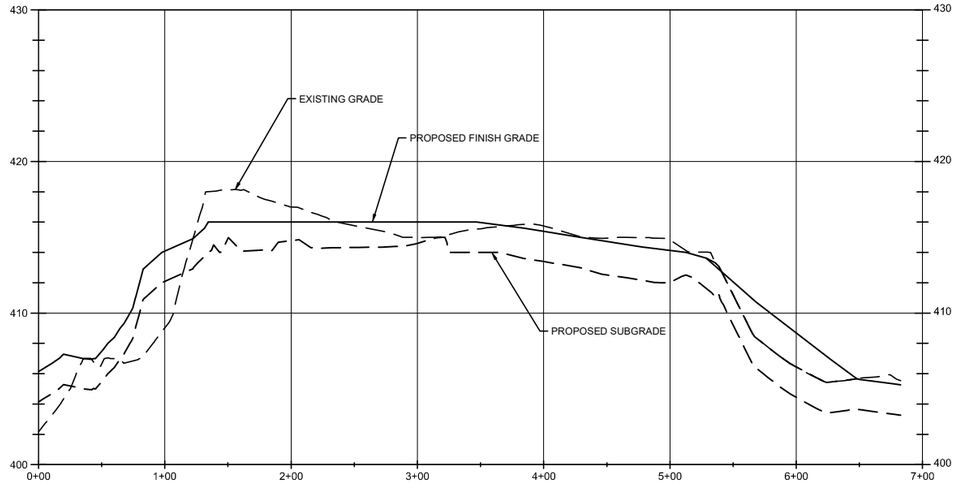


SECTION - B

SCALE: HORIZ. 1"=60' VERT. 1"=5'

60' 0 60'

5' 0 5'



SECTION - C

SCALE: HORIZ. 1"=60' VERT. 1"=5'

60' 0 60'

5' 0 5'

I:\HONEYWELL.1163\71978.MATHEWS-AVE-P\DOCS\DWG\SHEETS\PARCEL A RAWP\71978.C201_GRADING_1.DWG

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IN CHARGE OF J. REYMOND				
DESIGNED BY S. JOHNSON				
CHECKED BY T. STANIEC				
DRAWN BY S. JOHNSON/D. KENT	0	07/21/2021	ISSUED FOR CONSTRUCTION	
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O'BRIEN & GERE ENGINEERS, INC
A RAMBOLL COMPANY

RAMBOLL

301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

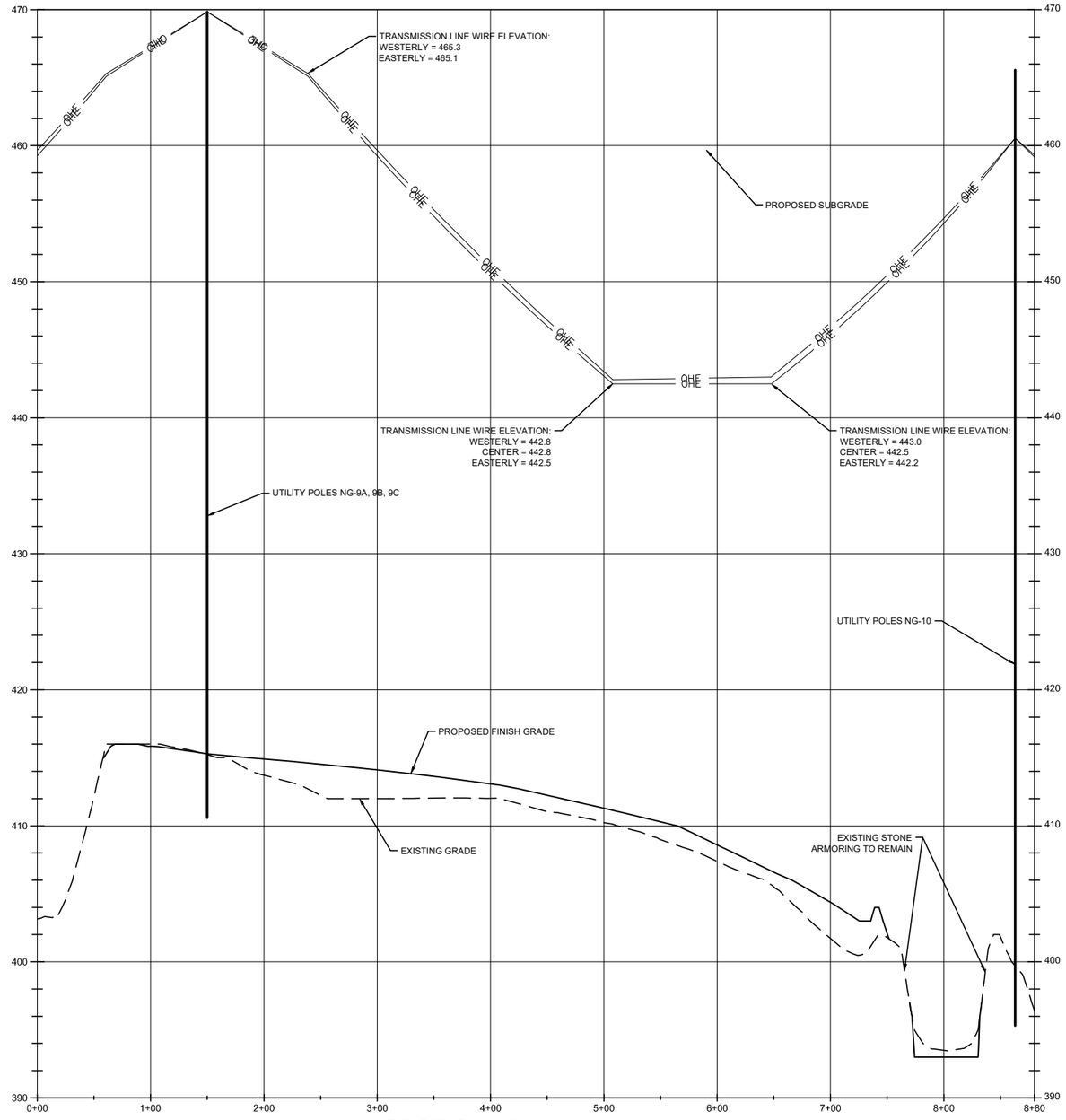
SECTIONS

FILE NO. 1163.71978

DATE JUNE 2020

C-201

SAVED: 7/20/21 4:35 PM



SECTION - D

SCALE: HORIZ. 1"=60' 60' 0 60'
VERT. 1"=5' 5' 0 5'

NOTE: WEATHER CONDITIONS ON APRIL 30, 2021 DURING THE TRANSMISSION LINE LOW WIRE SURVEY WERE 50°F, WIND 15MPH WESTERLY, RAIN.

IN CHARGE OF J. REYMOND
DESIGNED BY S. JOHNSON
CHECKED BY T. STANIEC
DRAWN BY S. JOHNSON/D. KENT

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VILLAGE OF SOLVAY, NEW YORK

CIVIL

SECTIONS

FILE NO. 1163.71978

DATE JUNE 2020

C-202

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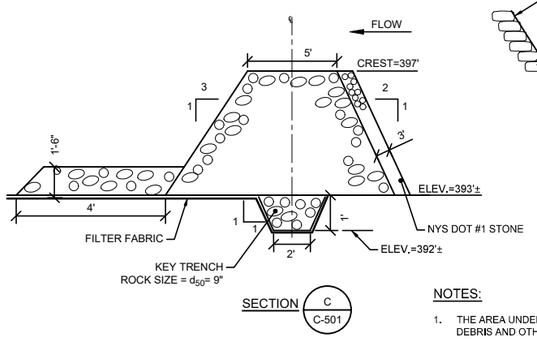
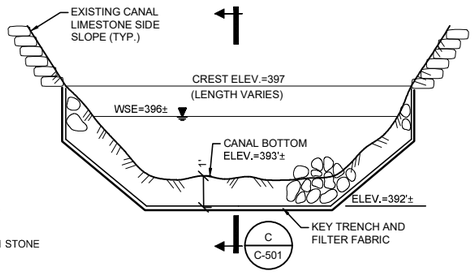


SECTION C / C-501

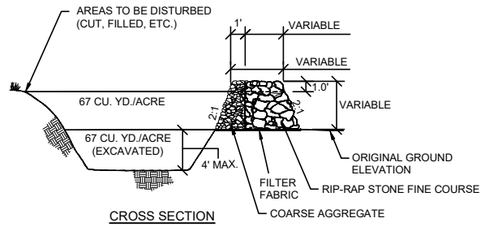


NOTES:

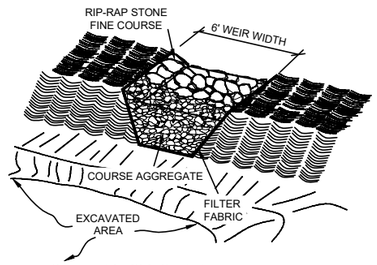
1. THE AREA UNDER THE ROCK DAM SHALL BE CLEARED AND STRIPPED OF ROOTS, SEDIMENT, DEBRIS AND OTHER OBJECTIONABLE MATERIAL.
2. DIMENSIONS SHOWN ARE MINIMUM. KEY TRENCH SHALL BE EXCAVATED FROM ABUTMENT TO ABUTMENT ON THE DAM CENTERLINE. FILTER FABRIC SHALL BE PLACED FROM UPSTREAM EDGE OF KEYTRENCH TO DOWNSTREAM EDGE OF APRON. JOINTS WILL LAP A MINIMUM OF 1 FT. WITH UPSTREAM STRIP ON TOP.
3. THE ROCK DAM SHALL BE CONSTRUCTED FOLLOWING CANAL REMEDIATION ACTIVITIES AND PRIOR TO USE OF THE CANAL AS A STORMWATER MANAGEMENT AREA.

A ROCK DAM DETAIL

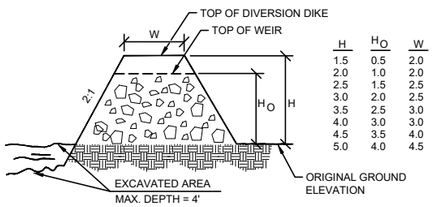
NOT TO SCALE



CROSS SECTION



OUTLET (PERSPECTIVE VIEW)



H	H_O	W
1.5	0.5	2.0
2.0	1.0	2.0
2.5	1.5	2.5
3.0	2.0	2.5
3.5	2.5	3.0
4.0	3.0	3.0
4.5	3.5	4.0
5.0	4.0	4.5

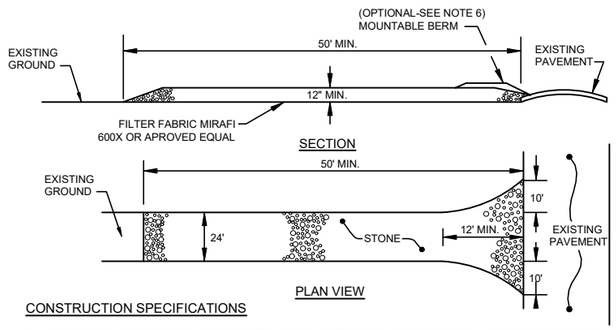
OUTLET (CROSS SECTION)

NOTE:

GEOTEXTILE FABRIC SHALL BE MIRAFI 140N OR APPROVED EQUAL.

B TEMPORARY SEDIMENT TRAP DETAIL

NOT TO SCALE

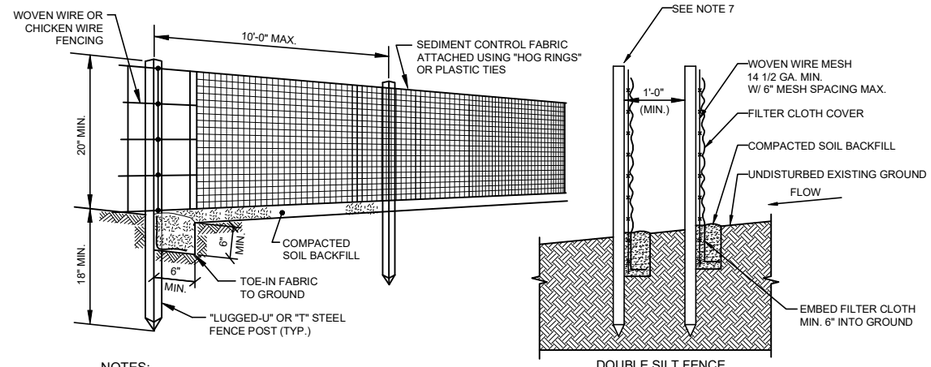


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE: USE 2 INCH STONE NYSDOT ITEM 203.07M (SIZE DESIGNATION 3), OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH: AS REQUIRED, BUT NOT LESS THAN 50 FEET.
3. THICKNESS: NOT LESS THAN TWELVE 12 INCHES.
4. WIDTH: 24 FEET MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE EGRESS OCCURS.
5. FILTER FABRIC (MIRAFI 600X OR APPROVED EQUAL): WILL BE PLACED OVER THE ENTIRE CONSTRUCTION ENTRANCE FOOTPRINT AREA TO BE STABILIZED PRIOR TO INSTALLATION OF STONE. AREA TO BE STRIPPED OF TOPSOIL PRIOR TO INSTALLATION OF FILTER FABRIC.
6. SURFACE WATER: ALL SURFACE WATER FLOWING OR DIVERTED TOWARDS CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS NOT POSSIBLE, A MOUNTABLE BERM 3' WIDE (MIN.) WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE: THE ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING: WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO ADJACENT SEDIMENT BASINS.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN.

C STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



NOTES:

1. SILT FENCE SHALL BE A PREFABRICATED UNIT OR AN APPROVED EQUAL AND PLACED AS INDICATED ON THE DRAWINGS OR AS ORDERED BY THE ENGINEER.
2. SILT FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
4. WHEN TWO SECTIONS OF SILT FENCE ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 2'.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
6. FENCE TO BE ALIGNED ALONG CONTOUR AS CLOSELY AS POSSIBLE.
7. FENCE SHALL BE DOUBLED AT THE TOE OF ALL SLOPES GREATER THAN 15 PERCENT, AND ADJACENT TO WATER BODIES/WETLANDS.

DOUBLE SILT FENCE
SECTION DETAIL

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FENCE: WOVEN WIRE 14.5 GAUGE 6" MAX. MESH OPENING

FILTER CLOTH: MINIMUM TENSILE STRENGTH OF 120 LBS. (ASTM D-16826)

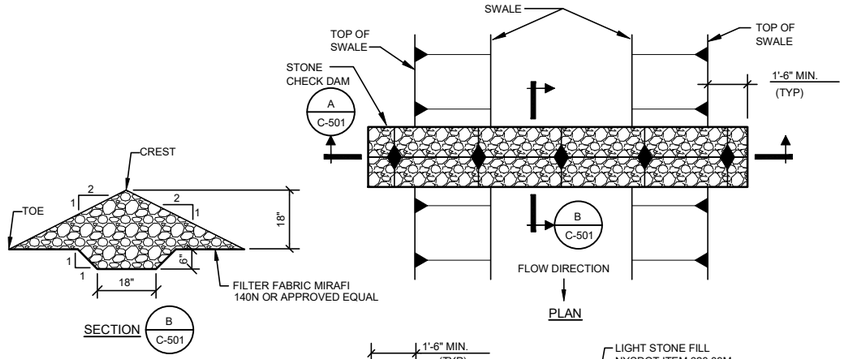
PREFABRICATED UNIT: MIRAFI ENVIROFENCE, OR APPROVED EQUAL

STANDARD SYMBOL —— SF ——— SF

DOUBLE SILT FENCE SYMBOL ═══ SF ═══ SF

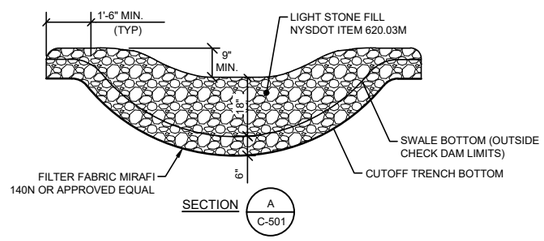
D SILT FENCE DETAIL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS:

1. LIGHT STONE FILL, NYSDOT ITEM 620.03M, SHALL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. SET SPACING OF CHECK DAMS SUCH THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE SWALE BANKS TO PREVENT CUTTING AROUND THE DAM.



E STONE CHECK DAM DETAIL

NOT TO SCALE

IN CHARGE OF J. REYMOND
DESIGNED BY S. JOHNSON
CHECKED BY T. STANIEC
DRAWN BY S. JOHNSON/D. KENT

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RAMBOLL

301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

EROSION & SEDIMENT CONTROL DETAILS

FILE NO. 1163.71978

DATE JUNE 2020

C-501

I:\HONEYWELL.1163\71978.MATHEWS-AVE-P\DOCS\DWG\SHEETS\PARCEL A RAWP\71978.C501.DWG

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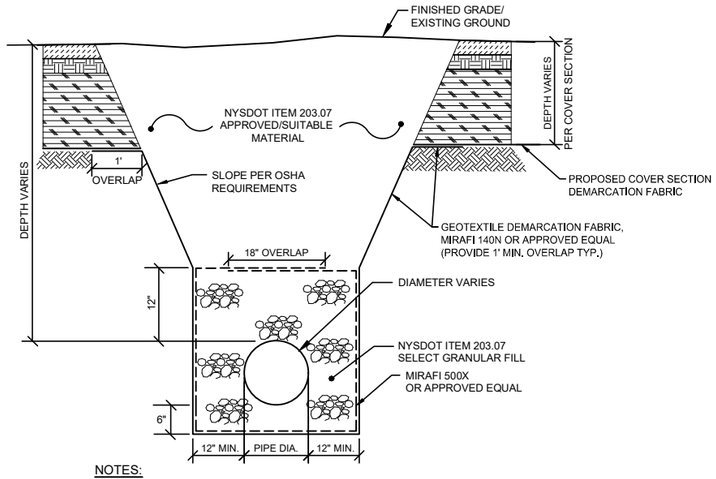
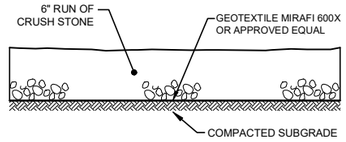


NOTES:

1. APPLIES TO ALL PROPOSED UTILITIES WITHIN THE BOUNDARIES OF BROWNFIELD CLEANUP PROGRAM SITE.

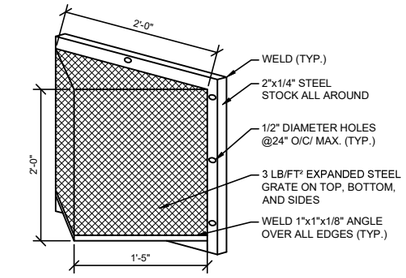
A TYPICAL CLEAN CORRIDOR UTILITY TRENCH DETAIL

NOT TO SCALE



B TYPICAL GRAVEL DRIVE SECTION

NOT TO SCALE

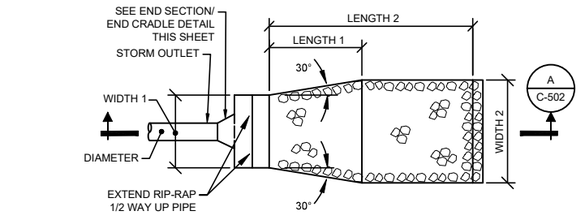


NOTES:

1. TRASH RACK TO BE CENTERED OVER OPENING.
2. STEEL TO CONFORM TO ASTM A-36.
3. ALL SURFACES TO BE COATED WITH ZRC COLD GALVANIZING COMPOUND AFTER WELDING.

C TRASH RACK DETAIL

NOT TO SCALE



OUTLETS

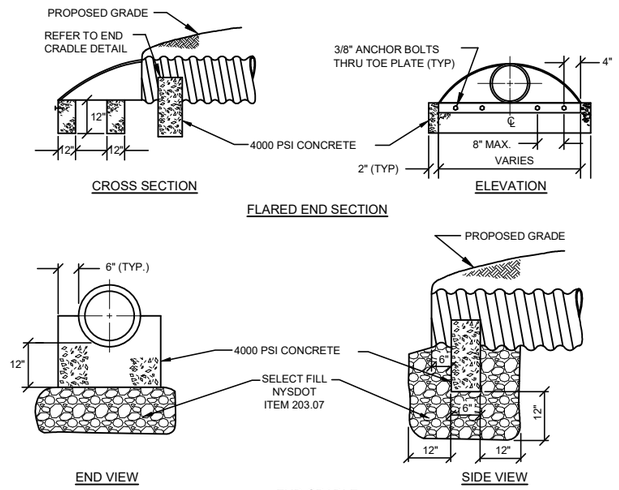
	PIPE DIAMETER (INCHES)		
DIMENSION	12",15",18"	24"	36"
LENGTH 1	4.5'	6'	9'
LENGTH 2	18'	24'	36'
WIDTH 1	4.5'	6'	9'
WIDTH 2	10'	12'	16'

NOTE:

1. ALL RIP-RAP SHALL BE PLACED ON 6" STONE BEDDING, NYSDOT ITEM NO. 620.08M.

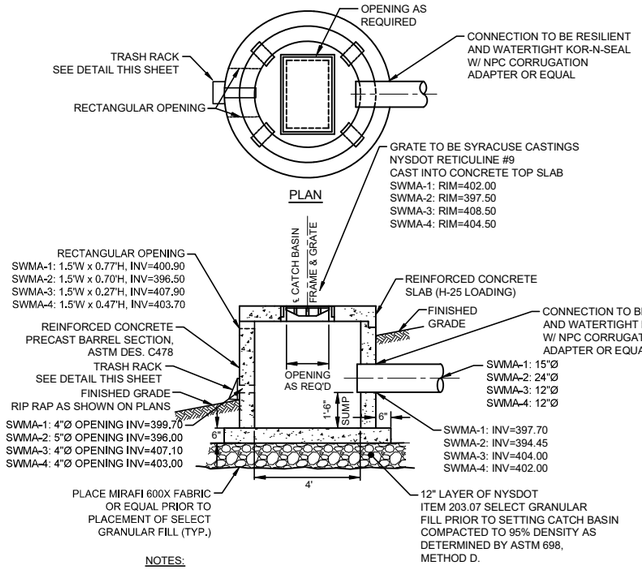
D RIP-RAP APRON DETAIL

NOT TO SCALE



E FLARED END SECTION & CRADLE DETAIL

NOT TO SCALE



NOTES:

1. CONCRETE TO BE 4000 PSI AT 28 DAYS.
2. TRASH RACK TO BE AS SHOWN ON THIS SHEET.

F OUTLET STRUCTURE DETAIL

NOT TO SCALE

IN CHARGE OF J. REYMOND
DESIGNED BY S. JOHNSON
CHECKED BY T. STANIEC
DRAWN BY S. JOHNSON/D. KENT

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MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

MISCELLANEOUS DETAILS

FILE NO. 1163.71978

DATE JUNE 2020

C-502

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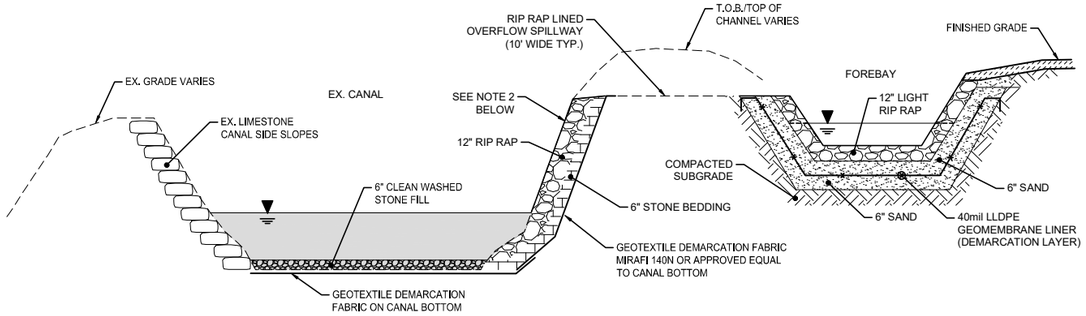
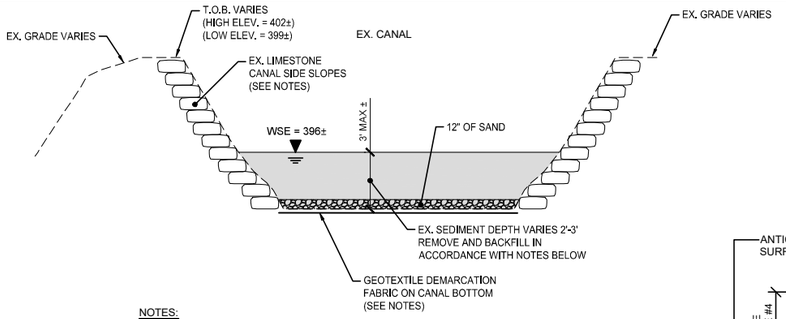


NOTE:

1. REMOVE EX. CANAL SIDEWALL LIMESTONE AND STABILIZE BANK FOR PLACEMENT OF RIP RAP OVERFLOW CHANNEL.
2. SEE TYPICAL CANAL EXCAVATION SECTION FOR CANAL EXCAVATION IN AREAS WITHOUT FOREBAY OVERFLOW CONNECTIONS.

A TYPICAL FOREBAY COVER SECTION

NOT TO SCALE

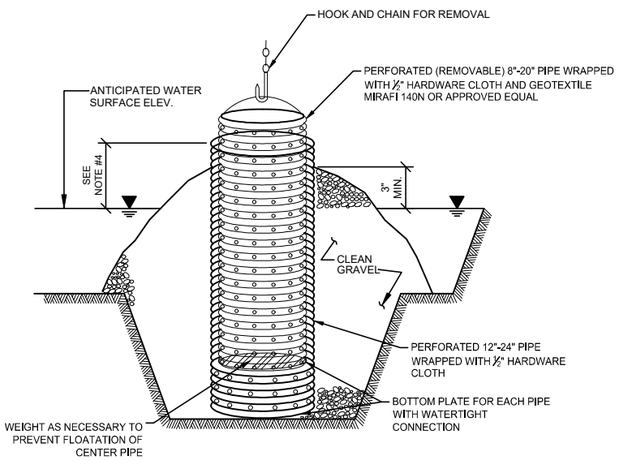


NOTES:

1. DEWATERING AND SEDIMENT REMOVAL FROM THE CANAL SHALL BE PERFORMED IN ACCORDANCE WITH THE RAWP.
2. PROTECT AND MAINTAIN ORIGINAL SIDE SLOPES OF THE CANAL FOR DURATION OF CONSTRUCTION. DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL SIDE SLOPE WITH LIGHT RIP-RAP STONE. LIMESTONE SIDE SLOPES WILL BE CLEANED OF SOIL USING "DRY METHODS" TO THE EXTENT PRACTICABLE AND MANAGED AS SEDIMENT.
3. FOLLOWING SEDIMENT REMOVAL ACTIVITIES, PLACE GEOTEXTILE DEMARCATION FABRIC, MIRAFI 140N OR APPROVED EQUAL ON THE CANAL BOTTOM, TO THE LIMITS OF SEDIMENT REMOVAL.
4. PLACE 12" OF SAND ON TOP OF GEOTEXTILE DEMARCATION FABRIC ON CANAL BOTTOM, TO LIMITS OF SEDIMENT REMOVAL AND FABRIC.
5. SEE TYPICAL FOREBAY COVER SECTION FOR CANAL SIDE SLOPES AT FOREBAY OVERFLOW CONNECTIONS.

C TYPICAL CANAL EXCAVATION SECTION

NOT TO SCALE



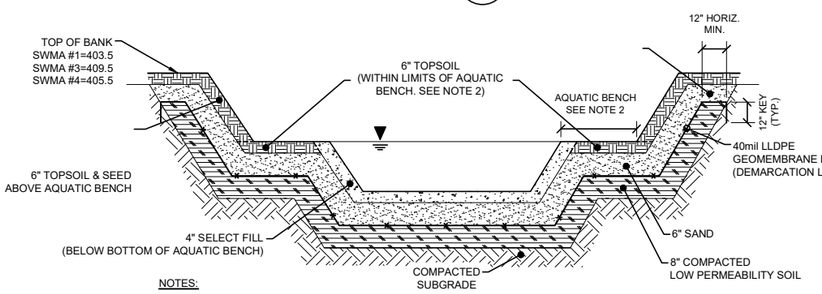
ELEVATION

CONSTRUCTION SPECIFICATIONS:

1. THE OUTER PIPE SHALL BE 12"-24" DIA. OR SHALL, IN ANY CASE, BE AT LEAST 4" GREATER IN DIAMETER THAN THE CENTER PIPE. THE OUTER PIPE SHALL BE WRAPPED WITH ½" HARDWARE CLOTH TO PREVENT BACKFILL MATERIAL FROM ENTERING THE PERFORATIONS.
2. AFTER INSTALLING THE OUTER PIPE, BACKFILL AROUND OUTER PIPE WITH 2" AGGREGATE OR CLEAN GRAVEL.
3. THE INSIDE STAND PIPE (CENTER PIPE) SHALL BE CONSTRUCTED BY PERFORATING A PVC PIPE BETWEEN 8" AND 20" IN DIAMETER WITH A WATERTIGHT CAP ON THE BOTTOM END. THE PERFORATIONS SHALL BE ½" X 6" SLITS OR 1" DIAMETER HOLES, 6" ON CENTER. THE CENTER PIPE SHALL BE WRAPPED WITH ½" HARDWARE CLOTH FIRST, THEN WRAPPED AGAIN WITH GEOTEXTILE MIRAFI 140N OR APPROVED EQUAL.
4. BOTH THE INNER AND OUTER PIPES SHOULD EXTEND 12" TO 18" ABOVE THE ANTICIPATED WATER SURFACE ELEVATION OR RISER CREST ELEVATION WHEN DEWATERING A BASIN.
5. WATER WILL BE PUMPED INTO A FRAC TANK AND SAMPLED. THE SAMPLE SHALL BE ANALYZED BY A NEW YORK STATE CERTIFIED LABORATORY FOR THE PARAMETERS DEFINED IN THE RAWP TO DETERMINE IF THE WATER REQUIRES TREATMENT PRIOR TO DISCHARGE. SEE THE RAWP FOR ADDITIONAL INFORMATION ON SAMPLING REQUIREMENTS DURING CANAL DEWATERING OPERATIONS.
6. MAINTENANCE - THE INNER PIPE CAN EASILY BE REMOVED TO FACILITATE CHANGING THE GEOTEXTILE WHEN IT CLOGS. MAINTENANCE MUST BE PERFORMED WHEN THE PUMP RUNS DRY AND BACKED UP WATER REMAINS.

E REMOVABLE CONSTRUCTION DEWATERING PUMPING DETAIL

NOT TO SCALE

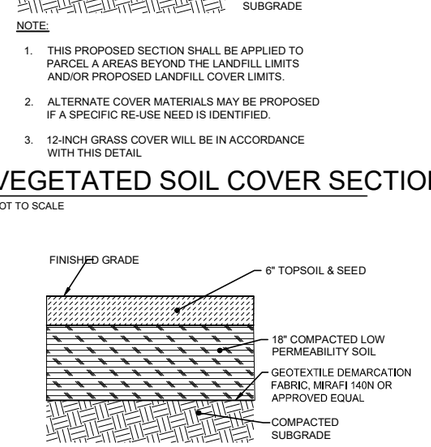


NOTES:

1. REFER TO SITE AND GRADING PLANS FOR SWMA OUTLETS AND ADDITIONAL INFORMATION.
2. SWMAS TO INCLUDE AQUATIC BENCH IN ACCORDANCE WITH THE SWPPP. AQUATIC BENCH SHALL BE SEEDED WITH THE OBL-FACW PERENNIAL FOOD & COVER WETLAND MIX (ERNMX-120) FROM ERNST CONSERVATION SEEDS, OR APPROVED EQUAL, APPLIED AT A RATE OF 0.5 LBS PER 1,000 SQ-FT.

D SWMA-1, 3, AND 4 COVER SECTION

NOT TO SCALE



NOTE:

1. THIS PROPOSED SECTION SHALL BE APPLIED TO PARCEL A AREAS BEYOND THE LANDFILL LIMITS AND/OR PROPOSED LANDFILL COVER LIMITS.
2. ALTERNATE COVER MATERIALS MAY BE PROPOSED IF A SPECIFIC RE-USE NEED IS IDENTIFIED.
3. 12-INCH GRASS COVER WILL BE IN ACCORDANCE WITH THIS DETAIL

B VEGETATED SOIL COVER SECTION

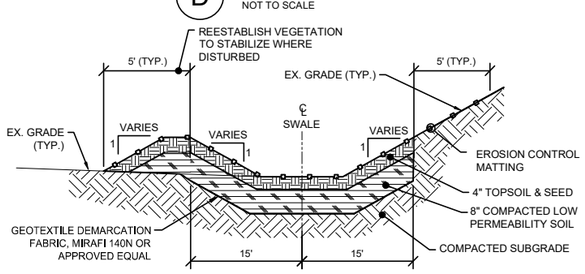
NOT TO SCALE

NOTE:

1. AN ALTERNATIVE COVER SECTION FOR THE LOW PERMEABILITY GRASS COVER AREAS IDENTIFIED ON THE PLANS, MAY BE PROPOSED.

F LOW PERMEABILITY VEGETATED SOIL COVER SECTION

NOT TO SCALE

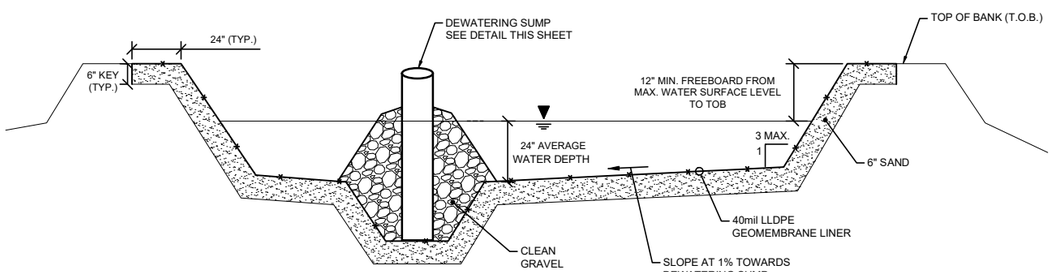


NOTE:

1. APPLIES TO REMEDIATED SWALE TO GEDDES BROOK.
2. DEPTH VARIES PER PLAN.

G REMEDIATED SWALE - LOW PERMEABILITY SOIL COVER DETAIL

NOT TO SCALE



NOTES:

1. PROVIDE APPROXIMATELY 11,100 CUBIC FEET OF STORAGE VOLUME BELOW MAX. WATER SURFACE LEVEL.

H LINED SEDIMENT STAGING AREA DETAIL

NOT TO SCALE

IN CHARGE OF	J. REYMOND
DESIGNED BY	S. JOHNSON
CHECKED BY	T. STANIEC
DRAWN BY	S. JOHNSON/D. KENT

NO.	DATE	REVISION	INT.
0	07/21/2021	ISSUED FOR CONSTRUCTION	

O'BRIEN & GERE ENGINEERS, INC
A RAMBOLL COMPANY

301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

SECTIONS & DETAILS

FILE NO. 1163.71978

DATE JUNE 2020

C-503

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ENVIRONMENT
& HEALTH

Ms. Jean Foley
New York State Department of Environmental Conservation
1285 Fisher Avenue
Cortland, NY 13045

Ms. Margaret Crawford
United States Army Corps of Engineers, Buffalo District
Auburn Field Office
7413 County House Road
Auburn, NY 13021

Mr. Trendon Choe
New York State Department of Environmental Conservation
5786 Widewaters Parkway
Syracuse, NY 13214-1867

May 9, 2023

Re: Revised Final Compensatory Wetland Mitigation Plan
Remedial Action for Parcel A – Mathews Avenue Site
(Site ID No. C734116)
Joint Application for Permit and Preconstruction Notification
File: 1163/71978

Ramboll
333 West Washington Street
Syracuse, NY 13202
USA

T 315-956-6100
F 315-463-7554
https://ramboll.com

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Dear Jean, Maggie, and Trendon:

This letter provides information regarding the proposed compensatory wetlands mitigation associated with remediation of Parcel A of the Mathews Avenue Landfill Site in Solvay, New York. This mitigation strategy has been developed in response to the New York State Department of Environmental Conservation (NYSDEC) request to evaluate alternative mitigation strategies to the in-lieu fee program and the Tully Farms Road Mitigation Design that have been proposed to date. We trust that this will facilitate project authorization under Articles 15 and 24 of the Environmental Conservation Law (ECL) and Section 401 of the Clean Water Act so that construction associated with this important environmental remediation and enhancement project can commence in the spring of 2023.

1. Background

The NYSDEC Division of Environmental Remediation approved the June 23, 2020, Remedial Action Work Plan (RAWP) for the Site on July 19, 2021, in accordance with the NYS Brownfield Cleanup Program (6 New York Codes, Rules and Regulation Subpart 375-3). A Joint Application for Permit (JAP) representing a Pre-Construction Notification (PCN) to request authorization from the U.S. Army Corps of Engineers (USACE) and NYSDEC was submitted on October 11, 2021. This information package supplements the previously submitted JAP/PCN.

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This mitigation plan has been developed to compensate for the functions and values associated with the 0.73-acre impact to existing shallow emergent wetland habitat.

2. Public Interest

The proposed remediation project will be conducted under the NYSDEC's Brownfield Cleanup Program (BCP). According to the NYSDEC, "the goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on 'greenfields'. A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant." A Citizen Participation (CP) Plan was prepared to provide the affected and interested public with information about how the NYSDEC will inform and involve them during the investigation and remediation of the Site. It is anticipated that remediation of the Site under the BCP and improvement of the wetland values and services provided within the Onondaga Lake watershed will serve the public interest.

3. Existing Wetlands and Aquatic Resources

As stated in the October 2021 JAP/PCN, the Site Remedial Action (RA) will permanently impact 0.73 acres of on-site emergent wetlands. The existing 0.73 acre of emergent wetland that will be impacted during remediation of Parcel A are of low ecological value.

The Northern Drainage Swale and Old Erie Canal are also degraded aquatic resources with impacted substrates that are dominated by invasive species. As detailed in the JAP/PCN package, their impacted nature and domination by invasive vegetive species such as common reed (*Phragmites australis*) provide minimal ecological functions and values. The RA includes establishing substrate, hydrologic conditions and vegetation in the Northern Drainage Swale and the Old Erie Canal East that will enhance the ecological functions and values provided by those resources.

4. Mitigation Alternatives

301 Belle Isle Road, LLC (hereafter referred to as the "Applicant") has followed the USACE hierarchy for evaluating mitigation alternatives and communicated with both the NYSDEC and USACE throughout the process as detailed in the following:

- During an April 10, 2007 pre-application meeting that was held at the USACE office in Auburn, NY and attended by representatives from both the NYSDEC and USACE, the USACE stated that an evaluation of mitigation alternatives should include payment of an in-lieu fee to finance a wetland and/or stream restoration project somewhere within Central New York. However, due to the lack of available mitigation projects within the Site watershed and the lack of available wetland mitigation banks within the Site service area, the Applicant proposed to compensate for the wetland impacts through the creation of wetland and enhancement of existing wetland on 2.3 acres of Honeywell-owned property located west of Tully Farms Road in the Town of Tully, New York. Subsequent discussions between the USACE, U.S. Fish and Wildlife Service (USFWS), and Ramboll (then O'Brien & Gere) indicated that the Conceptual Compensatory Wetland Mitigation Plan (CWMP) was a viable mitigation strategy that should be pursued as the preferred mitigation strategy. This was formalized in a Final CWMP that was submitted to the NYSDEC and USACE in 2014.

- Pursuant to the USACE's current mitigation hierarchy that prioritizes in-lieu fee purchase, the 2021 JAP/PCN that was submitted to the NYSDEC and USACE stated that compensatory mitigation would be completed through purchase of wetland credits from an established in-lieu fee program in New York rather than through completion of the Tully Farms Road CWMP.
- On June 29, 2022, the NYSDEC indicated that the proposed mitigation through purchase of in-lieu fee credits is not acceptable pursuant to Article 24 of the ECL since the on-site wetlands are under their jurisdiction. Further, the NYSDEC indicated that implementation of the Tully Farms Road CWMP is not acceptable as the proposed Tully Farms Road site is too far from the existing wetlands. The NYSDEC stated that on-site mitigation via wetland creation would be required to receive authorization under Article 24 of the ECL.

While purchase of in-lieu fee credits could be pursued to satisfy the requirements of Section 404 of the CWA in conjunction with on-site wetland creation to satisfy the requirements of Article 24 of the ECL, this represents an unacceptable financial burden and is inconsistent with the goals and objectives of these regulations and the BCP.

5. On-Site Mitigation

The project team met with the NYSDEC on July 12 and August 9, 2022, to discuss potential on-site mitigation approaches, including the Old Erie Canal West, the Northern Drainage Swale and the RA footprint. Siting of the mitigation areas was focused on Parcel A, since off-site locations within the site vicinity (including Parcel B) were evaluated previously and found to be unsuitable for mitigation purposes; in addition, these areas are not part of the RA approved under the BCP for this project.

The western portion of the proposed RA footprint, as shown on attached Figure 2 (Existing Conditions and Delineated Wetlands), Figure 3 (Proposed Mitigation Wetland Area) and Drawing C-110 (Grading Plan – Onsite Wetland), has been identified as the preferred mitigation alternative. This area was previously targeted for the siting of a stormwater management facility (SWMA-4) that was designed in accordance with the New York State Stormwater Design Manual (NYSDEC 2015) to detain stormwater runoff under future redeveloped conditions (e.g., post-remediation construction of buildings, paved surfaces, etc.) should a future end-user be identified. Under this on-site mitigation approach, regrading from the original RA design allows for creation of an approximately 1.1-acre mitigation wetland capable of sustaining emergent and scrub-shrub wetland communities. This area would capture post-remediation runoff from a portion of the Parcel A vegetated cover and would not be anticipated to accept hydrologic inputs from Parcel B under normal conditions.

Under a future redevelopment scenario, additional permanent stormwater facilities may be required to prevent untreated stormwater runoff from entering the area, as necessary per the New York State Stormwater Design Manual (NYSDEC 2015). Future site planning and design will include stormwater management facilities to convey runoff from impervious areas to other on-site facilities as needed.

This CWMP has been prepared in accordance with CFR Part 332 – Compensatory Mitigation for Losses of Aquatic Resources and presents the best available mitigation strategy to satisfy the mitigation requirements of the NYSDEC, the USACE and the watershed in the context of this important environmental remediation and enhancement project.

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6. Compensatory Wetland Mitigation Work Plan

The location of the proposed mitigation wetland, including a 100-foot buffer area as requested by NYSDEC, is depicted on Figures 2 and 3 and Drawing C-110. Through completion of the following activities, this area will become wetland habitat that will support a mix of shallow emergent and scrub-shrub vegetative species:

- Strategic re-grading of the area including, and proximal, to the former SWMA-4, in accordance with Drawing C-110 to create a topographic depression to capture surface water runoff from a portion of the adjacent Parcel A remediated area. This adjacent area will consist of a vegetative cover per the RAWP and serve as an upland buffer for the created wetland
- Use of periodic herbicide treatment or other actions as needed to control invasive species during post-construction maintenance
- Installation of signage around the mitigation perimeter as needed to limit access.

6.1 Construction

Wetland construction will be implemented concurrent with the Parcel A RA. Material excavated from the wetland footprint will be placed on-site and covered with a minimum of 1-foot clean fill, in accordance with the RAWP. During excavation, existing soil conditions will be assessed such that amendments can be made, as necessary, to promote water retention prior to topsoil placement. A minimum cover thickness of 2 ft will be placed within the limits of the mitigation area, with an average of 8 inches of topsoil in the emergent area and 12 inches of topsoil in the scrub-shrub area (see attached Drawings C-110 and C-505, Details A and B). Fill placed on-site shall meet Restricted Use Protection of Ecological Resources Soil Cleanup Objectives (SCOs), established in NYCRR Part 375-6.7(d)(1)(ii)(d). Two 20-ft wide outlets will be constructed as shown on Drawings C-110 and C-505, Detail D, to provide surface water connection between the compensatory wetland and wetland W3 on adjacent Parcel B.

6.1.1 Zone A – Shallow Emergent Wetland

The extent of the shallow emergent wetland area (Zone A) is shown on Drawing C-110. The Zone A habitat area will support a mix of vegetative species that thrive in shallow emergent (0- to 12-inch) areas, and shall be seeded with the seed mix shown in Table 1 at a rate of 30 pounds (lbs) per acre. Mulch shall be applied in these areas at a rate of 2 tons/acre.

Table 1. Zone A - Shallow Emergent Seed Mix

Content (%)	Common Name	*Botanical Name*
21	Fox sedge	*Carex vulpinoidea*
20	Virginia wildrye	*Elymus virginicus*
16	Lurid sedge	*Carex lurida*
12	Hop sedge	*Carex lupulina*
12	Blunt broom sedge	*Carex scoparia*
3.0	Blue vervain	*Verbena hastata*
2.4	Swamp milkweed	*Asclepias incarnata*
2.0	Soft rush	*Juncus effusus*
2.0	Golden alexanders	*Zizia aurea*
1.6	New England aster	*Aster novae-angliae*
1.3	Awl sedge	*Carex stipata*

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Table 1. Zone A - Shallow Emergent Seed Mix

Content (%)	Common Name	Botanical Name
1.0	Nodding bur marigold	*Bidens cernua*
1.0	Path rush	*Juncus tenuis*
0.8	Wrinkleleaf goldenrod	*Solidago rugosa*
0.6	White vervain	*Verbena urticifolia*
0.5	Fringed sedge	*Carex crinita*
0.5	Boneset	*Eupatorium perfoliatum*
0.5	Common sneezeweed	*Helenium autumnale*
0.5	Square stemmed monkeyflower	*Mimulus ringens*
0.3	Great blue lobelia	*Lobelia siphilitica*
0.3	Woolgrass	*Scirpus cyperinus*
0.2	Mud plantain	*Alisma subcordatum*
0.2	Purplestem aster	*Aster puniceus*
0.2	Flat topped white aster	*Aster umbellatus*
0.1	Ditch stonecrop	*Penthorum sedoides*

6.1.2 Zone B – Scrub-Shrub Wetland

The extent of the scrub-shrub wetland area (Zone B) is shown on Drawing C-110. The Zone B habitat area will support a mix of herbaceous and shrub species. Individual size #2 pots of the species shown in Table 2 shall be planted at a density of 1,200 plants per acre, alternating species such that equal numbers of each species are planted.

Table 2. Zone B – Shrub plantings

Common Name	Botanical Name
Viburnum	*Viburnum dentatum*
Silky dogwood	*Cornus ammomum*
Smooth alder	*Alnus serrulata*
Spicebush	*Lindera benzoin*
Blackgum	*Nyssa sylvatica*
Red osier dogwood	*Cornus stolonifera*

Following placement of shrubs, scrub-shrub wetland areas shall be seeded with the seed mix shown on **Table 3** at a rate of 30 lbs per acre. Mulch shall be applied in these areas at a rate of 2 tons/acre.

Table 3. Zone B – Scrub-Shrub Seed Mix

Content (%)	Common Name	Botanical Name
25	Virginia Wild Rye	*Elymus virginicus*
15	Arrowwood	*Viburnum dentatum*
15	Silky Dogwood	*Cornus amomum*
15	Grey Dogwood	*Cornus racemosa*
11	Oats	*Avena sativa*

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Table 3. Zone B – Scrub-Shrub Seed Mix

Content (%)	Common Name	*Botanical Name*
4.0	Fox Sedge	*Carex vulpinoidea*
3.0	Grass Leaved Goldenrod	*Euthamia graminifolia*
2.0	Lurid (Shallow) Sedge	*Carex lurida*
2.0	Blunt Broom Sedge	*Carex scoparia*
2.0	Awl Sedge	*Carex stipata*
2.0	Path Rush	*Juncus tenuis*
1.0	Calico Aster	*Aster lateriflorus*
1.0	New England Aster	*Aster novae-anliae*
1.0	Rough Avens	*Geum laciniatum*
1.0	Nodding bur marigold	*Bidens cernua*

Restoration of the upland buffer east of the mitigation area will be limited to shallow rooting species, such as the Old Field Successional Seed Mix, in accordance with the RAWP. This seed mix will include the species shown in **Table 4**.

Table 4. Successional Old Field Seed Mix[1]

Common Name	*Latin Name*	*Weight percent*
Oats	*Avena sativa*	32
Indiangrass	*Sorghastrum nutans*	13
Switchgrass	*Panicum virgatum*	9
Canada wildrye	*Elymus canadensis*	8
Big blustem	*Andropogon gerardii*	8
Little bluestem	*Schizachyrium scoparium*	5
American senna	*Senna hebecarpa*	4
Autumn bentgrass	*Agrostis perennans*	4
Blackeyed Susan	*Rudbeckia hirta*	4
Purple bergamot	*Monarda media*	4
Grass Leaved goldenrod	*Euthamia graminifolia*	3
New England aster	*Aster novae-angliae*	2
Annual sunflower	*Helianthus annuus*	2
Partridge pea	*Chamaecrista fasciculata*	1
Maximilian's Sunflower	*Helianthus maximilianii*	1

[1]If seed mix is applied in the fall (October 15 to December 1), add 10 pounds per acre of winter wheat (*Triticum aestivum*).

Apply seed mix at 40lb/ac

6.2 Water Budget

The hydrology of the wetland mitigation area under proposed conditions was modeled based on the methods presented in Planning Hydrology for Constructed Wetlands (Pierce 1993) and in accordance with the Wetlands Engineering Handbook (Hayes, et al. 2000). Wetland hydrographs were prepared for

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the mitigation area to illustrate internal hydrologic conditions during “wet year,” “dry year,” and “median year” scenarios. Precipitation and temperature data representative of each scenario were obtained from the National Climatic Data Center (NCDC) for the Syracuse Hancock International Airport Station, ID# 308383 (NCDC 2013). No inputs from groundwater discharge have been included in the model as the bottom elevation of the wetland is greater than the seasonal high level for the water table. The model assumes a compacted subgrade and corresponding rate of percolation ranging from approximately 0.1 to 0.3 inches per month, depending on the wetland water level. For each scenario, the water budget was initially run with a beginning wetland water depth of 0 inches.

Data and hydrographs for the mitigation wetland under these three scenarios are included as Attachment 1. These hydrographs illustrate that the wetland is predicted to maintain sufficient hydrology during the growing season to support hydrophytes as proposed. For each scenario, the water budget was initially run with a beginning wetland water depth of 0 inches.

6.3 Performance Standards

The following performance standards are proposed:

a. Prevent establishment of invasive species identified in the *New York State Prohibited and Regulated Invasive Plants* (https://www.dec.ny.gov/animals/99141.html) (NYSDEC 2014), and reed canary grass (*Phalaris arundacea)* in excess of 5% areal cover for 5 years. If this threshold is exceeded during or at the end of each monitored year, corrective measures will be implemented to preclude the growth of the listed species within the mitigation areas. Corrective measures such as, but not limited to, herbicide application, mechanical/manual removal, etc. shall be implemented. Any corrective measures proposed will be coordinated and approved, in writing, with the NYSDEC and USACE prior to implementation. Management and monitoring period extended up to 5 years if invasives establish on site.
b. The mitigation wetland will meet the vegetative and hydrology requirements specified in the 1987 Corps of Engineers Wetland Delineation Manual and Regional Supplement (USACE 1987; 2012).
c. Achieve 85% total areal coverage with more than 50% of the vegetation which are facultative (FAC), facultative wet (FACW) or obligate (OBL) species within the first year, no less than 80% of which are permanent perennial species.
d. 85% survival of woody plantings after 5 growing seasons.
e. Monitoring Reports for 5 years covers: wetland hydrology, dominant vegetation, total vegetative cover, invasive species, woody plant survival, management activities conducted.
f. Hydrology: “The permittee shall establish and maintain inundation and/or saturation within the upper 12 inches of the soil surface on consecutive days for at least 12.5% of the growing season (22 days) for at least 4 out of 5 monitoring years across each wetland mitigation basin and/or cover type.”
g. The mitigation area will be vegetated with no more than 50% areal cover of a single species, which will be demonstrated for each monitoring period. If it is determined that standard is not met at any time, a corrective action plan will be submitted to the USACE for review and approval prior to implementation during the following growing season. A waiver may be granted by the USACE for sites that are in the initial monitoring seasons (1-2 years) and are not meeting the hydrophytic vegetation cover goal.

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6.4 Post-Construction Baseline Report

Following completion of wetland construction, a baseline report will be provided to NYSDEC and USACE. The report will be submitted by December 31 in the year construction activities are completed, or by an approved extension. The baseline report will include the following:

- An as-built survey showing the topographic elevations of the created wetland mitigation area at a minimum of 0.5-foot contour intervals
- Photographs from fixed reference points with photo-location maps
- A list of plants introduced through seeding and/or planting in the wetlands, the methods employed to establish each plant community, the source and type of the vegetative materials used (*e.g.*, seed)
- A scaled map showing the overall planting schemes and the areas covered by each plant community
- Surface water depth and date of measurement from representative locations within the wetland mitigation area. The sample points will be fixed locations and shall be plotted on a map.

6.5 Annual Reports

Annual reports regarding the status of the compensatory mitigation areas will be submitted to the USACE district engineer and include:

- Estimated frequencies and percent cover of vegetative species within plots selected to represent the vegetative cover types present
- Photographs showing representative portions of the mitigation area
- Surface water elevations in representative portions of the mitigation area.

The reports will be prepared, formatted, and submitted in accordance with the Special Conditions of the federal permit.

6.6 Wetland Monitoring

Monitoring of the wetland mitigation area will be performed to evaluate whether the project is meeting design performance standards, and if measures are necessary to facilitate the attainment of mitigation objectives. The wetland area will be inspected annually during the growing season (*i.e.,* April 15 through October 25) for up to five years. If the first three years of inspections demonstrate that the compensatory mitigation project has consistently met the performance standards outlined above, the USACE district engineer may reduce or waive the remaining monitoring requirements. The five-year monitoring plan is summarized in **Table 4**.

Table 4. Maintenance Plan

Component	Description
Water level control structures	• Monitor water levels and add/change controls as needed to optimize levels • Check condition of inlets/outlets and remove accumulated debris as needed

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Table 4. Maintenance Plan	
Component	**Description**
Vegetation	• Reseed or replant areas that do not achieve performance standards • Hand-pull invasive species (e.g., purple loosestrife, common reed) observed during monitoring events, and dispose outside of the mitigation areas • Apply wetland-approved herbicide to patches of invasive species that cannot be manage by pulling (e.g., patches larger than approximately 0.1 acre) • Add measures to control herbivory
Mitigation area protection (site access restriction)	• Monitor for signs of trespassing and/or vandalism

The saturation of topsoil within the mitigation wetland will be monitored in the shallow emergent and scrub-shrub wetland area cover sections and the outlets. The approximate monitoring locations are shown on Drawing C-110 (Grading Plan – Onsite Wetland) and will be finalized based on field conditions encountered. Each monitoring location will be equipped with a data logging pressure transducer to monitor water levels during the five consecutive growing seasons following construction of the wetland.

6.7 Long-Term Management Plan

The wetland has been designed to be self-sustaining once performance standards have been achieved (*i.e.*, natural hydrology and landscape context will support long-term sustainability). Long-term monitoring and management activities consistent with the Site Protection Instrument will be implemented as necessary. These activities are summarized in **Table 5**.

Table 5. Long-Term Management Plan	
Component	**Impact on Performance Standard**
Water level control structures	• Monitor water levels and add/change controls as needed • Check condition of inlets/outlets. Remove accumulated debris as needed • Monitor impacts/damage from mammals (e.g., beaver, muskrat, deer) and employ control techniques (e.g., trapping and removal) as necessary
Vegetative	• No vegetative cutting or disposal of clippings to occur in wetlands • No mowing will be allowed within the wetland area
Mitigation area protection (Site access restriction)	• Monitor for signs of trespassing and/or vandalism • Maintain signage around the perimeter of the mitigation area

6.8 Site Protection Instrument

The Applicant will execute a Site Protection Instrument for the created wetland mitigation area to preserve the wetland and wildlife resources. Copies of the instrument will be submitted to the NYSDEC and USACE for approval prior to execution, and the instrument will be executed and recorded at the

Onondaga County Clerk's Office within one year following commencement of construction of the mitigation wetland. The easement will include:

- A platted survey prepared by a registered New York surveyor showing metes and bounds of the parcel boundary
- A legal description of the parcel or tract subject to the covenant
- A copy of the signed permit
- A one-page summary of the existing and/or proposed conservation functions and services of the protected site
- A resolution and adoption authorizing the placement of a Declaration of Conservation Covenants and Restrictions on the property as required by a permit
- The consent and subordination signed by the financial lender, if applicable.

7. Financial Assurances

Ramboll has prepared this Final CWMP on behalf of the Applicant, 301 Belle Isle Road, LLC.

Consistent with the agreed upon mitigation plan in Tully, Ramboll Americas Integrated Solutions, Inc. will arrange for the issuance of a payment/performance bond, letter of credit, or other form of financial security (the “Mitigation Work Financial Security”) reasonably acceptable to the USACE and NYSDEC, in the amount representing the estimated cost to purchase the equivalent mitigation credits via the Ducks Unlimited in-lieu fee program:

$106,870/wetland credit x 1.5 credits = $160,305

This financial assurance is provided in the event that unforeseen changes preclude completion of the mitigation wetland as outlined above. The financial assurance will be issued prior to the commencement of the construction components of the on-site wetlands mitigation (the “Mitigation Work”). The Mitigation Work Financial Security shall be reduced as each individual component part of the Mitigation Work is completed and demonstrated to the reasonable satisfaction of USACE and NYSDEC (each, a “Successfully Completed Component Part of the Mitigation Work”).

Honeywell International, Inc. will arrange for the issuance of a payment/performance bond, letter of credit or other form of financial security (the “Mitigation Performance Verification/Operations and Maintenance (PV/O&M) Financial Security”) reasonably acceptable to the USACE and NYSDEC for the amount of $139,000, representing the estimated contract prices for the PV/O&M component of the wetlands mitigation, prior to the commencement of any such Mitigation Work. The Mitigation PV/O&M Financial Security shall be reduced as each individual component part of the post-construction PV/O&M work is completed and demonstrated to the reasonable satisfaction of USACE and NYSDEC (each, in accordance with the performance standards/success criteria outlined in this mitigation plan and applicable special conditions included in the proffered permit).

The total of the payment/performance bonding will be $299,305.

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8. Summary

This Final CWMP compensates for the impacted wetland functions and values and satisfies the regulatory requirements of the NYSDEC and USACE to allow for permit issuance. Thank you for your continued diligence in processing this important environmental and ecological remediation project. Please contact Kyle Buelow at 315-447-0883; Kyle.Buelow@Ramboll.com or me if you have questions or comments.

Yours sincerely

Christopher Calkins
SR VICE PRESIDENT
ENVIRONMENT & HEALTH

D 315-956-6548
M 315-247-5471
christopher.calkins@ramboll.com

Attachments: Figure 2: Existing Conditions and Delineated Wetlands
Figure 3: Proposed Mitigation Wetland Area
Attachment 1: Onsite Wetland Hydrographs
Sheet C-110: Grading Plan – Onsite Wetland
Sheet C-203: Sections – Onsite Wetland
Sheet C-505: Wetland Notes, Details, and Planting

cc: Shane Blauvelt – Honeywell
Michael Belveg – NYSDEC
Nathan Carlton – NYSDEC
Dareth Glance– NYSDEC
Gary Priscott – NYSDEC
Elizabeth Tracy – NYSDEC
Kyle Buelow – Ramboll
Anthony Eallonardo – Ramboll
Jennifer Reymond – Ramboll
Brian White – Ramboll

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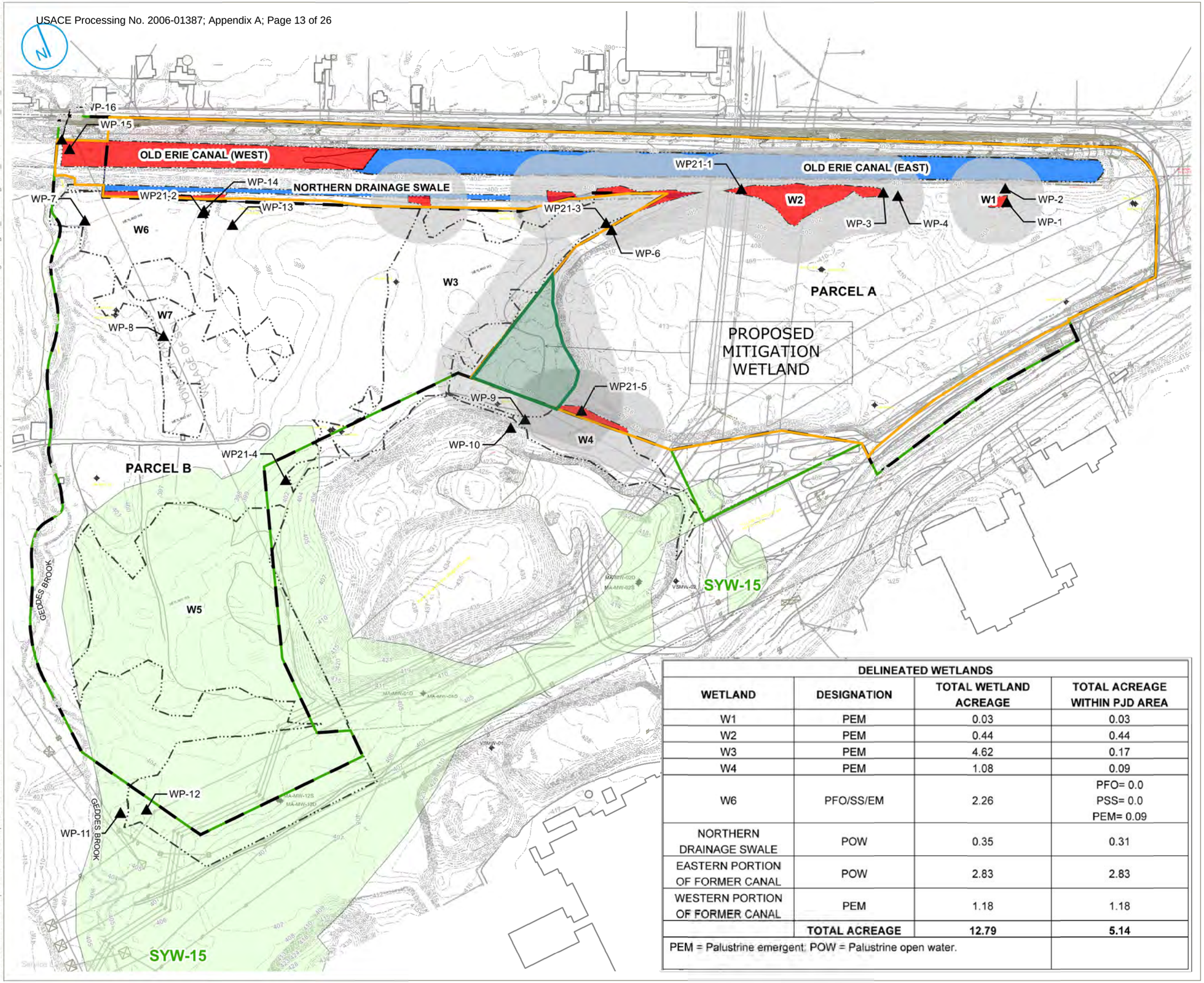
FIGURE 2
EXISTING CONDITIONS AND DELINEATED WETLANDS



DELINEATED WETLANDS			
WETLAND	**DESIGNATION**	**TOTAL WETLAND ACREAGE**	**TOTAL ACREAGE WITHIN PJD AREA**
W1	PEM	0.03	0.03
W2	PEM	0.44	0.44
W3	PEM	4.62	0.17
W4	PEM	1.08	0.09
W6	PFO/SS/EM	2.26	PFO= 0.0 PSS= 0.0 PEM= 0.09
NORTHERN DRAINAGE SWALE	POW	0.35	0.31
EASTERN PORTION OF FORMER CANAL	POW	2.83	2.83
WESTERN PORTION OF FORMER CANAL	PEM	1.18	1.18
	TOTAL ACREAGE	**12.79**	**5.14**
PEM = Palustrine emergent; POW = Palustrine open water.			

- MATHEWS AVENUE PARCEL BOUNDARY
- MATHEWS AVENUE PROPERTY LINE
- PRELIMINARY JURISDICTIONAL DETERMINATION (PJD)
- PEM WETLAND
- 100 FT BUFFER
- POW WETLAND
- WETLAND PLOTS
- MAPPED NYS FRESHWATER WETLANDS

0 250 500 Feet

EXISTING CONDITIONS AND DELINEATED WETLANDS

FIGURE 2

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

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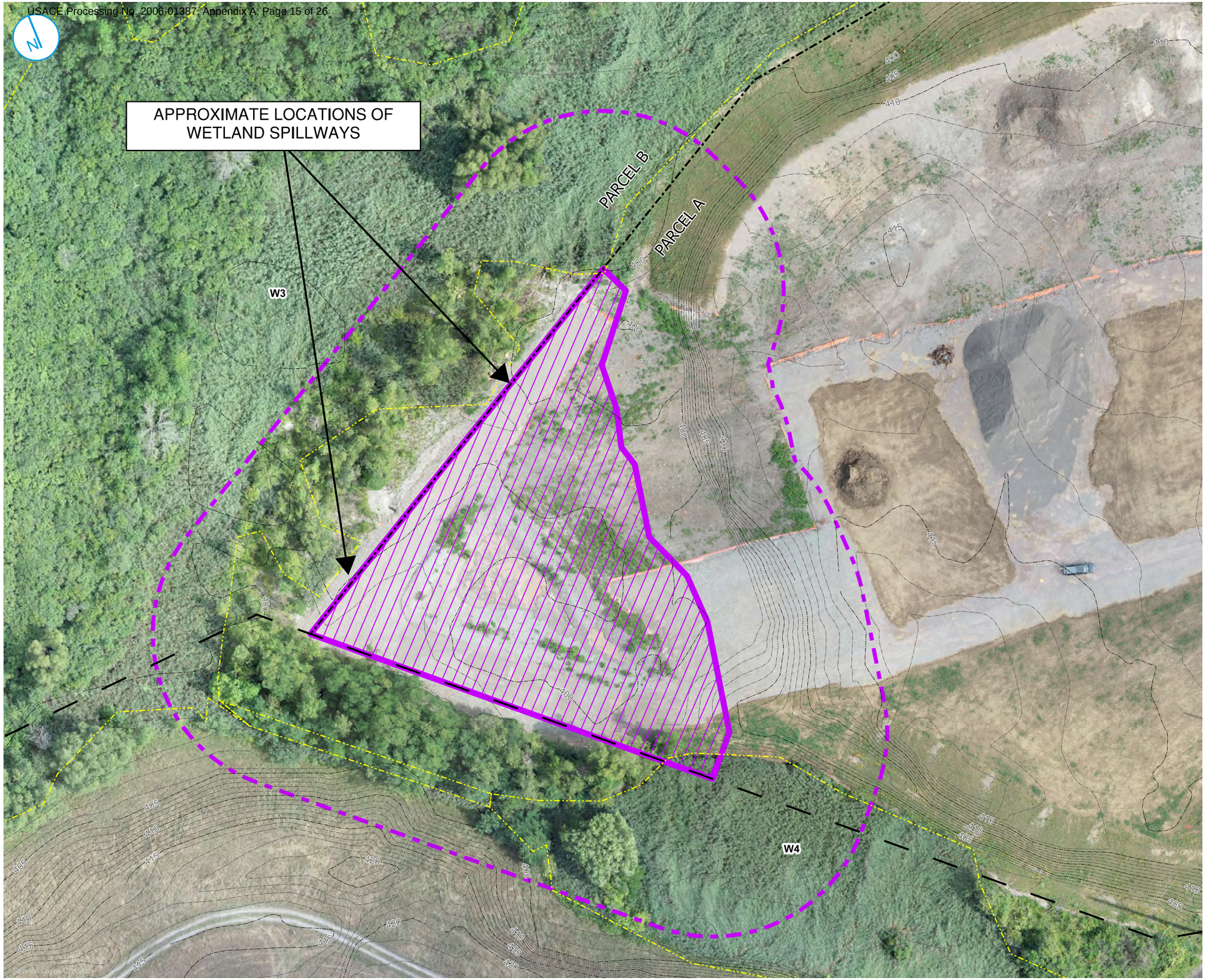
I:\Honeywell.1163\71978.Mathews-Ave-P\Docs\DWG\MXD\JB Figures\Figure_2-ExistingCond_DelinWetlands_rev3_STATE-WETLANDS.mxd

PROJECT: 1163.71978 | DATED: 8/2/2022 | DESIGNER: LOMBARJJ

RAMBØLL

FIGURE 3
PROPOSED MITIGATION WETLAND



APPROXIMATE PROPOSED MITIGATION WETLAND

APPROXIMATE 100 FT BUFFER

WETLAND BOUNDARY

MATHEWS AVE PARCEL BOUNDARY

MATHEWS AVE PROPERTY BOUNDARY

SURFACE CONTOUR (MAJOR)

SURFACE CONTOUR (MINOR)

NOTES

AERIAL CAPTURED AUGUST 25, 2022

0 30 60 Feet

PROPOSED MITIGATION WETLAND AREA

MATHEWS AVENUE

GEDDES AND CAMILLUS, NY

FIGURE 3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

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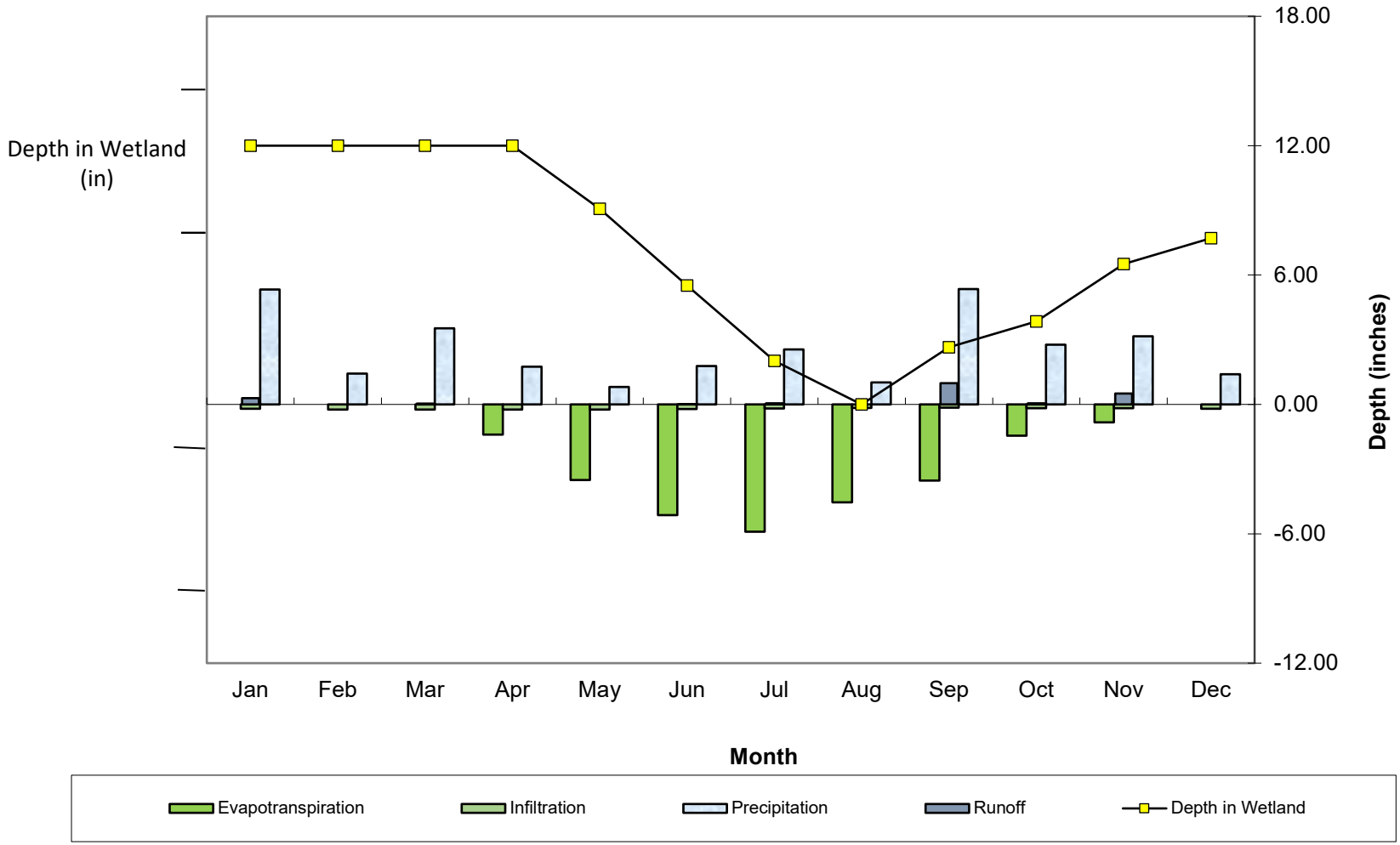
ATTACHMENT 1
SITE WETLAND HYDROGRAPHS

Remedial Action for Parcel A - Mathews Avenue Site
Joint Application for Permit and Preconstruction Notification
Figure 1A: Onsite Wetland Monthly Hydrograph
Dry Year (1999)



Remedial Action for Parcel A - Mathews Avenue Site
Joint Application for Permit and Preconstruction Notification
Figure 1B: Onsite Wetland Monthly Hydrograph
Dry Year (1999)

Water Budget Graphing Calculations - Dry Year (1999)

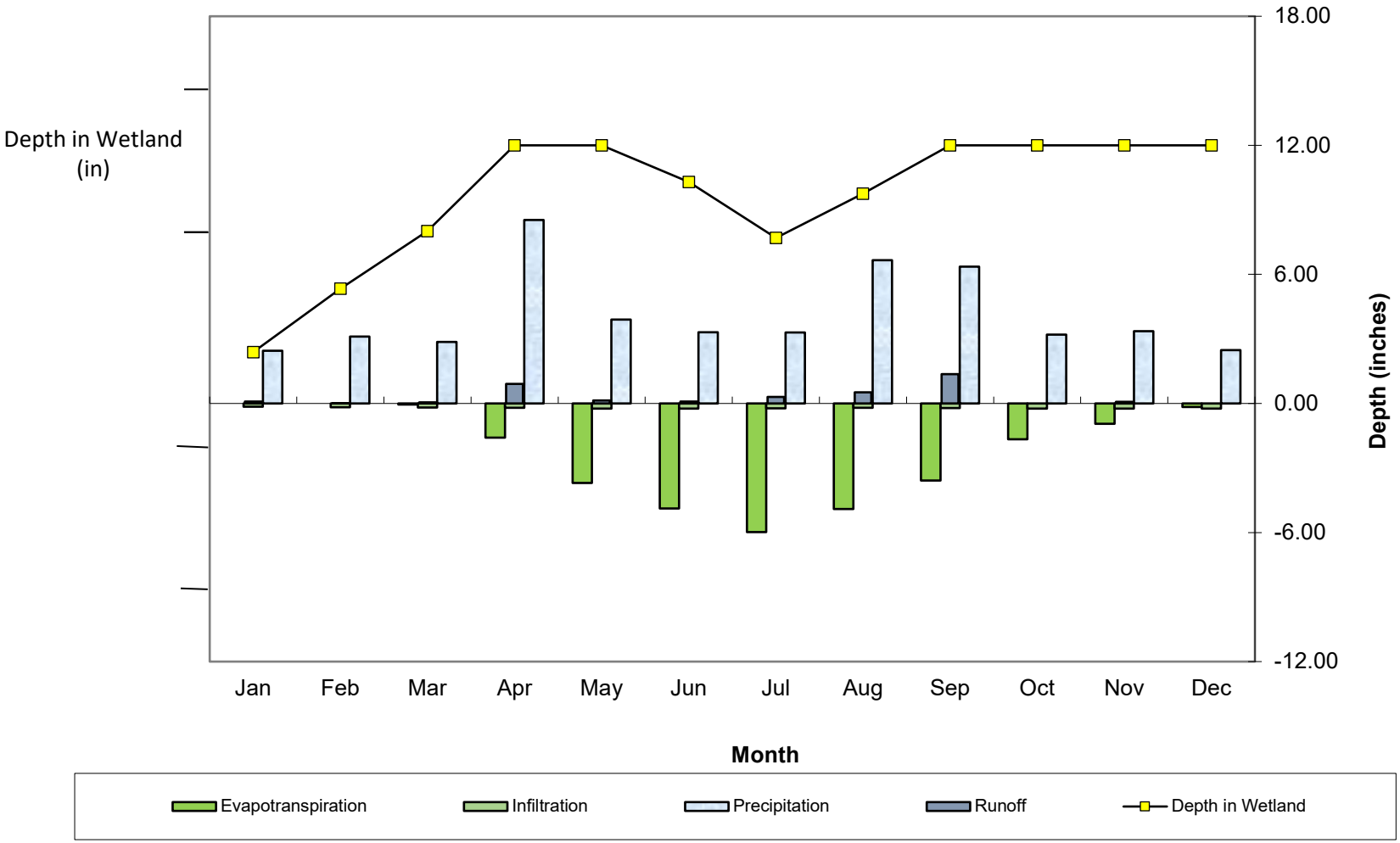
Month	Avg. Temp. (Degrees F)	Avg. Temp. (Degrees C)	Heat Index (I)	Evapotranspiration (ET)	Evapotranspiration Correction Factor	Corrected ET (Inches)	Infiltration (Inches)	Precipitation (Inches)	Groundwater (Inches)	Runoff (Inches)	Total depth change	Depth in Wetland (Inches)
												7.70
Jan	23	-5.14	0.00	0.00	0.77	0.00	-0.20	5.33	0.00	0.29	5.41	12.00
Feb	30	-1.23	0.00	0.00	0.88	0.00	-0.23	1.43	0.00	0.00	1.20	12.00
Mar	32	-0.16	0.00	0.00	0.99	0.00	-0.23	3.53	0.00	0.03	3.33	12.00
Apr	47	8.24	2.12	3.20	1.11	-1.40	-0.23	1.75	0.00	0.00	0.12	12.00
May	61	16.06	5.76	7.27	1.22	-3.50	-0.23	0.81	0.00	0.00	-2.93	9.07
Jun	70	21.09	8.66	10.16	1.28	-5.13	-0.21	1.78	0.00	0.01	-3.56	5.52
Jul	75	23.98	10.50	11.90	1.26	-5.90	-0.19	2.55	0.00	0.05	-3.49	2.02
Aug	69	20.61	8.37	9.88	1.17	-4.54	-0.17	1.02	0.00	0.00	-3.69	0.00
Sep	65	18.39	7.05	8.59	1.05	-3.54	-0.16	5.35	0.00	0.99	2.65	2.65
Oct	50	9.86	2.77	3.99	0.92	-1.45	-0.17	2.77	0.00	0.05	1.20	3.85
Nov	45	6.98	1.65	2.61	0.81	-0.83	-0.18	3.16	0.00	0.51	2.65	6.50
Dec	31	-0.47	0.00	0.00	0.75	0.00	-0.20	1.40	0.00	0.00	1.20	7.71

Monthly Heat Index = 47
Weir Height = 12 Inches
Latitude = 43 Degrees
a = 1.23

Threshold Precipitation Calculation

Curve Number = 78
S = 2.82 inches
Threshold Precipitation = 0.56 inches

Remedial Action for Parcel A - Mathews Avenue Site
Joint Application for Permit and Preconstruction Notification
Figure 2A: Onsite Wetland Monthly Hydrograph
Wet Year (2011)



Remedial Action for Parcel A - Mathews Avenue Site
Joint Application for Permit and Preconstruction Notification
Figure 2B: Onsite Wetland Monthly Hydrograph
Wet Year (2011)

Water Budget Graphing Calculations - Wet Year (2011)

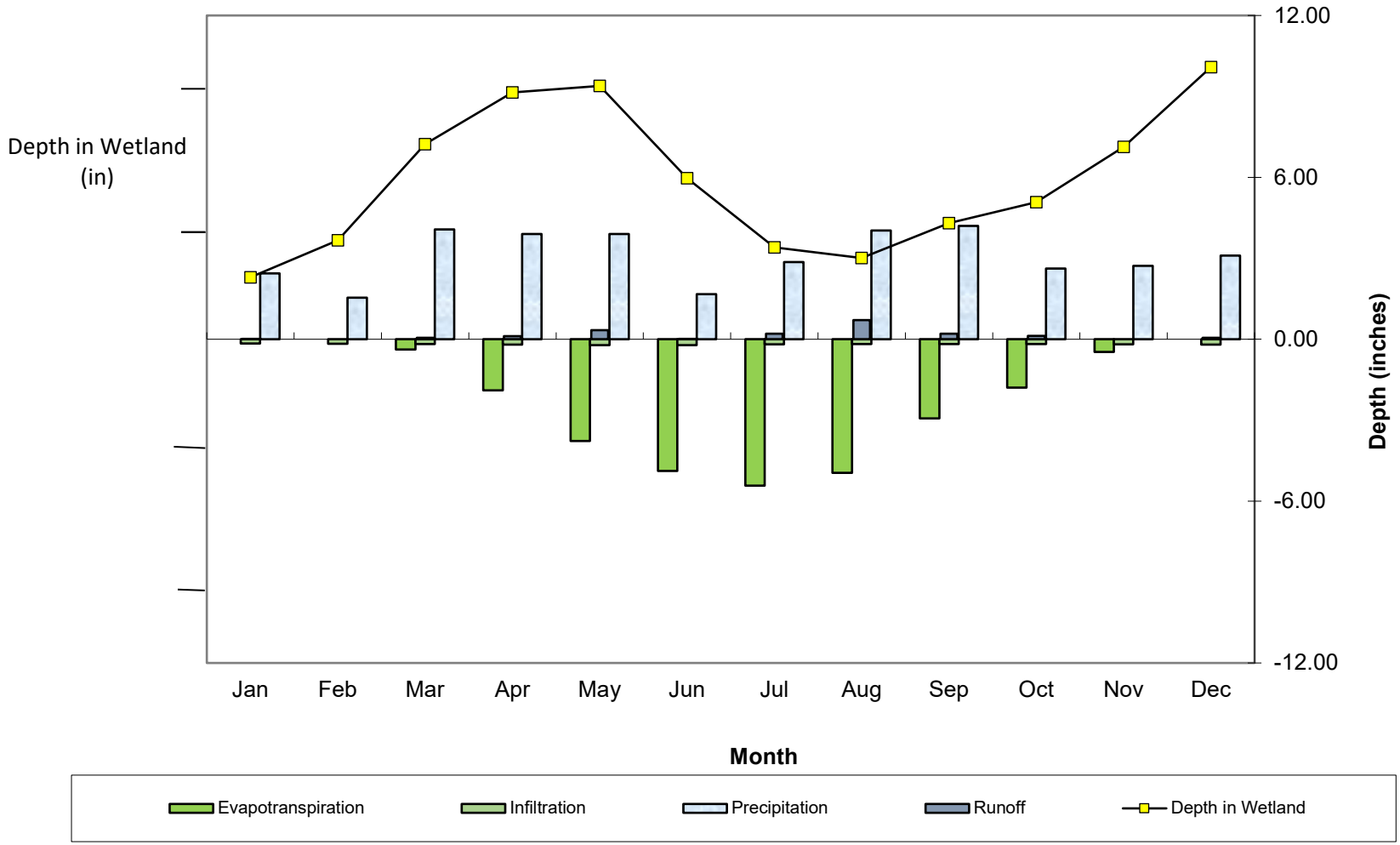
Month	Avg. Temp. (Degrees F)	Avg. Temp. (Degrees C)	Heat Index (I)	Evapotranspiration (ET)	Evapotranspiration Correction Factor	Corrected ET (Inches)	Infiltration (Inches)	Precipitation (Inches)	Groundwater (Inches)	Runoff (Inches)	Total depth change	Depth in Wetland (Inches)
												0.00
Jan	21	-6.13	0.00	0.00	0.77	0.00	-0.16	2.45	0.00	0.09	2.39	2.39
Feb	24	-4.58	0.00	0.00	0.88	0.00	-0.17	3.11	0.00	0.00	2.94	5.33
Mar	33	0.73	0.06	0.13	0.99	-0.05	-0.19	2.86	0.00	0.06	2.68	8.01
Apr	49	9.54	2.63	3.62	1.11	-1.58	-0.21	8.53	0.00	0.91	7.65	12.00
May	63	17.13	6.34	7.68	1.22	-3.70	-0.23	3.90	0.00	0.14	0.10	12.00
Jun	69	20.48	8.29	9.66	1.28	-4.88	-0.23	3.31	0.00	0.09	-1.71	10.29
Jul	76	24.33	10.73	12.05	1.26	-5.98	-0.22	3.30	0.00	0.31	-2.59	7.70
Aug	72	22.15	9.32	10.68	1.17	-4.91	-0.20	6.66	0.00	0.52	2.06	9.76
Sep	66	18.87	7.33	8.69	1.05	-3.58	-0.22	6.36	0.00	1.36	3.92	12.00
Oct	53	11.47	3.47	4.58	0.92	-1.66	-0.23	3.20	0.00	0.00	1.30	12.00
Nov	47	8.19	2.10	2.98	0.81	-0.95	-0.23	3.36	0.00	0.08	2.26	12.00
Dec	36	2.15	0.28	0.53	0.75	-0.16	-0.23	2.48	0.00	0.00	2.09	12.00

Monthly Heat Index = 51
Weir Height = 12 Inches
Latitude = 43 Degrees
a = 1.29

Threshold Precipitation Calculation

Curve Number = 78
S = 2.82 inches
Threshold Precipitation = 0.56 inches

Remedial Action for Parcel A - Mathews Avenue Site
Joint Application for Permit and Preconstruction Notification
Figure 3A: Onsite Wetland Monthly Hydrograph
Median Year (1991)



Remedial Action for Parcel A - Mathews Avenue Site
Joint Application for Permit and Preconstruction Notification
Figure 3B: Onsite Wetland Monthly Hydrograph
Median Year (1991)

Water Budget Graphing Calculations - Median Year (1991)

Month	Avg. Temp. (Degrees F)	Avg. Temp. (Degrees C)	Heat Index (I)	Evapotranspiration (ET)	Evapotranspiration Correction Factor	Corrected ET (Inches)	Infiltration (Inches)	Precipitation (Inches)	Groundwater (Inches)	Runoff (Inches)	Total depth change	Depth in Wetland (Inches)
												0.00
Jan	24	-4.26	0.00	0.00	0.77	0.00	-0.16	2.44	0.00	0.01	2.30	2.30
Feb	30	-1.22	0.00	0.00	0.88	0.00	-0.17	1.54	0.00	0.00	1.37	3.67
Mar	38	3.15	0.50	0.98	0.99	-0.38	-0.18	4.07	0.00	0.05	3.56	7.23
Apr	51	10.53	3.06	4.33	1.11	-1.89	-0.20	3.90	0.00	0.12	1.92	9.15
May	63	17.07	6.31	7.84	1.22	-3.78	-0.21	3.90	0.00	0.33	0.24	9.39
Jun	68	20.24	8.14	9.66	1.28	-4.88	-0.22	1.67	0.00	0.00	-3.43	5.96
Jul	72	22.41	9.49	10.95	1.26	-5.43	-0.19	2.86	0.00	0.20	-2.56	3.40
Aug	72	22.10	9.29	10.76	1.17	-4.95	-0.18	4.03	0.00	0.71	-0.39	3.01
Sep	60	15.81	5.63	7.14	1.05	-2.94	-0.17	4.20	0.00	0.20	1.29	4.31
Oct	53	11.72	3.59	4.94	0.92	-1.79	-0.18	2.62	0.00	0.12	0.77	5.07
Nov	40	4.43	0.83	1.49	0.81	-0.48	-0.19	2.72	0.00	0.00	2.06	7.13
Dec	31	-0.73	0.00	0.00	0.75	0.00	-0.20	3.10	0.00	0.06	2.95	10.08

Monthly Heat Index = 47
Weir Height = 12 Inches
Latitude = 43 Degrees
a = 1.23

Threshold Precipitation Calculation

Curve Number = 78
S = 2.82 inches
Threshold Precipitation = 0.56 inches

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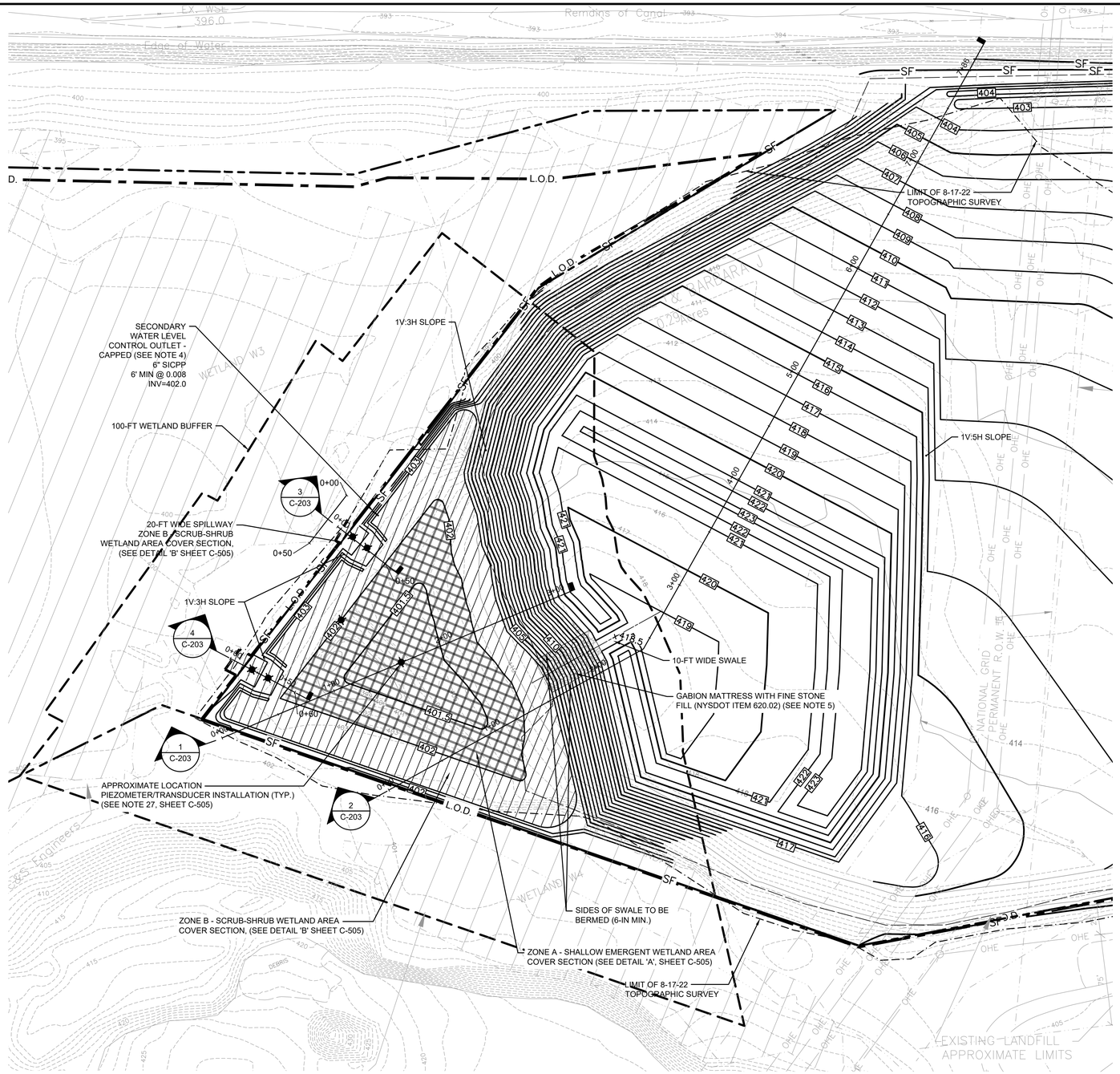
SHEET C-110: GRADING PLAN – ONSITE WETLAND
SHEET C-203: SECTIONS – ONSITE WETLAND
SHEET C-505: WETLAND NOTES, DETAILS, AND PLANTING

SAVED: 3/22/23 8:42 AM

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING EASEMENT
- EXISTING WATER EDGE
- EXISTING OVERHEAD ELECTRIC
- EXISTING WETLANDS
- EXISTING UTILITY POLE
- PROPERTY LINE
- SILT FENCE
- +409.9 PROPOSED SPOT ELEVATION
- EXISTING WETLAND
- PROPOSED FINE STONE FILL
- ZONE A - SHALLOW EMERGENT WETLAND HABITAT
- ZONE B - SCRUB SHRUB WETLAND HABITAT
- 100-FT WETLAND BUFFER
- L.O.D. LIMITS OF DISTURBANCE (L.O.D.)
- PIEZOMETER WITH TRANSDUCER



NOTES:

1. WETLAND LIMIT EXTENTS COMPRISE SCRUB-SHRUB AND SHALLOW EMERGENT COVER TYPES AND TOTAL 1.1 ACRES AS SHOWN.
2. SEE NOTE 19 ON SHEET C-505 FOR WETLAND COVER PLACEMENT DETAILS.
3. SURVEY PERFORMED BY THEW ASSOCIATES, AUGUST 17, 2022.
4. THE PRIMARY WETLAND OUTLET SHALL BE THE SPILLWAYS AT ELEVATION 402.5. A SECONDARY OUTLET PIPE SHALL BE INSTALLED AT ELEVATION 402.0 AND CAPPED AT INSTALLATION. THE CAP SHALL BE REMOVABLE, IN THE EVENT THAT ADDITIONAL WATER LEVEL CONTROL BETWEEN ELEVATIONS 402.5 AND 402.0 IS DESIRED FOR MANAGEMENT OF SCRUB-SHRUB ZONE SOIL SATURATION. PROVIDE FINE STONE FILL AS OUTLET PROTECTION.
5. SWALE COVER SECTION SHALL CONSIST OF 8-IN COMPACTED LOW-PERMEABILITY SOIL OVERLAIN BY A DEMARCATION LAYER AND 4-IN THICK GABION MATTRESS. PLACE GABION MATTRESSES SUCH THAT A TYPICAL TRAPEZOIDAL SWALE CROSS SECTION IS FORMED. SWALE BOTTOM ELEVATION SHALL MATCH DESIGN GRADES. TRAPEZOIDAL SIDES SHALL BE FORMED THROUGH THE CREATION OF BERMS. BERMS SHALL BE 6-INCHES ABOVE DESIGN GRADES. BERM ELEVATIONS NOT SHOWN.

GRADING PLAN - WETLAND MITIGATION AREA

SCALE: 1" = 50' 50' 0 50'

NORTH

PRELIMINARY NOT FOR CONSTRUCTION
DATE: MARCH 2023

IN CHARGE OF B. KUBIAK
DESIGNED BY N. PERROTTA
CHECKED BY M. DALEY
DRAWN BY D. KENT

NO.	DATE	REVISION	INT.
1	03/21/2023	ISSUED FOR NYSDEC REVIEW	BAK
0	11/17/2022	ISSUED FOR NYSDEC REVIEW	BAK

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

GRADING PLAN - ONSITE WETLAND

FILE NO. 1163.71978
DATE NOVEMBER 2022

C-110

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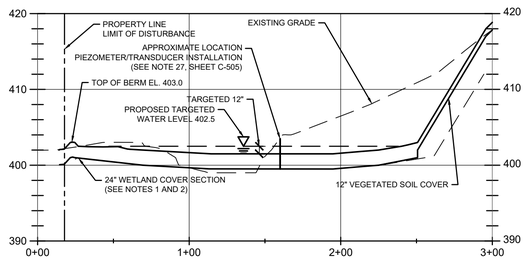
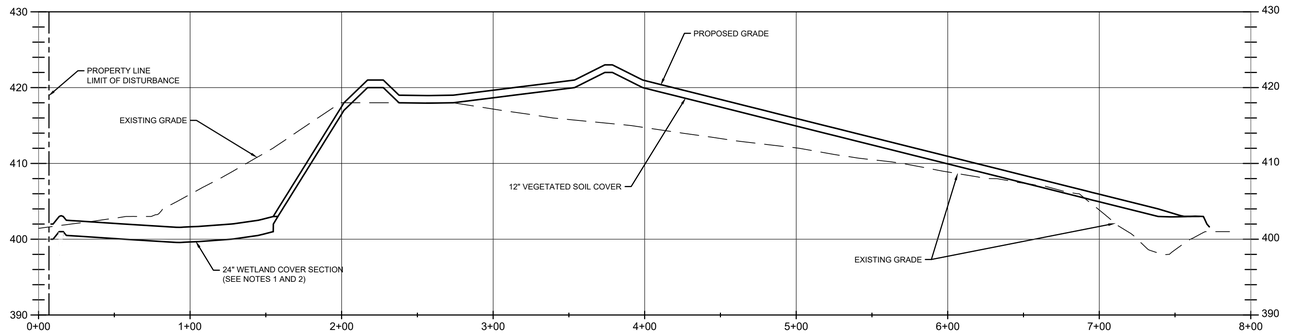


SECTION - 1

SCALE: HORIZ. 1"=50' 50' 0 50'
VERT. 1"=10' 10' 0 10'

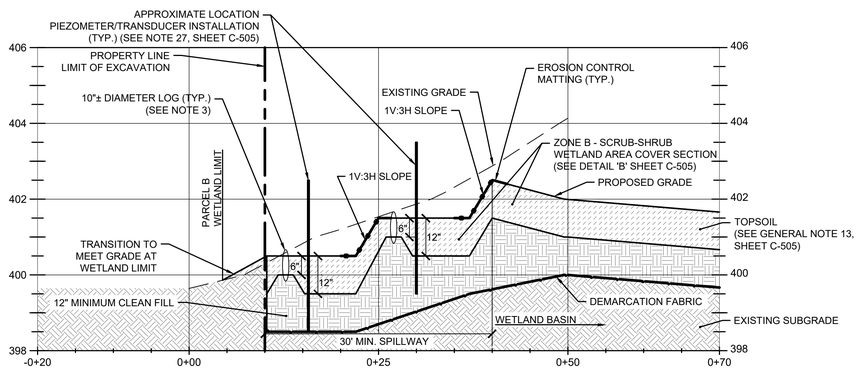
1 / C-110



SECTION - 2

SCALE: HORIZ. 1"=50' 50' 0 50'
VERT. 1"=10' 10' 0 10'

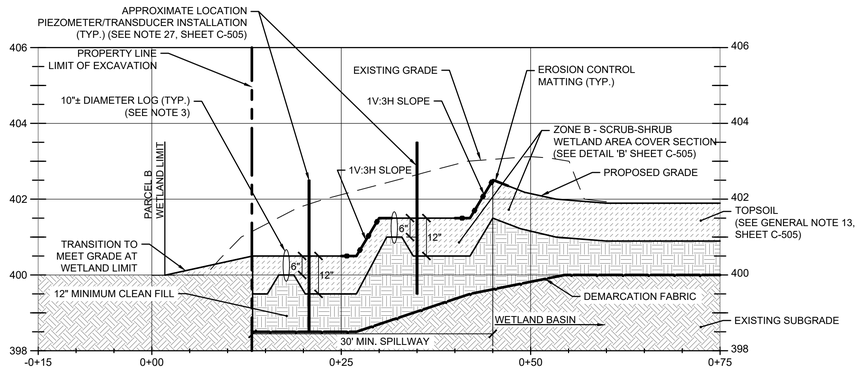
2 / C-110



SECTION - 3

SCALE: HORIZ. 1"=10' 10' 0 10'
VERT. 1"=2' 2' 0 2'

3 / C-110



SECTION - 4

SCALE: HORIZ. 1"=10' 10' 0 10'
VERT. 1"=2' 2' 0 2'

4 / C-110

SECTION 3 & 4 NOTES:

1. INSTALL BIODEGRADABLE EROSION CONTROL MATTING ON SLOPED AREA WITHIN SPILLWAY FOOTPRINT. ANCHOR AS RECOMMENDED BY MANUFACTURER.
2. PROVIDE UP TO ±2-INCHES SURFACE GRADE VARIATION TO PROMOTE WATER RETENTION.
3. APPROXIMATELY ±10" DIAMETER LOG TO BE BURIED AS DEPICTED, LOG SHALL PROTRUDE FROM TOPSOIL APPROXIMATELY 2-INCHES.

PRELIMINARY
NOT FOR
CONSTRUCTION
DATE: MARCH 2023

IN CHARGE OF B. KUBIAK
DESIGNED BY N. PERROTTA
CHECKED BY M. DALEY
DRAWN BY D. KENT

NO.	DATE	REVISION	INT.
0	03/21/2023	ISSUED FOR NYSDEC REVIEW	BAK

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

SECTIONS - ONSITE WETLAND

FILE NO. 1163.71978
DATE NOVEMBER 2022

C-203

SAVED: 3/21/23 5:03 PM

GENERAL NOTES:

1. IMPROVEMENT AND RESTORATION ACTIVITIES WITHIN WETLANDS SHALL BE PERFORMED IN ACCORDANCE WITH SECTIONS 401 AND 404 OF THE CLEAN WATER ACT AND OTHER PERMIT CONDITIONS OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC).
2. THE CONTRACTOR SHALL MAINTAIN SURFACE WATER FLOW INTO, THROUGH, AND OUT OF THE CONSTRUCTION ZONE AT ALL TIMES.
3. BASED ON PERMIT REQUIREMENTS, THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION OPERATIONS AS REQUIRED TO LIMIT THE MIGRATION OF SILT/SEDIMENT DOWNSTREAM OF THE CONSTRUCTION ZONE. SPECIFIC CRITERIA TO BE ADHERED TO INCLUDE THE FOLLOWING:
   A. TURBIDITY: NO INCREASE IN TURBIDITY 400 FEET DOWNSTREAM OF THE CONSTRUCTION ZONE WHICH WILL CAUSE A SUBSTANTIAL VISIBLE CONTRAST TO NATURAL CONDITIONS.
   B. SETTLEABLE SOLIDS: NO SETTLEABLE SOLIDS 100 FEET DOWNSTREAM OF THE CONSTRUCTION ZONE WHICH WILL CAUSE DEPOSITION OR IMPAIR THE WATERS FOR THEIR BEST USAGES.
4. CONSTRUCTION SHALL BE PERFORMED ONLY DURING DAYLIGHT HOURS. IF NECESSARY, THE CONTRACTOR SHALL ESTABLISH BYPASS PUMPING OPERATIONS DURING THE PERFORMANCE OF CONSTRUCTION ACTIVITIES TO MAINTAIN FLOW CONDITIONS. IF CONSTRUCTION OPERATIONS ARE TEMPORARILY SUSPENDED (E.G., DUE TO NIGHTFALL), BYPASS PUMPING SHALL BE MAINTAINED IF REQUIRED TO MINIMIZE THE DOWNSTREAM TRANSPORT OF SETTLEABLE SOLIDS AND IMPACTS TO DOWNSTREAM TURBIDITY IN ACCORDANCE WITH NOTE 3.
5. THE CONTRACTOR SHALL NOT STORE CHEMICALS, FUELS, OR LUBRICATING OILS WITHIN 100 FEET OF WETLAND OR STREAM. EQUIPMENT SHALL NOT BE REFUELED WITHIN 100 FEET OF WETLAND OR STREAM WITH THE EXCEPTION OF DEWATERING PUMPS.
6. EQUIPMENT AND/OR MACHINERY SHALL NOT BE WASHED IN EXISTING WETLANDS NOR SHALL THE CONTRACTOR PERMIT WATER FROM SUCH ACTIVITIES TO ENTER THE WETLANDS.
7. THE CONTRACTOR'S STAGING AREA(S) SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM EXISTING WETLANDS.
8. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PRECLUDE CONTAMINATION OF ANY WATERWAYS BY SUSPENDED SOLIDS, SEDIMENTS, FUELS, SOLVENTS, LUBRICANTS, OR ANY OTHER ENVIRONMENTALLY DELETERIOUS MATERIALS ASSOCIATED WITH THE PROJECT WORK.
9. THE PROJECT AREA SHALL BE RESTORED AS SOON AS PRACTICABLE AFTER GRADING IS COMPLETED PURSUANT TO GP-0-20-001.
10. IF NEEDED, THE CONTRACTOR SHALL SELECT THE NUMBER AND CAPACITY OF BYPASS PUMPS OR ENGINEER REVIEWED ALTERNATIVE REQUIRED TO DIVERT PROJECT AREA FLOW AWAY FROM THE CONSTRUCTION ZONE. THE MAXIMUM RATE OF FLOW WITHIN THE CONSTRUCTION ZONE SHALL BE BASED ON THE HYDRAULIC CAPACITY OF THE DOWNSTREAM SILTATION CONTROL MEASURES.
11. CONSTRUCTION MATS SHALL BE USED AS REQUIRED TO DEVELOP A STABLE BASE FOR THE MOVEMENT OF EQUIPMENT WITHIN WETLAND AREAS.
12. SANDBAGS SHALL BE FILLED WITH WELL GRADED COARSE SAND HAVING NO MORE THAN 10 PERCENT (BY WEIGHT) PASSING THE NO. 100 SIEVE.
13. TOPSOIL TO BE USED WITHIN THE MITIGATION AREA SHALL BE AMENDED AS NECESSARY TO OBTAIN A MINIMUM ORGANIC CONTENT OF 5% AND A CLAY CONTENT BETWEEN 20 AND 25%. AMENDMENT MATERIAL SHALL CONSIST OF ORGANIC MULCH THAT IS FREE OF ROCK, LIMBS OF WOODY VEGETATION, HAZARDOUS WASTE, OR SEEDS OF NOXIOUS OR INVASIVE SPECIES (E.G., PURPLE LOOSESTRIFE, COMMON REED, GARLIC MUSTARD).
14. MULCH SHALL BE FREE OF SEEDS FROM NOXIOUS PLANTS.
15. THE SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% AS DETERMINED WITH DENSITY TESTS DESIGNATED IN ASTM D698 METHOD D.
16. PLACE TOPSOIL WITHIN MITIGATION AREA AND ROUGH GRADE PER THE FOLLOWING:

    EMERGENT WETLAND (ZONE A)

    A. AVERAGE DEPTH OF 8-INCHES.
    B. MAXIMUM DEPTH OF 10-INCHES AND A MINIMUM DEPTH OF 6-INCHES.

    SCRUB-SHRUB WETLAND AREAS (ZONE B)

    A. AVERAGE DEPTH OF 12-INCHES.
    B. MAXIMUM DEPTH OF 16-INCHES AND A MINIMUM DEPTH OF 8-INCHES.
17. THE TOPSOIL SHALL NOT BE COMPACTED OR FINE GRADED BUT SHALL BE LOOSE AND NON-UNIFORM. FINISHED GRADE MAY VARY FROM THE PROPOSED GRADE ±6-INCHES TO CREATE WETLAND MICROTOPOGRAPHY BUT SHALL AVERAGE THE GRADES SHOWN.
18. SOIL STAGING ACTIVITIES SHALL BE COORDINATED WITH THE ENGINEER PRIOR TO PLACEMENT. SILT FENCE OR EQUIVALENT SHALL BE INSTALLED AROUND THE PERIMETER OF THE WORK AREA(S) UNTIL CONSTRUCTION ACTIVITIES ARE COMPLETED, AND THE AREA(S) IS GRADED, SEEDED, AND MULCHED. SILT FENCE SHALL BE REMOVED AFTER A MINIMUM OF 80% OF VEGETATIVE COVERAGE IS ACHIEVED.
19. COARSE WOODY DEBRIS (I.E., LOGS, STUMPS) SHALL BE PLACED RANDOMLY THROUGHOUT THE MITIGATION AREA. DEBRIS SHALL CONSIST OF CLEARED SITE VEGETATION THAT IS NATIVE/NON-INVASIVE AND SHALL BE PLACED AS GROUND COVER OVER A MINIMUM OF 2% OF EACH ZONE WITHIN THE MITIGATION AREAS. MATERIAL TO BE USED SHALL BE A MINIMUM OF 6-INCH DIAMETER AT BREAST HEIGHT THROUGHOUT. PLACE STOCKPILED DEBRIS AS DIRECTED PRIOR TO PLANTING.
20. SUFFICIENT WATER LEVELS, AS REVIEWED BY THE ENGINEER, SHALL BE MAINTAINED WITH PUMPING OR ENGINEER REVIEWED ALTERNATIVE TO FACILITATE VEGETATIVE ESTABLISHMENT IN ZONES A AND B.
21. UPON COMPLETION OF THE WETLAND MITIGATION ACTIVITIES, THE CONTRACTOR SHALL RESTORE DISTURBED SURFACES IN NON-WETLAND AREAS TO ORIGINAL OR BETTER CONDITION INCLUDING TOPSOIL, SEED, AND MULCH IN AREAS NOT OTHERWISE FINISHED.
22. SITE ACCESS DURING WETLAND MITIGATION CONSTRUCTION WORK SHALL BE COORDINATED WITH THE ENGINEER. THE AREA SHALL ALSO BE MAINTAINED FREE OF CONSTRUCTION MATERIALS (E.G., SOIL, MULCH, EQUIPMENT) AND DEBRIS.
23. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL IDENTIFY AREAS FOR STAGING AND LAY DOWN FOR REVIEW BY THE ENGINEER.
24. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO COMPLETE CONSTRUCTION EXPEDITIOUSLY TO MINIMIZE THE DURATION OF DISTURBANCE.
25. INTERNAL SITE MOVEMENTS BY VEHICLES AND EQUIPMENT SHALL BE COORDINATED WITH THE ENGINEER. ALL ROUTES SHALL BE REVIEWED PRIOR TO USE AND SHALL BE RESTORED TO PRE-DISTURBANCE CONDITIONS UPON COMPLETION.
26. BOUNDARIES OF EXISTING WETLANDS ARE BASED ON THE WETLAND DELINEATION PERFORMED BY RAMBOLL IN 2021.
27. AN APPROXIMATELY 2-INCH I.D. BOREHOLE WILL BE ADVANCED TO FACILITATE THE INSTALLATION OF A 1-INCH I.D. POLYVINYL CHLORIDE (PVC) PIEZOMETER. AT LEAST 6 INCHES OF EACH PIEZOMETER WILL BE SLOTTED (0.010-INCH SLOTS). A DATA LOGGING PRESSURE TRANSDUCER WILL BE INSTALLED WITHIN EACH PIEZOMETER TO MONITOR SATURATION DURING THE GROWING SEASON. PIEZOMETER AND TRANSDUCER INSTALLATION SHALL OCCUR FOLLOWING FINAL GRADING.

EROSION & SEDIMENT CONTROL NOTES:

1. WORK SHALL BE PERFORMED IN ACCORDANCE WITH NYSDEC STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) GP-0-20-001.
2. CONTRACTOR SHALL MINIMIZE VEGETATIVE CLEARING TO THAT REQUIRED TO PERFORM CONTRACT REQUIREMENTS.
3. CLEARED VEGETATION SHALL BE CHIPPED OUTSIDE THE LIMITS OF THE WETLANDS AND EITHER BE USED AS MULCH IN DISTURBED AREAS OR BE DISPOSED OF OFF-SITE.
4. EROSION AND SEDIMENT CONTROL (E&SC) FACILITIES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED PURSUANT TO THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND GP-0-20-001.
5. A TEMPORARY DIVERSION SYSTEM (I.E., COFFERDAM) SHALL BE INSTALLED AS NEEDED TO ACCOMMODATE CONSTRUCTION ACTIVITIES AND MINIMIZE OFF-SITE MIGRATION OF SEDIMENT.

SEQUENCES OF CONSTRUCTION:

THE SEQUENCE SHOWN HEREIN IS THE GENERAL ORDER OF DESIRED CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO CONFORM TO THE INTENT SHOWN. DEVIATIONS SHALL BE COORDINATED WITH AND REVIEWED BY THE ENGINEER PRIOR TO IMPLEMENTATION.

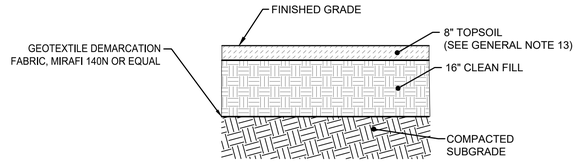
1. INSTALL AND MAINTAIN E&SC FACILITIES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND NYSDEC'S "NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL".
2. TEMPORARY STAGING/LAYDOWN AREAS SHALL BE MAINTAINED IN ACCORDANCE WITH THE DETAIL FOR A STABILIZED CONSTRUCTION ENTRANCE.
3. CLEAR AND GRUB PROPOSED WETLAND MITIGATION AREAS.
4. INSTALL FACILITIES AS NECESSARY TO DIVERT FLOW AROUND WORK AREA THROUGH A STABILIZED AREA THAT MINIMIZES EROSION AND PROMOTES SEDIMENTATION.
5. PERFORM GRADING AS SHOWN.
6. PLACE WOODY DEBRIS AS DESCRIBED.
7. TOPSOIL, SEED, PLANT, AND MULCH AREAS AS SHOWN.
8. RESTORE SURFACE DRAINAGE THROUGH AREAS.
9. COMPLETE OUTSTANDING PROJECT ITEMS, INCLUDING RESTORATION OF SURFACES AND REMOVAL OF E&SC DEVICES.
10. DEMOBILIZE.

TABLE 1 ZONE A - SHALLOW EMERGENT SEED MIX

CONTENT (%)	COMMON NAME	BOTANICAL NAME
21	FOX SEDGE	*CAREX VULPINOIDEA*
20	VIRGINIA WILDRYE	*ELYMUS VIRGINICUS*
16	LURID SEDGE	*CAREX LURIDA*
12	HOP SEDGE	*CAREX LUPULINA*
12	BLUNT BROOM SEDGE	*CAREX SCOPARIA*
3	BLUE VERVAIN	*VERBENA HASTATA*
2.4	SWAMP MILKWEED	*ASCLEPIAS INCARNATA*
2	SOFT RUSH	*JUNCUS EFFUSUS*
2	GOLDEN ALEXANDERS	*ZIZIA AUREA*
1.6	NEW ENGLAND ASTER	*ASTER NOVAE-ANGLIAE*
1.3	AWL SEDGE	*CAREX STIPATA*
1	NODDING BUR MARIGOLD	*BIDENS CERNUA*
1	PATH RUSH	*JUNCUS TENUIS*
0.8	WRINKLELEAF GOLDENROD	*SOLIDAGO RUGOSA*
0.6	WHITE VERVAIN	*VERBENA URTICIFOLIA*
0.5	FRINGED SEDGE	*CAREX CRINITA*
0.5	BONESET	*EUPATORIUM PERFOLIATUM*
0.5	COMMON SNEEZEWEED	*HELENIUM AUTUMNALE*
0.5	SQUARE STEMMED MONKEYFLOWER	*MIMULUS RINGENS*
0.3	GREAT BLUE LOBELIA	*LOBELIA SIPHILITICA*
0.3	WOOLGRASS	*SCIRPUS CYPERINUS*
0.2	MUD PLANTAIN	*ALISMA SUBCORDATUM*
0.2	PURPLESTEM ASTER	*ASTER PUNICEUS*
0.2	FLAT TOPPED WHITE ASTER	*ASTER UMBELLATUS*
0.1	DITCH STONECROP	*PENTHORUM SEDOIDES*

TABLE 2. ZONE B - SCRUB-SHRUB SEED MIX

CONTENT (%)	COMMON NAME	BOTANICAL NAME
25	VIRGINIA WILD RYE	*ELYMUS VIRGINICUS*
15	ARROWWOOD	*VIBURNUM DENTATUM*
15	SILKY DOGWOOD	*CORNUS AMOMUM*
15	GREY DOGWOOD	*CORNUS RACEMOSA*
11	OATS	*AVENA SATIVA*
4	FOX SEDGE	*CAREX VULPINOIDEA*
3	GRASS LEAVED GOLDENROD	*EUTHAMIA GRAMINIFOLIA*
2	LURID (SHALLOW) SEDGE	*CAREX LURIDA*
2	BLUNT BROOM SEDGE	*CAREX SCOPARIA*
2	AWL SEDGE	*CAREX STIPATA*
2	PATH RUSH	*JUNCUS TENUIS*
1	CALICO ASTER	*ASTER LATERIFLORUS*
1	NEW ENGLAND ASTER	*ASTER NOVAE-ANLIAE*
1	ROUGH AVENS	*GEUM LACINIATUM*
1	NODDING BUR MARIGOLD	*BIDENS CERNUA*

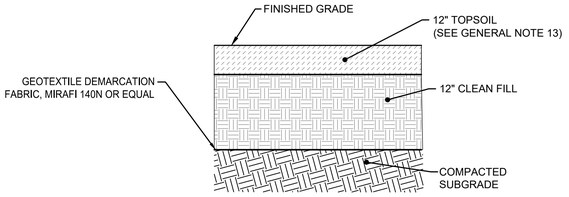


NOTES:

1. THIS PROPOSED SECTION SHALL BE APPLIED TO THE SHALLOW EMERGENT WETLAND HABITAT LIMITS.
2. SHALLOW EMERGENT WETLAND HABITAT SHALL BE SEEDED WITH THE SHALLOW EMERGENT SEED MIX (TABLE 1) FROM ERNST CONSERVATION SEEDS, OR EQUAL, AT A RATE OF 30 LBS PER ACRE.
3. MULCH SHALL BE APPLIED AT A RATE OF 2 TONS/ACRE FOR THIS AREA.

A ZONE A - SHALLOW EMERGENT WETLAND AREA COVER SECTION

NOT TO SCALE



NOTES:

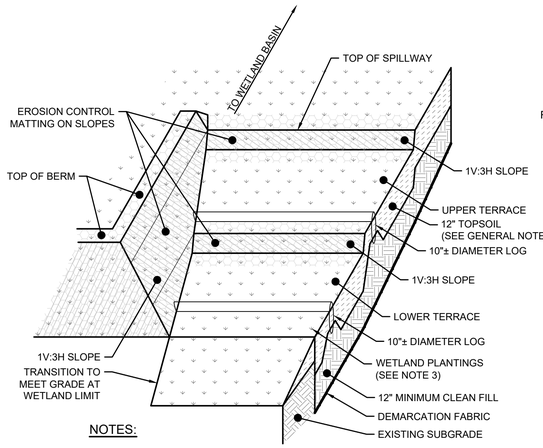
1. THIS PROPOSED SECTION SHALL BE APPLIED TO THE SCRUB-SHRUB WETLAND HABITAT LIMITS.
2. INDIVIDUAL SIZE #2 POTS OF THE FOLLOWING SPECIES SHALL BE PLANTED AT A DENSITY OF ONE PLANT PER 100 SQFT, ALTERNATING SPECIES SUCH THAT EQUAL NUMBERS OF EACH SPECIES ARE PLANTED.

SHRUB PLANTINGS	
COMMON NAME	**BOTANICAL NAME**
VIBURNUM	VIBURNUM DENTATUM
SILKY DOGWOOD	CORNUS AMMOMUM
SMOOTH ALDER	ALNUS SERRULATA
SPICEBUSH	LINDERA BENZOIN
BLACKGUM	NYSSA SYLVATICA
RED OSIER DOGWOOD	CORNUS STOLONIFERA

3. SCRUB-SHRUB WETLAND HABITAT SHALL BE SEEDED WITH THE SCRUB-SHRUB SEED MIX (TABLE 2) FROM ERNST CONSERVATION SEEDS, OR EQUAL, AT A RATE OF 30 LBS PER ACRE.
4. MULCH SHALL BE APPLIED AT A RATE OF 2 TONS PER ACRE FOR THIS AREA.

B ZONE B - SCRUB - SHRUB WETLAND AREA COVER SECTION

NOT TO SCALE

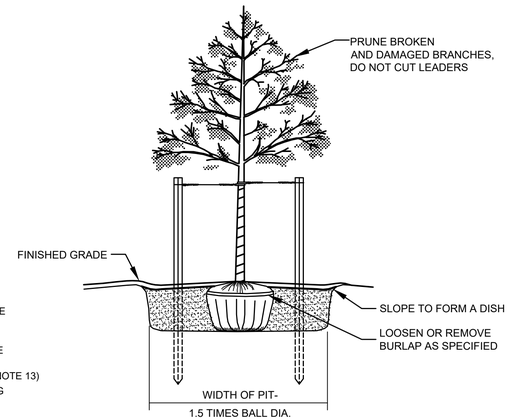


NOTES:

1. APPLIES TO BOTH SPILLWAYS SHOWN ON SHEET C-110.
2. SEE SECTIONS 3 AND 4, SHEET C-203 FOR ADDITIONAL DETAILS.
3. SPILLWAY TO BE PLANTED WITH ZONE B - SCRUB-SHRUB WETLAND AREA COVER SECTION. (SEE DETAIL B, THIS SHEET)

D SPILLWAY DETAIL

NOT TO SCALE



C DECIDUOUS PLANTING

NOT TO SCALE

PRELIMINARY
NOT FOR
CONSTRUCTION
DATE: MARCH 2023

IN CHARGE OF B. KUBIAK
DESIGNED BY N. PERROTTA
CHECKED BY M. DALEY
DRAWN BY D. KENT

NO.	DATE	REVISION	INT.
1	03/21/2023	ISSUED FOR NYSDEC REVIEW	BAK
0	11/17/2022	ISSUED FOR NYSDEC REVIEW	BAK

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

301 BELLE ISLE ROAD, LLC
MATHEWS AVENUE LANDFILL - PARCEL A
REMEDIAL ACTION WORK PLAN
VILLAGE OF SOLVAY, NEW YORK

CIVIL

WETLAND NOTES, DETAILS AND PLANTING

FILE NO. 1163.71978

DATE NOVEMBER 2022

C-505

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Buffalo & New York Districts Final Regional Conditions, Water Quality Certification and Coastal Zone Concurrence for the 2021 Nationwide Permits for New York State
Effective February 25, 2022 - Expiration March 14, 2026

Table of Contents:

A. NATIONWIDE PERMITS INDEX:

B. NATIONWIDE PERMITS

38. Cleanup of Hazardous and Toxic Waste. Specific activities required to effect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Court ordered remedial action plans or related settlements are also authorized by this NWP. This NWP does not authorize the establishment of new disposal sites or the expansion of existing sites used for the disposal of hazardous or toxic waste.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authorities: Sections 10 and 404)

Note: Activities undertaken entirely on a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site by authority of CERCLA as approved or required by EPA, are not required to obtain permits under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act.

Buffalo District Only Permit-specific Regional Conditions: None

New York District Only Permit-specific Regional Conditions:

a. For those activities that are located within Essential Fish Habitat (EFH) waters as defined in Section G-E.8. below, to the maximum extent practicable, no in-water work shall occur between March 1 and June 30.

b. Within EFH or within areas supporting anadromous fish migration and spawning, as discussed in Section G-E.8. below, the applicant shall include anadromous fish information in the required Pre-Construction Notification (PCN) for USACE coordination with the National Marine Fisheries Service (NMFS).

c. For those activities that would impact more than 0.5 acres of waters of the United States, and are located within EFH, a PCN is required for USACE coordination with the NMFS.

Section 401 Water Quality Certification (WQC):
The WQC has been denied for this NWP by all certifying authorities as follows:

i. New York State Department of Public Services (NYSDPS) for activities that relate to the construction and operation of major natural gas or electric transmission facilities undertaken pursuant to New York State Public Service Law (PSL) Article VII.

ii. New York State Office of Renewable Energy Siting (NYSORES) for activities that relate to the construction and operation of major renewable electric generating facilities undertaken pursuant to New York State Executive Law Article 6, Section 94-C.

iii. New York State Board on Electric Generation Siting and the Environment (Siting Board) for activities that relate to new and repowered or modified major electric generating facilities of 25 megawatts or more undertaken pursuant to PSL Article 10.

iv. U.S. Environmental Protection Agency (USEPA), as the certifying agency for the seven federally recognized Indian Nations in New York (Cayuga Nation, Onondaga Nation, Oneida Nation of Indians, Seneca Nation of Indians, Shinnecock Indian Nation, Tonawanda Seneca Nation, and Tuscarora Nation) for all activities occurring on these tribal lands.

v. Saint Regis Mohawk Tribe for all activities occurring on Saint Regis Mohawk Tribal land.

vi. New York State Department of Environmental Conservation (NYSDEC) for those activities not covered above in i. through v. in New York State.

Any party conducting proposing to conduct the activities authorized by this NWP must apply for and obtain an individual WQC or waiver thereof from the appropriate certifying authority. Refer to Section K below for agency contact information.

New York State Department of State Coastal Zone Management Consistency Determination:
Pursuant to 15 CFR Part 930.41, the New York State Department of State (NYSDOS) concurs with the USACE' consistency determination for this NWP anywhere in the New York State coastal area with which all general and all Buffalo and New York District regional conditions are complied.

For activities that are proposed within the New York City Waterfront Revitalization Program, the NYSDOS objects to the USACE' consistency determination and therefore, an individual consistency concurrence determination from NYSDOS is required for this NWP to be valid. See Section I below for further information. Such activities shall be submitted to NYSDOS for review by the applicant. NYSDOS will review the proposed activities pursuant to 15 CFR Part 930 Subpart D. NYSDOS concurrence with an applicant's consistency certification shall not be presumed unless NYSDOS fails to concur with or object to an applicant's consistency certification within six (6) months of commencement of NYSDOS' review of an applicant's consistency certification and all necessary data and information in accordance with 15 CFR § 930.62 or § 930.63. See Section I below for further information.

C. NATIONWIDE PERMIT GENERAL CONDITIONS

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Structures and Fills. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified

listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate

documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required

coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be

authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____
(Transferee)

_____
(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification.
(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) Form of Pre-Construction Notification: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) Agency Coordination:

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

D. DISTRICT ENGINEER'S DECISION

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must

review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

E. FURTHER INFORMATION

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

F. DEFINITIONS

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term "discharge" means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and

elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream’s course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power

transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a "water of the United States." If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

G. BUFFALO & NEW YORK DISTRICT GENERAL REGIONAL CONDITIONS

These conditions apply to ALL Nationwide Permits.

G-A. Construction Best Management Practices (BMP's): Unless specifically approved otherwise through issuance of a variance by the District Engineer, the following BMP's must be implemented to the maximum degree practicable, to minimize erosion, migration of sediments, and adverse environmental impacts. Note that at a minimum, all erosion and sediment control and stormwater management practices must be designed, installed and maintained throughout the entire construction project in accordance with the latest version of the *New York Standards and Specifications for Erosion and Sediment Control* and the *New York State Stormwater Management Design Manual*. These documents are available at: http://www.dec.ny.gov/chemical/29066.html and http://www.dec.ny.gov/chemical/29072.html, respectively. Prior to the discharge of any dredged or fill material into waters of the United States, including wetlands, authorized by NWP, the permittee must install and maintain erosion and sedimentation controls in and/or adjacent to wetlands or other waters of the United States.

1. All synthetic erosion control features (e.g., silt fencing, netting, mats), which are intended for temporary use during construction, shall be completely removed and properly disposed of after their initial purpose has been served. Only natural fiber materials, which will degrade over time, may be abandoned in place.

2. Materials resulting from trench excavation for utility line installation or ditch reshaping activities which are temporarily sidecast or stockpiled into waters of the United States must be backfilled or removed to an upland area within 30 days of the date of deposition. Note: Upland options shall be utilized prior to temporary placement within waters of the U.S., unless it can be demonstrated that it would not be practicable or if the impacts of complying with this upland option requirement would result in more adverse impacts to the aquatic environment.

3. For trenching activities in wetlands the applicant shall install impermeable trench dams or trench breakers at the wetland boundaries and every 100 feet within wetland areas to prevent inadvertent drainage of wetlands or other waters of the United States.

4. Dry stream crossing methods (e.g., diversion, dam and pump, flume, bore) shall be utilized for culvert or other pipe, or utility installations to reduce downstream impacts from turbidity and sedimentation. This may require piping or pumping the stream flow around the work area and the use of cofferdams.

5. No in-stream work shall occur during periods of high flow, except for work that occurs in dewatered areas behind temporary diversions, cofferdams or causeways.

6. Construction access and staging areas shall be by means that avoid or minimize impacts to aquatic sites (e.g. use of upland areas for access & staging, floating barges, mats, etc.). Discharges of fill material associated with the construction of temporary access roads, staging areas and work pads in wetlands shall be placed on filter fabric. All temporary fills shall be removed upon completion of the work and the disturbed area restored to pre-construction contours, elevations and wetland conditions, including cover type. All vegetation utilized in the restoration activity shall consist of native species.

7. All return flow from dredged material disposal areas shall not result in an increase in turbidity in the receiving water body that will cause a substantial visible contrast to natural conditions. (See NWP #16)

8. For activities involving the placement of concrete into waters of the U.S., the permittee must employ watertight forms. The forms shall be dewatered prior to the placement of the concrete. The use of tremie concrete is allowed, provided that it complies with New York State water quality standards.

9. New stormwater management facilities shall be located outside of waters of the U.S. A variance of this requirement may be requested with the submission of a PCN. The PCN must include justification which demonstrates that avoidance and minimization efforts have been met.

10. To the maximum extent practicable, the placement of fill in wetlands must be designed to maintain pre-construction surface water flows/conditions between remaining on or off-site waters and to prevent draining of the wetland or permanent hydrologic alteration. This may require the use of culverts and/or other measures. Furthermore, the activity must not restrict or impede the passage of normal or expected high flows (unless the primary purpose of the fill is to impound waters). The activity may alter the pre-construction flows/conditions if it can be shown that it benefits the aquatic environment (i.e. wetland restoration and/or enhancement).

11. Stone aprons and scour protection placed in streams shall not extend higher than the stream bed in order to create a uniform grade and shall be filled with native stream bed material and supplemented with similarly sized material, if needed, to fill interstitial spaces to maintain water flow on the surface of the stream bed.

G-B. CULVERTS

1. **ALL NEW OR REPLACEMENT CULVERTS IN STREAMS**, to the extent they are regulated, shall be constructed/installed in accordance with the following, in order to ensure compliance with NWP General Condition #2 – Aquatic Life Movement and #9 – Management of Water Flows:

a. Size: Bank-full flows shall be accommodated through maintenance of the existing bank-full channel cross sectional dimensions within a single culvert. Bank-full width is generally considered to be the top width at the stage where a stream begins to overtop its banks and spread into the floodplain. A bottomless culvert or bridge must be used to span the stream channel where practicable. If the stream cannot be spanned, the culvert width shall be minimum of 1.25 times width of the stream channel at the ordinary high water, which is generally equivalent to the width of the channel during the 2-year design storm.

b. Depth: To maintain low flow and aquatic life movement within culverts with a bottom, the culvert invert, including end sections, must be embedded. Specifically, the culvert must be installed with its

bottom buried below the grade of the stream bed, as measured at the average low point, to a depth of a minimum of 20 percent of the culvert vertical rise (height) throughout the length of the culvert. (Note: When not practicable to do so due to small culvert size, it is acceptable to allow natural deposition to cover the interior of the culvert bed following placement of the culvert invert to the 20% depth.)

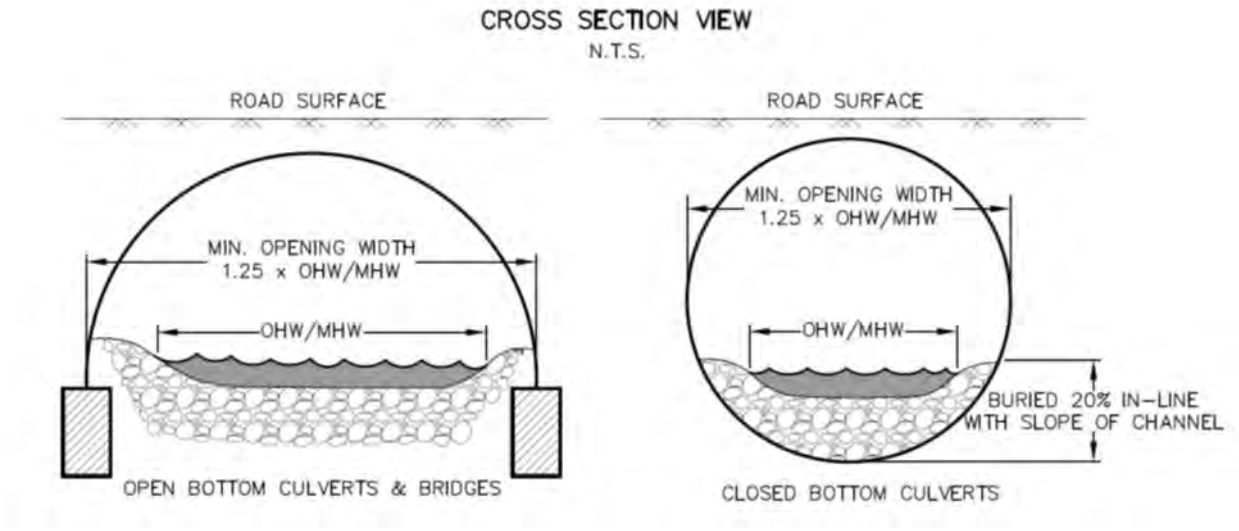
c. The dimension, pattern, and profile of the stream above and below the stream crossing shall not be permanently modified by changing the width or depth of the stream channel.

d. The culvert bed slope shall remain consistent with the slope of the adjacent stream channel.

Note 1: Use of the requirements alone will not satisfy the need for proper engineering and design. In particular, appropriate engineering is required to ensure structures are sized and designed to provide adequate capacity (to pass various flood flows) and stability (bed, bed forms, footings and abutments, both upstream and downstream). It is the permittee's responsibility to ensure the structure is appropriately designed.

Note 2: This condition does not apply to temporary culverts used for construction access that are in place for less than one construction season. However, compliance with General Conditions #2 and #9 still applies.

Note 3: For further guidance on identification of the Ordinary High Water mark, please see Regulatory Guidance Letter 05-05 available at: https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Guidance-Letters/



Preconstruction Notification (PCN) Requirements:
A PCN is required for projects that do not meet all of the above requirements. In addition to the PCN requirements of General Condition #32, the PCN must include the following information:

i. A statement indicating which of the above requirements will not be met by the proposed project;

ii. Information as to why the use of such structures or measures would not be practicable;

iii. A brief description of the stream discussing:

- Site specific information (i.e. stream bed slope, type and size of stream bed material, stream type, existing natural or manmade barriers, etc.) assessed to determine appropriate culvert design and to ensure management of water flows and aquatic life movement.

- Evaluation of the replacement for its impacts on: downstream flooding, upstream and downstream habitat (in-stream habitat, wetlands), potential for erosion and headcutting, and stream stability.

- Flow/storm event the proposed culvert is designed to pass (2 year, 50 year, etc.)

iv. Cross sections of the stream used to calculate the stream bed low point and ordinary high water width, consisting of:

- Stream channel cross sections shall be taken at proximal locations to the crossing location to determine the average of the lowest points in elevation of the stream bed and the average width at ordinary high water.

    - For new crossing locations, the average values from at least three measurements (project location and straight sections of the stream upstream and downstream) shall be used.

    - For replacement of an existing structure, the average values from at least two cross sections (straight sections of the stream upstream and downstream from the existing structure representative of the natural channel) shall be used. Note: sections should not be taken in the immediate vicinity of the structure as the channel width may be affected by the structure and not provide an accurate representation of the natural channel.

- This average low point shall be used to ensure low flow is maintained through the culvert and from which all embedment depths are measured.

- If the above cross section method was not practicable to use, an alternative method may be utilized. The PCN shall include justification for the method used including the data used and an explanation as to how it provides an equivalent measure.

v. An evaluation of the effects the crossing would have on aquatic life movement and/or water flows; and

vi. Mitigation measures that will be employed to minimize these effects. Mitigation measures may include, but are not limited to baffles, weirs, roughened channels, and grade control structures

A variance of the requirement(s) will be issued by the Corps if it can be demonstrated that the proposal would meet General Conditions #2 & #9 and would result in a less environmentally damaging practicable alternative (e.g. If compliance with any of the requirement(s) would result in detrimental impacts to the aquatic system then an alternate design should be proposed and a variance request submitted which outlines how compliance with the general conditions will be met.).

2. **ALL CULVERT REHABILITATION PROJECTS IN STREAMS**, to the extent they are regulated, not including culvert replacement projects (See 1 above), shall be constructed in accordance with the following, in order to ensure compliance with NWP General Condition #2 – Aquatic Life Movement and #9 – Management of Water Flows:

a. An evaluation of the existing culvert shall be conducted prior to the proposed culvert rehabilitation to determine if the existing culvert is in compliance with NWP GC #2 and #9. Specifically, the culvert shall be evaluated regarding its effect upon aquatic life movements and low/ high water flow. If the above requirements in General Regional Condition B. 1 (a)-(e) are met, then the culvert is considered in compliance with NWP General Conditions #2 & # 9. (Potential evaluation methods to consider include: North Atlantic Aquatic Connectivity Collaborative (NAACC) (Note: Projects should not result in a reduction of the NAACC passability score by reducing passage or creating a barrier), US Forest Service Aquatic Organism Passage FishXing, etc.)

b. A PCN is not required for projects that utilize cured-in-place pipe lining or other repair activities that do not raise the existing invert elevation such that it causes an impediment to the passage of either aquatic life movement or water flow, unless there is an existing impediment which will not be corrected by the proposed repair.

c. A PCN is required for any culvert rehabilitation project that includes a culvert which is not in compliance with GC #2 and/or #9 (i.e. impedes aquatic life movement or water flow) and which will not be corrected by the proposed repair.

d. A PCN is required for culvert rehabilitation projects which will involve pipe slip lining or other activities, including concrete invert paving and concrete lining that raise the existing invert elevation such that it causes an impediment to the passage of low flow or aquatic life movement. Slip lining is defined as the insertion of a smaller diameter pipe into an existing pipe by pulling pushing, or spiral winding.

Preconstruction Notification (PCN) Requirements:
In addition to the PCN requirements of General Condition #32, the PCN must include the following information:

i. A summary of the evaluation required in Item a. above including average ordinary high water channel width and a discussion of the impediment(s) to aquatic life movement and/or water flow.

ii. Information as to how the proposal will mitigate for the impediment. Mitigation measures may include, but are not limited to baffles, weirs, roughened channels, and grade control structures.

G-C. No regulated activity authorized by a Nationwide Permit can cause the loss of areas classified as a bog or fen in the State of New York, as determined by the Buffalo or the New York District Corps of Engineers, due to the scarcity of this habitat in New York State and the difficulty with in-kind mitigation. The Districts will utilize the following document in the classification:

> Edinger, G. J., D. J. Evans, S. Gebauer, T. G. Howard, D. M. Hunt, and A. M. Olivero (editors). 2014. *Ecological Communities of New York State*. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY. This document is available at the following location: https://www.nynhp.org/ecological-communities/

G-D. National Wild and Scenic Rivers (NWSR): The Upper Delaware River has been designated as a National Wild and Scenic River from the confluence of the East and West Branches below Hancock, New York, to the existing railroad bridge immediately downstream of Cherry Island in the vicinity of Sparrow Bush, New York. Also, the portion of the Genesee River located within Letchworth Gorge State Park, beginning at the southern boundary of the park and extending downstream to the Mt. Morris Dam, was designated by Congress as a permanent Study River in the Genesee River Protection Act of 1989. In accordance with General Condition #16, no activity may occur within a NWSR, including Study Rivers, unless the National Park Service (NPS) has determined in writing that the proposed work will not adversely affect the NWSR designation or study status**.** Therefore, a PCN is required for any NWP which would impact the designated portions of the Genesee River or the Upper Delaware River, unless NPS has previously indicated the project will not adversely affect the waterway. (Note: the applicant may not commence work under any NWP until the NPS determines in writing that the project will not adversely affect the NWSR even if 45-days have passed since receipt of the PCN package.) Information regarding NWSR may be found at**:** https://www.rivers.gov/new-york.php

G-E. For all proposals requiring a pre-construction notification (PCN), in addition to the requirements in General Condition 32, the applicant shall also include: (Note: the application will not be considered complete until all of the applicable information is received).

1. New York State/USACE Joint Application Form: The application form shall be completed and signed and shall clearly indicate that the submission is a PCN.
Buffalo District: http://www.lrb.usace.army.mil/Missions/Regulatory/Application-Forms/
New York District: https://www.nan.usace.army.mil/Missions/Regulatory/Obtaining-a-Permit/

2. Drawings: The PCN must include legible, project drawings on 8.5" x 11" paper. Full size drawings may be submitted in addition to the 8.5" x 11" plans to aid in the application review. Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are a Vicinity Map (i.e. a location map such as a USGS topographical map), a Plan View and a Cross-Section Map. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view or cross section). The Vicinity Map shall provide the location of the entire project site. In addition, each illustration should be identified with a figure or attachment number. The location map shall include the Latitude and Longitude or UTM coordinates of the project. For linear projects, the PCN shall include a map of the entire project including a delineation of all waters of the U.S. within the corridor. Aquatic resource information shall be submitted using the Cowardin Classification System mapping conventions (e.g. PFO, PEM, etc.).

3. Color photographs: The photos should be sufficient to accurately portray the project site, keyed to a location map and not taken when snow cover is present.

4. Avoidance and Minimization: The PCN should include a written narrative explaining how avoidance and minimization of temporary impacts and permanent losses of waters of the U.S. were achieved on the project site (i.e. site redesign, reduction in scope, alternate methods, etc.). It should include a description of the proposed construction practices that would be implemented to perform the proposed work and a description of the reasonably foreseeable direct and indirect effects to waters of the U.S. from the proposed construction practices.

5. Mitigation (See General Conditions 23 & 32(b)(6)): The PCN should include at least a conceptual compensatory mitigation plan for all projects resulting in the loss of greater than 1/10th of an acre of wetlands and/or 3/100 th of an acre of stream. Mitigation conceptual plans submitted with the PCN must include the following information at a minimum: proposed compensation type (bank or in-lieu fee credit, restoration, creation, preservation, etc.), location and brief discussion on factors considered for site selection (i.e. soils, water source, potential for invasive species, etc.), amount proposed per resource type and a discussion of how the proposal will compensate for aquatic resource functions and services lost as a result of the project.

Note 1: All mitigation projects must comply with the Federal Regulations on compensatory mitigation (33 CFR 332) entitled "Compensatory Mitigation for Losses of Aquatic Resources: Final Rule", dated April 10, 2008, which is available at: https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/mitig_info/ and any applicable District Guidelines.

Note 2: Although a conceptual mitigation plan may be sufficient for the purposes of a PCN submission, a detailed mitigation plan must be approved by the Corps before any jurisdictional work may occur on the project site.

Note 3: If more than 0.10 acres of designated EFH habitat (as discussed in Section G-E.8. below) would be impacted such that habitat would be lost, compensatory mitigation at a minimum ratio of 1:1 is required. A ratio of more than 1:1 may be required depending upon the ecological value of the habitat to be lost or degraded and the form of compensatory mitigation proposed to be provided.

Note 4: For additional information regarding natural stream channel design, please refer to https://www.epa.gov/cwa-404/natural-stream-channel-design-techniques-and-review for the Natural Stream Channel Design Techniques and Review Checklist as developed by U.S. EPA and U.S. Fish and Wildlife Service.

6. Nationwide Rivers Inventory: The PCN shall indicate if a river segment listed within the National

Park Service Nationwide Rivers Inventory (NRI) is located within the proposed project area. NRI river segments are potential candidates for inclusion in the National Wild and Scenic River System (See General Condition #16). For project areas containing a listed NRI segment, the PCN shall also include a statement as to how adverse effects to the river have been avoided or mitigated. The list is available at: http://www.nps.gov/ncrc/programs/rtca/nri/states/ny.html.

7. Historic or Cultural Resources: In accordance with General Condition 20, a PCN is required for any non-federal activity which may have the potential to cause effects to any historic properties* listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places (NR). Please refer to General Condition 20 for submission requirements. In addition, all PCNs should include:

a) A written statement indicating if any such properties may be affected by the proposed project.
b) A copy of any completed archaeology or building/structure survey reports. If a survey has not been performed, the statement shall include a list of resources checked in the determination.
c) Copies of any available correspondence from the New York State Office of Parks, Recreation, and Historic Preservation State Historic Preservation Officer (SHPO) regarding historic properties.
d) Copies of any available correspondence from federally recognized Indian Nations regarding historic properties that may be affected by the project.
e) Projects with ground disturbance may have the potential to cause effects to buried historic properties, regardless of occurring outside SHPO designated archaeological sensitive areas. Therefore, the PCN shall indicate if the ground disturbance will occur in any areas of previously undisturbed soil. For areas with prior disturbance, the PCN shall include a brief narrative describing the disturbance and its limit (i.e. type of disturbance, size of area with current undisturbed soil, size of area with existing disturbed soils, when the disturbance occurred, an estimate on how deep the soil disturbance extends, etc.) as well as photos of the existing ground disturbance.
f) Above ground buildings/structures that are over 50 years old and potentially affected by the project will need to be assessed to determine if they are eligible for the NR. The PCN shall: identify any structures present in the project area, which have not already been subject to SHPO review, include photos of the structures, and describe how the project would/would not affect them.

* - see NWP definition section for further clarification

Note 1**:** Information regarding historic properties may be found at: https://cris.parks.ny.gov. In addition, assistance regarding the determination of the presence of historic or cultural resources at or near the project site should be directed to SHPO.

Note 2**:** As stated in General Condition 20, if any listed, eligible or potentially eligible properties are present, the applicant shall not begin the activity until notified by the district engineer in writing either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

8. Endangered Species and Essential Fish Habitat (EFH): In accordance with General Condition #18, non-federal applicants must submit a PCN if any listed species or designated critical habitat might be affected or is in the vicinity of the activity (See Note 2 below), or if the activity is located in designated critical habitat. Please refer to General Condition #18 for submission requirements. In addition, all PCNs must include:

1. a written statement and documentation concerning any Essential Fish Habitat (EFH) and any federally listed or proposed Threatened or Endangered (T&E) species or designated and/or proposed critical habitat that might be affected or located in the vicinity of the project (See Note 2 below).

2. an official T&E species list printed within 90 days of the PCN submission, and a copy of any correspondence from the U.S. Fish and Wildlife Service (USFWS) and/or National Oceanic and Atmospheric Administration Fisheries Service (NOAA-Fisheries), regarding the potential presence of T&E species on the project site. An applicant should use the USFWS Information for Planning and Consultation (IPAC) website (https://ecos.fws.gov/ipac) as the primary resource to determine if there may be listed Threatened or Endangered species. Information on NOAA-Fisheries (NMFS) species (both T&E and EFH) can be found at: https://www.greateratlantic.fisheries.noaa.gov/. Region-specific information on NMFS species (both T&E and EFH) can we found at: https://www.fisheries.noaa.gov/new-england-mid-atlantic/habitat-conservation/essential-fish-habitat-consultations-greater-atlantic-region. Region-specific ESA information can be found at: https://www.fisheries.noaa.gov/topic/consultations#endangered-species-act-consultations.

3. For projects where T&E species are listed, a discussion of potential T&E species habitat within the project site (See USFWS T&E website for species habitat information). https://www.fws.gov/northeast/nyfo/es/section7.htm

4. If there is potential habitat for any T&E species within the project site the following, as applicable, shall be submitted:

    i. The results of any habitat surveys and presence/absence surveys. Note: all surveys should be coordinated with the USFWS and/or NOAA-Fisheries (NMFS) prior to initiation.

    ii. A detailed description of the proposed project, including secondary impacts and approximate proposed project construction schedule of project activities (e.g. land clearing, utilities, stormwater management).

    iii. A description of the natural characteristics of the property and surrounding area (e.g. forested areas, freshwater wetlands, open waters, and soils) and a description of surrounding land use (residential, agricultural, or commercial).

    iv. A description of the area to be impacted by the proposed project (including the species, typical sizes (d.b.h.) and number or acres of trees to be removed, substrate of stream, etc.).

    v. The location of the above referenced property and extent of any project related activities or discharges clearly indicated on a copy of a USGS 7.5-minute topographic quadrangle (quad) with the name of the quad(s) and latitude/longitude clearly labeled.

    vi. A description of conservation measures to avoid, minimize and/or mitigate impacts to listed species.

Note 1**:** There are no known T&E species or EFH species under the jurisdiction of the NOAA-Fisheries (NMFS) within the Buffalo District. Therefore, all Buffalo District requests for information regarding the presence of T&E species should be directed to the USFWS. In addition, no EFH review is necessary within the following New York District counties: Clinton, Essex, Franklin, Fulton, Hamilton, Montgomery, Otsego, Schenectady, Schoharie and Warren.

Note 2**:** Please refer to the following websites for further guidance and information relating to regulatory permits & T&E species in New York, including protocols for defining 'vicinity' for the Indiana and Northern long-eared bats:

Buffalo District: http://www.lrb.usace.army.mil/Missions/Regulatory/Endangered-Species/Endangered-Species-New-York/

New York District: https://www.nan.usace.army.mil/Missions/Regulatory/Nationwide-Permits/

Note 3**:** General Condition #18 is emphasized, … "For activities where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species or critical habitat, or until ESA section 7 consultation has been completed. **If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps."**

Note 4: Where a PCN is required for Essential Fish Habitat consultation, refer to the following links for the Essential Fish Habitat Assessment Worksheet and Mapper utilized to inform the preparation of the worksheet:

- EFH Assessment Worksheet: https://www.fisheries.noaa.gov/new-england-mid-atlantic/habitat-conservation/essential-fish-habitat-assessment-consultations
- EFH Mapper: https://www.habitat.noaa.gov/protection/efh/efhmapper/

Note 5: Where information is required for submerged aquatic vegetation (SAV) in the permit area or within 50 feet of the proposed work, please utilize the following map data:

- NYS Department of State SAV data: http://opdgig.dos.ny.gov/#/search/SAV
- NYS GIS Clearinghouse (for SAV data in the Hudson River): http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1209 and http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1350

9. PCNs should be submitted electronically, if possible, in accordance with the instructions provided on the Districts' websites. When submitted by hard copy, without an electronic submission, then multiple copies of the PCN must be provided as follows:

a) One (1) additional copy of the PCN package shall be provided to USACE for coordination with Department of Defense Siting Clearinghouse (See NWP # 39, 51, 52 & 57 Notes) for:
   i. overhead utility lines proposed under NWP #57 and
   ii. any activity that involves the construction of a wind energy generating structure, solar tower, or overhead transmission lines proposed under NWP #39, 51 or 52

b) Two (2) additional copies of the PCN package shall be provided to USACE when the project is located within the New York City Watershed, for coordination with the New York City Department of Environmental Protection.

c) Five (5) additional copies of the PCN package shall be submitted to USACE for agency coordination in accordance with General Condition # 32(d)(2) for:
   i. All NWP activities that result in the loss of greater than 1/2-acre of waters of the United States,
   ii. NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites;
   iii. NWP 54 activities in excess of 500 linear feet or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

G-F. CRITICAL RESOURCE WATERS

In accordance with NWP General Condition (GC) #22, certain activities in Critical Resource Waters cannot be authorized under the NWP program or would require a PCN (see GC #22 for a list of the

NWP activities that are either excluded or require a PCN).

Critical Resource Waters in New York State include the following:

1. **East-of-Hudson portion of the New York City Water Supply:** This area includes portions of Dutchess, Putnam and Westchester Counties as delineated on Enclosure 2.

2. **Hudson River National Estuarine Research Reserves (NERR):** The Hudson River NERR consists of four components: Piermont Marsh, Iona Island, Tivoli Bay, and Stockport Flats.

H. NYSDEC GENERAL WATER QUALITY CERTIFICATION (WQC) CONDITIONS APPLICABLE TO ALL NWPS FOR WHICH WQC HAS BEEN PROVIDED ARE AS FOLLOWS:

1. **Non-contamination of Waters** - All necessary precautions shall be taken to preclude contamination of any waters of the United States by suspended solids, resins, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate, inadvertent returns of drilling muds ("frac-outs") or any other environmentally deleterious materials associated with the project.

2. **Installation and Replacement of Culverts** - To be covered under this blanket Water Quality Certification, all the following criteria must be met for culvert installations and replacements:
   a. Culverts shall be designed to pass a storm event with an annual chance of 2% or less (i.e., 50-year storm event or greater) such that the water surface remains below the top of the inlet opening.
   b. All culverts with closed bottoms and culvert pipes must be appropriately embedded. Round culverts must be installed so that at least 20% of the culvert's vertical height is embedded below the existing stream bed at the outlet end of the culvert.
   c. Width of the structure must be a minimum of 1.25 times (1.25X) width of the Mean High-Water Channel.
   d. The slope of the stream bed within or under the culvert shall remain consistent with the slope of the adjacent stream channel. For slopes greater than 3%, an open bottom culvert must be used.
   e. This culvert must not be located under a roadway that provide sole access to "Critical Facilities"[2].
   f. This certification does not authorize culvert rehabilitation projects that involve slip lining, invert paving, or similar treatments.
   g. This certification does authorize the rehabilitation of culverts utilizing Cure in Place Pipe Lining (CIPP) or concrete spray lining for culverts which currently meet Nationwide Permit General Condition # 2 - Aquatic Life Movements.

[2] Critical Facilities are defined as facilities designed for bulk storage of chemicals, petrochemicals, hazardous or toxic substances or floatable materials; hospitals, rest homes, correctional facilities, dormitories, patient care facilities; major power generation, transmission or substation facilities, except for hydroelectric facilities; major communications centers, such as civil defense centers; or major emergency service facilities, such as central fire and police stations. (See 6 NYCRR Part 502.4(a)(17).)

3. **Discharges and Disturbances Limits** - The following discharge and disturbance limits apply to this certification:
   a. For NWPs 5, 7, 13, 14, 15, 18, 19, 23, 25, 32, 34, 36, 37, 45, and 46, the following discharge limits apply:
      i. Temporary or permanent discharges of dredged or fill material into wetlands and other waters of the United States must not exceed ¼ acre;
      ii. Temporary or permanent impacts (i.e., loss) to stream beds, lake shorelines, and ocean shorelines must not exceed 300 linear feet; and
      iii. The discharge area limit under paragraph (a) plus the equivalent stream, lake, or ocean impact area limit under paragraph (b) must not exceed ¼ acre total.

b. For NWPs 3, 4, 6, 20, 22, 27, 30, 31, 33, and 41, this certification authorizes discharges and disturbances up to the limit of the respective Nationwide Permit or regional conditions, whichever is most restrictive.
c. If a project requiring coverage under two or more Nationwide Permits results in a temporary or permanent discharge or disturbance, the most restrictive threshold applies to the project.

4. **Bulkheads** - Activities involving bulkheads are restricted as follows:
   a. This certification does not authorize the construction of new bulkheads or vertical walls.
   b. This certification does not authorize the waterward extension of existing bulkheads, except where minimally necessary to reface the bulkhead when in-place replacement is not feasible.
   c. New toe-stone protection may not extend more than 36 inches waterward from the existing bulkhead face.

5. **Maintenance of Water Levels** - This certification does not authorize any activity that results in a permanent water level alteration in waterbodies, such as draining or impounding, except for activities authorized by NWP 27.

6. **Dewatering** - Dewatering activities must be conducted in the following manner:
   a. Authorized dewatering is limited to immediate work areas that are within coffer dams or otherwise isolated from the larger waterbody or waters of the United States.
   b. Dewatering must be localized and must not drain extensive areas of a waterbody or reduce the water level such that fish and other aquatic organisms are killed, or their eggs and nests are exposed to desiccation, freezing or depredation in areas outside of the immediate work site.
   c. Cofferdams or diversions shall not be constructed in a manner that causes or exacerbates erosion of the bed or banks of a waterbody.
   d. All dewatering structures must be permanently removed, and disturbed areas must be graded and stabilized immediately following completion of work. Return flows from the dewatering structure shall be as visibly clear as the receiving waterbody.

7. **Horizontal and Directional Drilling** - For projects that involve horizontal or directional drilling, the permittee must prepare and implement a plan that addresses prevention, containment and cleanup of inadvertent drilling fluid returns or “frac-outs”.

8. **Endangered or Threatened Species** - This certification does not authorize discharges likely to result in the take or taking of any species listed as endangered or threatened in 6 NYCRR Part 182.5 (a) or (b) or discharges likely to destroy or adversely modify the habitat of such listed species. To be eligible for coverage under this certification, applicants must either verify that the activity is outside of the occupied habitat of such species or, if located within the habitat of such species, obtain a determination from the NYS Department of Conservation Regional Office that the proposed activity is not likely to result in the take or taking of any species listed as endangered or threatened species listed in 6 NYCRR Part 182. Information on New York State endangered or threatened species may be obtained from the NYS Department of Environmental regional offices, the New York Natural Heritage Program in Albany, New York or on the NYSDEC website at https://www.dec.ny.gov/animals/38801.html.

9. **Rare Mollusks** - This certification does not authorize disturbances or discharges to waters of the United States that support mollusks listed as S-1 or S-2 on the New York State Natural Heritage database, unless NYSDEC staff have determined that the project location does not contain mussels listed as S-1 or S-2 on the Natural Heritage database.

10. **Prohibition Period for In-water Work** - In-water work is prohibited in cold water trout fisheries (waterbodies classified under Article 15 of New York State Environmental Conservation Law with a "t" or "ts" designation), beginning October 1 and ending May 31.

    Water classification values can be found on the NYSDEC’s Environmental Resource Mapper available on the Department’s website at https://gisservices.dec.ny.gov/gis/erm/. Applicants may also contact the Regional Fisheries Manager in the appropriate New York State Department of Environmental

Conservation regional office to determine the classification of the water body and whether the prohibition period applies.

11. **Significant Coastal Fish and Wildlife Habitats** - This certification does not authorize any discharge occurring in a designated Significant Coastal Fish and Wildlife Habitat area pursuant to 19 NYCRR Part 602 (NYCRR, Title 19, Chapter XIII, Waterfront Revitalization of Coastal Areas and Inland Waterways). https://www.dos.ny.gov/opd/programs/consistency/scfwhabitats.html

12. **Coastal Erosion Hazard Areas** - This certification does not authorize projects that disturb greater than ¼ acre or 300 linear feet of waters of the United States within mapped Coastal Erosion Hazard Areas, as identified in New York State Environmental Conservation Law Article 34, and its implementing regulations, 6 NYCRR Part 505. https://www.dec.ny.gov/lands/86541.html

13. **Federal Energy Regulatory Commission** - This certification does not authorize activities regulated by the United States Federal Energy Regulatory Commission (FERC). An individual Section 401 Water Quality Certification from NYSDEC is required for all projects regulated by FERC.

14. **Preventing the Spread of Aquatic Invasive Species** - To prevent the unintentional introduction or spread of invasive species, the permittee must ensure that all construction equipment be cleaned of mud, seeds, vegetation, and other debris before entering any approved construction areas within waters of the United States. When using construction equipment, projects authorized under this Certification shall take reasonable precautions to prevent the spread of aquatic invasive species as required under the provisions in ECL § 9-1710.

15. **Utility Projects** - The following restrictions and conditions apply to activities involving utility projects:
    a. This certification does not authorize maintenance or other activities associated with hydroelectric power generation projects.
    b. This certification does not authorize the construction of substation facilities or permanent access roads in wetlands or within the Federal Emergency Management Agency mapped 100-year floodplain.
    c. Excess materials resulting from trench excavation must be permanently removed from the waters of the United States and contained so that they do not re-enter any waters of the United States.

16. **NYSDEC Emergency Authorizations** – This certification also applies to any regulated discharges to Waters of the U.S. covered under an NWP where NYSDEC makes a finding of emergency pursuant to New York States Uniform Procedures Act regulations at 6 NYCRR § 621.12. Such a finding may also, but is not required to, include NYSDEC emergency authorizations under ECL Article 15, Title 5 (Protection of Waters), Article 15, Title 27 (Wild, Scenic, and Recreational Rivers),Article 24 (Freshwater Wetlands), Article 25 (Tidal Wetlands) or Article 34 (Coastal Erosion Management). Where such certification Is granted, only NYSDEC General WQC Conditions 1, 4, 5, and 6 shall apply.

17. **NYSDEC General Permits** – This certification also applies to any regulated discharges to Waters of the U.S. covered under an NWP where NYSDEC issues project authorization under a general permit pursuant to ECL Article 15, Title 5 (Protection of Waters), Article 15, Title 27 (Wild, Scenic, and Recreational Rivers), Article 24 (Freshwater Wetlands), Article 25 (Tidal Wetlands), or Article 34 (Coastal Erosion Management). Where such certification is granted, all other NYSDEC General WQC Conditions shall not apply.

18. **NYSDEC Individual Permits** – This certification also applies to any regulated discharges to Waters of the U.S. covered under an NWP where NYSDEC issues individual project authorization pursuant to ECL Article 15, Title 5 (Protection of Waters), Article 15, Title 27 (Wild, Scenic, and Recreational Rivers), Article 24 (Freshwater Wetlands), Article 25 (Tidal Wetlands), or Article 34 (Coastal Erosion Management). Where such certification is granted, all other NYSDEC General WQC Conditions shall not apply.

I. NEW YORK STATE DEPARTMENT OF STATE (NYSDOS) COASTAL ZONE MANAGEMENT CONSISTENCY DETERMINATION ADDITIONAL INFORMATION (APPLICABLE TO ALL NWPS LOCATED WITHIN OR AFFECTING THE NYS COASTAL ZONE):

Where NYSDOS has objected to the USACE consistency determination, as outlined in the specific NWP listing in Section B above, the applicant must submit a request for an individual consistency determination to NYSDOS.

Further Information:

- Unless NYSDOS issues consistency concurrence or USACE has determined that NYSDOS concurrence is presumed, NWPs are not valid within the Coastal Zone.

- All consistency concurrence determination requests must be submitted directly to NYSDOS with a copy provided to USACE with any required Preconstruction Notification submissions.

- Limits of the coastal zone and details regarding NYSDOS submission requirements, including application forms can be obtained at: https://www.dos.ny.gov/opd/programs/consistency/index.html.

- For additional information regarding the NYSDOS Coastal Zone Management program, their application forms, and requirements, please contact NYSDOS. See Section K for NYSDOS contact information.

J. INFORMATION ON NATIONWIDE PERMIT VERIFICATION

Verification of the applicability of these Nationwide Permits is valid until March 14, 2026, unless the Nationwide Permit is modified, suspended, revoked, or the activity complies with any subsequent permit modification.

It is the applicant's responsibility to remain informed of changes to the Nationwide Permit program. A public notice announcing any changes will be issued when they occur and will be available for viewing at our website: http://www.lrb.usace.army.mil/Missions/Regulatory.aspx.

Please note in accordance with 33 CFR part 330.6(b), that if you commence or are under contract to commence an activity in reliance of the permit prior to the date this Nationwide permit expires, is suspended or revoked, or is modified such that the activity no longer complies with the terms and conditions, you have twelve months from the date of permit modification, expiration, or revocation to complete the activity under the present terms and conditions of the permit, unless the permit has been subject to the provisions of discretionary authority.

Possession of this permit does not obviate you of the need to contact all appropriate state and/or local governmental officials to ensure that the project complies with their requirements.

K. AGENCY CONTACT INFORMATION

NYS Board on Electric Generation Siting and the Environment (Siting Board)
Three Empire State Plaza
Albany, NY 12223-1350
(518) 949-0798
Email: Houtan.Moaveni@dps.ny.gov
www.dps.ny.gov/SitingBoard

NYS Department of Environmental Conservation
www.dec.ny.gov

NYS DEC REGION 1
Regional Permit Administrator
SUNY @ Stony Brook
50 Circle Road
Stony Brook, NY 11790-3409
(631) 444-0365

NYS DEC REGION 2
Regional Permit Administrator
1 Hunter's Point Plaza
47-40 21st Street
Long Island City, NY 11101-5407
(718) 482-4997

NYS DEC REGION 3
Regional Permit Administrator
21 South Putt Corners Road
New Paltz, NY 12561-1620
(845) 256-3054

NYS DEC REGION 4
Regional Permit Administrator
1130 North Westcott Road
Schenectady, NY 12306-2014
(518) 357-2069

NYS DEC REGION 4 Sub-Office
Deputy Regional Permit Administrator
65561 State Hwy 10
Stamford, NY 12167-9503
(607) 652-7741

NYS DEC REGION 5
Regional Permit Administrator
PO Box 296
1115 Route 86
Ray Brook, NY 12977-0296
(518) 897-1234

NYS DEC REGION 5 Sub-Office
Deputy Regional Permit Administrator
PO Box 220
232 Golf Course Rd
Warrensburg, NY 12885-0220
(518) 623-1281

NYS DEC REGION 6
Regional Permit Administrator
317 Washington Street
Watertown, NY 13601-3787
(315) 785-2245

NYS DEC REGION 6 Sub-Office
Deputy Regional Permit Administrator
207 Genesee Street, Room 1404
Utica, NY 13501-2885
(315) 793-2555

NYS DEC REGION 7
Regional Permit Administrator
615 Erie Blvd. West, Room 206
Syracuse, NY 13204-2400
(315)426-7438

NYS DEC REGION 8
Regional Permit Administrator
6274 E. Avon - Lima Road
Avon, NY 14414-9519
(585) 226-5400

NYS DEC REGION 9
Regional Permit Administrator
270 Michigan Avenue
Buffalo, NY 14203-2915
(716) 851-7165

NYS DEC REGION 9 Sub-Office
Deputy Regional Permit Administrator
182 East Union Street, Suite 3
Allegany, NY 14706-1328
(716) 372-0645

NYS Department of Public Service (NYS DPS)
Three Empire State Plaza
Albany, NY 12223-1350
(518) 949-0798
Email: Houtan.Moaveni@dps.ny.gov
www.dps.ny.gov

Buffalo & New York Districts Final Regional Conditions, Water Quality Certification and Coastal Zone Concurrence for the 2021 Nationwide Permits for New York State
Effective February 25, 2022 - Expiration March 14, 2026

NYS Department of State (NYSDOS)
Office of Planning, Development
And Community Infrastructure
Consistency Review Unit
One Commerce Plaza
99 Washington Avenue, Suite 1010
Albany, NY 12231-00001
(518) 474-6000
Email: cr@dos.ny.gov
https://www.dos.ny.gov/opd/programs/consistency/index.html

NYS Office of Renewable Energy Siting (ORES)
Empire State Plaza
240 State Street
P-1 South, J Dock
Albany, NY 12242
(518) 949-0798
Email: Houtan.Moaveni@ores.ny.gov
www.ores.ny.gov

Saint Regis Mohawk Tribe
Water Resources Program
449 Frogtown Road
Akwesasne, NY 13655
www.srmt-nsn.gov

Seneca Nation
Environmental Protection Department
84 Iroquois Drive
Irving, NY 14081
(716) 532-2546

US Army Corps of Engineers

(For DEC Regions 1, 2 and 3)
US Army Corps of Engineers, NY District (NAN)
ATTN: Regulatory Branch, Room 16-406
26 Federal Plaza
New York, NY 10278-0090
For DEC Regions 1 & 2 - (917) 790-8511
For DEC Region 3 - (917) 790-8411
Email: CENAN-PublicNotice@usace.army.mil

(For DEC Regions 4, 5)
US Army Corps of Engineers, NY District (NAN)
Upstate Regulatory Field Office
ATTN: CENAN-OP-RU, Bldg. 10, 3rd Floor North
1 Buffington Street, Watervliet Arsenal
Watervliet, NY 12189-4000
(518) 266-6350 - Permits Processing Team
(518) 266-6360 - Compliance & Enforcement Team
Email: cenan.rfo@usace.army.mil

NAN Electronic Application Email:
CENAN-R-Permit-App@usace.army.mil

NAN website:
http://www.nan.usace.army.mil/Missions/Regulatory/

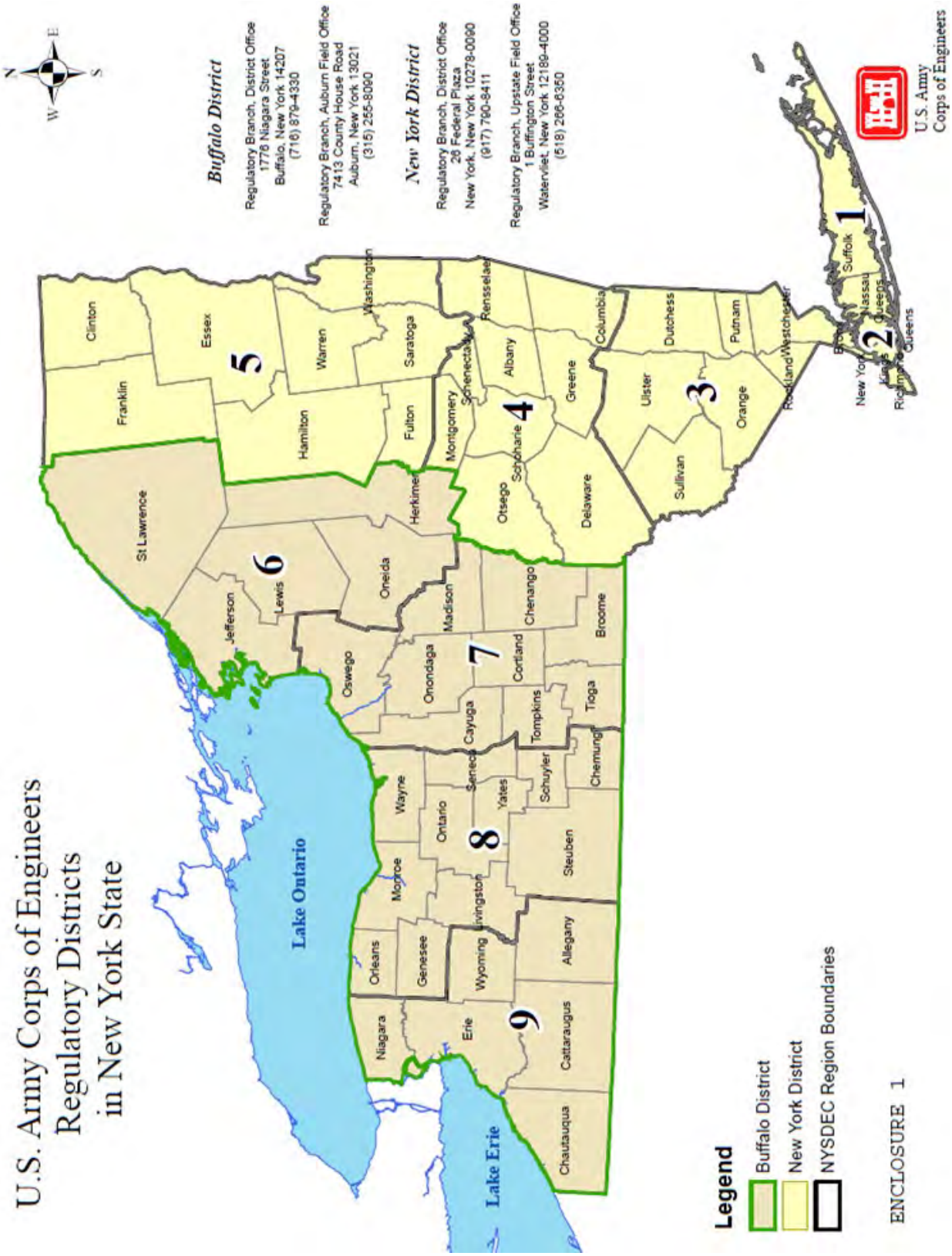
(For DEC Regions 6, 7, 8, 9)
US Army Corps of Engineers,
Buffalo District (LRB)
ATTN: Regulatory Branch
1776 Niagara Street
Buffalo, NY 14207-3199
(716) 879-4330

LRB Electronic Application Email:
LRB.NewYork.RegActions@usace.army.mil

LRB website**:**
www.lrb.usace.army.mil/Missions/Regulatory/

US Environmental Protection Agency Region 2
Wetlands Protection Section
290 Broadway, 24th Floor
New York, NY 10007
212-637-3838
Email: Region2_CWA404@epa.gov

ENCLOSURE 1


U.S. Army Corps of Engineers
Regulatory Districts
in New York State
Buffalo District
Regulatory Branch, District Office
1776 Niagara Street
Buffalo, New York 14207
(716) 879-4330
Regulatory Branch, Auburn Field Office
7413 County House Road
Auburn, New York 13021
(315) 255-8090
New York District
Regulatory Branch, District Office
26 Federal Plaza
New York, New York 10278-0090
(917) 790-8411
Regulatory Branch, Upstate Field Office
1 Buffington Street
Watervliet, New York 12189-4000
(518) 266-6350
U.S. Army
Corps of Engineers
Lake Ontario
Lake Erie
Clinton
Essex
Franklin
Hamilton
Warren
Washington
Saratoga
Fulton
Montgomery
Schenectady
Rensselaer
Albany
Columbia
Greene
Dutchess
Putnam
Ulster
Orange
Sullivan
Delaware
Otsego
Schoharie
Herkimer
St Lawrence
Jefferson
Lewis
Oneida
Madison
Chenango
Broome
Oswego
Onondaga
Cortland
Tioga
Cayuga
Tompkins
Seneca
Schuyler
Chemung
Wayne
Ontario
Yates
Steuben
Monroe
Livingston
Orleans
Genesee
Wyoming
Allegany
Niagara
Erie
Cattaraugus
Chautauqua
Suffolk
Nassau
Queens
Kings
Richmond
Bronx
New York
Rockland
Westchester
1
2
3
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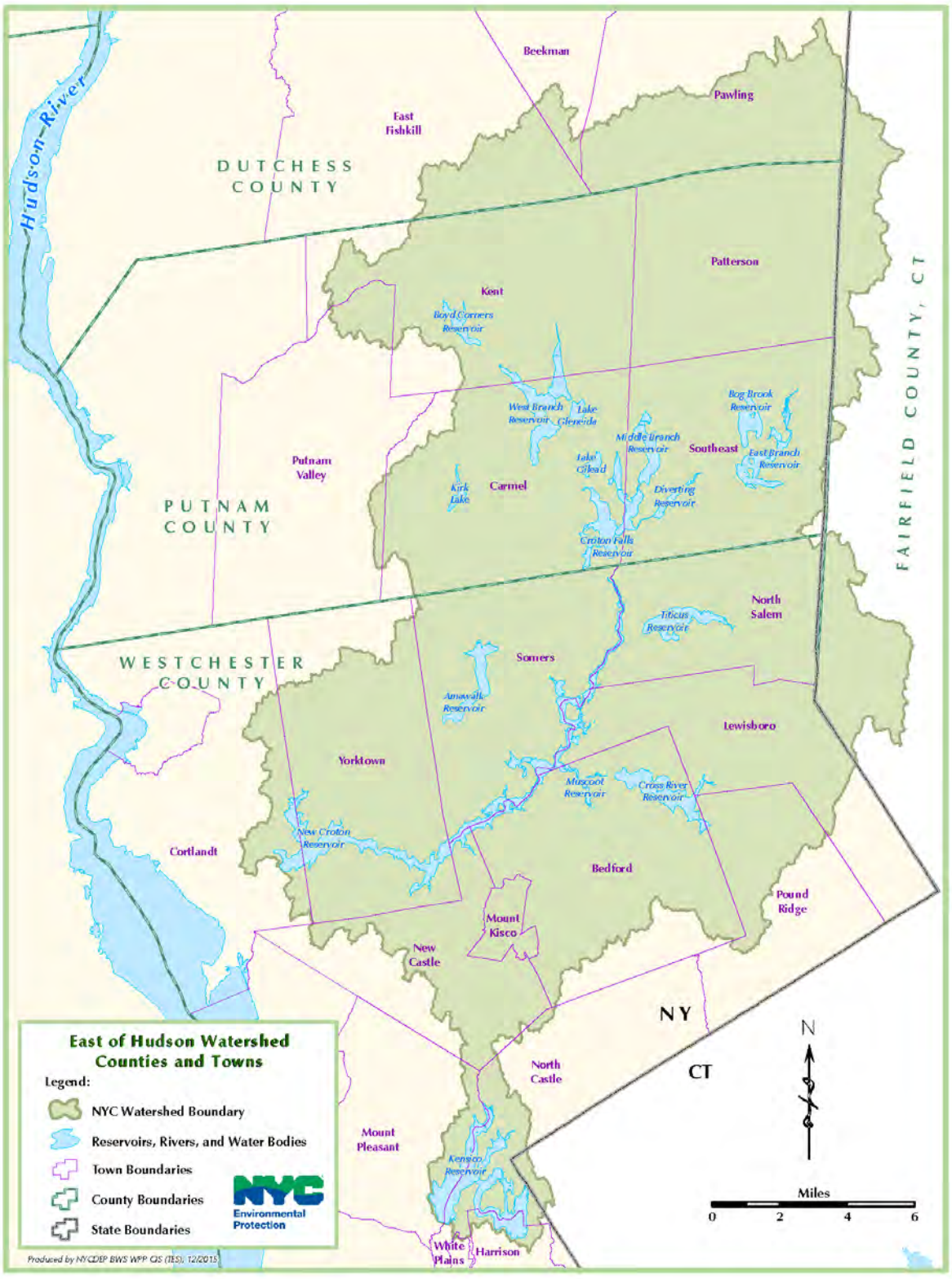
6
7
8
9
Legend
Buffalo District
New York District
NYSDEC Region Boundaries
ENCLOSURE 1

ENCLOSURE 2


Hudson River
DUTCHESS COUNTY
PUTNAM COUNTY
WESTCHESTER COUNTY
FAIRFIELD COUNTY, CT
NY
CT
Beekman
East Fishkill
Pawling
Patterson
Kent
Boyd Corners Reservoir
West Branch Reservoir
Lake Gleneida
Bog Brook Reservoir
Middle Branch Reservoir
Southeast
East Branch Reservoir
Lake Gilead
Putnam Valley
Kirk Lake
Carmel
Diverting Reservoir
Croton Falls Reservoir
North Salem
Titicus Reservoir
Somers
Amawalk Reservoir
Lewisboro
Yorktown
Muscoot Reservoir
Cross River Reservoir
New Croton Reservoir
Cortlandt
Bedford
Pound Ridge
Mount Kisco
New Castle
North Castle
Mount Pleasant
Kensico Reservoir
White Plains
Harrison
East of Hudson Watershed
Counties and Towns
Legend:
NYC Watershed Boundary
Reservoirs, Rivers, and Water Bodies
Town Boundaries
County Boundaries
State Boundaries
NYC Environmental Protection
Produced by NYCDEP BWS WPP GIS (TES), 12/2015
N
Miles
0 2 4 6

ENCLOSURE 3

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

REPLY TO
ATTENTION OF

REGULATORY BRANCH Attn:_____

Commercial Mooring Buoy Application Additional Information

Permit Application Number NAN-_____

Company Name: _____ Phone: _____
Attn: _____
Address: _____

Initial☐Renewal☐
If Renewal, USCG Permit No._____

Purpose: _____

LOCATION OF MOORING:

Anchorage: _____ Chart: _____ On Scene Depth (ft.):_____

Position*:_____ N _____ W

MOORING BUOY DATA:

No. of anchors: _____ Lbs. per anchor: _____ Type: _____

Chain size (in.):_____ Scope (yds.):_____

Pennant length (yds.):_____ Circ. /dia. (in.):_____ Type: _____

VESSEL/BARGE DATA:

Max size (LxBxD):_____x_____x_____ Max No. of barges: _____

Configuration (# abreast x # astern):____x____ Watch circle** (yds.):_____

Swing Radius (yards):_____

* Please provide a copy of the NOAA chart showing your proposed mooring buoy location and the swing radius; also identify the Anchorage Ground, if applicable

** Watch Circle =$\sqrt{(length\ of\ scope)^2 - (water\ depth)^2}$
Swing Radius =$(Watch\ circle) + (Barge(s)\ length\ astern) + \left(Pendant\ length(s)\right) + (10\%\ of\ swing\ radius)$. You must maintain an additional 10% of your Swing Radius from any adjacent mooring buoy Swing Radius for safety and maneuvering.

ENCLOSURE 4

Incident Report of Sea Turtle Take
U.S. Army Corps of Engineers, New York District

Date _____ Time (specimen found) _____

Species Taken: Loggerhead Kemp's ridley Leatherback
Green Unknown turtle Other
(*please circle and describe how specimen was identified in Comments*)

Animal: Alive / Dead (*please circle*)
Specimen Decomposition: FRESH SLIGHTLY MODERATELY SEVERELY
Approximate length _____ Approximate width _____
(*please designate cm/m or inches*)

Condition of specimen/description of animal
_____
_____
_____

Animal tagged: YES / NO (*please circle and record all tag numbers*)
Tag # _____

Photograph attached: YES / NO (*please circle*)
(*please label species, date, geographic site and name on photo back*)

Fate of animal _____

Geographic Site _____
Location: Lat/Long _____
Approx. depth of gear _____

Location where animal found (*leader, anchor line, buoy line, etc.*)
_____
_____

Thickness and type of line (*if applicable*) _____
Mesh size and type of net (*if applicable*) _____
Debris in gear? _____

Weather conditions _____
_____
Water temp: Surface _____ Below midwater (*if known*)_____
Tide state (Ebb or Flood) _____
Entanglement on downcurrent or upcurrent side of net? _____

Comments/other (*include justification on how species was identified*)
_____
_____
_____

Observer's Name _____ Permit # _____
Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person by subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid Office of Management and Budget Control Number.

Special Conditions

1. The permittee must notify the Regulatory Branch, in writing, at least one day prior to the date the activities authorized in Waters of the United States, including wetlands, are scheduled to begin. Notification shall either be by: 1) e-mail sent to david.w.leput2@usace.army.mil AND LRB.Regulatory@usace.army.mil; or 2) mailed to the following address: Mr. David Leput, U.S. Army Corps of Engineers, Buffalo District, 1776 Niagara Street, Buffalo New York 14207-3199.

2. The permittee's responsibility to complete the required compensatory mitigation as set forth in the Special Conditions below will not be considered fulfilled until it has demonstrated compensatory project success and has received written verification of that success from the U.S. Army Corps of Engineers.

3. As compensatory mitigation to compensate for permanent impacts to 0.73 acres of emergent wetland, the permittee must establish at a minimum, 1.1 acres of emergent and scrub shrub wetland on-site. The mitigation must be constructed in accordance with the attached drawings as well as any permit conditions. The mitigation must be constructed prior to, or concurrent with, work associated with this permit authorization, and must be completed by November 15th of the year the mitigation construction begins, or by a Corps-approved extension date.

4. The compensatory wetland mitigation plan entitled Revised Final Compensatory Wetland Mitigation Plan and dated May 9, 2023, is hereby incorporated into and made part of the permit as "Appendix A". The permittee must implement the mitigation in accordance with the plan and any permit conditions. The mitigation performance standards listed in the Special Conditions supersede any conflicting standards listed in the compensatory mitigation plan as listed previously.

5. The permittee must begin construction of the wetland mitigation area prior to or concurrent with the filling authorized by this permit, and must be completed by November 15th of the year the mitigation construction begins, or by a Corps-approved extension date.

6. The permittee is required to provide financial assurance in the form of a performance bond in the amount of $160,305 to ensure the project will meet performance obligations of the compensatory mitigation project required under this permit, in accordance with the following:

a. The performance bond agreement must contain the information described in 33 CFR 332.3(n) and be executed and submitted to this office for review, and is required to be approved in writing by this office **prior to commencement** of the work associated with this permit authorization.
b. The permittee is referred to the performance bond template located at: http://www.lrb.usace.army.mil/Portals/45/docs/regulatory/MitandMon/Performance%20Bond%20Template%20Updated.pdf?ver=2017-10-25-051710-643 (If the website cannot be accessed, you are directed to contact the Corps Project Manager for an electronic copy of the template).
c. The original, executed performance bond document must be submitted to: David Leput, USACE Buffalo District, Regulatory Branch, US Army Corps of Engineers, 1776 Niagara Street, Buffalo, NY 14207.

d. Once executed, the performance bond will thereby be incorporated into and made part of the permit as Appendix B.
e. After review of all required monitoring reports and compliance with the terms and conditions of the permit, the DE will determine, in writing, when the permittee has completed its compensatory mitigation requirements and may be released from the financial assurance requirement.

7. The following performance standards are incorporated into this permit and are required to be met as follows:

a. Prevent establishment of invasive species identified in the *New York State Prohibited and Regulated Invasive Plants (*https://www.dec.ny.gov/animals/99141.html) (NYSDEC 2014), and reed canary grass (*Phalaris arundacea)* in excess of 5% areal cover for 5 years. If this threshold is exceeded during or at the end of each monitored year, corrective measures will be implemented to preclude the growth of the listed species within the mitigation areas. Corrective measures such as, but not limited to, herbicide application, mechanical/manual removal, etc. shall be implemented. Any corrective measures proposed will be coordinated and approved by USACE prior to implementation. Management and monitoring period extended up to 5 years if invasives establish on site.
b. The mitigation wetland will meet the vegetative and hydrology requirements specified in the 1987 Corps of Engineers Wetland Delineation Manual and Regional Supplement (USACE 1987; 2012).
c. Achieve 85% total areal coverage with more than 50% of the vegetation which are facultative (FAC), facultative wet (FACW) or obligate (OBL) species within the first year, no less than 80% of which are permanent perennial species.
d. 85% survival of woody plantings after 5 growing seasons.
e. Hydrology: “The permittee shall establish and maintain inundation and/or saturation within the upper 12 inches of the soil surface on consecutive days for at least 12.5% of the growing season (22 days) for at least 4 out of 5 monitoring years across each wetland mitigation basin and/or cover type.”
f. The mitigation area will be vegetated with no more than 50% areal cover of a single species, which will be demonstrated for each monitoring period. If it is determined that standard is not met at any time, a corrective action plan will be submitted to the USACE for review and approval prior to implementation during the following growing season. A waiver may be granted by the USACE for sites that are in the initial monitoring seasons (1-2 years) and are not meeting the hydrophytic vegetation cover goal.

8. A baseline wetland construction report must be forwarded to this office by December 31 in the year of completion of all mitigation construction activities, or by an approved extension. For purposes of this special condition, "completion" means all activities associated with site grading and seeding and/or planting. The baseline report must include the following:

a. An "as-built" topographic survey of the mitigation area at 0.5 foot contour intervals.
b. Photographs from fixed locations with a photo-location map.
c. A list of plants introduced through seeding and/or planting.
d. Water depth and date of measurement from representative locations within the mitigation area. The sample points will be fixed locations and shall be plotted on a map.

e. A list of any modifications that were made from the original mitigation plan.

9. The permittee is required to submit annual monitoring and/or compliance reports for the wetland mitigation project to this office for the first five (5) years following completion of the mitigation construction based upon data collected during each monitored year between June and October. The reports must follow the requirements outlined in Regulatory Guidance Letter No. 08-03 (Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources). The first annual report is due by December 31 in the year following completion of mitigation construction, or by an approved extension date (Example – If mitigation construction is completed in 2023, the first year report would be due by Dec. 31, 2023). For purposes of this special condition, "completion" means all activities associated with site grading and seeding and/or planting. All reports must be submitted to LRB.Regulatory.PermitCompliance@usace.army.mil by December 31 of the year due, or by a Corps-approved extension date. This requirement may be waived for years 3 and 4 if, after the first two growing seasons, the mitigation is shown to meet performance criteria listed in the permit. These reports must include:

a. Comparison of site conditions to an as-built survey.
b. Wetland Delineation, including a map of wetland boundary.
c. Photographs (minimum 5) from fixed locations with a photo location reference map.
d. Plant species list with the following information: Wetland Indicator Status and strata; Dominant plants and percent cover.
e. A list of plants introduced through seeding or planting.
f. Water depth and date of measurement from representative locations within the mitigation area during the growing season. The sample points will be fixed locations and shall be plotted on a map.
g. Fish and wildlife observations at the mitigation site.
h. Summary statement regarding the perceived success of the wetland creation project. The report will evaluate the goals/performance standards as set forth in the permit or mitigation and monitoring plan as well as current wetland functions. These reports must also address any potential problem areas and include suggestions and timetable for correction if it is anticipated that projected goals may not be met.
i. Date(s) of field inspection(s).

10. The permittee assumes all liability for accomplishing corrective work. Should the District Engineer determine the compensatory mitigation to be unsuccessful at the end of the monitoring period or during the monitoring period where specific performance criteria must be met, the permittee will be required to undertake, and bear all costs associated with, additional mitigative or corrective measures. These actions may include, but are not limited to, regrading, additional planting, purchase of wetland credits from a bank, etc. Additional yearly monitoring of the site may be required at the discretion of the District Engineer.

11. Prior to conducting any work associated with this permit authorization, the permittee is required to place perpetual deed restrictions on the mitigation site and the designated upland buffers to guarantee their preservation for wetland and wildlife resources. The deed restriction shall specifically state: (1) the Department of the Army Permit number; 2) the permit date; 3) the restricted uses as identified in Special Conditions of this permit, 4) the contact information for

the Buffalo District U.S. Army Corps of Engineers Regulatory Branch, 5) that the wetland and buffer areas are to be preserved and are not to be adversely impacted, 6) that the deed restriction runs with the land and burdens the property in perpetuity; and (7) that the deed restriction shall be transferred to subsequent property owners upon the sale, transfer, or reversion of the property. A map that is drafted by a professional surveyor and a legal description that defines the metes and bounds of the deed restricted area shall be attached to and referenced in the deed restriction. The permittee shall identify the location of federal jurisdictional boundaries on all documents recorded by the Onondaga County Recorder to include subdivision plats, deeds, and other legal real estate documents. A draft copy of the deed restriction language must be submitted to Margaret Crawford of this office and approved, in writing, prior to recordation. An approved, certified copy of the recorded deed restriction is required to be provided to LRB.Regulatory.PermitCompliance@usace.army.mil, BY DECEMBER 31ST OF THE YEAR WORK BEGAN, or by an extension authorized in writing from this office.

12. The permittee must ensure none of the following activities occur at the mitigation area(s): filling, excavating, dredging, mining or drilling, use of ATVs or other recreational motorized vehicles, removal of topsoil, sand, gravel, rock, minerals, or other materials, nor any building of roads or change in topography of the land in any manner (with the exception of the maintenance of small foot trails), construction or placement of buildings, camping accommodations or mobile homes, fences, signs, billboards or other advertising material, or other structures. There shall be no removal, destruction, or cutting of vegetation, spraying with herbicides, grazing of domestic animals, or disturbance or manipulation of the mitigation area without first obtaining Department of the Army authorization. Control of nuisance vegetation, or any other manipulation within the mitigation areas, shall only occur after Corps of Engineers concurrence that such management practices are necessary to ensure the long-term success of the mitigation program.

13. All reports required under this permit must be submitted to LRB.Regulatory.PermitCompliance@usace.army.mil, unless otherwise specified.

Appendix B

Seed Tags

ERNST Conservation Seeds Inc.

(800) 873-3321
(814) 336-2404
Fax: (814) 336-5191
www.ernstseed.com

May 14, 2024

Ramboll
333 West Washington Street
Syracause, NY 13202

RE: Invoice# I1128507

To Whom It May Concern:

Ernst Conservation Seeds has supplied 25 bulk lbs. of Zone A Shallow/Emergent Mix – Lot# RAMB00306 (see mix specifications below) to Ramboll on August 8, 2023.

Percent by Bulk Weight	Botanical Name	Common Name
	Zone A Shallow/Emergent Mix – Lot# RAMB00306	
28.0%	Carex lurida	Lurid Sedge, PA Ecotype
21.0%	Carex vulpinoidea	Fox Sedge, PA Ecotype
20.0%	Elymus virginicus	Virginia Wildrye, PA Ecotype
12.0%	Carex scoparia	Blunt Broom Sedge, PA Ecotype
3.0%	Verbena hastata	Blue Vervain, PA Ecotype
2.4%	Asclepias incarnata	Swamp Milkweed, PA Ecotype
2.0%	Zizia aurea	Golden Alexanders, PA Ecotype
2.0%	Juncus effusus	Soft Rush
1.6%	Aster novae-angliae	New England Aster, PA Ecotype
1.3%	Carex stipata	Awl Sedge, PA Ecotype
1.0%	Juncus tenuis	Path Rush, PA Ecotype
1.0%	Bidens cernua	Nodding Bur Marigold, PA Ecotype
0.8%	Solidago rugosa	Wrinkleleaf Goldenrod, PA Ecotype
0.6%	Verbena urticifolia	White vervain, PA Ecotype
0.5%	Mimulus ringens	Square Stemmed Monkeyflower, PA Ecotype
0.5%	Carex crinita	Fringed Sedge, PA Ecotype
0.5%	Helenium autumnale	Common Sneezeweed, PA Ecotype
0.5%	Eupatorium perfoliatum	Boneset, PA Ecotype
0.3%	Lobelia siphilitica	Great Blue Lobelia, PA Ecotype
0.3%	Scirpus cyperinus	Woolgrass, PA Ecotype
0.2%	Alisma subcordatum	Mud Plantain

ERNST *Conservation Seeds Inc.*

(800) 873-3321
(814) 336-2404
Fax: (814) 336-5191
www.ernstseed.com

May 14, 2024

Ramboll Environmental
333 West Washington Street
Syracuse, NY 13202

RE: Invoice# I1128507

To Whom It May Concern:

Ernst Conservation Seeds has supplied 25 bulk lbs. of Zone B Scrub-Shrub Mix – Lot# RAMB00307 (see mix specifications below) to Ramboll on August 8, 2023.

Percent by Bulk Weight	Botanical Name	Common Name
	Zone B Scrub-Shrub Mix – Lot# RAMB00307	
25.0%	Elymus virginicus	Virginia Wildrye, PA Ecotype
15.0%	Cornus amomum	Silky Dogwood, PA Ecotype
15.0%	Cornus racemosa	Gray Dogwood, PA Ecotype
15.0%	Ilex verticillata	Winterberry, PA Ecotype
11.0%	Avena sativa	Oats, Variety Not Stated
4.0%	Carex vulpinoidea	Fox Sedge, PA Ecotype
3.0%	Euthamia graminifolia	Grassleaf Goldenrod, PA Ecotype
2.0%	Carex stipata	Awl Sedge, PA Ecotype
2.0%	Juncus tenuis	Path Rush, PA Ecotype
2.0%	Carex lurida	Lurid Sedge, PA Ecotype
2.0%	Carex scoparia	Blunt Broom Sedge, PA Ecotype
1.0%	Aster lateriflorus	Calico Aster
1.0%	Aster novae-angliae	New England Aster, PA Ecotype
1.0%	Geum laciniatum	Rough avens, PA Ecotype
1.0%	Bidens cernua	Nodding Bur Marigold, PA Ecotype
100% Total		

All of our seed is tested by a certified seed laboratory that meets the Association of Official Seed Analyst (AOSA) requirements.

ERNST SEEDS

July 30, 2024

Ramboll
333 West Washington St
Syracuse NY 13202

To Whom It May Concern:

Ernst Conservation Seeds supplied the following seed mixes to the above entity, 25 pounds each as reflected on order 730114. All of our seed is tested by a certified seed laboratory that meets the Association of Official Seed Analyst (AOSA) requirements. Please note that the percent purity for each species listed on the seed tag, reflects the percent purity of each species within the seed mix blend (not the individual seed lot's purity).

Zone A Shallow/Emergent Mix – RAMB00306

28.5% Carex lurida – Lurid Sedge PA Ecotype
21% Carex vulpinoidea – Fox Sedge, PA Ecotype
20% Elymus virginicus – Virginia Wildrye, PA Ecotype
12% Carex scoparia – Blunt Broom Sedge, PA Ecotype
3.0% Verbena hastata – Blue Vervain, PA Ecotype
2.4% Ascplepias incarnata – Swamp Milkweed, PA Ecotype
2.0% Zizia aurea – Golden Alexanders, PA Ecotype
2.0% Juncus effusus – Soft Rush
1.6% Aster novae-angliae – New England Aster, PA Ecotype
1.3% Carex stipata – Awl Sedge, PA Ecotype
1.0% Juncus tenuis – Path Rush, PA Ecotype
1.0% Bidens cernua – Nodding Bur Marigold, PA Ecotype
0.8% Solidgao rugosa – Wrinkleaf Goldenrod, PA Ecotype
0.6% Verbena urticifilia – White Vervain, PA Ecotype
0.5% Mimulus ringens– Square Stemmed Monkeyflower, PA Ecotype
0.5% Helenium autumnale - Common Sneezeweed, PA Ecotype
0.5% Eupatorium perfoliatum – Boneset, PA Ecotype
0.3% Lobelia siphilitica – Great Blue Lobelia, PA Ecotype
0.3% Scirpus cyperinus – Wooldgrass, PA Ecotype
0.2% Alisma subordatum – Mud Plantain
0.2% Aster puniceus – Purplestem Aster, PA Ecotype
0.2% Aster umbellatus – Flat Topped White Aster, PA Ecotype
0.1% Penthorum sedoides – Ditch Stonecrop, PA Ecotype

8884 Mercer Pike, Meadville, PA 16335
P. (800) 873-3321 F. (814) 336-5191
www.ernstseed.com

(Certificate Continued)

100%

Zone B Scrub-Shrub Mix – RAMB00307

1.0% Aster lateriflorus – Calico Aster
1.0% Aster novae – New England Aster
11% Avena sativa – Oats, Variety Not Stated
1.0% Bidens cernua – Nodding Bur Marigold, PA Ecotype
2.0% Carex lurida – Lurid Sedge, PA Ecotype
2.0% Carex scoparia – Blunt Broom Sedge, PA Ecotype
2.0% Carex stipata – Awl Sedge, PA Ecotype
4.0% Carex vulpinoidea – Fox Sedge, PA Ecotype
15% Cornus amomum – Silky Dogwood, IA Ecotype
15% Cornus racemose – Gray Dogwood, IA Ecotype
25% Elymus virginicus – Virginia Wildrye, PA Ecotype
3.0% Euthamia graminifolia – Grassleaf Goldenrod, PA Ecotype
1.0% Geum laciniatum – Rough Avens, PA Ecotype
15% Illex verticillata – Winterberry, PA Ecotype
2.0% Juncus tenuis – Path Rush, PA Ecotype

100%

All seed species are subject to availability at the time of ordering.

Please do not hesitate to contact me with any questions or if you need additional information.

Best regards,

Amy A. Grove
Sales Representative
Ernst Conservation Seeds

Invoice

Invoice Number: 545c6f9f

Order Name : Ramboll Americas Integrated Solutions, Inc - October order

Order # : be94a505
Order Ship Date: 10/12/2023
Customer PO #: 1950007012
Invoice Date: 10/13/2023

Send Payment To:

ArcheWild Native Nurseries
2191 Hillcrest Road
Quakertown, PA 18951
855-752-6862

Bill To:
Customer Name: Ramboll Americas Integrated Solutions, Inc.
Contact Name: Brian Garrett
Billing Address: 7600 Morgan Rd, Liverpool, NY 13090, USA

Ship To:
Customer Name: Ramboll Americas Integrated Solutions, Inc.
Contact Name: Brian Garrett
Shipping Address: 301 Belle Isle Rd, Solvay, NY 13209, USA

Customer Note:

Species	Notes	Ecoregion	Size	Qty	Units	Unit $	Price
Viburnum dentatum			3g	115.000	115	$20.00	$2,300.00
Cornus amomum			2g	115.000	115	$17.00	$1,955.00
Alnus serrulata			2g	115.000	115	$17.00	$1,955.00
Lindera benzoin			2g	115.000	115	$21.00	$2,415.00
Nyssa sylvatica			2g	115.000	115	$24.00	$2,760.00
Cornus sericea			3g	115.000	115	$27.00	$3,105.00

Other Charges	Total Amount	Notes
DELIVERY @ $3.5 a mile/for 219 miles	$766.50	

Shipped Total	$15,256.50

Discounts/Credits Applied	$0.00
Total After Discount/Credits Applied	$15,256.50
Sales Tax	$0.00
GRAND TOTAL (Including Sales Tax)	**$15,256.50**
Payments Received to date	$0.00
Pay This Amount	**$15,256.50**

Invoice and Payments History

Invoices Submitted	Invoice Code	Due Date	Invoice Amount
Ramboll Americas Integrated Solutions, Inc - October order - SHIP DATE 10/12/2023	545c6f9f	10/19/2023	$15,256.50

Payments Applied	Note	Received Date	Payment Amount

Payment Terms

NET 10 Days

Terms and Conditions

Any changes to this order may be made up to 5 business days prior to the ship date, subject to availability. Cancellations made after this point will incur a 20% restocking fee. A processing fee of 2% will be assessed on credit card payments over $3,000.

Date Printed:10/13/2023

Appendix C

Photograph Log

Mathews Ave. CWMA: Year 2 (2025) Monitoring - Photograph Log

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
1	8/18/2025

Description

Looking south at the wetland mitigation area.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
2	8/18/2025

Description

Looking southwest at the wetland mitigation area.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
3	8/18/2025

Description

Looking north at Spillway 1.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
4	8/18/2025

Description

Looking south across the emergent zone (Zone A) of the wetland mitigation area.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
5	8/18/2025

Description

Looking north at Spillway 2.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
6	8/18/2025

Description

Looking east across the wetland mitigation area towards the berm.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
7	8/18/2025

Description

Looking north across the wetland mitigation area.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
8	8/18/2025

Description

Looking southwest at the wetland mitigation area from on top of the berm.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
9	8/18/2025

Description

Looking west across the wetland mitigation area from on top of the berm.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
10	8/18/2025

Description

Looking west across the wetland mitigation area from on top of the berm.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
11	8/18/2025

Description

Looking northwest across the wetland mitigation area from on top of the berm.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
12	8/18/2025

Description

Observed conditions at Vegetation Plot 1.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
13	8/18/2025

Description

Observed conditions at Vegetation Plot 2.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
14	8/18/2025

Description

Observed conditions at Vegetation Plot 3.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
15	8/18/2025

Description

Observed conditions at Vegetation Plot 4.

Client Name:	Site Location:	Project No.
301 Belle Isle Road, LLC	Mathews Ave. Parcel A - Compensatory Wetland Mitigation Area, Village of Solvay, NY	1940115784

Photo No.	Date:
16	8/18/2025

Description

Observed conditions at Vegetation Plot 5.

Appendix D

Plant Species List

Common Name	Botanical Name	Wetland Indicator Status
American elm	*Ulmus americana*	FACW
Arrowwood[1]	*Viburnum dentatum*	FAC
Barnyard grass	*Echinocloa crus-galli*	FAC
Bird's foot trefoil	*Lotus corniculatus*	FACU
Black walnut	*Juglans nigra*	FACU
Black willow	*Salix nigra*	OBL
Blackgum[1]	*Nyssa sylvatica*	FAC
Blue vervain[1]	*Verbena hastata*	FACW
Boxelder	*Acer negundo*	FAC
Broad-leaved cattail	*Typha latifolia*	OBL
Broom sedge	*Carex scoparia*	FACW
Canada goldenrod	*Solidago altissima*	FACU
Common plantain	*Plantago major*	FACU
Common ragweed	*Ambrosia artemisiifolia*	FACU
Common reed	*Phragmites australis*	FACW
Common boneset	*Eupatorium perfoliatum*	FACW
Common hawkweed	*Hieracium lachenalii*	UPL
Coontail	*Ceratophyllum demersum*	OBL
Creeping bentgrass	*Agrostis stolonifera*	FACW
Curled dock	*Rumex crispus*	FAC
Curly pondweed	*Potamogeton crispus*	OBL
Devil's beggarticks	*Bidens frondose*	FACW
Ditch stonecrop[1]	*Penthorum sedoides*	OBL
Eastern cottonwood	*Populus deltoides*	FAC
Eastern daisy fleabane	*Erigeron annuus*	UPL
Fox sedge[1]	*Carex vulpinoidea*	OBL
Grass leaved goldenrod[1]	*Solidago graminifolia*	FAC
Jerusalem artichoke	*Helianthus tuberosus*	FACU

[1] Indicates species is from Mitigation Plan planting list. See Appendix B for Seed Tags.

Common Name	Botanical Name	Wetland Indicator Status
Lady's thumb	*Persicaria maculosa*	FAC
Leafy pondweed	*Potamogeton foliosus*	OBL
Mud plantain[1]	*Alisma subcordatum*	OBL
Nodding bur marigold[1]	*Bidens cernua*	OBL
Northern spicebush[1]	*Lindera benzoin*	FAC
Oats[1]	*Avena sativa*	UPL
Path rush[1]	*Juncus tenuis*	FAC
Prostrate knotweed	*Polygonum aviculare*	FACU
Queen Anne's lace	*Daucus carota*	UPL
Red clover	*Trifolium pratense*	FACU
Red-osier dogwood[1]	*Cornus sericea*	FACW
Redtop grass	*Agrostis gigantea*	FACW
Shallow sedge[1]	*Carex lurida*	OBL
Silky dogwood[1]	*Cornus amomum*	FACW
Smooth alder[1]	*Alnus serrulata*	OBL
Soft rush[1]	*Juncus effusus*	OBL
Sow thistle	*Sonchus oleraceus*	FACU
Square-stemmed monkeyflower[1]	*Mimulus ringens*	OBL
Strawcolored flatsedge	*Cyperus strigosus*	FACW
Virginia wildrye[1]	*Elymus virginicus*	FACW
Water celery	*Vallisneria americana*	OBL
Water purslane	*Ludwigia palustris*	OBL
White sweet clover	*Melilotus albus*	FACU
Wood sorrel	*Oxalis corniculate*	FACU
Woolgrass[1]	*Scirpus cyperinus*	OBL
Yellow foxtail	*Setaria pumila*	FAC
Yellow nut sedge	*Cyperus esculentus*	FACW