INVENTUM ENGINEERING, PC

May 11, 2026

Megan Kuczka
Project Manager
New York State Department of Environmental Conservation
700 Delaware Avenue
Buffalo, NY 14209.

Re: Engineering Report and Notice of Intrusive Activities
Site Name: Buffalo Color Area "D"
Site No.: 915012
Site Address: 2 Buffalo Creek Railroad; Buffalo, NY, 14210

Dear Ms. Kuczka:

On behalf of South Buffalo Development LLC (SBD), Inventum Engineering, P.C. (Inventum) is providing the required supporting information for the planned Buffalo Landfill Solar Farm to be constructed/operated on Buffalo Color Area "D" (State Superfund Site No. 915012) in Buffalo, New York. A 60-Day Advanced Notification of Change of Use Form (COU) for redevelopment was submitted to the New York State Department of Environmental Conservation (NYSDEC) on January 30, 2026, and acknowledged by NYSDEC in a letter dated February 2, 2026.

The planned redevelopment includes construction of an above grade solar energy array. The fixed-tilt Solar PV System utilizing Remote Net Metering (RNM) (PV System) will be installed on ballasted above grade foundations and maintained by the PV Operator, SUNN 1016, LLC (SUNN 1016) under a lease agreement with SBD. The PV Operator's engineer provided the attached certified engineering report (Attachment E) to confirm that they have evaluated the current conditions at Area D and that the proposed construction and operation will have no adverse effect on the capping and containment systems. SBD will remain the responsible party for complying with the Buffalo Color Area "D" Site Management Plan (SMP) during construction and operation.

The following documents/work plans are being submitted in support of NYSDEC project approval:

- Attachment A – Engineering Certification
- Attachment B – Change of Use Acknowledgment – February 2, 2026
- Attachment C – Lease agreement between SUNN 1016, LLC and South Buffalo Development LLC
- Attachment D – Notice of Intrusive Activities – A description of the limited intrusive activities associated with the construction/operation of the PV System.

- Attachment E – Buffalo Landfill Solar Farm – Engineering Report – April 2026 – Prepared by LaBella Associates, D.P.C. on behalf of Solarbank Corp. in accordance with NYSDEC Policy DMM-4 *Guidance for Photovoltaic Solar Projects at Closed Solid Waste Landfills*.

Please feel free to call with any questions or comments.

Respectfully submitted,

Todd Waldrop

ecc: Andrea Caprio – NYSDEC
Jon Williams, SBD
John Yensan, OSC
John P. Black, P.E. – Inventum Engineering

Attachment A – Engineering Certification

Engineering Certification

I, John. P. Black, certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Work Plan was prepared in accordance with all applicable statutes and regulators and in substation conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Respectfully Submitted,

Inventum Engineering, P.C.

Date: 4.13.2026

John P. Black, P.E.

License No: 062818.1

Seal:

It is a violation of the laws of New York, for any person, unless acting under the direction of a Licensed Professional Engineer, to alter any item or any portion of this document in any way. If an item bearing the seal of a Licensed Professional Engineer is altered, the altering Engineer shall affix to the item his/her seal and notation "altered by" followed by his/her signature and the date of such alternation, and a specific description of the alteration.

Attachment B – Change of Use Acknowledgement

NEW YORK STATE | Department of Environmental Conservation

KATHY HOCHUL
Governor

AMANDA LEFTON
Commissioner

February 2, 2026

Todd Waldrop
Inventum Engineering
441 Carlisle Drive, Suite C
Herndon, VA 20170

Dear Todd Waldrop:

Change of Use Notification
Buffalo Color Area "D", 915026

This acknowledges our receipt of your January 30, 2026 60-Day Advance Notification of Change of Use Form for the above referenced site, notifying the New York State Department of Environmental Conservation ("NYSDEC") of a change of use in accordance with 6 NYCRR 375-1.11(d). This acknowledgment is not intended to imply approval or concurrence with the proposed change of use. If you have any questions or need additional information, you may contact me at the address given above.

Sincerely,

Megan Kuczka

Megan Kuczka
Environmental Program Specialist 2

MK/sed

ec: Andrea Caprio – NYSDEC
Jon Williams – South Buffalo Development, LLC
John Black – Inventum Engineering
John Yensan – OSC
Lawrence Pirrone – OSC

Attachment C – Lease Agreement between SUN 1016, LLC and South Buffalo Development LLC

Attachment D – Notice of Intrusive Activities

Notice of Intrusive Activities
Proposed Buffalo Landfill Solar Farm
Buffalo Color Area "D" (State Superfund Site No. 915012)

Scope of Work

The PV system will consist of approximately 5,434 580-watt peak (Wp) solar modules affixed to panels supported by a non-penetrating surface-mounted ballast racking system. Electrical service to the PV System will be provided via interconnection to the existing electrical infrastructure located on the north side of the site. All construction within the limits of the Site will be above grade except for installation of five (5) new power poles on the north side of the site near the point of interconnection.

A 20-foot-wide gravel access road and improvements to the existing access road will be constructed on the northern side of Area D. This improvement will connect the site with the existing access road on Buffalo Color Corporation Site Areas A & B (NYSDEC Site No. C915230). No modifications to the existing access road on the Buffalo Color Corporation Site Areas A & B will be required for either travelling to Area D or related to construction staging. Topsoil may be stripped to a maximum depth of 2 inches below grade for the access road improvements. Approximately 13.4 cubic yards of gravel will be emplaced directly on the stripped surface. The new gravel will remain as a permanent cover feature and incorporated into the Site Management Plan (SMP) as an engineering control.

The existing slurry wall on the north side of the site near the new power poles and access road will be protected by a 5-foot-wide gravel protection extension, consisting of gravel overlain with 6-inches of topsoil. Topsoil may be stripped to a maximum depth of 2 inches below grade over the slurry wall protection area. Approximately 2.55 cubic yards of gravel will be emplaced directly on the stripped surface. The new gravel and topsoil will remain as a permanent cover feature and incorporated into the SMP as an engineering control.

The existing extraction wells, observation wells, and gas vents will remain in place and will be fully accessible during and after construction. The site will utilize a combination of existing and new 7-foot-high perimeter fencing to enclose the PV System for safety. All new fencing will be ballasted (no excavation). No staking will be allowed onsite below the depth of the liner.

All site work will be performed in compliance with the Site Excavation Work Plan (EWP), 29 CFR 1910.120, and 29 CFR 1926 Subpart P. Inventum personnel will provide construction oversight specific to maintaining compliance with the SMP and EWP. All sitework adhere to the Health and Safety Plan (HASP) included within the established SMP.

Intrusive Activities

The five (5) new power poles on the north side of the site will penetrate the cover system and will be installed outside of the slurry wall. The location of the proposed poles and typical pole details are included as an enclosure to this notice. All soils excavated for pole installation will be

staged on 10 mil poly sheeting for field screening with a photoionization detector (PID) and collection of waste characterization samples. No excavated material is proposed for reuse onsite. Poles will be embedded approximately 7 feet below grade and backfilled with a No. 1 or 2 crushed stone in 12-inch lifts.

Staged soil stockpiles will be kept covered at all times and continuously encircled with hay bales and/or silt fence. Alternatively, rolloff boxes (tarped and lined as necessary) may be used for on-Site accumulation of excavated materials. NYSDEC will be notified 5 days prior to offsite disposal of all excavated materials.

Upwind (1 location) and downwind (1 location) ambient air monitoring for Volatile Organic Compounds (VOCs) and particulates will be conducted during all intrusive activities in accordance with the Community Air Monitoring Plan (CAMP).

Import Requests

Import request forms for all soil and coarse aggregate materials will be provided to NYSDEC prior to importing any materials to the Site including documentation/tabulation of any analytical sampling that may be required in accordance with DER-10.

Schedule

A tentative construction schedule for completion of the solar installation is provided as part of this notice. The work is scheduled to begin on or near June 2026 and be completed by January 2027.

Solarbank Corp. will provide oversight related to the construction of the PV system. Inventum will provide oversight during construction related to compliance with the requirements of the SMP.

Permits and Approvals

All local, state, and federal regulations will be adhered to during construction of the solar installation. The following is a list and status of the known and/or anticipated permits and approvals required for construction of the PV System:

- NYSDEC Division of Environmental Remediation – Change of Use Notification and approval in accordance with SMP requirements. Status: Ongoing
- Building Permit – Ongoing
- Electric Permit – Ongoing
- Stormwater Pollution Prevent Plan (SWPPP) – Attachment 3 of Engineering Report - Ongoing

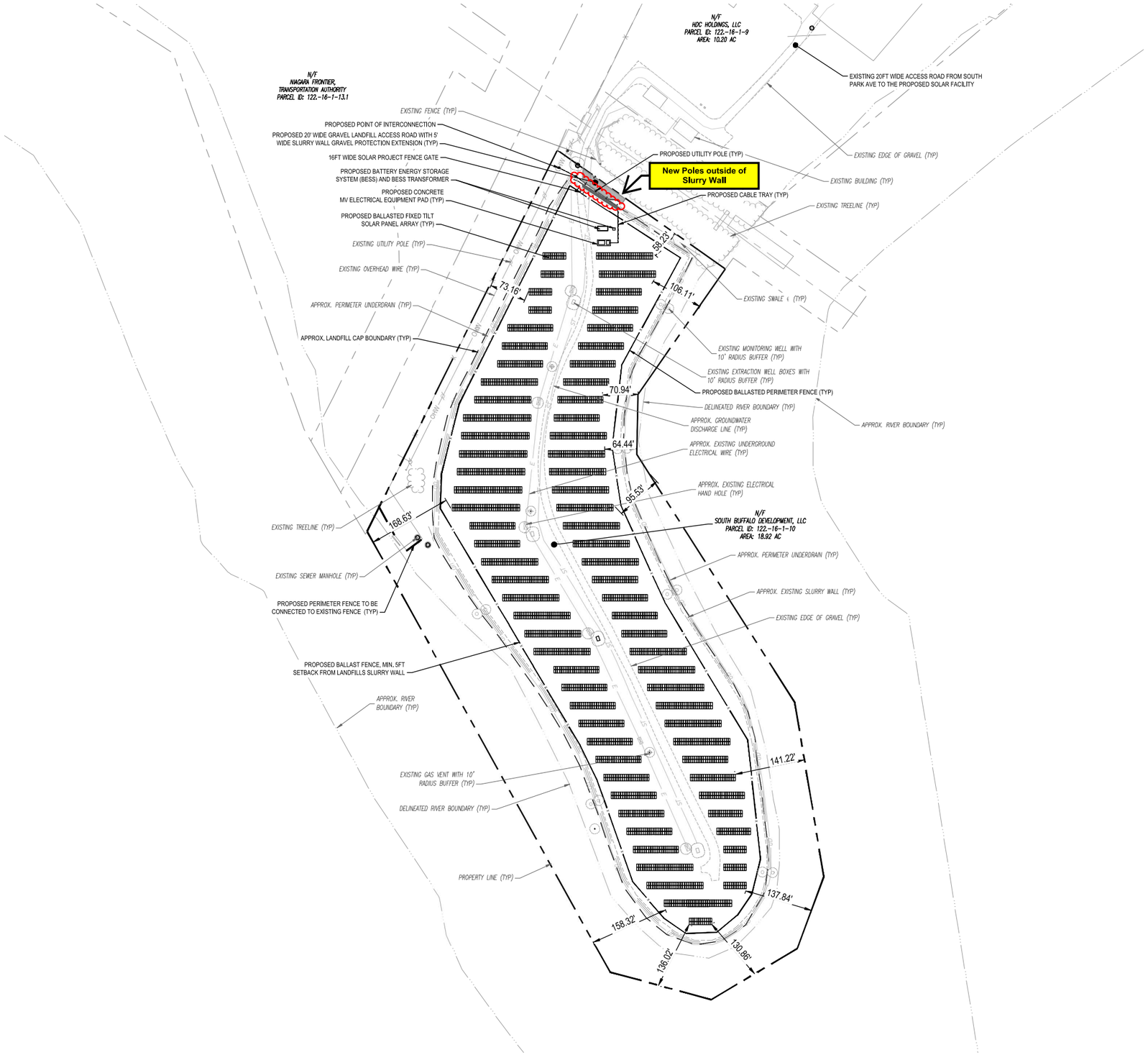
Reporting

The following will be submitted to NYSDEC during and following completion of the solar installation:

- Daily field reports will be submitted to NYSDEC and New York State Department of Health (NYSDOH) during all field activities associated with the solar installation. The daily report will be submitted via e-mail to the NYSDEC Project Manager (PM) by the end of the following day unless a different submittal schedule is approved by the NYSDEC PM. Daily reports will include (at minimum)
    - An update on progress made during the reporting day;
    - Locations of work/site activities identified on a site map;
    - Quantities and descriptions of material imported to and exported from the site;
    - Summary of any and all complaints with relevant details (names, phone numbers);
    - Summary of CAMP findings, including exceedances;
    - Explanation of notable site conditions/findings; and
    - Deviations from the approved work plan

- Construction Completion Report (CCR) – A CCR will be submitted detailing work completed as part of the solar installation and will be certified by a NYS Licensed PE. The CCR will be submitted within 60 days of completion of the solar installation. The CCR will include (at minimum)
    - As-builts of the installation including modifications to the cover system;
    - Documentation of all material imported or exported from the site;
    - CAMP data, and
    - Photographic log.

- Updated SMP – The 2015 SMP will be updated to reflect construction of the solar installation and any resulting changes to the established institutional or engineering control. The updated SMP will be submitted within 30 days following approval of the CCR.



1 C202 SITE PLAN

SCALE: 1" = 100'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BUFFALO RIVER BOUNDARY
		GRAVEL LANDFILL ACCESS ROAD
x	x	FENCE
		PROPERTY LINE
		SETBACK LINE
		UTILITY POLE
E	E	CABLE TRAY
OHE	OHE	OVERHEAD ELECTRIC
ST		STORM LINE
UD		UNDERDRAIN LINE
		GAS VENT
		MONITORING WELL
510	510	MAJOR CONTOUR
509	509	MINOR CONTOUR

SITE PLAN NOTES

1. A 5-FOOT WIDE SLURRY WALL PROTECTION STRIP CONSISTING OF GRAVEL OVERLAIN WITH GEOTEXTILE SHALL BE INSTALLED DIRECTLY ADJACENT TO THE UTILITY POLE ACCESS AREA, AS SHOWN. TRAFFIC IS NOT PERMITTED ON THIS PROTECTION STRIP.
2. FOLLOWING INSTALLATION OF THE SLURRY WALL PROTECTION STRIP, PLACE A MINIMUM OF 6-INCHES OF TOPSOIL OVER STONE AND SEED TO CLEARLY MARK THAT THIS AREA DOES NOT FALL WITHIN THE ROAD BOUNDARIES.
3. NO PANELS WILL BE LOCATED WITHIN A 10' RADIUS OF GROUNDWATER EXTRACTION WELLS OR LANDFILL GAS VENTS,
4. GROUND PRESSURE FROM CONSTRUCTION EQUIPMENT OR SOLAR ARRAY FEATURES SHALL NOT EXCEED 10 POUNDS PER SQUARE INCH (PSI) AT ANY TIME.
5. CONSTRUCTION EQUIPMENT SHALL NOT BE PERMITTED TO TRAVERSE THE SLURRY WALL AT ANY TIME,
6. GROUND-INTRUSIVE WORK (I.E. EXCAVATION OR COVER SYSTEM PENETRATIONS) ARE NOT PERMITTED WITHIN THE COVER SYSTEM AT ANY TIME.

PROJECT DATA	
PARCEL INFORMATION	
APPLICANT	SUNN 1016, LLC
OWNER	SOUTH BUFFALO DEVELOPMENT, LLC
PARCEL ADDRESS	1037 SOUTH PARK AVE, BUFFALO, NY 14210
SYSTEM SIZE (MWDC)	2.227
SYSTEM SIZE (MWAC)	1.50
PARCEL AREA (TOTAL)	18.92 AC
TOTAL PROJECT AREA	13.90 AC
PROPOSED IMPERVIOUS WITHIN PROJECT AREA	0.09 AC
GROUND MOUNT PV SYSTEM SUMMARY	
DC SIZE (MW)	2.227
AC SIZE (MW)	1.50
MAX PANEL HEIGHT (FT)	12
MODULE POWER (W)	580
MODULE QUANTITY	3,840
RACKING TYPE / TILT ANGLE	FIXED / 30°

LaBella
Powered by partnership.

300 State Street, Suite 201
Rochester, NY 14614
585-454-6110

labellapc.com

STATE OF NEW YORK — NOT FOR CONSTRUCTION

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 102063

It is a violation of New York Education Law Art, 145 Sec, 7209 & Art, 147 Sec. 7307, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered; the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

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ABUNDANT SOLAR POWER, INC.
700 WEST METRO PARK
ROCHESTER, NY 14623

ABUNDANT
Solar Power Inc.

BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, BUFFALO, NY

NO:	DATE:	DESCRIPTION:
3	04/10/2026	PER DEC COMMENTS
2	02/18/2026	SITE LAYOUT CHANGES
1	12/01/2025	SETBACK ADDITION
Revisions		

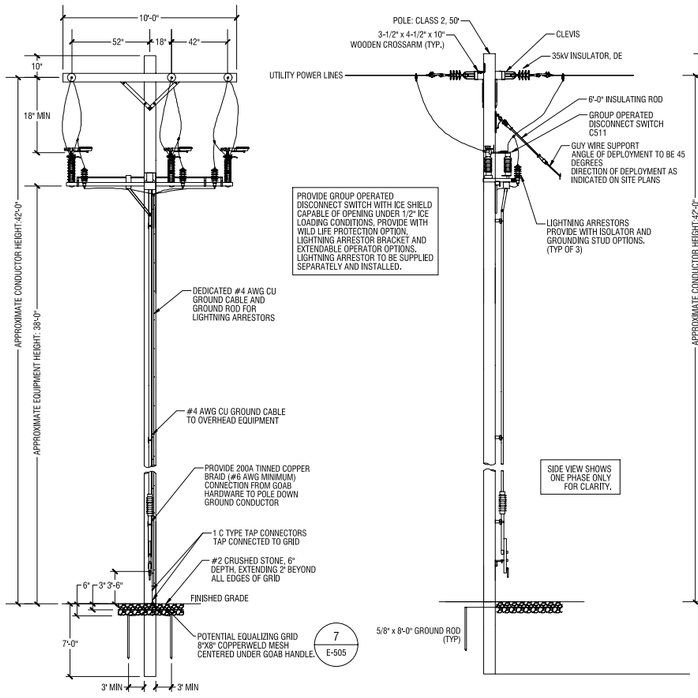
PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

SITE PLAN

DRAWING NUMBER:

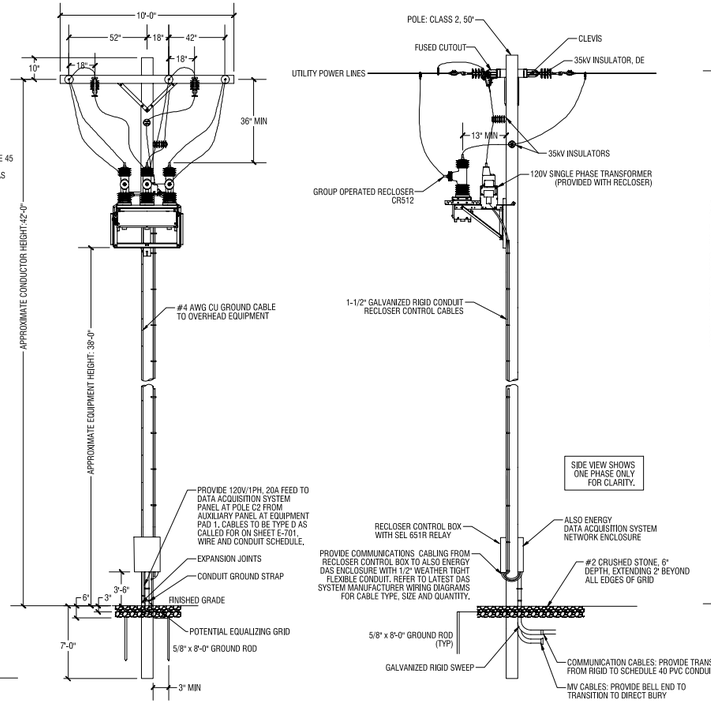
C202

4/10/2026 12:30:05 PM
B:\GLOBAL Projects\Abundant Solar Power\2251176 - Buffalo Landfill Solar Project\05_Drawings\Civil\C202 SITE PLAN.dwg



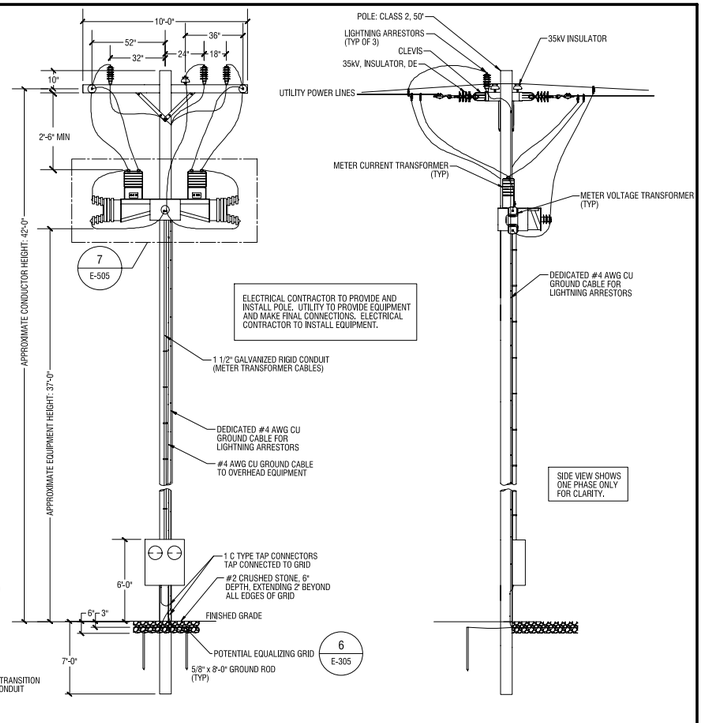
1 E-305 POLE C1 - GENERATOR DISCONNECT C511

N.T.S.



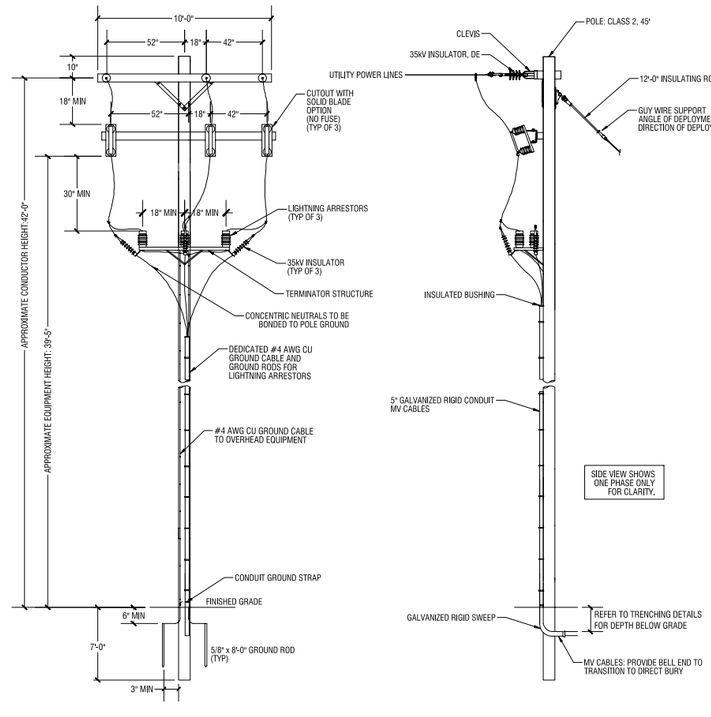
2 E-309 POLE C2 - CUSTOMER RECLOSER R516

N.T.S.



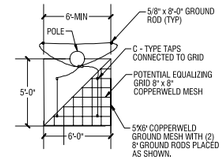
3 E-305 POLE C3 - UTILITY METER

N.T.S.



4 E-309 POLE C4 - RISER WITH DISCONNECT SWITCH

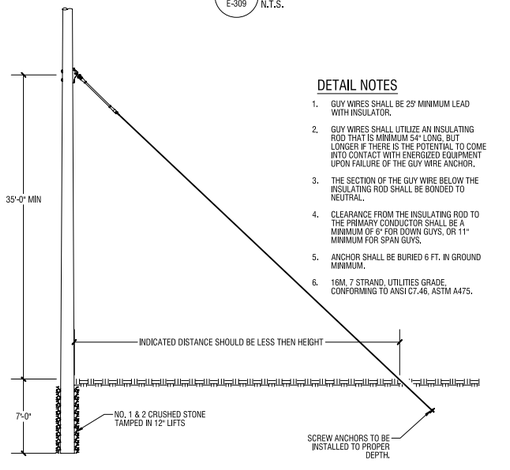
N.T.S.



THE GROUND RESISTANCE OF THIS ENTIRE INSTALLATION SHOULD BE BELOW 0.25 OHMS

6 E-309 GROUND MAT - TOP VIEW

N.T.S.

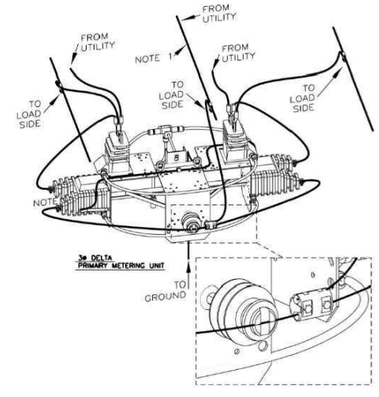


DETAIL NOTES

1. GUY WIRES SHALL BE 25' MINIMUM LEAD WITH INSULATOR.
2. GUY WIRES SHALL UTILIZE AN INSULATING ROD THAT IS MINIMUM 5.4' LONG, BUT LONGER IF THERE IS THE POTENTIAL TO COME INTO CONTACT WITH ENERGIZED EQUIPMENT UPON FAILURE OF THE GUY WIRE ANCHOR.
3. THE SECTION OF THE GUY WIRE BELOW THE INSULATING ROD SHALL BE BONDED TO NEUTRAL.
4. CLEARANCE FROM THE INSULATING ROD TO THE PRIMARY CONDUCTOR SHALL BE A MINIMUM OF 6" FOR DOWN GUYS, OR 11" MINIMUM FOR SPAN GUYS.
5. ANCHOR SHALL BE BURIED 6 FT. IN GROUND MINIMUM.
6. 16M, 7 STRAND, UTILITIES GRADE, CONFORMING TO ANSI C7.46, ASTM A475.

5 E-305 GUY WIRE DETAIL

N.T.S.



7 E-305 UTILITY WIRING SCHEMATIC FOR DELTA PRIMARY METERING

N.T.S.

PROVIDE A SINGLE GROUND RING. #6 AWG CU SURROUNDING POLES C1 - C4 AT A DISTANCE OF 3'-0" FROM POLE CENTERS. BOND TO POLE GROUND MATS AND GROUND RODS.

GENERAL NOTES

1. DETAILS SHOWN ARE PROVIDED FOR INFORMATION ONLY. EQUIPMENT CLEARANCES AND CONFIGURATION WILL VARY BASED ON EQUIPMENT SELECTION. FINAL DESIGN TO COMPLY WITH NATIONAL ELECTRIC CODE AND NATIONAL ELECTRIC SAFETY CODE. CLEARANCES ARE TO MEET NATIONAL ELECTRIC SAFETY CODE TABLE 232-1.
2. LOCATION OF NEUTRAL CONDUCTOR SHOWN FOR REFERENCE ONLY. INSTALL NEUTRAL CONDUCTOR IN ACCORDANCE WITH PROJECT DESIGN AND APPLICABLE CODES AND STANDARDS.
3. ALL CABLES AND EQUIPMENT INSTALLED ON POLE TO MEET RATINGS AS CALLED FOR ON 3-LINE DIAGRAM.
4. PROVIDE GROUND CONNECTION FOR POLE MOUNTED EQUIPMENT INCLUDING BUT NOT LIMITED TO: GROUP OPERATED DISCONNECT SWITCH HARDWARE, METERING TRANSFORMER MOUNTING BRACKET, METER ENCLOSURE AND EXPOSED RIGID METALLIC CONDUITS.
5. RECLOSER TO BE PROVIDED WITH TRANSFORMER OPTION FOR SUPPLY OF 120V SINGLE PHASE POWER TO CONTROL BOX.
6. PROVIDE PULL CORDS IN ALL EMPTY CONDUITS.
7. PROVIDE SEPARATE DOWN GROUND CONNECTION FOR LIGHTNING ARRESTORS, #4 AWG CU.
8. PROVIDE EXPANSION JOINTS FOR ALL PVC CONDUITS PENETRATING GRADE.
9. THE GENERATOR DISCONNECT SWITCH SHALL BE INSTALLED TO HAVE THE LINE CONNECTION (LE, JAW SIDE) OF THE SWITCH CONNECTED TO THE UTILITY SOURCE. HINGE SIDE OF THE SWITCH SHALL BE CONNECTED ELECTRICALLY TOWARDS THE CUSTOMER DER. DISCONNECTS WITH MORE THAN ONE CURRENT CARRYING CONDUCTOR SHALL BE GANG OPERATE
10. ALL POLES (C1 THROUGH C4) AND ASSOCIATED EQUIPMENT SHOWN ARE NEW UNLESS OTHERWISE NOTED, NO EXISTING POLES ARE UTILIZED AS PART OF THIS INSTALLATION.

ABUNDANT
Solar Power Inc.

700 WEST METRO PARK
ROCHESTER, NY 14623

T: 585-484-8317
www.solarbankcorp.com

It is a violation of New York Education Law Article 145 Sec.7209, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered; the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

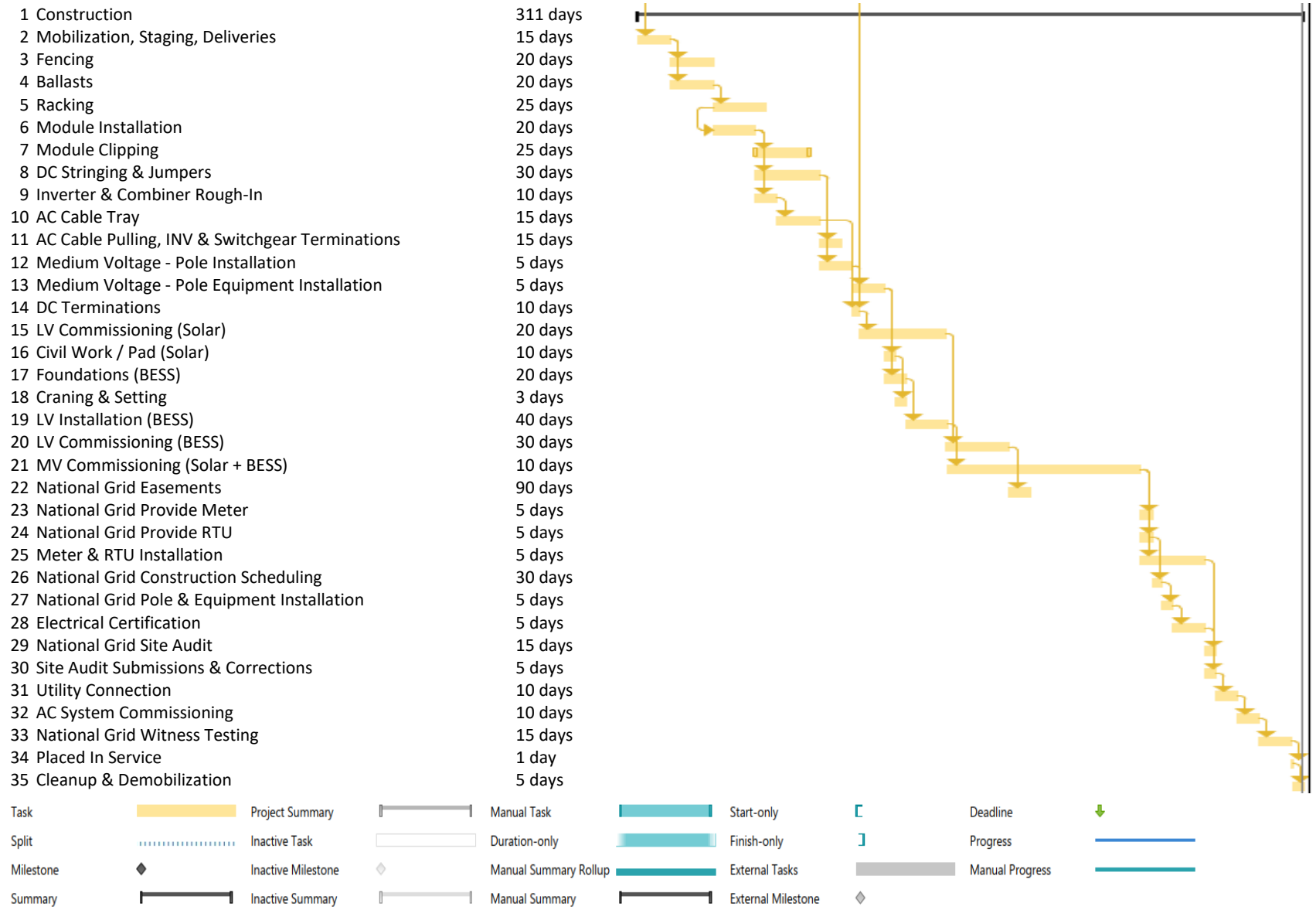
ABUNDANT SOLAR POWER, INC
700 WEST METRO PARK
ROCHESTER, NY 14623

BUFFALO LANDFILL SOLAR ARRAY
2 BUFFALO CREEK RAILROAD
BUFFALO NY 14210

DRAWING NAME:

MV POLE DETAILS

ID	Task Name	Duration
1	Construction	311 days
2	Mobilization, Staging, Deliveries	15 days
3	Fencing	20 days
4	Ballasts	20 days
5	Racking	25 days
6	Module Installation	20 days
7	Module Clipping	25 days
8	DC Stringing & Jumpers	30 days
9	Inverter & Combiner Rough-In	10 days
10	AC Cable Tray	15 days
11	AC Cable Pulling, INV & Switchgear Terminations	15 days
12	Medium Voltage - Pole Installation	5 days
13	Medium Voltage - Pole Equipment Installation	5 days
14	DC Terminations	10 days
15	LV Commissioning (Solar)	20 days
16	Civil Work / Pad (Solar)	10 days
17	Foundations (BESS)	20 days
18	Craning & Setting	3 days
19	LV Installation (BESS)	40 days
20	LV Commissioning (BESS)	30 days
21	MV Commissioning (Solar + BESS)	10 days
22	National Grid Easements	90 days
23	National Grid Provide Meter	5 days
24	National Grid Provide RTU	5 days
25	Meter & RTU Installation	5 days
26	National Grid Construction Scheduling	30 days
27	National Grid Pole & Equipment Installation	5 days
28	Electrical Certification	5 days
29	National Grid Site Audit	15 days
30	Site Audit Submissions & Corrections	5 days
31	Utility Connection	10 days
32	AC System Commissioning	10 days
33	National Grid Witness Testing	15 days
34	Placed In Service	1 day
35	Cleanup & Demobilization	5 days



Attachment E – Engineering Report – LaBella Associates, D.P.C. – May 2026

Prepared For:

SOLARBANK

Solarbank Corp.
Unit 803, 505 Consumers Rd.
North York, ON, Canada m2J 4V8

Submitted by:

LaBella Associates, D.P.C.
300 State Street, Suite 201
Rochester, NY 14614

LaBella
Powered by partnership.

BUFFALO LANDFILL SOLAR FARM IN THE CITY OF BUFFALO, NEW YORK

ENGINEERING REPORT

MAY 2026

PROJECT NO. 2251176

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Attachment 1 PV System Engineering Drawings

Attachment 2 Settlement, Slope Failure, Slippage, and Uplift Calculations

Attachment 3 Stormwater Pollution Prevention Plan (SWPPP)

Attachment 4 PCMM Contingency Plan (Contingency Plan)

I. INTRODUCTION

LaBella has developed this Engineering Report on behalf of Solarbank Corp. (Solarbank) by LaBella Associates, DPC (LaBella) for submission to New York State Department of Environmental Conservation (NYSDEC) as part of a package submitted for proposed change of use at the Buffalo Color Area "D" owned and operated by South Buffalo Development, LLC (SBD) situated on an approximately 19-acre landfill (situated on tax parcel 122.16-1-10) at 1337 South Park Avenue, in the City of Buffalo, Erie County, New York.

This Engineering Report is for the planned development on the approximately 19-acre former Site that was closed under an Order on Consent (#B9-0014-84-01RD) dated June 28, 1993 for New York State Department of Environmental Conservation (NYSDEC) Site No. 9-15-012 (NYSDEC, 1993). This development will not modify post-closure monitoring and maintenance requirements in the approved Former Buffalo Corporation Color Sites Areas A and D Groundwater Extraction System Operation, Maintenance and Monitoring Manual (OM&M Manual) dated December 2001 and updated March 2015 (MACTEC, 2001) or the Operation and Maintenance Plan (O&M Plan) included as part of the Site Management Plan (SMP) for the Buffalo Color Area "D" site dated April 2015 (MACTEC, 2015), or any approved changes as identified in multiple annual reports. This report includes construction level drawings and plans, and the engineering report requirements in accordance with *DEC Program Policy DMM-4: Photovoltaic Solar Projects Located at Closed Solid Waste Landfills ("DMM-4")* dated January 4, 2023. Additionally, a PCMM Plan has been developed for the entire site area. This PCMM Plan will address the use of the site as a solar array.

SBD has entered into an agreement with SUNN 1016, LLC (SUNN 1016) in August 2025 to install and operate an approximately 13.50-acre Photovoltaic (PV) Solar Array system within the Buffalo Color Area "D" site final cover system and property limits. Refer to the *Remedial Design Report Final Design Submittal* for location and construction detail of the final cover system (Parsons, 1996) as well as the *Buffalo Color Area "D" Closure Certification Report* (Parsons, August 2000). The PV Operator (SUNN 1016) of the PV system will be responsible for the operation and maintenance of the solar array system for the duration of the agreement. The detailed monitoring and maintenance responsibility discussion is included in Attachment 4 – Post-Closure Monitoring and Maintenance (PCMM) Plan.

This project has been labeled as a State Environmental Quality Review (SEQR) Type 1 action. Once memorialized, no further SEQR action is anticipated as part of this project.

II. PHOTOVOLTAIC SYSTEM

A fixed-tilt Solar PV System utilizing Remote Net Metering (RNM) (PV System) will be constructed on approximately 13.50 acres ("Lease Area" or "Project Area"; see Attachment 4, "PCMM Plan") with the closed Buffalo Color Area "D" being part of that area. The PV System will be installed and maintained by the PV Operator.

The PV System will consist of approximately 5,434 580 watt peak (Wp) solar modules affixed to panels supported by a non-penetrating surface-mounted ballast racking system in the Buffalo Color Area "D" site (see Attachment 1, PV Solar Array Engineering Drawings). Electrical service to the PV System will be provided via interconnection to the existing electrical infrastructure. The utility poles are located in the northern portion of the site and will be accessed by a 20' wide gravel access road running parallel to the proposed utility poles. A 20' wide limited use pervious gravel access road and existing access road improvement is proposed on the northern side of the Buffalo Color Area "D" site that connects the Site with an existing access road which is connected to South Park Avenue. A proposed 5' wide slurry wall gravel protection extension, consisting of gravel overlain with 6" of topsoil, will be installed directly adjacent to the pervious gravel access road to prevent utility trucks from traversing and potentially damaging the slurry wall. The existing gravel access road that starts at the northeastern portion of the site and bisects the majority of the Buffalo Color Area "D", ending before the southernmost portion of the site, will be utilized and maintained for array construction, maintenance, and fire access. The site will utilize a combination of existing and proposed 7' high perimeter fencing to enclose the PV System for safety. Fencing will be ballasted within the Buffalo Color Area "D" cover system.

The solar array will be located over the Buffalo Color Area "D" site and will consist of approximately 44 rows. Care was taken to maintain access to and provide a 10' minimum buffer around the existing Buffalo Color Area "D" gas vents monitoring wells and hydraulic control system components from the proposed panels. Additionally, a 10' minimum buffer has been provided for all existing groundwater monitoring wells and recovery wells within the proposed array footprint. Conduit within the Buffalo Color Area "D" footprint will be mounted from rack-to-rack and in between rows via above-ground cable trays. No trenching of any kind will occur at the Buffalo Color Area "D" site as part of this project. An existing gravel access road on the Buffalo Color Area "D" cap will be utilized for construction and long-term array access. See Attachment 1 for more details.

III.SETTLEMENT, SLOPE FAILURE, AND SLIPPAGE

Prior to and immediately following construction of the solar array system, an inspection of the Buffalo Color Area "D" cover system, monitoring wells and hydraulic controls system will be performed. All construction vehicles will remain on the gravel access road, to the greatest extent practicable during construction to prevent damage to the vegetative cover system. Wheeled equipment will not be permitted off the gravel access road at any time during construction, and no equipment that exceeds 10 pounds per square inch (psi) of ground pressure will be allowed on the Buffalo Color Area "D" cover system at any time. The gravel access roads consist of the existing final cover system and subgrade, and a geotextile beneath a minimum of 12-inches of gravel. Tracked equipment is not expected to be a concern on the final cover system, due to the low ground pressure developed by these pieces of equipment, but all disturbed areas will be repaired and revegetated following construction. The calculations for the impacts on the final cover system are included in Attachment 2.

Cover material properties from the Buffalo Color Area "D" *Remedial Design Report Final Design Submittal* (Parsons, 1996) were used to quantitatively evaluate the effects of placing a solar array on top of the Buffalo Color Area "D" site. A review of the Closure Certification Report for the Buffalo Color Area "D" Remedial Construction (Parsons, 1999, revised 2000) indicated that all cover system materials (topsoil, barrier soils, and geomembrane) met the design specifications set in the Parsons 1996 report with no exceptions.

The Buffalo Color Area "D" was properly closed over 27 years ago and was closed in 1998 with a New York State 6 NYCRR Part 360-equivalent low-permeability cover. With the applied loading of the ballasted system, no substantial settlement is expected. Calculations showing this minimal differential settlement are included in Attachment 2.

The ballasted PV array will sit on top of the final cover, which has a variable slope (10H:1V at top, 7H:1V in sections). Slope stability calculations were performed using the ballasted system. With the minimal slope of the Site and limited proposed structure, the veneer stability remains above a factor of safety of 1.5 for static conditions and 1.0 for seismic conditions. These calculations are included in Attachment 2.

As part of these slope stability calculations, the NYSDEC requested that consideration be given to a possible deeper failure that might undermine the portion of the slope itself that acts as a passive wedge, located above the prevailing grade at the toe. The possibility of this deeper slope failure was considered qualitatively. The unclassified fill surface adherence to the geosynthetic materials is accounted for in this calculation, and this adherence is calculated conservatively by assuming a typical critical interface friction angle for clay atop a smooth geosynthetic liner. A force causing failure through geosynthetics would be difficult to achieve with the soil cover over the geosynthetic. If this were to occur, then a global failure would need to be identified instead of the veneer condition analyzed here. This global condition would need to account for the tensile strength of the geosynthetics and the added strength it would provide to the soils. With this added strength, the veneer condition would demonstrate the weaker of the two failure types. Therefore, the deeper failure scenario was not quantitatively evaluated as it is less likely to occur than veneer failure due to the applied loading of the solar array.

Additionally, the NYSDEC requested that the effect of groundwater within the waste mass be qualitatively evaluated to determine if additional settlement can be expected due to groundwater infiltration. The bottom elevation of the waste in relation to station markers along the slurry wall surrounding Buffalo Color Area "D" is set at EL. 551 (see "Buffalo Color Area 'D' Evaluation of Buffalo River Embankment Wastefill" Parsons, 1998, Figure 4.2). D-0W-1I, D-0W-1E, D-0W-2I, D-0W-2E, D-0W-3I, D-0W-3E, D-0W-4I, D-0W-4E, D-0W-5I, D-0W-5E, D-0W-6I, and D-0W-6E are located within the Buffalo Color Area "D" footprint and had the following groundwater elevations as derived from the 2024 monthly groundwater sampling events and top casing elevations:

- D-OW-1I: 570.53 feet
- D-OW-1E: 571.79 feet
- D-OW-2I: 570.48 feet
- D-OW-2E: 571.83 feet
- D-OW-3I: 570.50 feet
- D-OW-3E: 571.79 feet
- D-OW-4I: 570.53 feet
- D-OW-4E: 571.81 feet
- D-OW-5I: 570.54 feet
- D-OW-5E: 571.80 feet
- D-OW-6I: 570.50 feet
- D-OW-6E: 571.76 feet

There are several assumptions that are used in the analysis of the settlement at the Buffalo Color landfill when applying the force of placing the solar array on the finished cap, including maximum waste depth. This depth is likely to be variable as opposed to being at a specific elevation. Knowns for this project are that the waste and the cap have been in place a number of years and the predicted settlement associated with the placement of the cap will have already occurred.

The groundwater elevations at the site are interpolated from the monitoring wells inside of the waste mass and show that groundwater is approximately 19-21 feet above the bottom of the slurry wall. Assuming that the waste extends down to the bottom of the slurry wall, a small layer of the waste may be in the groundwater. When applying the additional weight of the solar array minimal forces will be distributed through the waste and the impact at that depth would be small, as well as being distributed over a large footprint. If settlement of the waste were to occur, it would occur over large areas and would not result in localize differential settlement causing failure of the cap. The areas of the solar array should be monitored to maintain positive drainage and to not allow ponding on the cap and if repairs are warranted that they would be completed.

IV.STORM WATER CONTROL AND EROSION

The storm water on-site is currently managed by a series of swales to collect drainage off of the Buffalo Color Area "D" cover and elevated central access area. Ballasts and racking will not be located within or across existing stormwater conveyance systems. Since impervious areas are not expected to increase at the Site due to solar development activities, additional stormwater management controls are not proposed as part of this design. A description of E&S controls, stormwater conveyance systems, and anticipated disturbance area is included in Attachment 3. Solar development activities and solar system components will not impact or impede stormwater flow.

V. GAS MANAGEMENT

Prior to and immediately following construction of the PV array system, an inspection of the Buffalo Color Area "D" gas vents, monitoring wells and hydraulic control systems will be performed. The existing Buffalo Color Area "D" gas vents, piezometers, pumping wells and other hydraulic control components located within the Buffalo Color Area "D" site will be protected and not be disturbed during construction. All utility lines near the Buffalo Color Area "D" site are located aboveground. At completion of the PV array construction the Buffalo Color

Area “D” gas vents and hydraulic control system will continue to operate as described in the PCMM Plan (Attachment 4).

VI. VEGETATIVE COVER EVALUATION

Prior to and immediately following construction of the PV array system, an inspection of the Buffalo Color Area “D” vegetative cover system beneath the PV array will be performed. Routine inspections will then be conducted at the frequency indicated in PCMM Plan (Attachment 4).

VII. WIND AND SNOW

The ballast system will be designed to conform to local wind and snow loading requirements with a safety factor of 1.5 to ensure no uplift of the solar panels or undesirable settlement of the Buffalo Color Area “D” cap. Uplift calculations (performed by Polar Racking) are included as part of Appendix 2. The City of Buffalo primarily follows the climatic and geographic design criteria mandated by New York State for solar design, with the exception of wind speed (Buffalo, accessed 2025). As such, the array design will adhere to the following climatic and geographic design criteria provided in the 2020 Building Code of New York State, the National Oceanic and Atmospheric Administration (NOAA), the 2020 Plumbing Code of NYS, and the Local Standards of the City of Buffalo:

- Ground snow load: 50 PSF
- Wind design:
    - 3-second wind speed: 115 mph (ASCE7-16, Risk Category 1)
    - Topographic effects: none
    - Special wind region: none
    - Wind-borne debris-zone: none
- Frost line depth: 48”
- Ice barrier underlayment: Required
- Air freezing index: Erie 2000 or greater
- Heating Degree Days: 6756

VIII.CONSTRUCTION TECHNIQUES

Gas vents, monitoring wells, hydraulic control system components, buried utilities, and all other sensitive items within the project limits will be appropriately flagged prior to construction to avoid disturbances of such items.

Conduit will be run along the racks and connected from row-to-row with conduit hangers to limit the amount of conduit running along the final cover. No buried conduit is proposed within the limits of the final cover. Cable trays conveying conduit will be placed atop the vegetative cover but will be supported by footers. This system is expected to be easy to mow and maintain.

The ballasts will be installed on a crushed stone leveling pad underlain by geotextile fabric. Stripping of topsoil/vegetative layer will be limited to the area within the ballast footprint and

will not exceed 2" depth (bottom of root structure). During installation, no stripped/unvegetated areas will be left open overnight or over weekends to minimize the potential for erosion, stormwater infiltration, or slope failure. Stripped vegetative material/topsoil will be stockpiled at the construction entrance/staging area, sampled, and properly disposed of at a permitted, off-site facility. Geotextile fabric and crushed stone shall be placed on stripped/unvegetated areas immediately following vegetative stripping.

No punctures to the final cover system are anticipated during the construction of the PV array system. Staying within the 10 psi allowable load in the Buffalo Color Area "D" cap the selection of equipment used is limited. The following is a list of events and proposed equipment:

Construction of the Gravel Buffalo Color Area "D" Access Road: Import of the Type 4 and Type 2 gravel using triaxle dump trucks partially loaded, spreading the weight across all (3) axles. A "low pressure" wide tracked bulldozer will be used to spread, grade & fine grade the gravel.

Survey & layout: Construction personnel are able to move about the project on ATV 2 & 5 person machines staying well within the allowable load of the Buffalo Color Area "D" cap. Traffic patterns will be identified and reviewed in the weekly project meetings.

Installation of the ballasted foundations: The precast foundations will be arriving on flatbed trailers along the lower access road. They will be taken off the trailer and prepared to be brought up to the Buffalo Color Area "D" access road. From there they will be distributed and set via track equipment in their locations.

Racking & Modules: Delivery and installation will be done using the same method as the foundations and in the same sequence most likely from south to north.

A Decommissioning Plan will be prepared and submitted to the NYSDEC prior to decommissioning of solar array panels.

IX. CONTINGENCY PLAN

The PCMM Plan (Attachment 4) addresses contingency plans for potential problems that could arise as a result of the construction of the PV array system.

X. REFERENCES

1. NYSDEC, 1993. *Order on Consent, Site Number 9-15-012 Buffalo Color Area "D" Site*. New York State Department of Environmental Conservation, June 1993.

2. Parsons, 1996. *Remedial Design Report, Final Design Submittal, Volume 1*. Parsons, February 1996.

3. Parsons, 1996. *Remedial Design Report, Final Design Submittal, Volume 2*. Parsons, February 1996.

4. Parsons, 1999. *Closure Certification Report.* Parsons, January 1999.

ATTACHMENT 1:

PV SYSTEM ENGINEERING DRAWINGS

BUFFALO LANDFILL SOLAR PROJECT

2 BUFFALO CREEK RAILROAD, BUFFALO, NY 14210

CITY OF BUFFALO, ERIE COUNTY

BUFFALO COLOR AREA "D"
NYSDEC SITE NO.: 915012
NYSDEC SITE ADDRESS: 2 BUFFALO CREEK RAILROAD
BUFFALO, NY 14210

PROJECT DATA	
PARCEL INFORMATION	
APPLICANT	SUNN 1016, LLC
OWNER	SOUTH BUFFALO DEVELOPMENT, LLC
PARCEL ADDRESS	1037 SOUTH PARK AVE, BUFFALO, NY 14210
SYSTEM SIZE (MWDC)	2.227
SYSTEM SIZE (MWAC)	1.50
PARCEL AREA (TOTAL)	18.92 AC
TOTAL PROJECT AREA	13.90 AC
PROPOSED IMPERVIOUS WITHIN PROJECT AREA	0.09 AC
GROUND MOUNT PV SYSTEM SUMMARY	
DC SIZE (MW)	2.227
AC SIZE (MW)	1.50
MAX PANEL HEIGHT (FT)	12
MODULE POWER (W)	580
MODULE QUANTITY	3,840
RACKING TYPE / TILT ANGLE	FIXED / 30°

LOCATION MAP
1" = 600'

DRAWING INDEX

C001 GENERAL NOTES & LEGEND
C101 EXISTING CONDITIONS& DEMOLITION PLAN
C201 OVERALL SITE PLAN
C202 SITE PLAN
C401 OVERALL GRADING PLAN
C402 GRADING PLAN
C501 EROSION & SEDIMENT CONTROL PLAN
C701 CONSTRUCTION DETAILS
C702 CONSTRUCTION DETAILS
C703 CONSTRUCTION DETAILS

ABUNDANT SOLAR POWER, INC.

700 WEST METRO PARK
ROCHESTER, NY 14623
AUGUST 15, 2025
REVISED: MAY 5, 2026

ABUNDANT
Solar Power Inc.

LaBella
Powered by partnership.

300 State Street, Suite 201
Rochester, NY 14614
585-454-6110

labellapc.com

ISSUED FOR PERMIT
AUGUST 15, 2025

SUNN 1016 LLC
PROJECT NO: 2251176

BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, CITY OF BUFFALO, NY 14210

GENERAL NOTES

1. THE CONTRACTOR ALONE SHALL BE RESPONSIBLE TO LOCATE UTILITIES OUTSIDE THE RIGHT-OF-WAY INCLUDING PRIVATE ROADS.
2. SITE DRAINAGE, INCLUDING THE PROJECT SITE AND ADJACENT PRIVATE AND PUBLIC ROADWAYS, DRIVES, PARKING AREAS OR PROPERTIES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL MATERIALS, TOOLS AND EQUIPMENT, INCLUDING SPECIAL CUTTING DEVICES, NECESSARY TO PERFORM THE WORK CONTAINED IN THIS CONTRACT.
4. THE CONTRACTOR SHALL PROTECT ALL EXISTING SITE AMENITIES.
5. UNLESS OTHERWISE INDICATED ON THE PLANS OR DIRECTED BY THE ARCHITECT/ENGINEER, THE CONTRACTOR IS RESPONSIBLE FOR PRESERVING AND PROTECTING FROM DAMAGE ALL TREES, THE LANDFILL COVER, THE SLOPES ABOVE THE BUFFALO RIVER, SHRUBS AND PLANTS IN THE VICINITY OF THE PROPOSED WORK.
6. THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL EXISTING UTILITIES.
7. ANY SITE AMENITY, UTILITY, STREET APPURTENANCE, OR OTHER ITEM WHICH BECOMES DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED IN-KIND BY THE CONTRACTOR AS DETERMINED BY THE PROJECT MANAGER OR ARCHITECT/ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER. REPAIR WORK IS ALSO TO BE COORDINATED WITH NYSDEC.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SAMPLING OR OTHER COSTS ASSOCIATED WITH ANY OFFSITE SOILS DISPOSAL. SBD NEEDS FINAL APPROVAL OF ALL WASTE MANIFESTS.

SURVEY NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. NO ALLOWANCE WILL BE MADE FOR ADDITIONAL COSTS DUE TO CONTRACTOR'S FAILURE TO VERIFY EXISTING CONDITIONS,
2. THE CONTRACTOR SHALL LOCATE, MARK, SAFEGUARD AND PRESERVE ALL SURVEY MARKERS AND RIGHT-OF-WAY MARKERS IN THE AREA OF CONSTRUCTION.
3. ANY IRON PINS, MONUMENTS OR OTHER ITEMS DEFINING PROPERTY LINES WHICH ARE DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE PROPERLY TIED AND ACCURATELY RESET BY A NYS LICENSED SURVEYOR UPON COMPLETION OF THE WORK.
4. HORIZONTAL DATUM BASED OFF NY83-WF.
5. ELEVATIONS BASED ON NAD'83 DATUM US FT.

DEMOLITION NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. NO ALLOWANCE WILL BE MADE FOR ADDITIONAL COSTS DUE TO CONTRACTOR'S FAILURE TO VERIFY EXISTING CONDITIONS AND DIMENSIONS. COULD BE SUBSTANTIAL IF THE NYSDEC DETERMINES THE CONTRACTOR DISTURBED THE CAP. CONTRACTOR SHALL OBTAIN PHOTOS AT ONSET OF CONSTRUCTION TO DEMONSTRATE PRE-CONSTRUCTION CONDITIONS OF COVER SYSTEM.
2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY DIG SAFELY NEW YORK AT 811 TO REQUEST UTILITY STAKEOUT OF ALL PUBLIC UTILITIES.
3. THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING ABOVE GROUND AND BELOW GROUND UTILITIES, STRUCTURES, AND APPURTENANCES SHOWN ON THE PLANS ARE APPROXIMATE AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES, STRUCTURES, AND APPURTENANCES IN THE PATH OF AND ADJACENT TO THE PROPOSED WORK.
4. SITE DRAINAGE, INCLUDING THE PROJECT SITE AND ADJACENT PRIVATE AND PUBLIC ROADWAYS, DRIVES, PARKING AREAS OR PROPERTIES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
5. CONTRACTOR SHALL PROTECT AND SUPPORT ALL EXISTING UTILITIES.
6. THE CONTRACTOR SHALL FIRST COORDINATE WITH THE PROPERTY OWNER BEFORE ANY CONTACT WITH THE CITY OR NYSDEC. THE CONTRACTOR SHALL THEN NOTIFY THE LOCAL GOVERNMENT, LOCAL FIRE DEPARTMENT, THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) AND THE U.S. ARMY CORPS OF ENGINEERS (USACOE) AS NECESSARY AND SHALL OBTAIN ANY REQUIRED PERMITS PRIOR TO BEGINNING WORK. COPIES OF ANY REQUIRED PERMITS SHALL BE PROVIDED TO THE OWNER PRIOR TO BEGINNING THE WORK.
7. CONTRACTOR SHALL REMOVE FROM SITE, CONSTRUCTION MATERIALS NOT INDICATED TO BE SALVAGED INCLUDING ALL DEBRIS. ALL REMOVED MATERIALS SHALL BECOME THE PROPERTY OF CONTRACTOR WHO SHALL LEGALLY DISPOSE OF SAME. CONTRACTOR SHALL NOT REMOVE ANY SOIL FROM THE SITE.
8. ALL TREES, SHRUBS AND PLANTS DESIGNATED TO REMAIN AND DISTURBED BY CONSTRUCTION OPERATIONS, SHALL BE REPLACED IN-KIND AS DIRECTED BY THE ARCHITECT/ENGINEER AND/OR OWNER'S DESIGNATED REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.
9. THE CONTRACTOR SHALL MAINTAIN SAFE VEHICULAR AND PEDESTRIAN ACCESS TO THE EXISTING BUILDINGS FOR THE DURATION OF THE CONTRACT.
10. WHEN EXISTING CONSTRUCTION WHICH IS TO REMAIN IS DAMAGED DURING THE COURSE OF CONSTRUCTION AS A RESULT OF CONTRACTORS WORK, IT SHALL BE REPAIRED AND/OR REPLACED TO SATISFY THE PROPERTY OWNER AND THE NYSDEC, AT NO COST TO THE OWNER. ALL REPAIRS AND/OR REPLACEMENTS WILL BE SUBJECT TO OWNERS APPROVAL.
11. COORDINATE LOCATION OF TEMPORARY CONSTRUCTION FENCE AND TEMPORARY STONE STAGING AREA WITH PROPERTY OWNER AND NYSDEC. NYSDEC MUST APPROVE ALL IMPORT BEFORE IT IS TRANSPORTED TO THE PROPERTY.

SITE NOTES

1. GENERAL NOTE: ALL SUBGRADE MATERIAL IMPORTED REQUIRES NYSDEC APPROVAL.
2. WELL COMPACTED SUBGRADE SHALL BE UTILIZED UNDERNEATH CONSTRUCTION OF PAVEMENT AND CONCRETE BASES. COMPACTION OF SUBGRADE IS NOT APPLICABLE UNDER THE PERVIOUS GRAVEL ROAD AREAS.
3. ALL STAKEOUT FOR THE PROPOSED SITE IMPROVEMENTS SHALL BE COMPLETED BY A NEW YORK STATE LICENSED LAND SURVEYOR.
4. IF ANY DISCREPANCIES ARE NOTED BETWEEN THESE CONSTRUCTION DOCUMENTS AND INFORMATION PROVIDED OR AN ERROR IS SUSPECT, IT SHALL BE IMMEDIATELY REPORTED TO THE CONSTRUCTION MANAGER AND LABELLA ASSOCIATES PROJECT MANAGER IN WRITING.
5. ANY PROOF-ROLLING OF EXPOSED SUBBASE BY A MINIMUM 10 TON SMOOTH DRUM ROLLER SHALL BE DONE UNDER THE GUIDANCE OF, AND OBSERVED BY, QUALIFIED ENGINEERING PERSONNEL PRIOR TO PLACEMENT OF SUBBASE MATERIAL. THE ROLLER SHOULD BE OPERATED IN THE STATIC MODE AND COMPLETE AT LEAST TWO (2) PASSES OVER THE EXPOSED SUBGRADES. PERVIOUS GRAVEL ACCESS ROAD AREAS SHALL NOT PROOF-ROLL THE SUBGRADE, BUT MUST MAINTAIN A 10:1 OR LESS SLOPE ALONG ALL AREAS OF THE ROAD.

GRADING NOTES

1. THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF OSHA, AND ANY OTHER AGENCY HAVING JURISDICTION WITH REGARD TO SAFETY PRECAUTIONS WITH TRENCHING OPERATIONS. THE REQUIREMENTS SET FORTH HEREIN ARE INTENDED TO SUPPLEMENT REQUIREMENTS ESTABLISHED BY THESE AGENCIES. IN THE CASE OF A CONFLICT BETWEEN REQUIREMENTS OF OTHER JURISDICTIONAL AGENCIES AND THESE DOCUMENTS, THE MORE STRINGENT REQUIREMENT ON THE CONTRACTOR SHALL APPLY.
2. THE CONTRACTOR SHALL PLACE AT MINIMUM 6 INCHES OF CLEANED SCREENED TOPSOIL IN ALL DISTURBED AREAS PRIOR TO SEEDING

SCHEDULE OF CONSTRUCTION ACTIVITIES

1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE CITY OF BUFFALO OFFICIALS, OWNER, PROPERTY OWNER REPRESENTATIVES, NYSDEC, EMERGENCY SERVICES, UTILITY & OTHER AGENCIES IN ATTENDANCE.
2. SUBMIT EROSION CONTROL MEASURES AND SEQUENCING FOR REVIEW AND APPROVAL BY THE QUALIFIED INSPECTOR AND THE SMP.
3. STAKEOUT AND FLAG THE LIMITS OF THE BUFFALO RIVER.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
5. INSTALL PERIMETER SEDIMENT CONTROLS, SUCH AS SEDIMENT COMPOST FILTER SOCK.
6. INSTALL TEMPORARY CONSTRUCTION MEASURE SUCH AS CONSTRUCTION ROAD, LAYDOWN AREA, CONSTRUCTION AREA, DESIGNATED TOPSOIL STOCKPILE AREA, STAGING AREA FENCING, ETC.
7. PROTECT EXISTING VEGETATION AND OTHER ENVIRONMENTAL FEATURES TO BE PRESERVED WITH ORANGE CONSTRUCTION FENCE OR TREE PROTECTION.
8. CLEAR AND GRUB BRUSH, SHRUBS, AND OTHER DEBRIS WITHIN DESIGNATED AREAS.
9. INSPECT, CLEAN, AND MAINTAIN EROSION CONTROL MEASURES AS NECESSARY AND AS ORDERED BY THE QUALIFIED INSPECTOR. SWEEP PUBLIC OR PRIVATE ROADWAYS, DRIVES AND PARKING AREAS AS NECESSARY TO MAINTAIN CLEAN FROM DEBRIS. RELOCATED AND RESET EROSION CONTROL MEASURES AND CONSTRUCTION FENCING AS REQUIRED TO COMPLETE WORK. ALL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONAL BEFORE COMMENCEMENT OF CONSTRUCTION OF ANY SEGMENT OF THE PROJECT THAT REQUIRES SUCH MEASURES.
10. STABILIZE DISTURBED AREAS AND STOCKPILES WITHIN 14 DAYS OF LAST CONSTRUCTION ACTIVITY IN EACH AREA. (7 DAYS IF GREATER THAN 5 ACRES DISTURBED).
11. INSTALL UTILITES. EXCESS MATERIALS NOT BACKFILLED IN UTILITY TRENCHES SHALL BE REMOVED FROM THE SITE OR SPOILED IN AREAS APPROVED BY THE PROPERTY OWNER AND NYSDEC. EROSION CONTROL MEASURES ARE NOT REQUIRED AROUND SOILS (EARTHEN MATERIALS) EXCAVATED, SIDE CAST AND BACKFILLED INTO THE TRENCH WITHIN THE SAME DAY.
12. RESTORE TO EXISTING GRADE AS TRENCH BACKFILLING PROGRESSING. MAINTAIN PROPER SITE DRAINAGE TO PROTECT WORK AREA, ADJACENT PROPERTIES, SWALES, AND OTHER WATERCOURSES.
13. BOX OUT AREAS FOR PERVIOUS ACCESS ROADS AND EQUIPMENT PADS. AS UTILITY REPLACEMENTS ARE COMPLETE, PREPARE THE SUBGRADE AS REQUIRED.
14. INSTALL CONCRETE WASHOUT AREA. NO WET OR FRESH CONCRETE, WASHINGS FROM CONCRETE TRUCKS, MIXERS, OR OTHER DEVICES, OR CONCRETE LEACHATE SHALL BE ALLOWED TO ESCAPE INTO ANY WETLANDS OR WATERS.
15. INSTALL CONCRETE ELECTRICAL EQUIPMENT PADS AND THE APPROPRIATE STORMWATER MANAGEMENT FACILITIES.
16. INSTALL THE DEC APPROVED LIMITED USE PERVIOUS GRAVEL ACCESS ROAD ONCE ALL AREAS SUBJECT TO RUNOFF ONTO THE PERVIOUS ACCESS ROAD HAVE ACHIEVED FINAL STABILIZATION.
17. INSTALL PERMANENT SEEDING, FERTILIZER, AND MULCH.
18. COMPLETE GRADING IF REQUIRED, REAPPLY TOPSOIL, INSTALL PERMANENT SEEDING, FERTILIZER, AND MULCH.
19. CAPTURE, REMOVE, AND DISPOSE OF ACCUMULATED SILT OR SEDIMENT FROM SILT FENCE, CHECK DAMS, INLET PROTECTION, AND SEDIMENT BASINS.
20. CLEAN THE SITE OF ALL INCIDENTAL CONSTRUCTION MATERIALS THAT ARE NOT INCORPORATED INTO THE WORK, AND PROPERLY DISPOSE OFFSITE.
21. SEED, MULCH, AND FERTILIZE TO ESTABLISH VEGETATION AT DISTURBED AREAS NOT DESIGNATED FOR PAVEMENT OR OTHER SURFACES. WHERE SEED DOES NOT GERMINATE OR WHERE WASHOUT, EROSION, RUTTING, OR OTHER DAMAGE OCCURS, REPAIR DAMAGE, RE-SEED AND RE-FERTILIZE AS NECESSARY TO ACHIEVE 80% GERMINATION OVER 100% OF THE SITE.
22. REMOVE ALL TEMPORARY EROSION CONTROL PRACTICES UPON APPROVAL OF FINAL STABILIZATION BY THE QUALIFIED INSPECTOR.

LEGEND

EXISTING	PROPOSED	DESCRIPTION
△		PROJECT BENCHMARK / CONTROL POINTS
		WETLAND
		WETLAND BUFFER
	⌀	TREE REMOVAL
		DECIDUOUS TREE
		CONIFEROUS TREE
		ASPHALT ACCESS ROAD
		PERVIOUS GRAVEL ACCESS ROAD
		AGRICULTURAL FENCE
		BALLASTED FENCE
		TREE/VEGETATION LIMIT
		PROPERTY LINE
		SETBACK LINE
ROW		RIGHT-OF-WAY
		UTILITY POLE
		UNDERGROUND ELECTRIC
	OE	OVERHEAD ELECTRIC
ST	ST	STORM LINE
		UNDERDRAIN
510	510	MAJOR CONTOUR
509	509	MINOR CONTOUR
		FLOW DIRECTION
		EROSION FENCE
		CONSTRUCTION FENCE
		SILT SOCK INLET PROTECTION
		CHECK DAM
		CONCRETE WASHOUT
		STABILIZED CONSTRUCTION ENTRANCE (TEMPORARY)
	TOPSOIL STOCKPILE	TOPSOIL STOCKPILES
		TEMPORARY CONSTRUCTION LAY DOWN AREA

EROSION & SEDIMENT CONTROL NOTES

1. ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, AND LOCAL GOVERNING SOIL AND WATER CONSERVATION AGENCY RECOMMENDATIONS AND STANDARDS. CONTRACTOR SHALL SUBMIT PROPOSED EROSION CONTROL PLAN INCLUDING SEQUENCING OF WORK TO THE ENGINEER FOR REVIEW PRIOR TO START OF WORK.
2. UTILIZE CONSTRUCTION METHODS/TECHNIQUES, WHICH WILL LIMIT THE EXPOSED EARTHEN AREAS AND MINIMIZE THE EFFECT OF EARTH DISTURBANCE ACTIVITIES ON SOIL EROSION.
3. RESTRICT DISTURBANCE TO UNDER 5 AC WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.
4. ALL SEDIMENTATION BARRIERS AND OTHER TEMPORARY OR PERMANENT MEASURES SHALL BE IN PLACE PRIOR TO THE START OF CONSTRUCTION. PLANS SHOW THE SUGGESTED MINIMUM MEASURES REQUIRED. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE ADJUSTED IN THE FIELD AS NEEDED DEPENDING ON CONSTRUCTION SEQUENCE. LOCATIONS TO BE VERIFIED BY STORMWATER INSPECTOR.
5. REMOVAL OF ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE COMPLETED AT THE APPROVAL OF THE OWNER AND ENGINEER. THE COST OF REMOVING THESE MEASURES SHALL ALSO BE INCLUDED IN THE BID PRICE.
6. FOR THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL PROTECT ALL ON-SITE, ADJACENT AND/OR DOWNSTREAM STORM/SANITARY SEWERS, AND/OR OTHER WATER COURSES FROM CONTAMINATION BY WATER BORNE SILTS, SEDIMENTS, FUELS, SOLVENTS, LUBRICANTS OR OTHER POLLUTANTS ORIGINATING FROM ANY WORK DONE ON, OR IN SUPPORT OF THIS PROJECT.
7. DURING CONSTRUCTION NO WET OR FRESH CONCRETE OR LEACHATE SHALL BE ALLOWED TO ESCAPE INTO STORM/SANITARY SEWERS, DITCHES OR OTHER WATERS OF NEW YORK STATE, NOR SHALL WASHINGS FROM CONCRETE TRUCKS, MIXERS OR OTHER DEVICES BE ALLOWED TO ENTER ANY STORM/SANITARY SEWERS, DITCHES, RIVERS, OR WATER COURSES.
8. ALL EXCAVATED OR IMPORTED EARTHEN STOCKPILES SHALL BE SUITABLY STABILIZED AND PROTECTED BY SILT FENCE SO THAT IT CANNOT REASONABLY ENTER ANY WATER BODY, OR STORM OR SANITARY SEWER.
9. ALL METHODS AND EQUIPMENT PROPOSED BY THE CONTRACTOR TO ACCOMPLISH THE WORK FOR EROSION AND POLLUTION CONTROL SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER OR STORMWATER INSPECTOR.
10. THE CONTRACTOR SHALL BE REQUIRED TO TREAT TRAVELED AREAS TO CONTROL DUST. WATER SHALL BE APPLIED TO SUCH TRAVELED AREAS AS THE ARCHITECT/ENGINEER OR OWNER'S DESIGNATED REPRESENTATIVE MAY DESIGNATE. THE NUMBER OF APPLICATIONS AND THE AMOUNT OF WATER SHALL BE BASED UPON FIELD AND WEATHER CONDITIONS.
11. ALL AREAS OF SOIL DISTURBANCE RESULTING FROM THIS PROJECT WHICH WILL NOT BE SUBJECT TO FURTHER EARTHWORK OR CONSTRUCTION ACTIVITIES SHALL BE PERMANENTLY SEEDED TO ESTABLISH GRASS, AND MULCHED WITH HAY OR STRAW WITHIN ONE WEEK OF FINAL DISTURBANCE. MULCH SHALL BE MAINTAINED UNTIL A SUITABLE VEGETATIVE COVER IS ESTABLISHED.
12. CONTRACTOR IS REQUIRED TO SURVEY ALL DISTURBED AREAS AFTER COMPLETION OF THE WORK TO DOCUMENT COVER SYSTEM COMPLIANCE.
13. CONTRACTOR STAGING AREAS AND CONSTRUCTION ENTRANCE LOCATIONS SHALL BE COORDINATED WITH THE OWNER PRIOR TO START OF CONSTRUCTION. STABILIZED CONSTRUCTION ENTRANCE(S), AS SHOWN ON THE PLANS SHALL BE PROVIDED. ALL DISTURBED AREAS SHALL BE RESTORED.
14. UPON COMPLETION OF THE PROJECT THE SOIL UNDERNEATH THE CONSTRUCTION STAGING AREA SHALL BE DISKED AND RESEEDED TO A DEPTH OF AT LEAST 6" BELOW EXISTING GRADE TO HELP REESTABLISH VEGETATIVE GROWTH.
15. CONTRACTOR TO PROVIDE 3-4 STAKEOUT LATHES DELINEATING THE WETLAND IN RELATION TO THE ORANGE CONSTRUCTION FENCE.
16. CONTRACTOR SHALL PROTECT VEGETATION SCHEDULED TO REMAIN WITH ORANGE CONSTRUCTION FENCING.

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STATE OF NEW YORK — MICHAEL D. PRATT — 102063 — LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 102063

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ABUNDANT SOLAR POWER, INC.
700 WEST METRO PARK
ROCHESTER, NY 14623

ABUNDANT
Solar Power Inc.

BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, BUFFALO, NY

NO:	DATE:	DESCRIPTION:
4	05/05/2026	PER DEC COMMENTS
3	04/10/2026	PER DEC COMMENTS
2	02/18/2026	SITE LAYOUT CHANGES
1	12/01/2025	SETBACK ADDITION
Revisions		

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

GENERAL NOTES, LEGEND, AND DRAWING INDEX

DRAWING NUMBER:

C001

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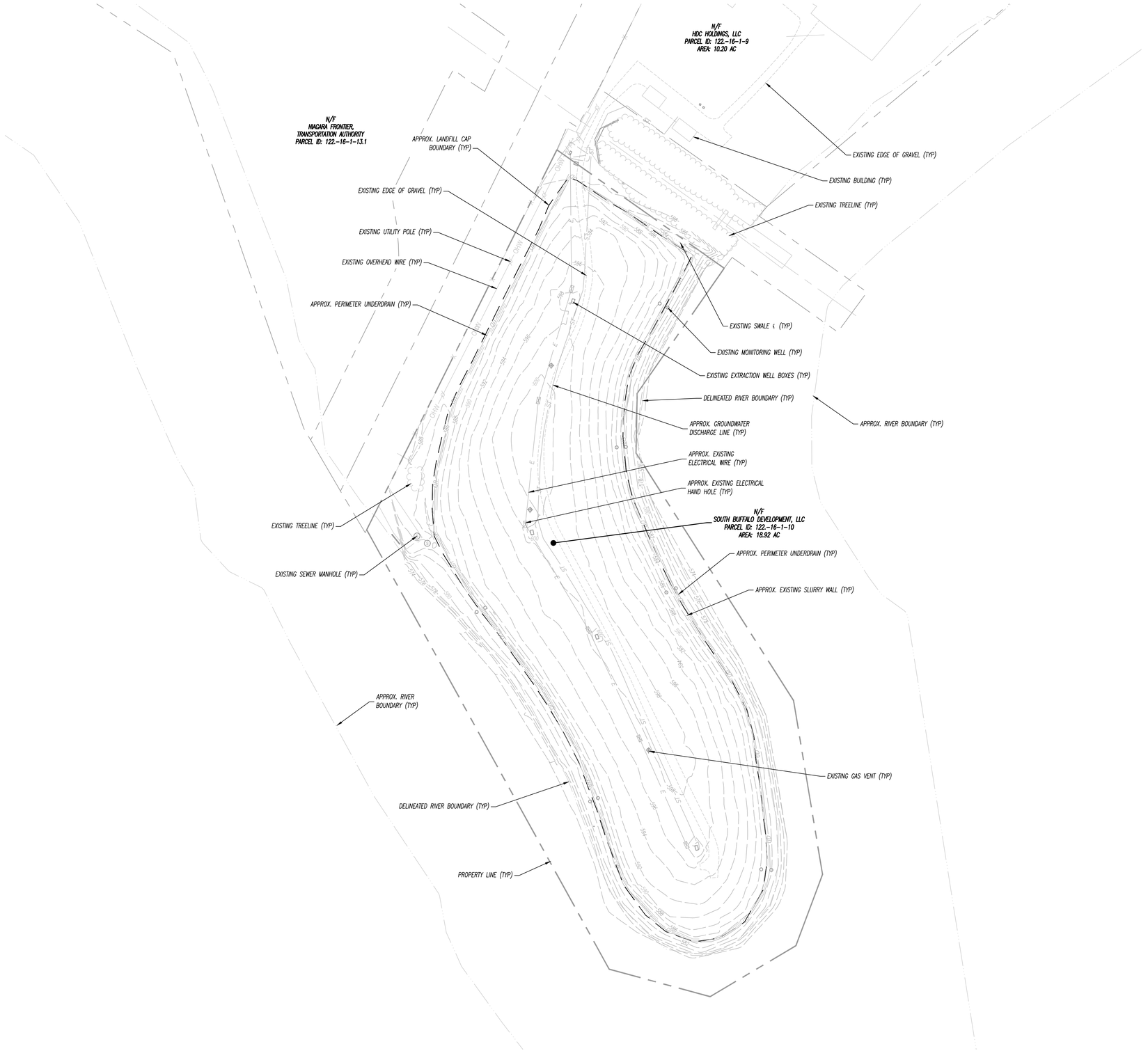

1 C101 EXISTING CONDITIONS PLAN

SCALE: 1" = 100'

N

0' 100' 200' 300'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BUFFALO RIVER BOUNDARY
		GRAVEL LANDFILL ACCESS ROAD
		FENCE
		PROPERTY LINE
		SETBACK LINE
		UTILITY POLE
		CABLE TRAY
		OVERHEAD ELECTRIC
		STORM LINE
		UNDERDRAIN LINE
		GAS VENT
		MONITORING WELL
		MAJOR CONTOUR
		MINOR CONTOUR

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CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 102063

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BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, BUFFALO, NY

NO:	DATE:	DESCRIPTION:
4	05/05/2026	PER DEC COMMENTS
3	04/10/2026	PER DEC COMMENTS
2	02/18/2026	SITE LAYOUT CHANGES
1	12/01/2025	SETBACK ADDITION

Revisions

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

EXISTING CONDITIONS PLAN

DRAWING NUMBER:

C101

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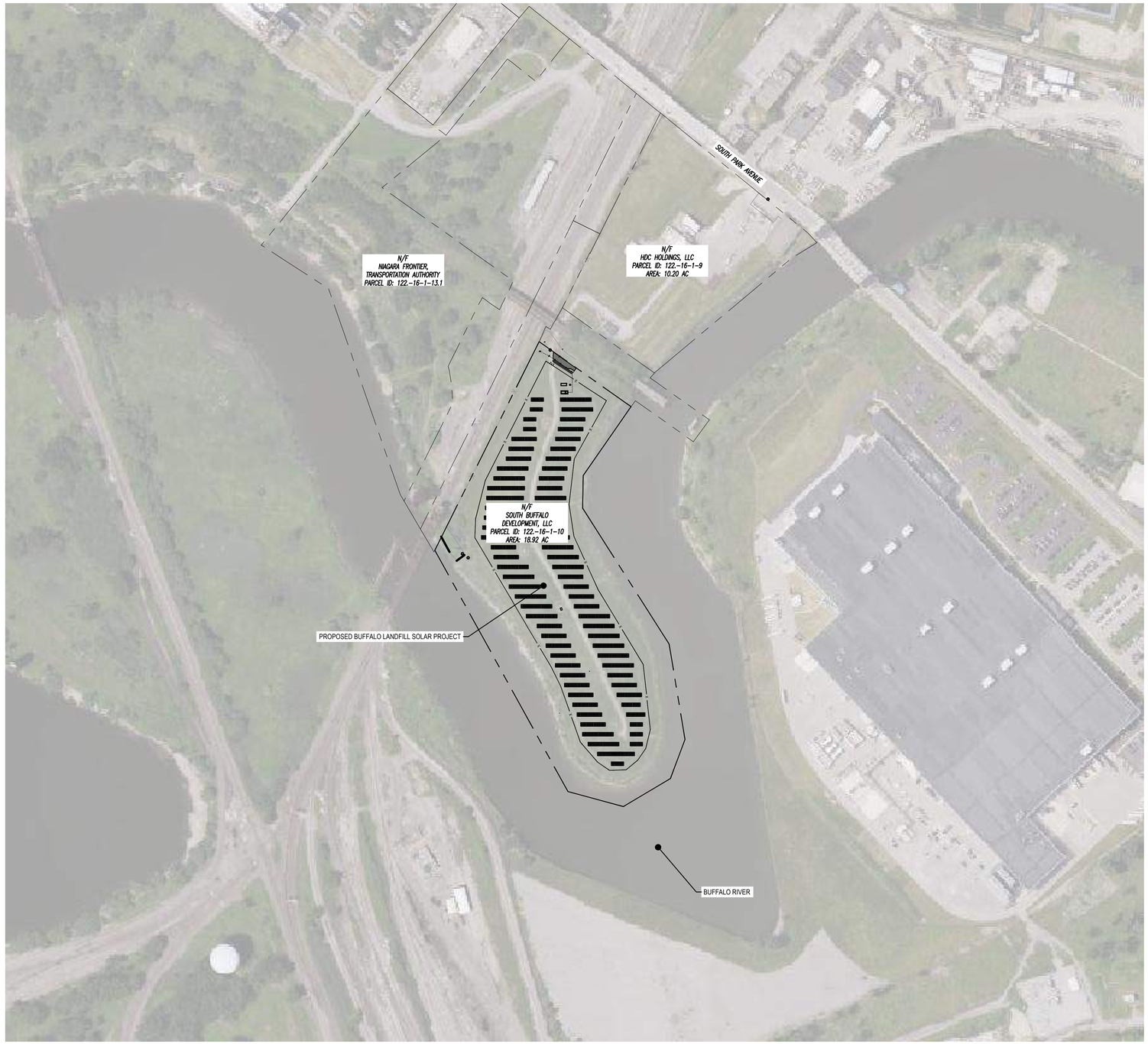

1 / C201 OVERALL SITE PLAN

SCALE: 1" = 200'

N

0' 200' 400' 600'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BUFFALO RIVER BOUNDARY
		GRAVEL LANDFILL ACCESS ROAD
x	x	FENCE
		PROPERTY LINE
		SETBACK LINE
		UTILITY POLE
E	E	CABLE TRAY
OHE	OHE	OVERHEAD ELECTRIC
ST		STORM LINE
UD		UNDERDRAIN LINE
		GAS VENT
		MONITORING WELL
510	510	MAJOR CONTOUR
509	509	MINOR CONTOUR

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STATE OF NEW YORK
MATTHEW D. PIERCE
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BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, BUFFALO, NY

NO:	DATE:	DESCRIPTION:
4	05/05/2026	PER DEC COMMENTS
3	04/10/2026	PER DEC COMMENTS
2	02/18/2026	SITE LAYOUT CHANGES
1	12/01/2025	SETBACK ADDITION
Revisions		

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

OVERALL SITE PLAN

DRAWING NUMBER:

C201

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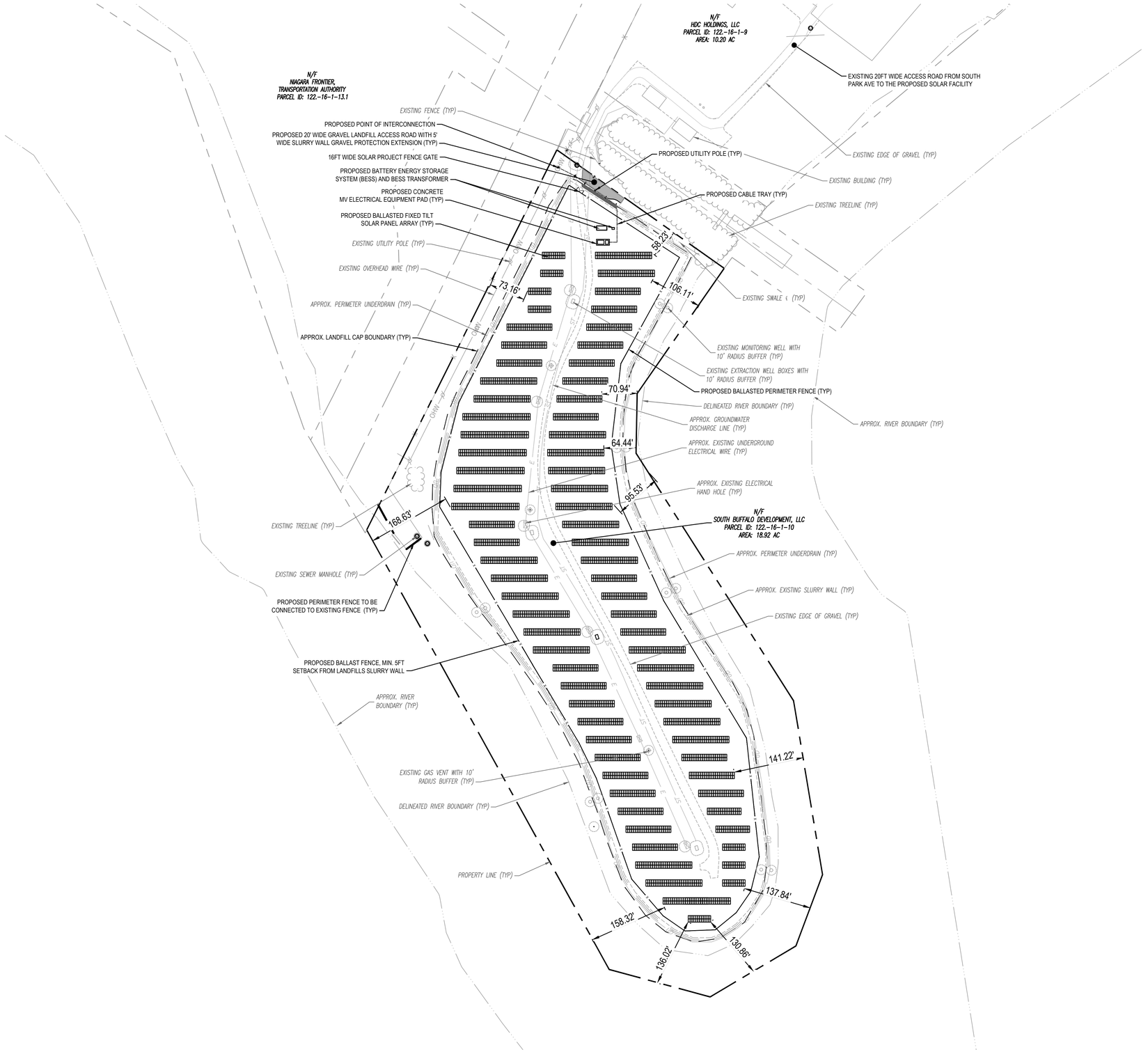

1 C202 SITE PLAN

SCALE: 1" = 100'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BUFFALO RIVER BOUNDARY
		GRAVEL LANDFILL ACCESS ROAD
x	x	FENCE
		PROPERTY LINE
		SETBACK LINE
		UTILITY POLE
E	E	CABLE TRAY
OHW	OHW	OVERHEAD ELECTRIC
ST	ST	STORM LINE
UD	UD	UNDERDRAIN LINE
		GAS VENT
		MONITORING WELL
510	510	MAJOR CONTOUR
509	509	MINOR CONTOUR

SITE PLAN NOTES

1. A 5-FOOT WIDE SLURRY WALL PROTECTION STRIP CONSISTING OF GRAVEL OVERLAIN WITH GEOTEXTILE SHALL BE INSTALLED DIRECTLY ADJACENT TO THE UTILITY POLE ACCESS AREA, AS SHOWN. TRAFFIC IS NOT PERMITTED ON THIS PROTECTION STRIP.
2. FOLLOWING INSTALLATION OF THE SLURRY WALL PROTECTION STRIP, PLACE A MINIMUM OF 6-INCHES OF TOPSOIL OVER STONE AND SEED TO CLEARLY MARK THAT THIS AREA DOES NOT FALL WITHIN THE ROAD BOUNDARIES.
3. NO PANELS WILL BE LOCATED WITHIN A 10' RADIUS OF GROUNDWATER EXTRACTION WELLS OR LANDFILL GAS VENTS.
4. GROUND PRESSURE FROM CONSTRUCTION EQUIPMENT OR SOLAR ARRAY FEATURES SHALL NOT EXCEED 10 POUNDS PER SQUARE INCH (PSI) AT ANY TIME.
5. CONSTRUCTION EQUIPMENT SHALL NOT BE PERMITTED TO TRAVERSE THE SLURRY WALL AT ANY TIME.
6. GROUND-INTRUSIVE WORK (I.E. EXCAVATION OR COVER SYSTEM PENETRATIONS) ARE NOT PERMITTED WITHIN THE COVER SYSTEM AT ANY TIME.

PROJECT DATA	
PARCEL INFORMATION	
APPLICANT	SUNN 1016, LLC
OWNER	SOUTH BUFFALO DEVELOPMENT, LLC
PARCEL ADDRESS	1037 SOUTH PARK AVE, BUFFALO, NY 14210
SYSTEM SIZE (MWDC)	2.227
SYSTEM SIZE (MWAC)	1.50
PARCEL AREA (TOTAL)	18.92 AC
TOTAL PROJECT AREA	13.90 AC
PROPOSED IMPERVIOUS WITHIN PROJECT AREA	0.09 AC
GROUND MOUNT PV SYSTEM SUMMARY	
DC SIZE (MW)	2.227
AC SIZE (MW)	1.50
MAX PANEL HEIGHT (FT)	12
MODULE POWER (W)	580
MODULE QUANTITY	3,840
RACKING TYPE / TILT ANGLE	FIXED / 30°

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CERTIFICATE OF AUTHORIZATION NUMBER:
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ABUNDANT Solar Power Inc.

BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, BUFFALO, NY

NO:	DATE:	DESCRIPTION:
4	05/05/2026	PER DEC COMMENTS
3	04/10/2026	PER DEC COMMENTS
2	02/18/2026	SITE LAYOUT CHANGES
1	12/01/2025	SETBACK ADDITION

Revisions

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

SITE PLAN

DRAWING NUMBER:

C202

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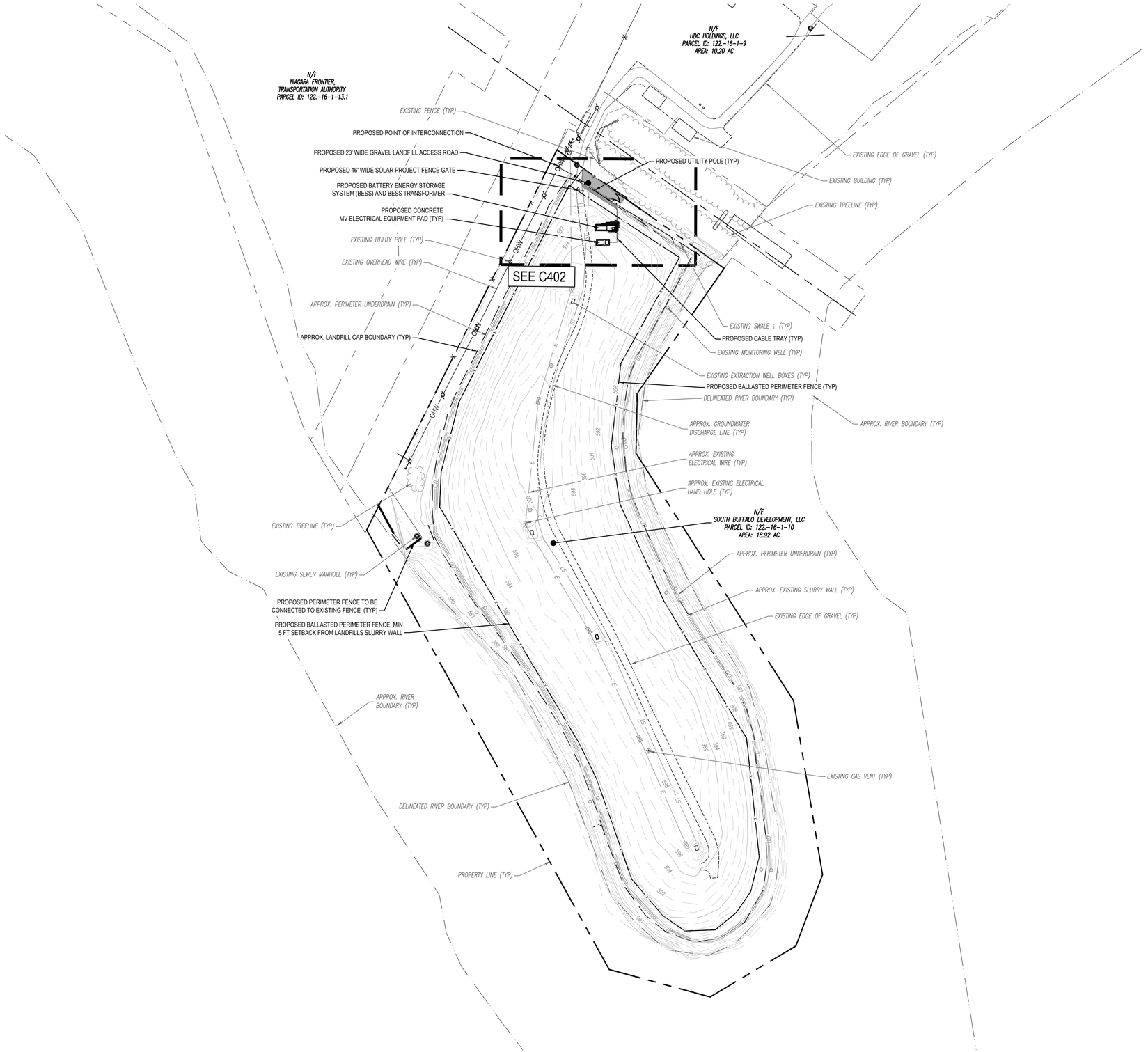

1 C401 OVERALL GRADING PLAN

SCALE: 1" = 100'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BUFFALO RIVER BOUNDARY
		GRAVEL LANDFILL ACCESS ROAD
X	X	FENCE
		PROPERTY LINE
		SETBACK LINE
		UTILITY POLE
E	E	CABLE TRAY
OHW	OHW	OVERHEAD ELECTRIC
ST		STORM LINE
UD		UNDERDRAIN LINE
		GAS VENT
		MONITORING WELL
510	510	MAJOR CONTOUR
509	509	MINOR CONTOUR

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STATE OF NEW YORK — MATTHEW D. PIERCE — 102063

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BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, BUFFALO, NY

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Revisions		

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

OVERALL GRADING PLAN

DRAWING NUMBER:

C401

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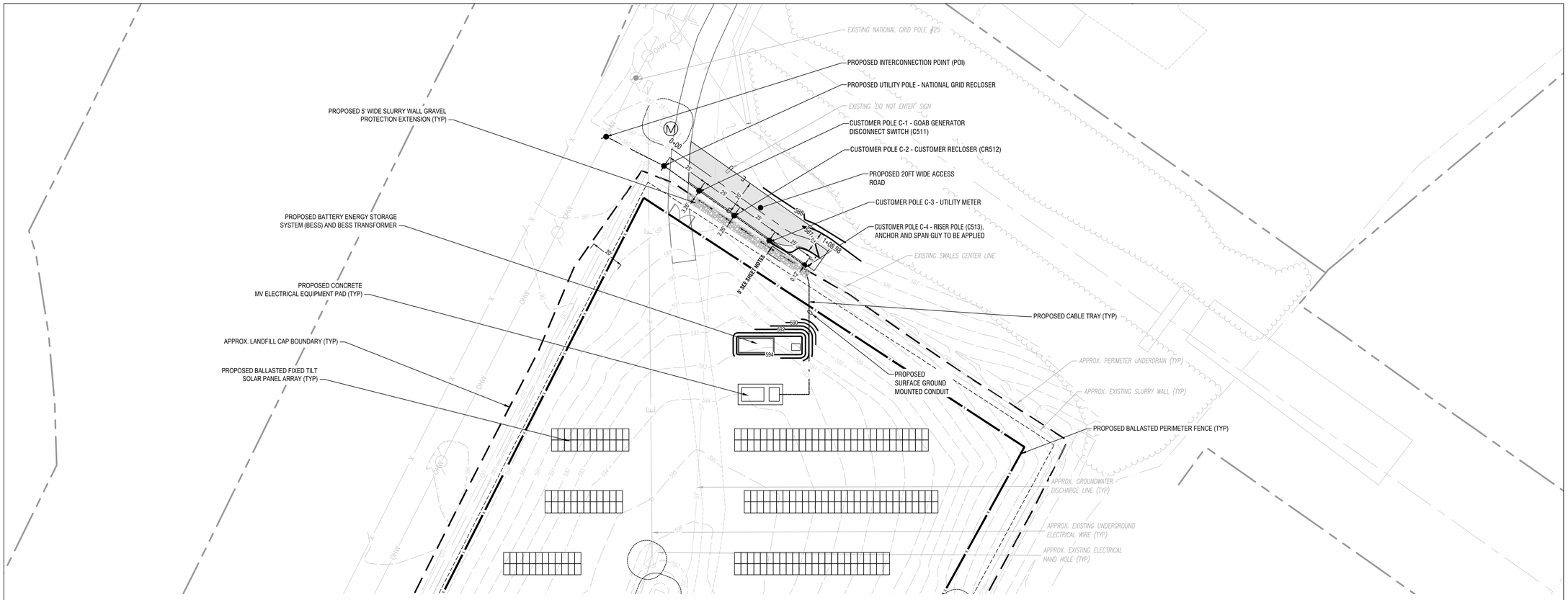
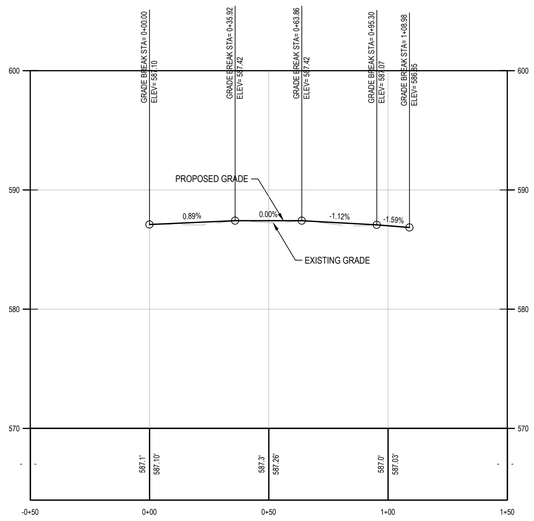


1 C402 GRADING PLAN
SCALE: 1" = 30'

N

0' 30' 60' 90'



1 C402 ACCESS ROAD PROFILE
SCALE: 1"= 30'

0' 30' 60' 90'

SHEET NOTES:

1. THE GEOTEXTILE AND GRAVEL MUST EXTEND ACROSS THE SLURRY WALL FOR MINIMUM 5FT TO PROTECT THE SLURRY WALL.
2. THE 5-FEET-WIDE EXTENDED GRAVEL OVER THE SLURRY WALL IS NOT PART OF THE ROAD. ALTERNATIVELY, TO ADD TOPSOIL AND SEED ON THE PROTECTIVE 5-FOOT-WIDE AREA AFTER PLACING THE GEOTEXTILE AND STONE PROTECTIVE LAYER TO CLEARLY MARK THIS AREA DOES NOT FALL WITHIN THE ROAD BOUNDARIES.

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ABUNDANT
Solar Power Inc.

BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, BUFFALO, NY

NO:	DATE:	DESCRIPTION:
4	05/05/2026	PER DEC COMMENTS
3	04/10/2026	PER DEC COMMENTS
2	02/18/2026	SITE LAYOUT CHANGES
1	12/01/2025	SETBACK ADDITION
Revisions		

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

GRADING PLAN

DRAWING NUMBER:

C402

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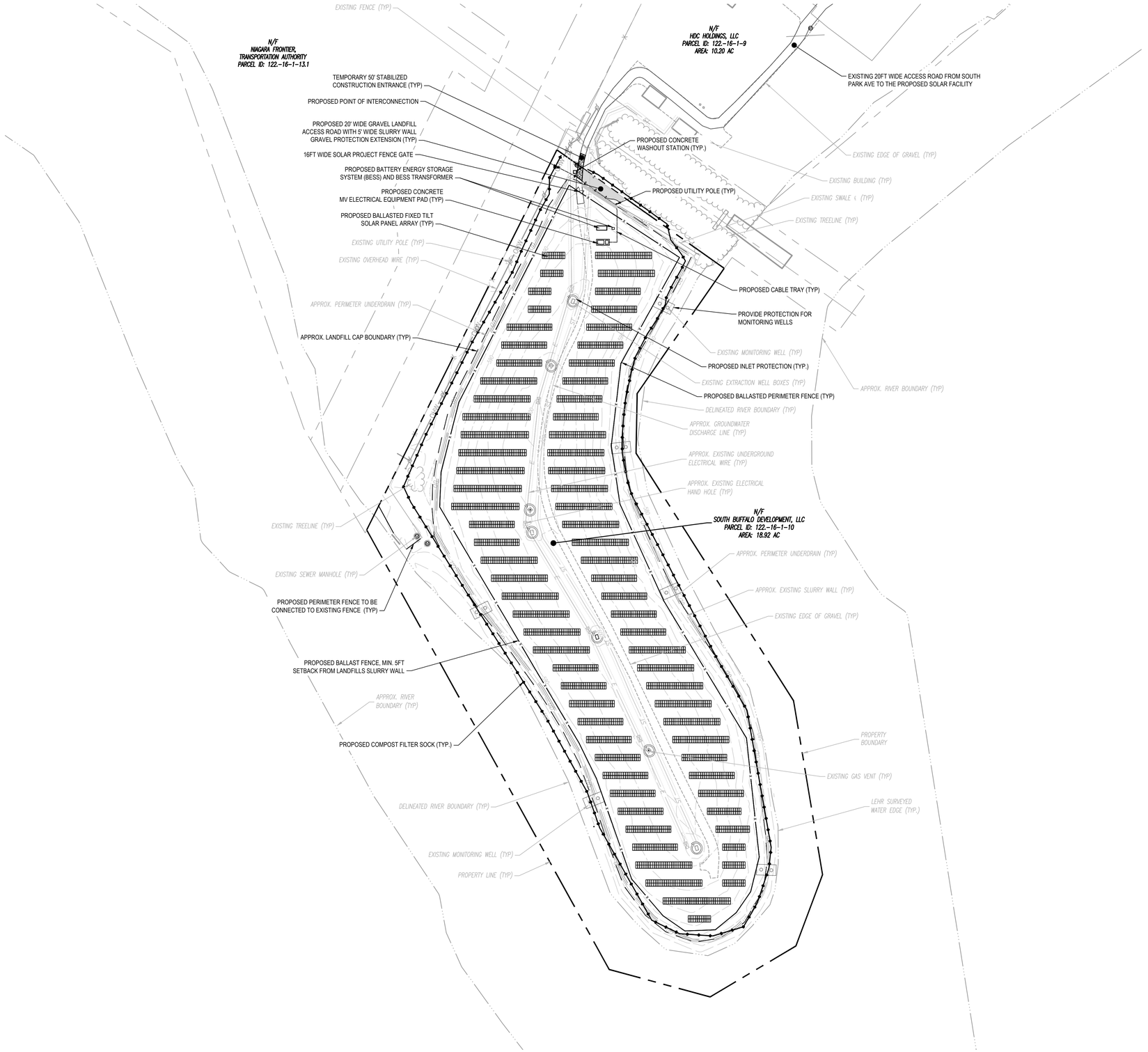

1 C501 EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 100'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BUFFALO RIVER
		PERVIOUS GRAVEL ACCESS ROAD
x x x		FENCE
		PROPERTY LINE
		SETBACK LINE
		UTILITY POLE
E	E	CABLE TRAY
OHE	OHE	OVERHEAD ELECTRIC
ST	ST	STORM LINE
UD	UD	UNDERDRAIN LINE
		GAS VENT
510	510	MAJOR CONTOUR
509	509	MINOR CONTOUR
		COMPOST FILTER SOCK
		CONSTRUCTION FENCE
		SILT SOCK INLET PROTECTION
		CHECK DAM
		CONCRETE WASHOUT
		STABILIZED CONSTRUCTION ENTRANCE (TEMPORARY)

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STATE OF NEW YORK — MATTHEW D. PIERCE — 102063 — LICENSED PROFESSIONAL ENGINEER

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CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 102063

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BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, BUFFALO, NY

NO:	DATE:	DESCRIPTION:
4	05/05/2026	PER DEC COMMENTS
3	04/10/2026	PER DEC COMMENTS
2	02/18/2026	SITE LAYOUT CHANGES
1	12/01/2025	SETBACK ADDITION
Revisions		

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

EROSION & SEDIMENT CONTROL PLAN

DRAWING NUMBER:

C501

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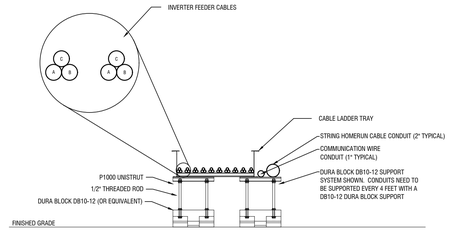


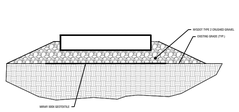
SECTION VIEW

NOTES:

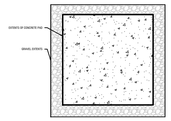
1. REFER TO THE ELECTRICAL DRAWINGS FOR ALL DEPTHS AND DIMENSIONS.
2. REFER TO THE ELECTRICAL DRAWINGS FOR THE FINAL ELECTRICAL TRENCH DESIGN.

1 C701 TYPICAL CABLE TRAY DETAIL

N.T.S.



SECTION VIEW



EQUIPMENT PAD NOTES:

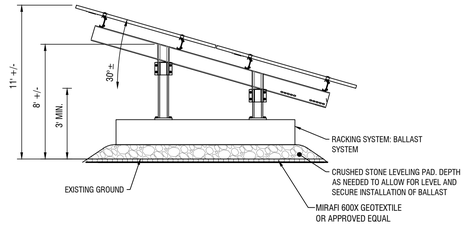
1. ALL ELECTRICAL EQUIPMENT TO BE SITUATED ON A CONCRETE PAD AS SHOWN PER EQUIPMENT PAD LAYOUT SHEET.
2. PAD DIMENSIONS, CHASES, AND CONDUIT STUB-UPS TO BE PER EQUIPMENT PAD LAYOUT SHEET.
3. ANCHOR BOLTS SHALL BE DRILLED AND SET IN FIELD AFTER INSTALLATION ON SLAB AS PER MANUFACTURER'S SPECIFICATIONS.
4. BOUND REBAR TO GROUNDING RING. REFER TO GROUNDING DIAGRAM SHEET FOR DETAILS.

NOTES:

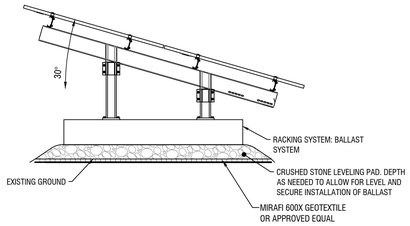
1. REFER TO THE ELECTRICAL DRAWINGS FOR ALL DEPTHS AND DIMENSIONS.
2. REFER TO THE ELECTRICAL DRAWINGS FOR THE FINAL ELECTRICAL TRENCH DESIGN.

2 C701 TYPICAL ELECTRICAL EQUIPMENT PAD DETAIL

N.T.S.



SIDE VIEW - BALLAST SYSTEM

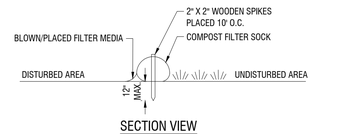


NOTES:

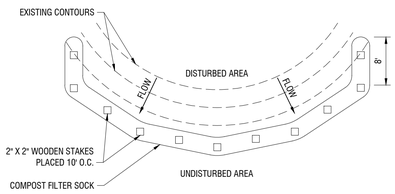
1. TYPICAL BALLAST DETAIL SHOWN FOR REFERENCE ONLY. BALLAST SYSTEM SHALL BE DESIGNED BY RACKING MANUFACTURER.
2. EXISTING VEGETATION TO BE STRIPPED ONLY WITHIN THE BALLAST FOOTPRINT.

3 C701 TYPICAL BALLAST SYSTEM

N.T.S.



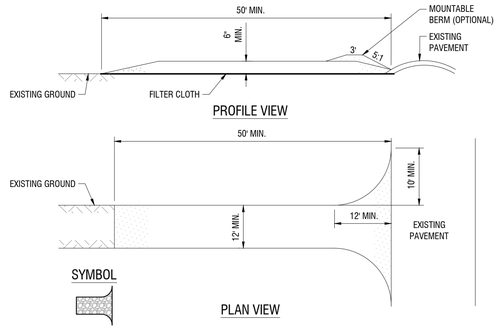
SECTION VIEW



PLAN VIEW

4 C701 COMPOST FILTER SOCK

NYS DEC DETAIL: COMPOST FILTER SOCK

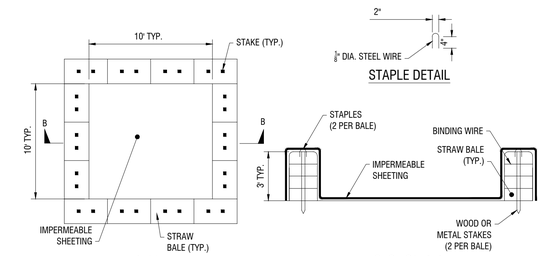


CONSTRUCTION SPECIFICATIONS:

1. STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ACCESS SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT.

5 C701 STABILIZED CONSTRUCTION ENTRANCE

N.YS DEC DETAIL: STABILIZED CONSTRUCTION ACCESS



NOTE:

CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP. FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.
6. STAKES SHALL NOT BE INSERTED INTO THE GROUND DEEPER THAN 6".

6 C701 CONCRETE WASHOUT AREA WITH STRAW BALES

N.T.S.

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STATE OF NEW YORK — NOT FOR CONSTRUCTION

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 102063

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700 WEST METRO PARK
ROCHESTER, NY 14623

ABUNDANT
Solar Power Inc.

BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, BUFFALO, NY

NO:	DATE:	DESCRIPTION:
4	05/05/2026	PER DEC COMMENTS
3	04/10/2026	PER DEC COMMENTS
2	02/18/2026	SITE LAYOUT CHANGES
1	12/01/2025	SETBACK ADDITION

Revisions

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

CONSTRUCTION DETAILS

DRAWING NUMBER:

C701

5/5/2026 8:31:00 AM
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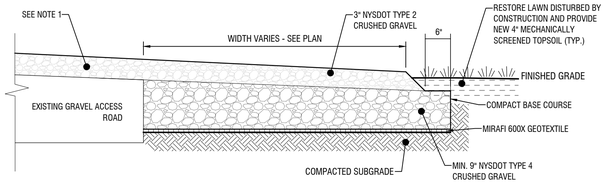
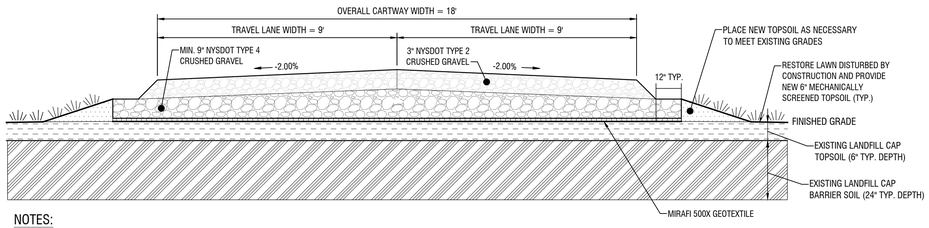


NOTE:

1. CONTRACTOR TO PLACE 3" OF NYSDOT TYPE 2 CRUSHED GRAVEL OVER THE ENTIRE 12' OR 20' WIDE ACCESS ROAD, SEE PLAN.
2. ACCESS ROAD ELEVATION TO BE SET 3" HIGHER THAN EXISTING GRADE TO PROMOTE POSITIVE DRAINAGE.

1 C702 EXISTING GRAVEL ACCESS ROAD IMPROVEMENT

N.T.S.



NOTES:

1. CAREFULLY REMOVE EXISTING LANDFILL TOPSOIL TO LANDFILL BARRIER SOIL. DO NOT DISTURB LANDFILL BARRIER SOIL.

2 C702 PROPOSED GRAVEL LANDFILL ACCESS ROAD

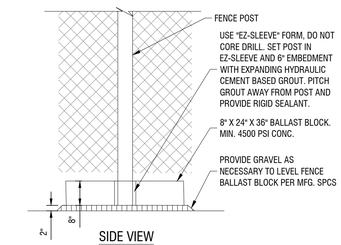
N.T.S.

NOTES:

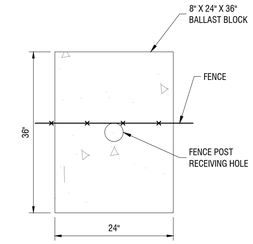
1. MAXIMUM FENCE POST SPACING SHALL BE 8'.
2. ALL SUPPORTS SHALL BE BALLASTED TYPE.

4 C702 7' HIGH BALLASTED FENCE

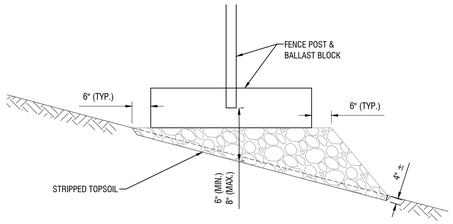
N.T.S.



SIDE VIEW



TOP VIEW



SECTION VIEW

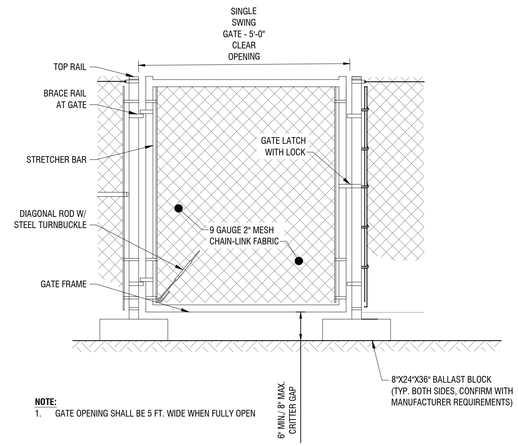
NOTES:
1. CRITTER- GAP SHALL BE MAINTAINED AT FENCE LINE.
2. LEVELING PADS SHALL BE INSTALLED WHERE EXISTING GRADES EXCEED 5%.

3 C702 CONCRETE FENCE BALLAST DETAIL

N.T.S.

5 C702 7' TALL 20' WIDE DOUBLE SWING GATE (BALLASTED)

N.T.S.



NOTE:
1. GATE OPENING SHALL BE 5 FT. WIDE WHEN FULLY OPEN

6 C702 SINGLE SWING GATE (BALLASTED)

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ABUNDANT
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Revisions		

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DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

CONSTRUCTION DETAILS

DRAWING NUMBER:

C702

5/5/2026 8:31:37 AM
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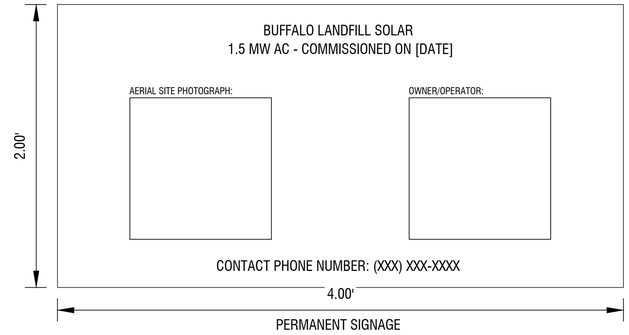
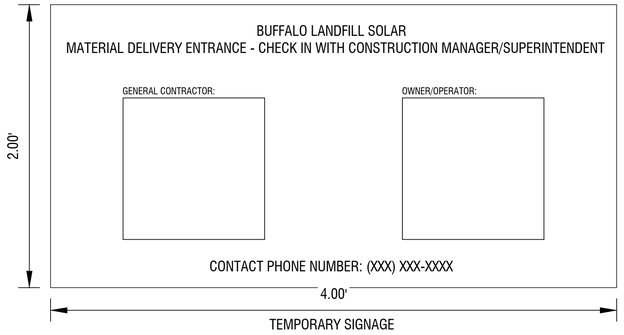




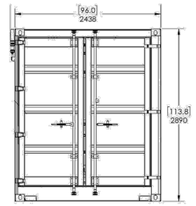
NOTES:

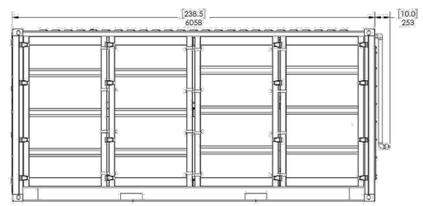
1. TEMPORARY SIGNAGE TO BE INSTALLED ALONG GRAVEL DRIVE PRIOR TO CONSTRUCTION.
2. TEMPORARY SIGNAGE TO BE REMOVED AFTER ARRAY HAS BEEN COMMISSIONED AND BEFORE PERMANENT SIGNAGE IS INSTALLED.
3. PERMANENT SIGNAGE TO BE INSTALLED ON GATE AFTER ARRAY HAS BEEN COMMISSIONED.

1 C703 TEMPORARY AND PERMANENT SIGNAGE

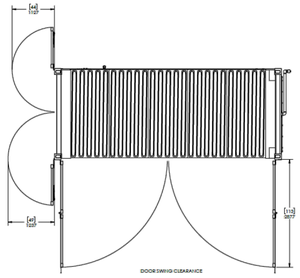
N.T.S.

Dimension	English	Metric
Length	238.5 inch	6057.9 mm
Width	96.0 Inch	2438.4 mm
Height	113.8 Inch	2890.5 mm
Weight	42,000 pounds	19,050 Kg

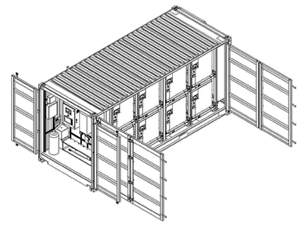




Overall Dimensioning



Top View Dimensioning with Access Doors Opened



Isometric View

2 C703 BATTERY ENERGY SYSTEM BESS DETAIL

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ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

CONSTRUCTION DETAILS

DRAWING NUMBER:

C703

5/5/2026 8:32:14 AM
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ATTACHMENT 2:

SETTLEMENT, SLOPE FAILURE, SLIPPAGE, AND UPLIFT CALCULATIONS

Project:	Buffalo Landfill Solar Farm		
Project Number:	2251176		
Calculated By:	JM	Date:	7/15/2025
Revised By:	JP	Date:	7/16/2025
Checked By:		Date:	
Subject:	Settlement		
Sheet:	1 of 6		

SETTLEMENT

OBJECTIVE

To estimate the settlement for the Buffalo Landfill Solar Farm in relation to the application of loading from the Abundant Solar, LLC ballasted solar array.

ASSUMPTIONS

The following assumptions were made for the calculations:

- The groundwater at or just below the bottom of the existing waste.
- The densities of materials were assumed as follows:
  - Average weight of MWS and C&D – 50.2 pcf,
    - This is a conservative estimate taken from MSW and C&D values presented in *Volume-to-Weight Conversion Factors* (EPA, 2016)
  - Solar Array applied load – 225 pcf/lf
  - Foundation soil is consistent with cover soil – 120 pcf
- The maximum depth of influence used in the settlement calculations was 30 ft below the assumed bottom of waste, based on lack of data on bedrock location. Based on the approved closure plans the waste depths were estimated 30 and 33 feet below the ground surface. As such, a maximum waste depth of 33 feet was used.
- Loading pressure is assumed to be equal to vertical effective stress increase in the base. No consideration for vertical stress distribution was assumed. This is conservative.

METHODOLOGY

A one-dimensional consolidation/compression theory is used to estimate the expected primary and secondary settlement of the waste at critical locations within the proposed landfill. A typical section for the expansion area is shown in the attached Figure 1. Settlement induced strains for the landfill cover were calculated and then used to evaluate the long-term performance of the landfill cover with the applied loads from the solar array.

CALCULATIONS FOR BASE SETTLEMENTS

Placement of the solar array ballasts will induce primary and secondary consolidation in the residual soils in addition to primary and secondary consolidation of the existing waste. Both primary and secondary settlements will be estimated at different critical locations along the system.

CALCULATIONS FOR LANDFILL COVER SETTLEMENT

The landfill cover settlement is anticipated to be minimal. The primary settlement due to the placement of the ballasted system is expected to occur with the first day or two after placement of the ballasted system. In this case, it was assumed that the primary landfill cover settlement includes

the settlement induced due to the placement of the ballasted solar array, in addition to the secondary settlement in the existing waste and foundation soil. The secondary settlements are evaluated from year 27 (waste age) through year 57 (30 years after placement of the PV system).

Foundation Settlement Analysis

One-dimensional elastic deformation analysis was used to estimate the primary settlement of the foundation due to vertical expansion using the SPT data found in the boring logs of the boundary probes and monitoring wells.

1. The constrained stiffness moduli of the foundation soils were calculated for the subsurface layers as,

$$E_{oed} = \frac{1-\upsilon}{(1-2\upsilon)(1+\upsilon)}E \qquad \text{Ref. 1}$$

where E_{oed} = constrained stiffness modulus (1D), E = deformation modulus (3D), and υ = Poisson's ratio. E was estimated from SPT N values using the average of two methods corresponding to clayey soils and sandy soils, respectively,

For clayey soils:

Method 1 : $E = 2(1+\upsilon)(0.05)(120N^{0.77})p_a$ (Wroth, et al. 1979)

Method 2 : $E = 19.3N^{0.63}p_a$ (Ohya, et al. 1982)

For sandy soils:

Method 1 : $E = 5Np_a$ (Callanan and Kulhawy, et al. 1979)

Method 2 : $E = 9.08N^{0.66}p_a$ (Ohya, et al. 1982)

where p_a = atmospheric pressure (14.7 psi). υ = 0.333 was used in the calculations

2. Using the equation in Step 1, the foundation primary settlement was calculated as follows:

$$\delta_p = \frac{\Delta\sigma}{E_{oed}}Z \qquad \text{Ref. 2}$$

where Δσ = the change in stress imposed by the vertical expansion (at that particular Phase), and Z = the thickness of that particular foundation layer.

3. The secondary settlement of the foundation was calculated based on SPT data as below:

$$\delta_s = 0.02\frac{1.4}{\overline{N}_{60}} Z_1 \log\left(\frac{t}{1day}\right)$$ Ref. 2

where δ_s = settlement due to secondary consolidation;
$\overline{N}_{60}$ = arithmetic mean of the SPT-N values measured within the thickness Z_1;
Z_1 = Zone of influence. In this case, use the layer thickness of the foundation layer
t = design life of the structure, in days from the end of construction, t = 30 years = 10,950 days were used.

Waste Settlement Analysis

Settlement of new waste was determined as shown below.

1. Primary settlement of waste as a result of the applied solar array was calculated using:

$$\delta_p = H * C_c' * \log\left(\frac{\sigma_i}{\sigma_0}\right)$$ Ref. 3

where H = initial thickness of waste layer of existing landfill
C_c' = modified primary compression index (typically 0.17-0.36), assumed average Cc' = 0.265
σ_0 = previously applied pressure in the waste layer
σ_i = total overburden pressure applied at the mid-level of concrete ballast

2. Long term secondary settlement was calculated using:

$$\delta_s = H * C_{\alpha'_{min}} * \log\left(\frac{t_2}{t_1}\right) + H * C_{\alpha'_{max}} * \log\left(\frac{t_4}{t_3}\right)$$ Ref. 5

where H = initial thickness of waste layer before settlement
$C_{\alpha'_{min}}$ = modified secondary compression index immediately following primary compression between time t_1 to t_2. A value for $C_{\alpha'_{min}}$ = 0.019 was assumed and this settlement occurs between 1 day (t_1) to 1 month (t_2)
$C_{\alpha'_{max}}$ = modified secondary compression index immediately following the initial secondary compression between time t_3 to t_4. A value for $C_{\alpha'_{max}}$ = 0.125 was assumed and this settlement occurs between 10 years (t_3) to 30 years (t_4)

CALCULATIONS FOR SETTLEMENTS

The settlement calculation results and differential settlement evaluation are summarized in the attached tables.

1. Landfill cover strains were evaluated as below:

$$\varepsilon_1 = \frac{(Final\ Length) - (Initial\ Length)}{Initial\ Length}$$

Maximum Allowable Tensile Strain $\varepsilon_1 < 0.01$ (1%)

The calculated landfill cover strains for landfill cover of the solar array areas are within the tolerable range of strains for the soils used for the landfill cover.

REFERENCES

1. Kullhawy, F.H. and P.W. Mayne (1990). Manual on Estimating Soil Properties for Foundation Design, EL-6800, Electric Power Research Institute.

2. Terzaghi, K., Peck, R.B., and Mesri (1996), G. Soil Mechanics In Engineering Practice, 3rd Ed., John Wiley & Sons, Inc.

3. Qian, X., Koerner, R.M., and Gray, D.H (2002), Geotechnical Aspects of Landfill Design and Construction, Prentice Hall, Inc., pp 449-451.

4. Oweis, I.S. and Khera, R.P. (1998), Geotechnology of Waste Management, 2nd Ed., PWS Publishing Company, 472 p. 58, 59, 65.

5. Lee, S.R., Park, H (Aug 1999), "Estimation of Municipal Solid Waste Landfill Settlement", Journal of Geotechnical and Geoenvironmental Engineering.

6. US Environmental Protection Agency (Apr 2016), "Volume-to-Weight Conversion Factors" Office of Resource Conservation and Recovery, p.5-6. "Volume-to-Weight Conversion Factors, April 2016 (epa.gov)" (Accessed May 2024).

ATTACHMENT A

FIGURE

1 C101 EXISTING CONDITIONS PLAN

SCALE: 1" = 100'

N

0' 100' 200' 300'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BUFFALO RIVER BOUNDARY
		GRAVEL LANDFILL ACCESS ROAD
		FENCE
		PROPERTY LINE
		SETBACK LINE
		UTILITY POLE
		CABLE TRAY
		OVERHEAD ELECTRIC
		STORM LINE
		UNDERDRAIN LINE
		GAS VENT
		MONITORING WELL
		MAJOR CONTOUR
		MINOR CONTOUR

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ROCHESTER, NY 14623

ABUNDANT Solar Power Inc.

BUFFALO LANDFILL SOLAR PROJECT
1037 SOUTH PARK AVE, BUFFALO, NY

NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/08/2025
DRAWING NAME:

EXISTING CONDITIONS PLAN

DRAWING NUMBER:

C101

8/6/2025 3:00:59 PM
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ATTACHMENT B
SETTLEMENT TABLES

Job:	Buffalo Landfill Solar Project		
Job Number:	2251176		
Calculated By:	JM	Date:	7/15/2025
Revised By:		Date:	
Checked By:	JP	Date:	7/16/2025
Subject:	Differential Settlement		
Sheet:	1 of 2		

Table 1 Summary of Cover Settlement Analysis for Array - Due to Ballast Installation

Location	Layer	Top Elevation (ft)	Bottom Elevation (ft)	Layer Thickness (ft)	σ'_o (psf)	$\Delta\sigma$ (psf)	$\delta_{primary}$ (ft)	$\delta_{secondary}$ (ft)	δ_{total} (ft)	δ_{total} (ft)	$\delta_{difference}$ (ft)
1	Landfill Cover	594	591.5	2.5	150	150	0.20	0.06	0.26	1.39	
	Ex Waste	591.5	564.5	27	978	150	0.44	0.63	1.07		
	Foundation	564.5	534.5	30	3,455	150	0.01	0.05	0.06		
2	Landfill Cover	596.5	594	2.5	150	150	0.20	0.22	0.42	1.55	-0.16
	Ex Waste	594	567	27	978	150	0.44	0.63	1.07		
	Foundation	567	537	30	3,455	150	0.01	0.05	0.06		
3	Landfill Cover	598	595.5	2.5	150	150	0.20	0.06	0.26	1.39	0.16
	Ex Waste	595.5	568.5	27	978	150	0.44	0.63	1.07		
	Foundation	568.5	538.5	30	3,455	150	0.01	0.05	0.06		
4	Landfill Cover	594	591.5	2.5	150	150	0.20	0.06	0.26	1.39	0.00
	Ex Waste	591.5	564.5	27	978	150	0.44	0.63	1.07		
	Foundation	564.5	534.5	30	3,455	150	0.01	0.05	0.06		

Table 2 Evaluation of Differential Settlement Due to Ballast Installation

Location	Initial Elevation (ft)	$\delta_{difference}$ (ft)	Initial Length (ft)	Final Length (ft)	ϵ (%)	Check
1	591.5					
2	594	-0.16	224.51	224.52	0.00%	OK
3	595.5	0.16	522.25	522.25	0.00%	OK
4	591.5	0.00	393.52	393.52	0.00%	OK

Project:	Buffalo Landfill Solar Farm		
Project Number:	2251176		
Calculated By:	JM	Date:	7/15/2025
Revised By:	JP	Date:	7/16/2025
Checked By:		Date:	
Subject:	Landfill Cover Veneer Stability		
Sheet:	1 of 9		

FINAL COVER VENEER STATIC AND SEISMIC SLOPE STABILITY

OBJECTIVE

The objective of this calculation is to perform a seismic slope stability analysis for the final cover system of the Landfill.

METHODOLOGY

A spreadsheet taken from a report prepared by the Geosynthetic Research Institute (GRI), Drexel University, entitled "Cover Soil Stability Involving Geosynthetic Interfaces", by Te-Yang Soong and Robert M. Koerner is utilized to perform the calculation. This method analyzes the situation where a uniform layer of cover soil lies along a finite length of landfill side slope.

The seismic coefficient used within the stability analysis was obtained from the "Peak Acceleration (%g) with 2% Probability of Exceedance in 50 Years (site: hazards.atcouncil.org)" published by the U.S.G.S and included in ASCE 7-10 in 2016 and Figure 9-9 of the "Geotechnical and Stability Analyses for Ohio Waste Containment Facilities" September 14, 2002, which is included here. As suggested, the factor of safety for seismic stability worst-case slope and most critical interface must be greater than or equal to 1.0. The factor of safety for the static conditions must be greater than or equal to 1.5.

VARIABLES DEFINED

The shear strength envelope of the most critical interface in the final cover system was defined in the "Final Cover Veneer Slope Stability" calculation included with this Amendment.

The seismic coefficient, Cs, is defined as follows:

Cs = Seismic Coefficient, or the yield acceleration, Ky, which is expressed as a percentage of g, (acceleration due to gravity)

The seismic coefficient is multiplied by the weight of the active and passive blocks to produce a horizontal force resulting from the seismic acceleration. (F = ma)

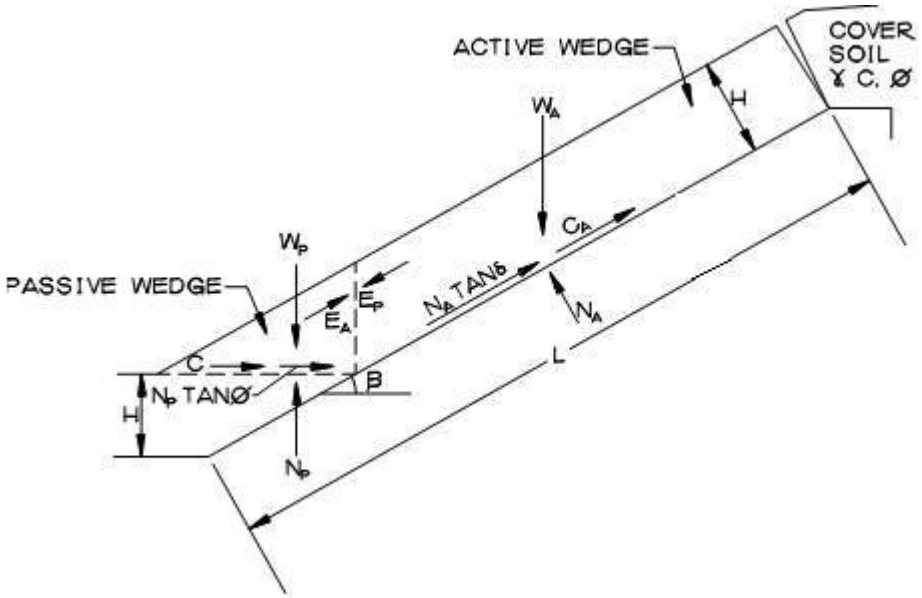


Figure 1, Side Slope Geometry & Free Body Diagram

Slope Dimensions – Top of Landfill	
Maximum Slope Length	29.5 feet
Slope Orientation	7.5H:1V or 7.73 degrees

The final cover system along the Landfill sideslope is outlined below, from top to bottom:

- 6-inch thick vegetative support (Topsoil) layer;
- 24-inch unclassified fill soil layer;
- Drainage net with geotextile on one side (plateau portion supporting solar array);
- 60-mil high density polyethylene (HDPE) smooth flexible membrane liner (FML); and,
- 6-ounce non-woven geotextile.

W_A = Total weight of the active wedge;
W_P = Total weight of the passive wedge;
N_A = Effective force normal to the failure plane of the active wedge;
N_P = Effective force normal to the failure plane of the passive wedge;
γ = Unit weight of the cover soil;
h = Thickness of the cover soil;
L = Length of slope measured along the soil cover;
β = Soil slope angle beneath the soil cover;
W_{pa} = Unit weight applied to the soil by the panel array;
ϕ = Internal angle of friction within the cover soil;

δ = Interface friction angle between the most critical interface;
C_a = Adhesive force between the components lying along the most critical geosynthetic interface of the active wedge;
c_a = The adhesion developed between the components lying along the most critical geosynthetic interface of the active wedge;
C = Cohesive force along the failure plane of the passive wedge;
c = cohesion of the cover soil;
E_A = Interwedge force acting on the active wedge from the passive wedge;
E_P = Interwedge force acting on the passive wedge from the active wedge;
FS = Factor of safety against cover soil sliding down the slope; and
C_s = Seismic coefficient in percent of gravity. The resulting acceleration at the crest of the landfill is based on the design bedrock acceleration.

Additional Material Properties

Assumed unit weight of the cap protection layer material: γ_S = 1.5 pcf

The final cover soils were modeled as one layer with a thickness of 2.5 feet and assigned the average values for cohesion and friction angle.

Internal angle of friction = 28° (conservative)

Equations Used

$$Wa = \gamma h^2 \left[\frac{L}{h} - \frac{1}{\sin\beta} - \frac{\tan\beta}{2}\right] + Wpa$$

$$Na = Wa \cos\beta$$

$$Ca = ca \left[L - \frac{h}{\sin\beta}\right]$$

The forces illustrated in Figure 1 are resolved below to produce a FS:

Balancing the forces in the horizontal direction, the following formulation results:

$$E_A \cos\beta + \frac{N_A \tan\delta + C_a}{FS} \cos\beta = C_S W_A + N_A \sin\beta$$

The interwedge force acting on the active wedge is:

$$E_A = \frac{FS \cdot (C_S W_A + N_A \sin\beta) - (N_A \tan\delta + C_a)\cos\beta}{FS \cos\beta}$$

The passive wedge can be considered in a similar manner:

$$W_p = \frac{\gamma h^2}{\sin 2\beta}$$

$$N_p = W_p + E_p \sin\beta$$

$$C = \frac{c\,h}{\sin\beta}$$

Balancing the forces in the horizontal direction produces:

$$E_p \cos\beta + C_S W_P = \frac{C + N_p \tan\phi}{FS}$$

The interwedge force acting on the passive wedge is:

$$E_p = \frac{C + W_p \tan\phi - C_S W_P (FS)}{\cos\beta (FS) - \sin\beta \tan\phi}$$

Setting E_A = E_p, the equation can be arranged in the form of the following quadratic equation:

$$a(FS)^2 + b(FS) + c = 0$$

Where the coefficients a, b and c are equal to the following expressions:

$$a = (C_S W_A + N_A \sin\beta)\cos\beta + C_S W_p \cos\beta$$

$$b = -\left[(C_S W_A + N_A \sin\beta)\sin\beta \tan\phi + (N_A \tan\delta + C_a)\cos^2\beta + \cos\beta(C + W_p \tan\phi)\right]$$

$$c = (N_A \tan\delta + C_a)\sin\beta\cos\beta\tan\phi$$

The quadratic equation is then used to calculate the FS:

$$FS = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$$

For the ease of calculation, the above quadratic equation was input into a spreadsheet format to produce a FS corresponding to a given set of input parameters. A copy of the spreadsheet calculations displaying the results is included in Attachment A.

Seismic Analysis

The shear wave acceleration is modeled within the stability analysis by inputting a coefficient, (Cs) that is some fraction of gravity. The peak acceleration for the site is estimated to be 0.167 g which is taken from the "Peak Acceleration (%g) with 2% Probability of Exceedance in 50 Years (site: hazards.atcouncil.org)" published by the U.S.G.S and included in ASCE 7-10 in 2016. Since this analysis is for the final cover system, the acceleration at the crest of the landfill will be considered.

When plotting this value onto Singh and Sun's 1995 figure below for the relationship between maximum horizontal seismic acceleration at the base and crest of 33 feet of refuse, the maximum horizontal seismic acceleration at the crest of the landfill can be expected to be 0.11 g. This is conservative.

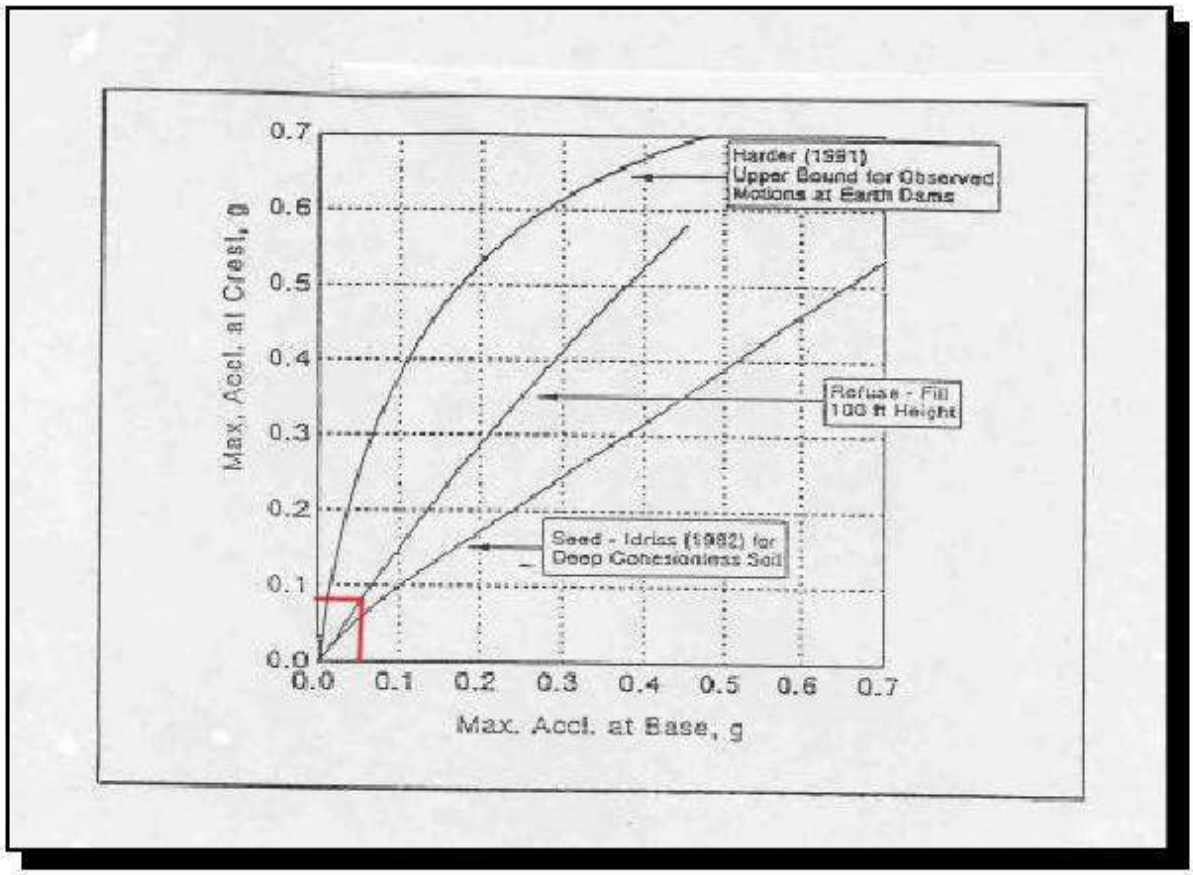


Figure 8-11 Approximate relationship between maximum accelerations at the base and crest for various ground conditions. Singh and Sun,1995, Figure 3.

The parameters used in the seismic analysis are stated below:

h = Thickness of cover soil = 2.5 ft
L = Length of slope measured along the geomembrane = 29.5 ft
γ = Unit weight of the cover soil = 1.5 lb/ft^3
δ = Critical interface friction angle = 15 degrees (conservative)
c_a = Adhesion of cover soil = 0.0 lb/ft^2 (conservative)
ϕ = Friction angle of the cover soil layer = 28 degrees (conservative)
c = Cohesion of cover soil = 0.0 lb/ft^2 (conservative)
W_{pa} = Applied pressure from the ballasted solar array = 0.3804 ksf = 380.4 psf

CALCULATIONS

The spreadsheet printout of the seismic stability analysis considering yield acceleration is included in Attachment A.

RESULTS

Scenario 1 – Top of Landfill
The results of the static stability analyses to determine the yield acceleration is presented below:

FS = 2.77

The results of the seismic stability analyses to determine the yield acceleration is presented below:

C_s = 0.11 g, FS = 1.40

Therefore, the final cover system should be stable during static conditions and seismic activity.

ASSUMPTIONS

1. Topsoil and soil barrier layer thicknesses are uniform and as described in the "Construction Certification Report" (Parsons, 1999).
2. Minimum/critical interface friction angle (δ) is given as 15° based on "Typical Interfacial Frication Angles" as presented in the "Civil Engineering Reference Manual 15th Edition," (Lingdeburg, 2015). The type of soil of the cover system was assumed to be silty sand for use as a protective barrier layer on top of the geomembrane.
3. Friction angle of the cover soil (ϕ) is given as 28° based on the same assumption outlined above.
4. Unit weight of the cover soil is 120 lb/ft^3, based on average backfill values presented as part of the Construction Certification Report (Parsons Engineering Science, January 1999), Table 3.4, "Backfill Testing/Permeability Test Results."
5. Applied pressure, W_{pa}, represented by highest pressure calculated by the racking manufacturer and applied along the continuous slope for conservatism.

REFERENCES

1. Soong, Te-Yang and Koerner, R.M., (1996) “Cover Soil Slope Stability Involving Geosynthetic Interfaces”, Geosynthetic Research Institute, Drexel University, GRI Report #18

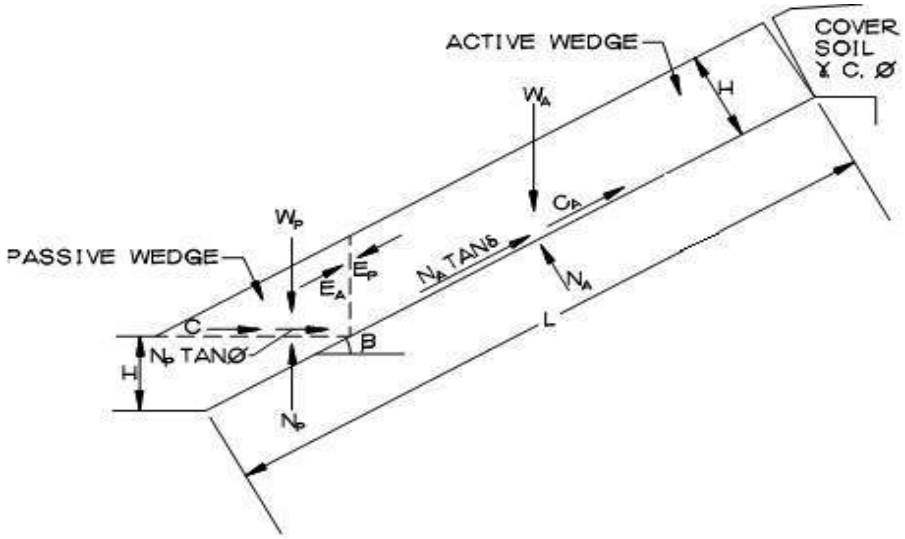
2. Ohio EPA, (September 14, 2002), “Geotechnical and Stability Analyses for Ohio Waste Containment Facilities”.

ATTACHMENT A

LANDFILL COVER SYSTEM
STABILITY ANALYSIS
COMPUTER SPREADSHEET RESULT

Buffalo Landfill Solar Farm

Uniform and/or Tapered Cover Soil with Consideration of Static Forces



Calculation of FS

Active Wedge:

Wa=	*14430.6*	*lb*
Na=	*14299.5*	*lb*
Ca=	*0.0*	*lb*

Passive Wedge:

Wp=	*2813.6*	*lb*
C=	*0.0*	*lb*

$$FS = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$$

a=	*1905.9*
b=	*-5382.1692*
c=	*271.5*

FS= 2.77

(Note: for uniform cover soil thickness the input value of $\omega = \beta$)

thickness of cover soil on the slope = h =	2.50	ft	
soil slope angle beneath the cover = β =	7.73	°	*= 0.13 (rad.)*
length of slope measured along the geomembrane = L =	29.5	ft	

Applied pressure by the ballasted solar array = W_{pa} =	380.4	lb/ft^2	
unit weight of the cover soil = γ =	120.0	lb/ft^3	
friction angle of the cover soil = ϕ =	28.0	°	*= 0.49 (rad.)*
cohesion of the cover soil = c =	0.0	lb/ft^2	
critical interface friction angle = δ =	15.0	°	*= 0.26 (rad.)*
adhesion between cover soil and geocomposite = ca =	0.0	lb/ft^2	

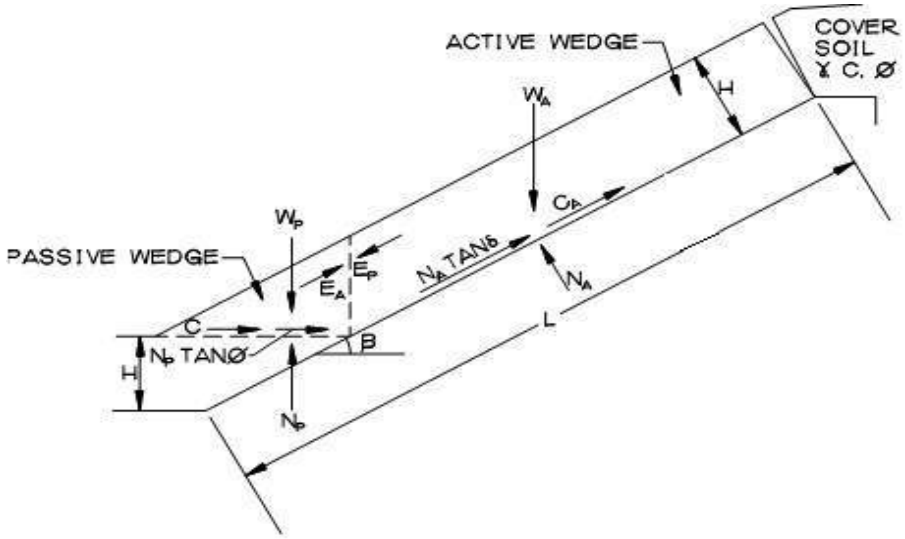
seismic coefficient = Cs =	0.000	g

Note: numbers in boxes are input values

numbers in Italics are calculated values

Buffalo Landfill Solar Farm

Uniform and/or Tapered Cover Soil with Consideration of Seimic Forces



Calculation of FS

Active Wedge:

Wa=	*14430.6*	*lb*
Na=	*14299.5*	*lb*
Ca=	*0.0*	*lb*

Passive Wedge:

Wp=	*2813.6*	*lb*
C=	*0.0*	*lb*

$$FS = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$$

a=	*3785.5*
b=	*-5495.6937*
c=	*271.5*

FS= 1.40

(Note: for uniform cover soil thickness the input value of $\omega = \beta$)

thickness of cover soil on the slope = h =	2.50	ft	
soil slope angle beneath the cover = β =	7.73	°	*= 0.13 (rad.)*
length of slope measured along the geomembrane = L =	29.5	ft	

Applied pressure by the solar array = W_{pa} =	380.4	lb/ft^3	
unit weight of the cover soil = γ =	120.0	lb/ft^3	
friction angle of the cover soil = ϕ =	28.0	°	*= 0.49 (rad.)*
cohesion of the cover soil = c =	0.0	lb/ft^2	
critical interface friction angle = δ =	15.0	°	*= 0.26 (rad.)*
adhesion between cover soil and geocomposite = ca =	0.0	lb/ft^2	

seismic coefficient = Cs =	0.110	g

Note: numbers in boxes are input values

numbers in Italics are calculated values

Project:	Buffalo Landfill Solar Farm		
Project Number:	2251176		
Calculated By:	JM	Date:	3/18/26
Revised By:	JP	Date:	3/18/26
Checked By:		Date:	
Subject:	Low Normal Load Interface Strength		
Sheet:	1 of 9		

DETERMINATION OF LOW NORMAL LOAD INTERFACE STRENGTH FOR THE FINAL COVER SYSTEM

OBJECTIVE

Calculate the shear strength that will provide an unsaturated veneer slope stability FS ≥ 1.5 with respect to the Landfill cover soils failing along the final cover sideslopes. The calculation will also consider the presence of moving equipment placing ballasts and leveling materials across the landfill cap system.

METHODOLOGY

The analytical method used to calculate the veneer slope stability FS is taken from a report prepared by the Geosynthetic Research Institute (GRI), Drexel University:

1) "*Cover Soil Slope Stability Involving Geosynthetic Interfaces*", (GRI REPORT #18), by Te-Yang Soong and Robert M. Koerner, December 9, 1996 and

GRI Report #18 is used to consider the presence of equipment on top of the soil cover layer and provides a FS based on the most critical interface shear strength of final cover components. The spreadsheet calculates a FS by dividing the protective cover material along the sideslope into two blocks:

1) an active wedge of protective cover material along the length of the sideslope; and
2) a passive wedge of protective cover material at the toe of the sideslope.

A freebody diagram is then drawn identifying the forces on each wedge and static equilibrium equations are resolved in terms of vertical and horizontal components. Expressions are derived that quantify the magnitude of both the passive and active interwedge forces. Subsequently, the interwedge force equations are set equal to each other and are arranged in the form of a quadratic equation that can be solved to calculate a FS.

This calculation analyzes the longest length of the final cover sideslope. Figure 1 illustrates the proposed geometry of the final cover sideslope and the freebody of the forces acting along the sideslope.

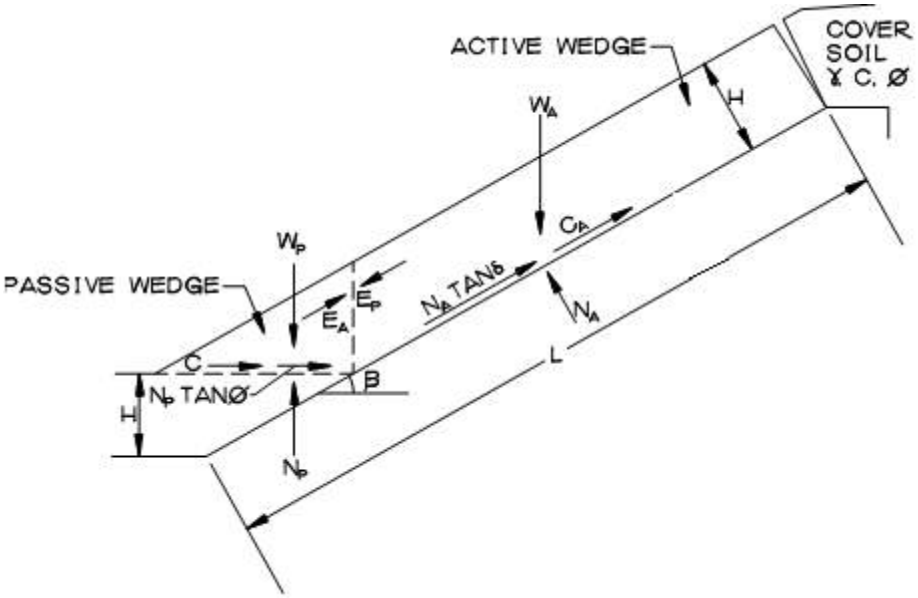


Figure 1, Slope Geometry & Free Body Diagram

Slope Dimensions	
Maximum Length of Cover Sideslope	29.5 feet
Cover Sideslope Orientation*	7.5H:1V or 7.73 degrees

**Note: no slopes are expected to exceed 10H:1V, this value will therefore be utilized as the maximum slope for the Project.*

This veneer slope stability FS calculation is prepared proposing the following assumptions:

- The presence of moving equipment (dynamic loading) along the protective cover sideslope is analyzed within GRI Report #18.
- The shear strength component of adhesion developed between material layers is ignored.
- Tensile strength of the geosynthetic materials contributing to the veneer slope stability FS is ignored.
- The protective cover material provides a buttress at the toe of the slope, i.e. the passive soil wedge.
- For conservatism, the cohesive strength of the proposed protective cover material was ignored.
- All calculations will utilize a 1-foot unit width of sideslope.

LANDFILL COVER

The Landfill Cover System is outlined below, from top to bottom:

- Vegetated Topsoil (6-inch thick topsoil layer);
- Unclassified fill soil layer (24-inch thick soil layer);
- Drainage net with geotextile on one side (plateau portion supporting solar array);
- 60-mil high density polyethylene (HDPE) smooth flexible membrane liner (FML); and
- 6-ounce non-woven geotextile.

PROTECTIVE COVER MATERIAL PARAMETERS

Unit weight: γ_{Total} = 120 pcf;

Cohesion: c = 0 psf (conservative); and
Internal angle of friction: ϕ_i = 28 degrees (conservative)

REQUIRED SHEAR STRENGTH PARAMETERS

The calculation spreadsheet presented within GRI Report #18 will be used to determine the shear strength parameter (contact interface friction angle, $\delta_{interface\ friction}$) that corresponds to a FS ≥ 1.5 under drained conditions for all interfaces. The input variables of final cover sideslope length, protective cover, and LGP equipment will be held constant within the spreadsheet while the contact interface friction angle, $\delta_{interface\ friction,}$ is varied until a FS of ≥ 1.5 is achieved. Cohesion values of 0 psf will be entered for conservatism.

The calculated $\delta_{interface\ friction}$ that corresponds to the FS ≥ 1.5 represents laboratory data where a straight line is drawn from the origin through the first data point (i.e. c = 0 psf) that corresponds to the lowest normal load within the given data set. The lowest normal load models the shear strength of protective cover material under relatively light normal loads that are anticipated to be initially encountered in the field during placement of the material. With respect to the landfill cover, normal loads representative of 2.0 foot of landfill cover are appropriate. The proposed critical contact interface will undergo ASTM D-5321-92 Direct Shear Testing and will be required to meet the minimum calculated contact interface friction angle corresponding to the first normal load.

The resulting contact interface friction angles will be included with other minimum shear strength parameters specified within the Construction Quality Assurance (CQA) Plan and/or specifications.

VARIABLES DEFINED

W_A = Total weight of the active wedge;
W_P = Total weight of the passive wedge;
Wpa = Applied weight of the ballasted solar array;
N_A = Effective force normal to the failure plane of the active wedge;
N_P = Effective force normal to the failure plane of the passive wedge;
γ = Unit weight of the leachate collection/protective cover material;
h = Thickness of the leachate collection/protective cover material;
L = Length of slope measured along the geomembrane;
β = Soil slope angle beneath the geomembrane;
ϕ = Internal angle of friction within the protective cover soil;
δ = Interface friction angle between the most critical geosynthetic to soil interface;
C_a = Adhesive force between the components lying along the most critical geosynthetic interface of the active wedge;
c_a = The adhesion developed between the components lying along the most critical geosynthetic interface of the active wedge;
C = Cohesive force along the failure plane of the passive wedge;
c = cohesion of the protective cover soil;
E_A = Interwedge force acting on the active wedge from the passive wedge;
E_P = Interwedge force acting on the passive wedge from the active wedge; and
FS = Factor of safety against protective cover soil sliding down the slope.

CALCULATIONS

It is proposed that a Low Ground Pressure (LGP) bulldozer will be used to place protective cover material across the sideslope. The pressure exerted upon the top of the landfill cover layer by a bulldozer is modeled as illustrated in Figure 2.

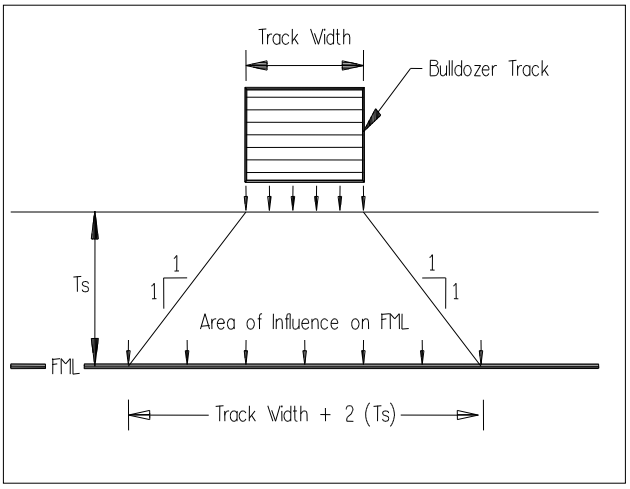


Figure 2, Stress Distribution of the LGP Bulldozer

The following typical LGP Bulldozer equipment specifications are used within the GRI Report #18.

- 2 tracks
- Track length = 9.4 feet
- Track width = 3.0 feet
- Operating weight = 38,300 lbs
- One Track Contact area = 28.2 ft^2
- One Track Contact pressure = 19,150 lbs / 28.2 ft^2 = 679.1 psf

Subsequently, the forces illustrated in Figure 1 are resolved below to produce a veneer slope stability FS. The equations presented are taken from pages 13 and 14 of GRI Report #18.

$$Wa = \gamma h^2 \left[\frac{L}{h} - \frac{1}{\sin\beta} - \frac{\tan\beta}{2}\right] + Wpa$$

$$Na = Wa \cos\beta$$

$$Ca = ca \left[L - \frac{h}{\sin\beta}\right]$$

Balancing the forces in the vertical direction, the following formulation results:

$$E_A \sin\beta = W_A - N_A \cos\beta - \frac{N_A \tan\delta + C_a}{FS} \sin\beta$$

The interwedge force acting on the active wedge is:

$$E_A = \frac{FS \cdot (W_A - N_A \cos\beta) - (N_A \tan\delta + C_a)\sin\beta}{\sin\beta \, FS}$$

The passive wedge can be considered in a similar manner:

$$W_p = \frac{\gamma h^2}{\sin 2\beta}$$

$$N_p = W_p + E_p \sin\beta$$

$$C = \frac{c\,h}{\sin\beta}$$

Balancing the forces in the horizontal direction produces:

$$E_p \cos\beta = \frac{C + N_p \tan\phi}{FS}$$

The interwedge force acting on the passive wedge is:

$$E_p = \frac{C + W_p \tan\phi}{\cos\beta\,(FS) - \sin\beta \tan\phi}$$

Setting $E_A = E_p$ the equation can be arranged in the form of the quadratic equation:

$$a(FS)^2 + b(FS) + c = 0$$

Where the coefficients a, b and c are equal to the following expressions:

$$a = (W_A - N_A \cos\beta)\cos\beta$$

$$b = -\left[(W_A - N_A \cos\beta)\sin\beta \tan\phi + (N_A \tan\delta + C_a)\sin\beta\cos\beta + \sin\beta(C + W_p \tan\phi)\right]$$

$$c = (N_A \tan\delta + C_a)\sin^2\beta \tan\phi$$

The quadratic equation is then used to calculate the FS:

$$FS = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$$

For the ease of calculations, the above quadratic equation was input into a spreadsheet format to produce a FS corresponding to a given set of input parameters. A copy of the spreadsheet calculations displaying the results is included in Attachment A.

CONCLUSIONS

Maximum Slope (7.5H:1V):
Utilizing a contact interface shear strength friction angle of 15 degrees (conservative) within GRI Report #18 resulted in a veneer slope stability FS equal to 2.54 while the equipment is static. This is the critical interface friction angle for the final cover interface. While the equipment is placing the materials and ballast systems, a veneer slope stability FS equal to 1.79 was calculated. Additional assumptions include:

- The presence of an equipment load along the landfill cover sideslope, equipment moves from toe towards the crest;
- The shear strength component of adhesion/cohesion between the landfill cover material and the in-place waste does not exist; and,

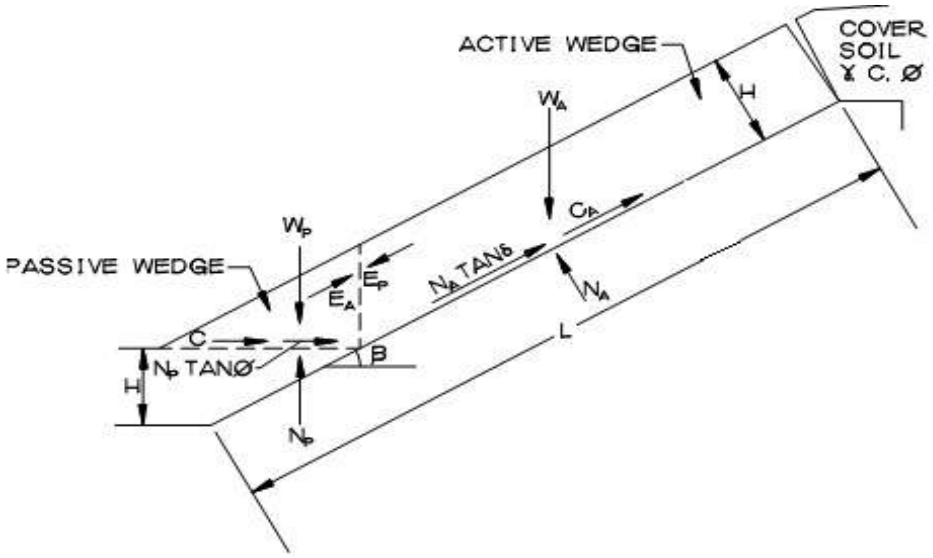
- Calculations consider that the 30-inch thick soil protective cover layer is entirely in-place along the length of landfill cover sideslope approximately 29.5 feet, measured at the northern end of the landfill along the area of steepest slope.

Attachment A

Spreadsheet Calculation

Buffalo Landfill Solar Farm

Placement of the PV Ballasts on the 30-inch thick Landfill Cover
across the 7.5:1 (H:V) Sideslopes with the incorporation of Static Equipment Loads



Calculation of FS

Active Wedge:

Wa=	*14444.9*	*lb*
Na=	*14313.6*	*lb*
Ca=	*0.0*	*lb*

Passive Wedge:

Wp=	*2813.6*	*lb*
C=	*0.0*	*lb*

$$FS = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$$

a=	*2742.0*
b=	*-7107*
c=	*390.7*

FS= 2.54

thickness of protective cover soil = h =	2.50	ft			
Applied weight of the ballasted solar array = Wpa =	380.4	lb/ft^2			
soil slope angle beneath the cover = β =	7.73	°	*= 0.13*	*(rad.)*	
length of slope measured along the geocomposite = L =	29.5	ft			
unit weight of the protective cover soil = γ =	120.0	lb/ft^3			
friction angle of the protective cover soil = ϕ =	28.0	°	*= 0.49*	*(rad.)*	
cohesion of the protective cover soil = c =	0.0	lb/ft^2		*C= 0*	*lb*
critical interface friction angle = δ =	15.0	°	*= 0.26*	*(rad.)*	
adhesion = ca =	0.0	lb/ft^2		*Ca= 0*	*lb*

thickness of the protective cover soil = h =	2.50	ft		*b/h= 1.2*
equipment ground pressure (= wt. of equipment/(2wb)) = q =	679.1	lb/ft^2		*We=qwl= 6128.2*
length of each equipment track = w =	9.4	ft		*Ne=Wecos β = 6072.5*
width of each equipment track = b =	3.0	ft		*Fe=We(a/g)= 0.0*
influence factor* at geocomposite interface = I =	0.96			
acceleration/deceleration of the bulldozer = a =	0.00	g		

*Influence Factor Default Values

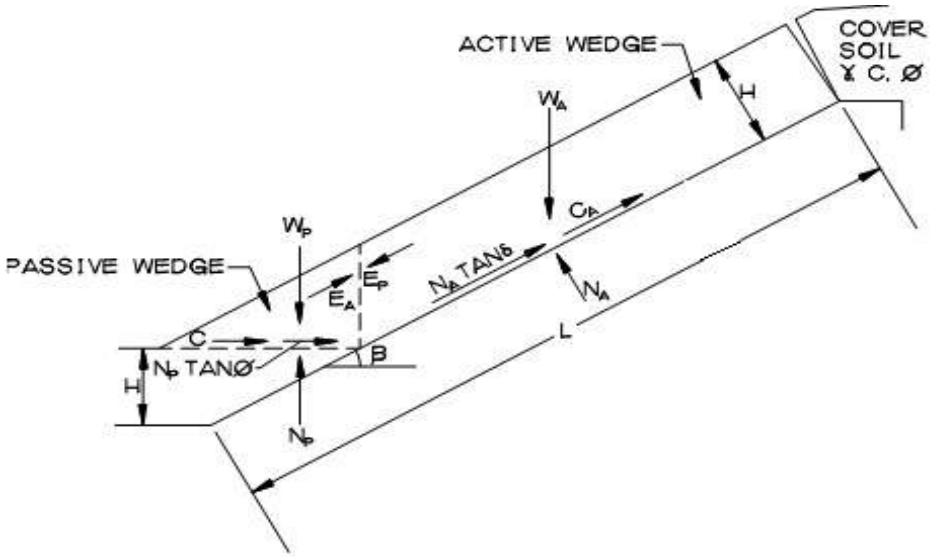
Cover Soil Thickness	Equipment Track Width		
	Very Wide	Wide	Standard
[2] 300 mm	1.00	0.97	0.94
300-1000 mm	0.97	0.92	0.70
[3] 1000 mm	0.95	0.75	0.30

e: numbers in boxes are input values

numbers in Italics are calculated values

Buffalo Landfill Solar Farm

Placement of the PV Ballasts on the 30-inch thick Landfill Cover
across the 7.5:1 (H:V) Sideslopes with the incorporation of Static Equipment Loads



Calculation of FS

Active Wedge:

Wa=	*14444.9*	*lb*
Na=	*14313.6*	*lb*
Ca=	*0.0*	*lb*

Passive Wedge:

Wp=	*2813.6*	*lb*
C=	*0.0*	*lb*

$$FS = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$$

a=	*3895.8*
b=	*-7190*
c=	*390.7*

FS= 1.79

thickness of protective cover soil = h =	2.50	ft				
Applied weight of the ballasted solar array = Wpa =	380.4	lb/ft^2				
soil slope angle beneath the cover = β =	7.73	°	*= 0.13*	*(rad.)*		
length of slope measured along the geocomposite = L =	29.5	ft				
unit weight of the protective cover soil = γ =	120.0	lb/ft^3				
friction angle of the protective cover soil = ϕ =	28.0	°	*= 0.49*	*(rad.)*		
cohesion of the protective cover soil = c =	0.0	lb/ft^2			*C= 0*	*lb*
critical interface friction angle = δ =	15.0	°	*= 0.26*	*(rad.)*		
adhesion = ca =	0.0	lb/ft^2			*Ca= 0*	*lb*

thickness of the protective cover soil = h =	2.50	ft		*b/h= 1.2*
equipment ground pressure (= wt. of equipment/(2wb)) = q =	679.1	lb/ft^2		*We=qwl= 6128.2*
length of each equipment track = w =	9.4	ft		*Ne=Wecos β = 6072.5*
width of each equipment track = b =	3.0	ft		*Fe=We(a/g)= 1164.4*
influence factor* at geocomposite interface = I =	0.96			
acceleration/deceleration of the bulldozer = a =	0.19	g		

*Influence Factor Default Values

Cover Soil Thickness	Equipment Track Width		
	Very Wide	Wide	Standard
[2] 300 mm	1.00	0.97	0.94
300-1000 mm	0.97	0.92	0.70
[3] 1000 mm	0.95	0.75	0.30

e: numbers in boxes are input values

numbers in Italics are calculated values

Project Name:	Buffalo Landfill Solar	**Project #:**	007836
Client:	SolarBank	**Date:**	25-Jul-2025
Table:	2x14	**Tilt:**	30°
Module:	2172x1303x35 mm	**Leading Edge:**	1 m

Ballast Dimensions & Volume / Tub:

Ballast Type	L (m)	W (m)	D (m)	Concrete / Tub (m^3)	Concrete Density (kg / m^3)	Weight / Tub (kg)	Weight / Tub (lbs)
Orange	3.2	1.1	0.5	1.760	2150	3784.00	8342
Yellow	3.2	1.1	0.35	1.232	2150	2648.80	5840

Quantity of Concrete & Tubs:

Ballast Type	# of Tables	Tub / Table	# of Tubs	Concrete / Tub (m^3)	Volume of Concrete (m^3)	Weight of Concrete (kg)	Weight of Concrete (lbs)
Orange	158	2	316	1.760	556.16	1195744	2636161
Yellow	158	2	384	1.232	389.312	837021	1845313
	17	4		1.232	83.776	180118	397093
Total	**175**		**700**		**1029.25**	**2212883**	**4878567**
				Average:	**1.470**	**3161.26**	**6969.38**

RECTANGULAR SPREAD FOOTING ANALYSIS

For Assumed Rigid Footing with from 1 To 8 Piers (Load Points)
Subjected to Uniaxial or Biaxial Eccentricity

Job Name:	SolarBank - Buffalo Solar	Subject:	Uplift Check_ASD - 2x14 - 30° - Orange		
Job Number:	007836	Originator:		Checker:	

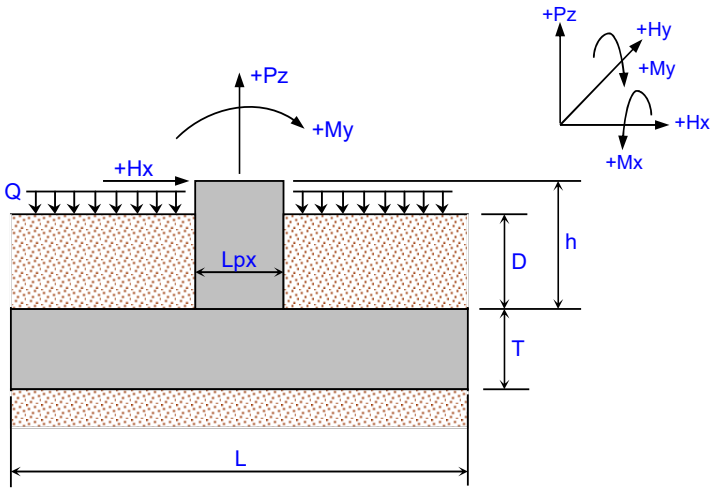
Input Data:

Footing Data:

Footing Length, L =	10.499	ft.
Footing Width, B =	3.609	ft.
Footing Thickness, T =	1.640	ft.
Concrete Unit Wt., γc =	0.134	kcf
Soil Depth, D =	0.000	ft.
Soil Unit Wt., γs =	0.120	kcf
Pass. Press. Coef., Kp =	3.000	
Coef. of Base Friction, μ =	0.400	
Uniform Surcharge, Q =	0.000	ksf

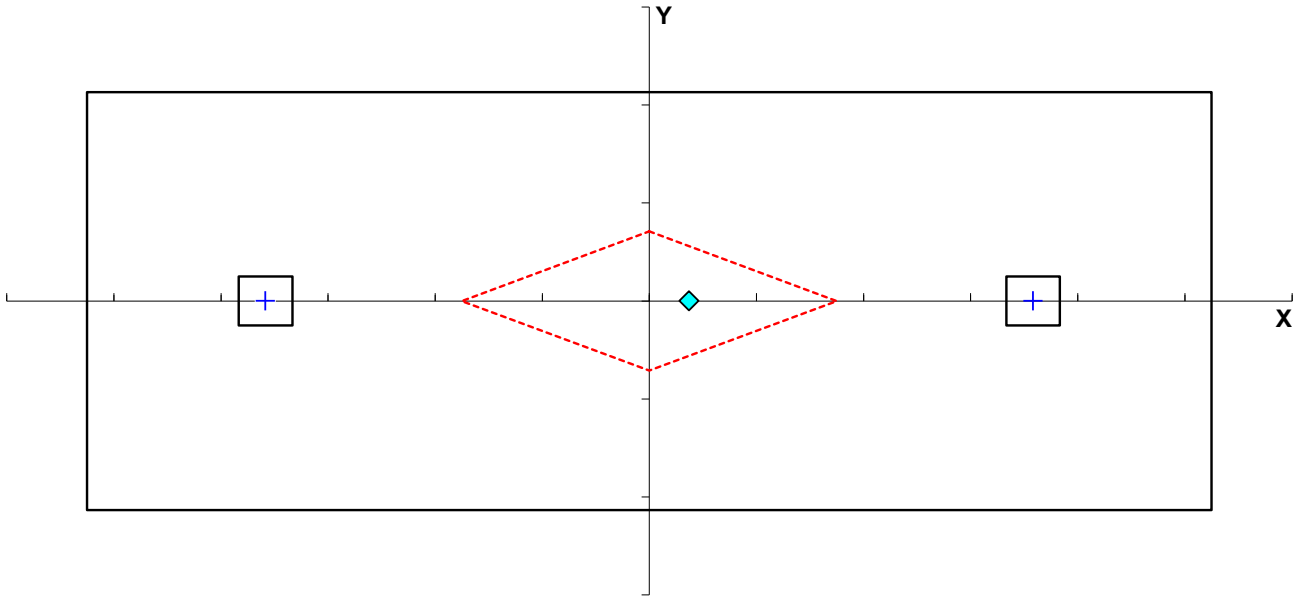
Pier/Loading Data:

Number of Piers = 2



Nomenclature

	Pier #1	Pier #2						
Xp (ft.) =	-3.123	3.123						
Yp (ft.) =	0.000	0.000						
Lpx (ft.) =	0.500	0.500						
Lpy (ft.) =	0.500	0.500						
h (ft.) =	0.000	0.000						
Pz (k) =	3.57	-0.27						
Hx (k) =	0.00	0.00						
Hy (k) =	-2.05	-0.13						
Mx (ft-k) =	0.00	0.00						
My (ft-k) =	-4.35	-2.66						



FOOTING PLAN

(continued)

Results:

Total Resultant Load and Eccentricities:

ΣPz =	-5.03	kips
ex =	1.00	ft. (<= L/6)
ey =	-0.71	ft. (> B/6)

Overturning Check:

ΣMrx =	15.52	ft-kips
ΣMox =	10.03	ft-kips
FS(ot)x =	1.548	>= 1.5
ΣMry =	44.30	ft-kips
ΣMoy =	22.92	ft-kips
FS(ot)y =	1.933	>= 1.5

Sliding Check:

Pass(x) =	1.75	kips
Frict(x) =	2.01	kips
FS(slid)x =	N.A.	
Pass(y) =	5.09	kips
Frict(y) =	2.01	kips
FS(slid)y =	3.254	>= 1.5

Uplift Check:

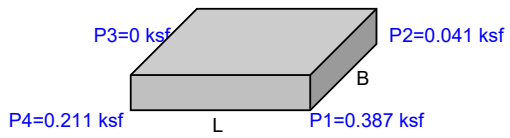
ΣPz(down) =	-8.60	kips
ΣPz(uplift) =	3.57	kips
FS(uplift) =	2.407	>= 1.5

Bearing Length and % Bearing Area:

Dist. x =	23.006	ft.
Dist. y =	4.040	ft.
Brg. Lx =	2.455	ft.
Brg. Ly =	2.196	ft.
%Brg. Area =	85.01	%
Biaxial Case =	Case 1	6*ex/L + 6*ey/B = 1.752

Gross Soil Bearing Corner Pressures:

P1 =	0.387	ksf
P2 =	0.041	ksf
P3 =	0.000	ksf
P4 =	0.211	ksf



CORNER PRESSURES

Maximum Net Soil Pressure:

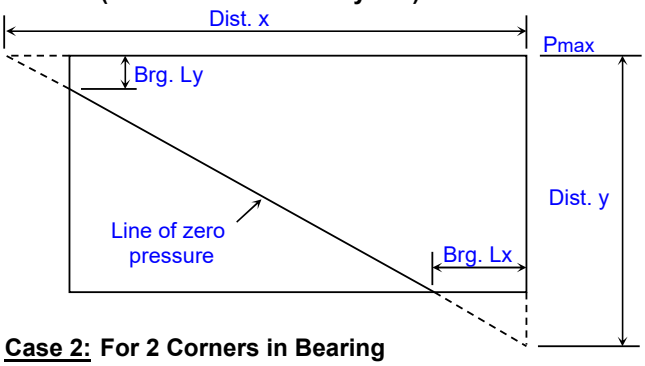
$P_{max}(net) = P_{max}(gross) - (D+T)*\gamma s$

$P_{max}(net)$ =	0.190	ksf

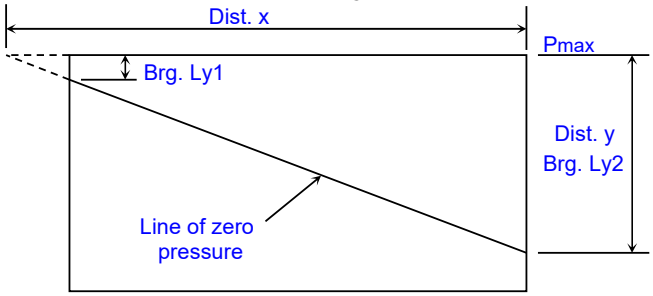
Comments:

Nomenclature for Biaxial Eccentricity:

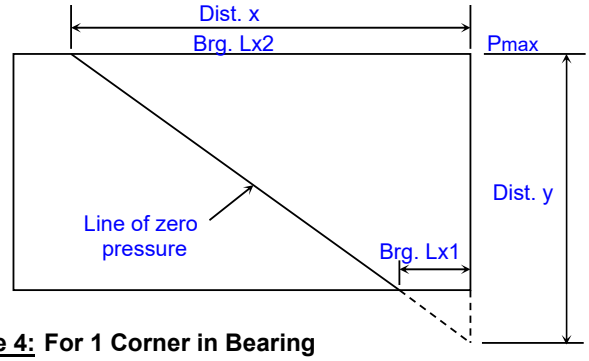
Case 1: For 3 Corners in Bearing
(Dist. x > L and Dist. y > B)



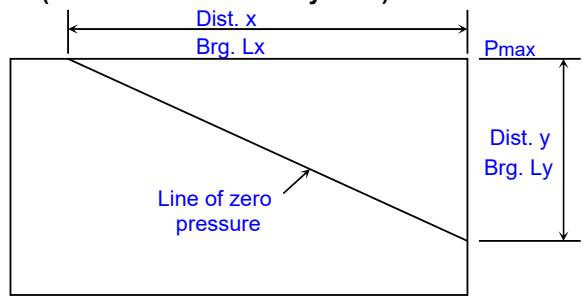
Case 2: For 2 Corners in Bearing
(Dist. x > L and Dist. y <= B)



Case 3: For 2 Corners in Bearing
(Dist. x <= L and Dist. y > B)



Case 4: For 1 Corner in Bearing
(Dist. x <= L and Dist. y <= B)



RECTANGULAR SPREAD FOOTING ANALYSIS

For Assumed Rigid Footing with from 1 To 8 Piers (Load Points)
Subjected to Uniaxial or Biaxial Eccentricity

Job Name:	SolarBank - Buffalo Solar	Subject:	Downforce Check_ASD - 2x14 - 30° - Orange		
Job Number:	007836	Originator:		Checker:	

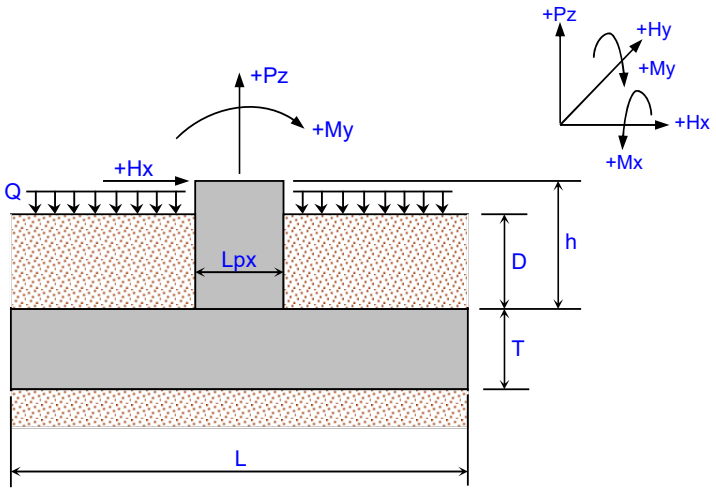
Input Data:

Footing Data:

Footing Length, L =	10.499	ft.
Footing Width, B =	3.609	ft.
Footing Thickness, T =	1.640	ft.
Concrete Unit Wt., γc =	0.134	kcf
Soil Depth, D =	0.000	ft.
Soil Unit Wt., γs =	0.120	kcf
Pass. Press. Coef., Kp =	3.000	
Coef. of Base Friction, μ =	0.400	
Uniform Surcharge, Q =	0.000	ksf

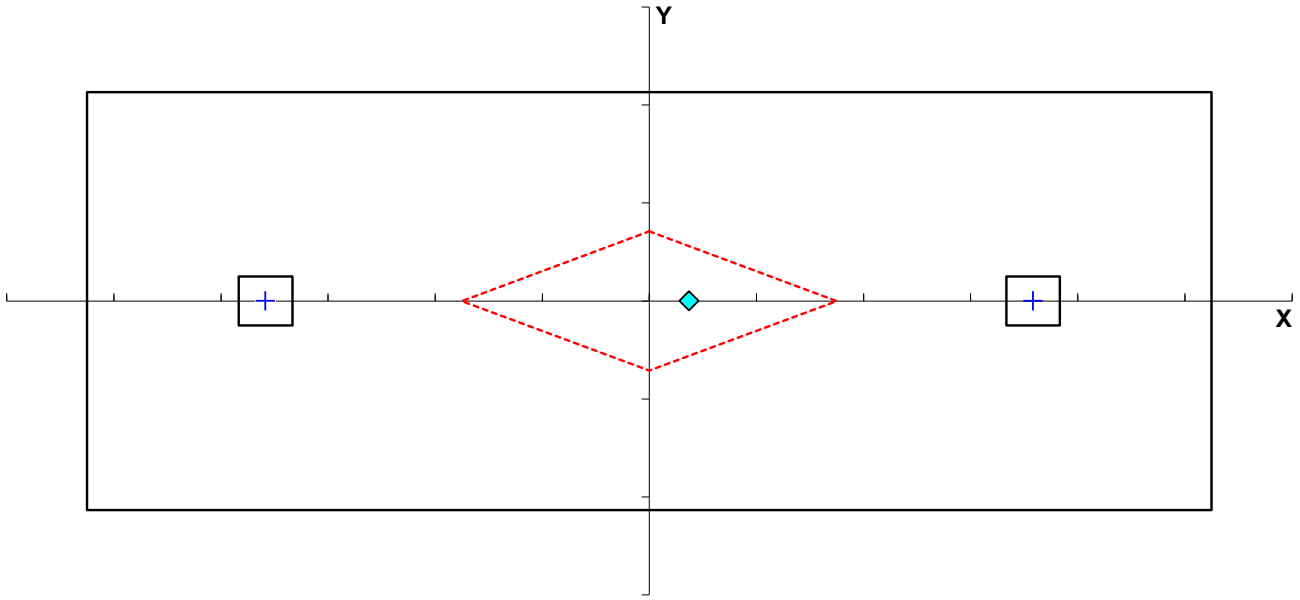
Pier/Loading Data:

Number of Piers = 2



Nomenclature

	Pier #1	Pier #2						
Xp (ft.) =	-3.123	3.123						
Yp (ft.) =	0.000	0.000						
Lpx (ft.) =	0.500	0.500						
Lpy (ft.) =	0.500	0.500						
h (ft.) =	0.000	0.000						
Pz (k) =	-3.10	-2.99						
Hx (k) =	0.00	0.00						
Hy (k) =	-2.05	-0.13						
Mx (ft-k) =	0.00	0.00						
My (ft-k) =	-4.35	-2.66						



FOOTING PLAN

(continued)

Results:

Total Resultant Load and Eccentricities:

ΣPz =	-14.42	kips
ex =	-0.51	ft. (<= L/6)
ey =	-0.25	ft. (<= B/6)

Overturning Check:

ΣMrx =	26.02	ft-kips
ΣMox =	3.58	ft-kips
FS(ot)x =	7.274	>= 1.5
ΣMry =	75.35	ft-kips
ΣMoy =	-7.01	ft-kips
FS(ot)y =	10.754	>= 1.5

Sliding Check:

Pass(x) =	1.75	kips
Frict(x) =	5.77	kips
FS(slid)x =	N.A.	
Pass(y) =	5.09	kips
Frict(y) =	5.77	kips
FS(slid)y =	4.977	>= 1.5

Uplift Check:

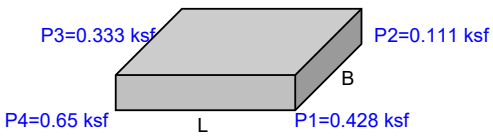
ΣPz(down) =	-14.42	kips
ΣPz(uplift) =	0.00	kips
FS(uplift) =	N.A.	

Bearing Length and % Bearing Area:

Dist. x =	N.A.	ft.
Dist. y =	N.A.	ft.
Brg. Lx =	10.499	ft.
Brg. Ly =	3.609	ft.
%Brg. Area =	100.00	%
Biaxial Case =	N.A.	6*ex/L + 6*ey/B = 0.707

Gross Soil Bearing Corner Pressures:

P1 =	0.428	ksf
P2 =	0.111	ksf
P3 =	0.333	ksf
P4 =	0.650	ksf



CORNER PRESSURES

Maximum Net Soil Pressure:

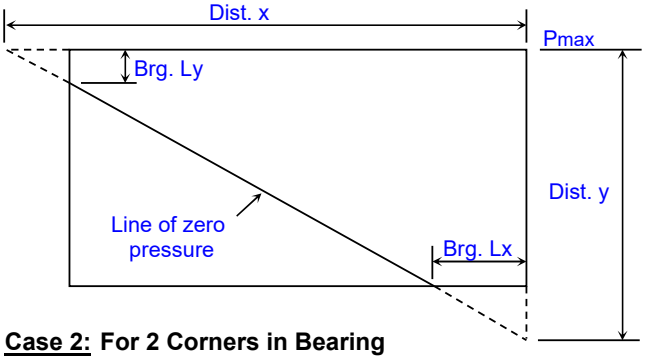
$P_{max}(net) = P_{max}(gross)-(D+T)*\gamma s$

$P_{max}(net)$ =	0.453	ksf

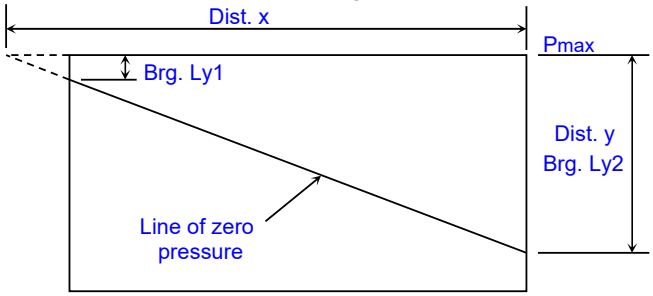
Comments:

Nomenclature for Biaxial Eccentricity:

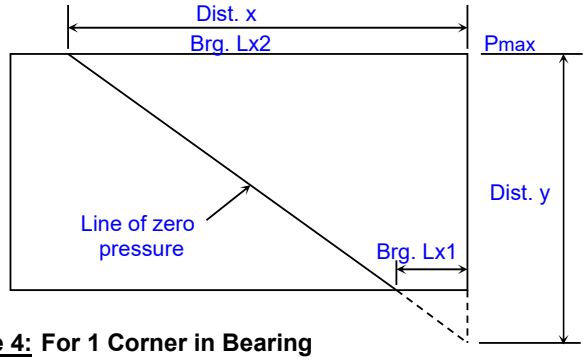
Case 1: For 3 Corners in Bearing
(Dist. x > L and Dist. y > B)



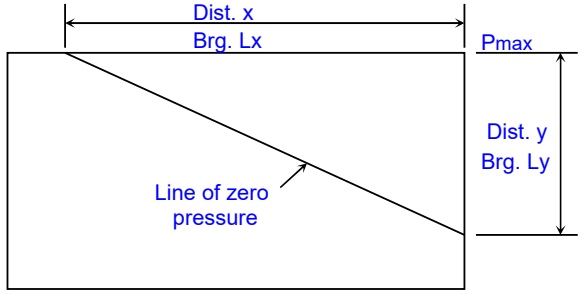
Case 2: For 2 Corners in Bearing
(Dist. x > L and Dist. y <= B)



Case 3: For 2 Corners in Bearing
(Dist. x <= L and Dist. y > B)



Case 4: For 1 Corner in Bearing
(Dist. x <= L and Dist. y <= B)



RECTANGULAR SPREAD FOOTING ANALYSIS

For Assumed Rigid Footing with from 1 To 8 Piers (Load Points)
Subjected to Uniaxial or Biaxial Eccentricity

Job Name:	SolarBank - Buffalo Solar	Subject:	Uplift Check_ASD - 2x14 - 30° - Yellow		
Job Number:	007836	Originator:		Checker:	

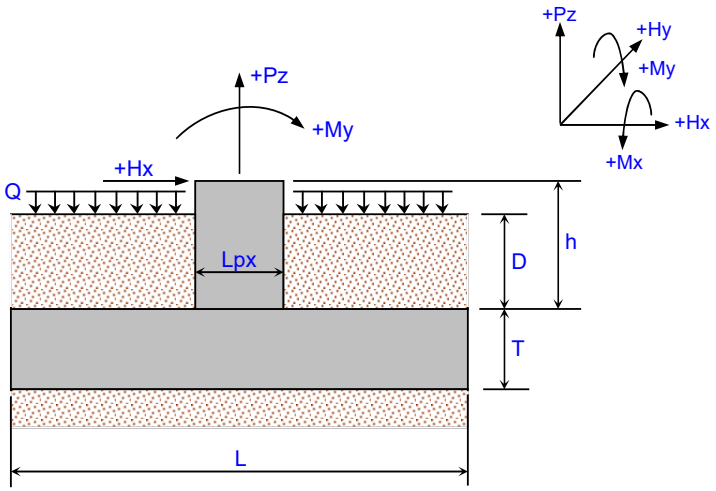
Input Data:

Footing Data:

Footing Length, L =	10.499	ft.
Footing Width, B =	3.609	ft.
Footing Thickness, T =	1.148	ft.
Concrete Unit Wt., γc =	0.134	kcf
Soil Depth, D =	0.000	ft.
Soil Unit Wt., γs =	0.120	kcf
Pass. Press. Coef., Kp =	3.000	
Coef. of Base Friction, μ =	0.400	
Uniform Surcharge, Q =	0.000	ksf

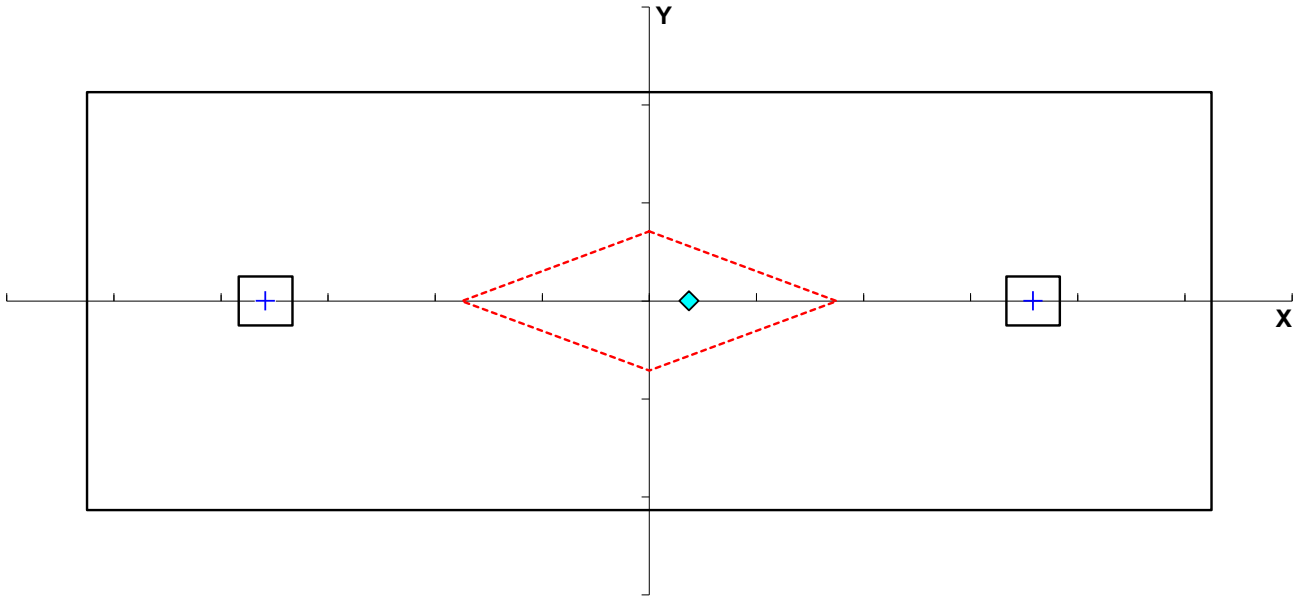
Pier/Loading Data:

Number of Piers = 2



Nomenclature

	Pier #1	Pier #2						
Xp (ft.) =	-3.123	3.123						
Yp (ft.) =	0.000	0.000						
Lpx (ft.) =	0.500	0.500						
Lpy (ft.) =	0.500	0.500						
h (ft.) =	0.000	0.000						
Pz (k) =	2.50	-0.28						
Hx (k) =	0.00	0.00						
Hy (k) =	-1.39	-0.09						
Mx (ft-k) =	0.00	0.00						
My (ft-k) =	-2.95	-1.77						



FOOTING PLAN

(continued)

Results:

Total Resultant Load and Eccentricities:

ΣPz =	-3.62	kips
ex =	1.09	ft. (<= L/6)
ey =	-0.47	ft. (<= B/6)

Overturning Check:

ΣMrx =	11.03	ft-kips
ΣMox =	6.21	ft-kips
FS(ot)x =	1.777	>= 1.5
ΣMry =	31.20	ft-kips
ΣMoy =	16.17	ft-kips
FS(ot)y =	1.929	>= 1.5

Sliding Check:

Pass(x) =	0.86	kips
Frict(x) =	1.45	kips
FS(slid)x =	N.A.	
Pass(y) =	2.49	kips
Frict(y) =	1.45	kips
FS(slid)y =	2.654	>= 1.5

Uplift Check:

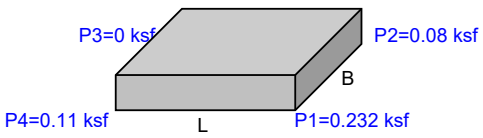
ΣPz(down) =	-6.11	kips
ΣPz(uplift) =	2.50	kips
FS(uplift) =	2.449	>= 1.5

Bearing Length and % Bearing Area:

Dist. x =	19.930	ft.
Dist. y =	5.488	ft.
Brg. Lx =	6.824	ft.
Brg. Ly =	2.597	ft.
%Brg. Area =	95.09	%
Biaxial Case =	Case 1	6*ex/L + 6*ey/B = 1.404

Gross Soil Bearing Corner Pressures:

P1 =	0.232	ksf
P2 =	0.080	ksf
P3 =	0.000	ksf
P4 =	0.110	ksf



CORNER PRESSURES

Maximum Net Soil Pressure:

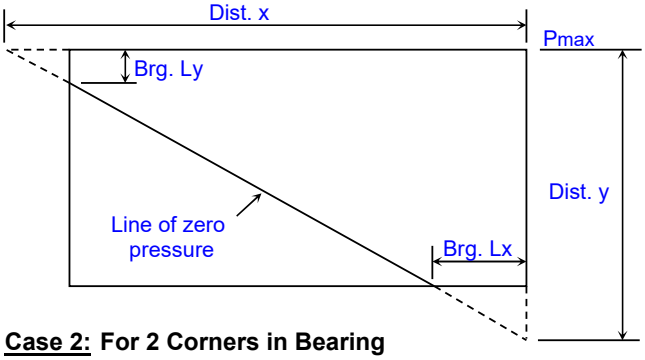
$P_{max}(net) = P_{max}(gross) - (D+T)*\gamma s$

$P_{max}(net)$ =	0.095	ksf

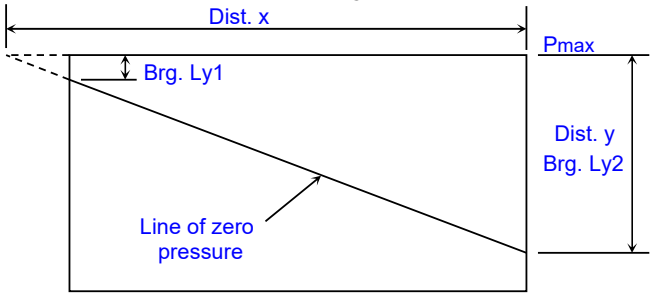
Comments:

Nomenclature for Biaxial Eccentricity:

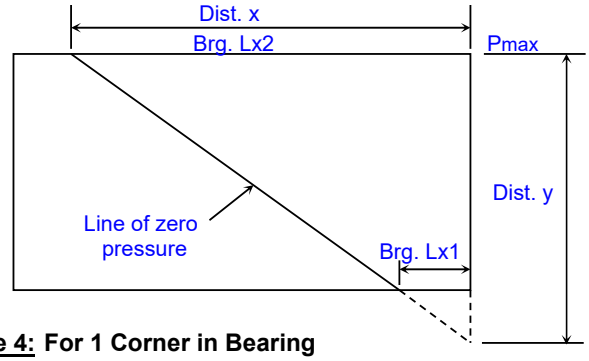
Case 1: For 3 Corners in Bearing
(Dist. x > L and Dist. y > B)



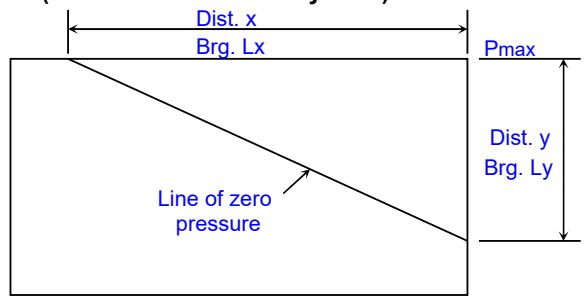
Case 2: For 2 Corners in Bearing
(Dist. x > L and Dist. y <= B)



Case 3: For 2 Corners in Bearing
(Dist. x <= L and Dist. y > B)



Case 4: For 1 Corner in Bearing
(Dist. x <= L and Dist. y <= B)



RECTANGULAR SPREAD FOOTING ANALYSIS

For Assumed Rigid Footing with from 1 To 8 Piers (Load Points)
Subjected to Uniaxial or Biaxial Eccentricity

Job Name:	SolarBank - Buffalo Solar	Subject:	Downforce Check_ASD - 2x14 - 30° - Yellow		
Job Number:	007836	Originator:		Checker:	

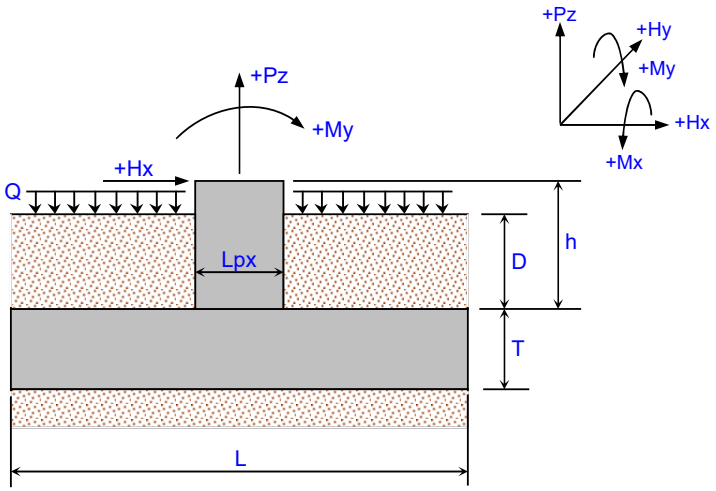
Input Data:

Footing Data:

Footing Length, L =	10.499	ft.
Footing Width, B =	3.609	ft.
Footing Thickness, T =	1.148	ft.
Concrete Unit Wt., γc =	0.134	kcf
Soil Depth, D =	0.000	ft.
Soil Unit Wt., γs =	0.120	kcf
Pass. Press. Coef., Kp =	3.000	
Coef. of Base Friction, μ =	0.400	
Uniform Surcharge, Q =	0.000	ksf

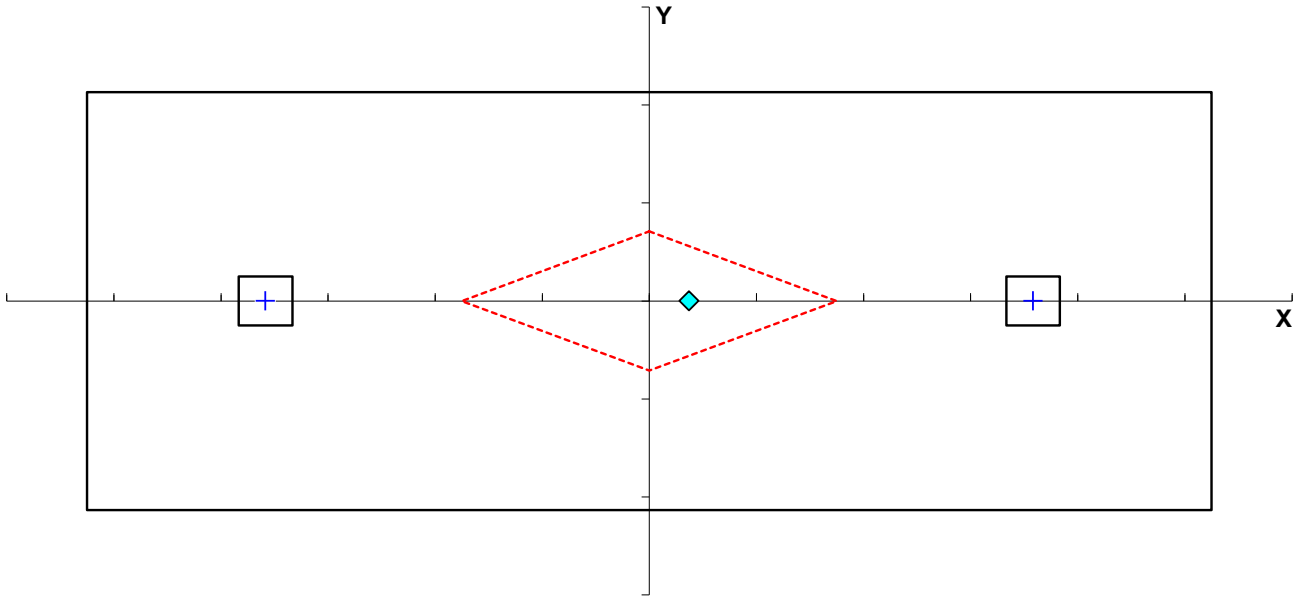
Pier/Loading Data:

Number of Piers = 2



Nomenclature

	Pier #1	Pier #2						
Xp (ft.) =	-3.123	3.123						
Yp (ft.) =	0.000	0.000						
Lpx (ft.) =	0.500	0.500						
Lpy (ft.) =	0.500	0.500						
h (ft.) =	0.000	0.000						
Pz (k) =	-2.86	-2.81						
Hx (k) =	0.00	0.00						
Hy (k) =	-1.39	-0.09						
Mx (ft-k) =	0.00	0.00						
My (ft-k) =	-2.95	-1.77						



FOOTING PLAN

(continued)

Results:

Total Resultant Load and Eccentricities:

ΣPz =	-11.50	kips
ex =	-0.42	ft. (<= L/6)
ey =	-0.15	ft. (<= B/6)

Overturning Check:

ΣMrx =	20.74	ft-kips
ΣMox =	1.70	ft-kips
FS(ot)x =	12.175	>= 1.5
ΣMry =	60.20	ft-kips
ΣMoy =	-4.72	ft-kips
FS(ot)y =	12.754	>= 1.5

Sliding Check:

Pass(x) =	0.86	kips
Frict(x) =	4.60	kips
FS(slid)x =	N.A.	
Pass(y) =	2.49	kips
Frict(y) =	4.60	kips
FS(slid)y =	4.778	>= 1.5

Uplift Check:

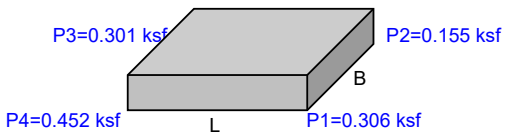
ΣPz(down) =	-11.50	kips
ΣPz(uplift) =	0.00	kips
FS(uplift) =	N.A.	

Bearing Length and % Bearing Area:

Dist. x =	N.A.	ft.
Dist. y =	N.A.	ft.
Brg. Lx =	10.499	ft.
Brg. Ly =	3.609	ft.
%Brg. Area =	100.00	%
Biaxial Case =	N.A.	6*ex/L + 6*ey/B = 0.489

Gross Soil Bearing Corner Pressures:

P1 =	0.306	ksf
P2 =	0.155	ksf
P3 =	0.301	ksf
P4 =	0.452	ksf



CORNER PRESSURES

Maximum Net Soil Pressure:

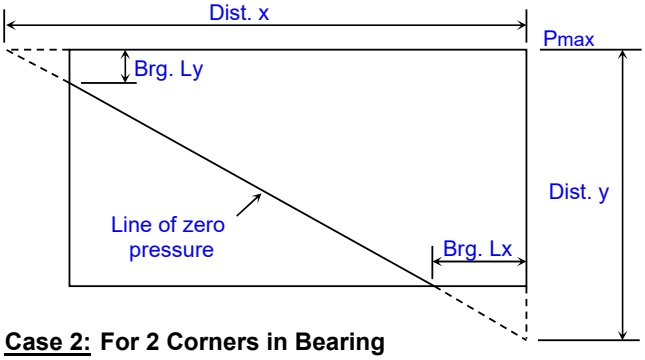
$P_{max}(net) = P_{max}(gross)-(D+T)*\gamma s$

$P_{max}(net)$ =	0.314	ksf

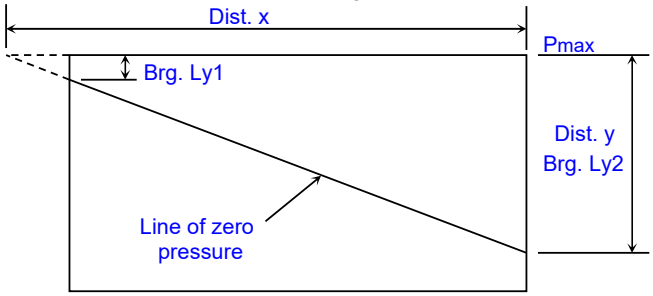
Comments:

Nomenclature for Biaxial Eccentricity:

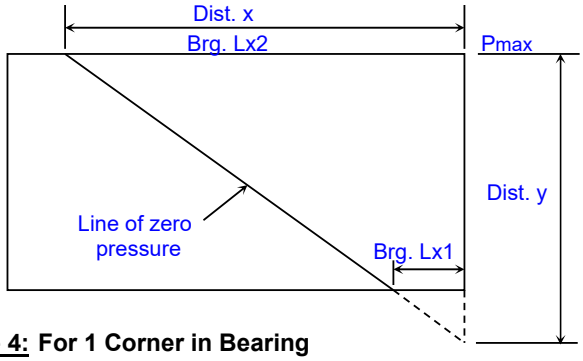
Case 1: For 3 Corners in Bearing
(Dist. x > L and Dist. y > B)



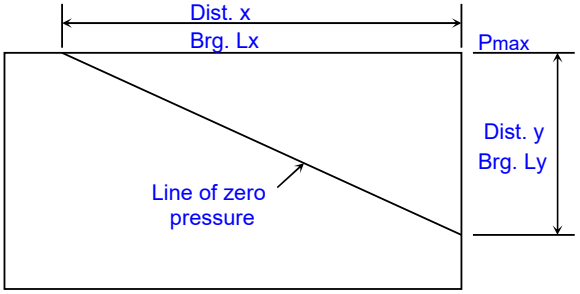
Case 2: For 2 Corners in Bearing
(Dist. x > L and Dist. y <= B)



Case 3: For 2 Corners in Bearing
(Dist. x <= L and Dist. y > B)



Case 4: For 1 Corner in Bearing
(Dist. x <= L and Dist. y <= B)



ATTACHMENT 3:

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Stormwater Pollution Prevention Plan

Prepared for:
SUNN 1016 LLC
700 West Metro Park
Rochester, NY 14623

Submitted by:
LaBella Associates
300 State Street, Suite 201
Rochester, NY 14614
(585) 454-6110

LaBella
Powered by partnership.

Buffalo Landfill Solar Project

City of Buffalo, Erie County, New York

DATE: AUGUST 2025
LAST REVISED: MAY 2026
PROJECT NO. 2251176

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PREPARER OF THE SWPPP

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

Name and Title[1]: Mufuta Tshimanga, PE

Date: Issued: August 2025
Revised: May 2026

[1] *This is a signature of a New York State licensed Professional Engineer employed by LaBella Associates that is duly authorized to sign and seal Stormwater Pollution Prevention Plans (SWPPPs), NOIs, and NOTs prepared under their direct supervision. Refer to Appendix B for the SWPPP Preparer Certification Form, and Appendix I for the LaBella Certifying Professionals Letter.*

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- A-4: Environmental Resource Map
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Appendix B: Forms

- Notice of Intent (NOI)
- MS4 SWPPP Acceptance Form
- SWPPP Preparer Certification Form
- Owner/Operator Certification Form
- NYCDEP SWPPP Acceptance Form
- Contractor and Subcontractor Certification Forms
- Notice of Termination (NOT)

Appendix C: Project Evaluation

Appendix D: SWPPP Inspection Report (Sample Form)

Appendix E: NYSDEC “Deep-Ripping and Decompaction,” April 2008

Appendix F: LaBella Certifying Professionals Letter

Appendix G: NYSDEC SPDES General Permit GP-0-25-001

1.0 EXECUTIVE SUMMARY

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared for major activities associated with construction of an approximately 13.5 Acre solar development of 3.15 Megawatt (MW) in the City of Buffalo. This SWPPP includes the elements necessary to comply with the national baseline general permit for construction activities enacted by the U.S. Environmental Protection Agency (EPA) under the National Pollutant Discharge Elimination System (NPDES) program and all local governing agency requirements. This SWPPP must be executed and permit coverage must be obtained prior to the commencement of construction activity.

This SWPPP has been developed in accordance with the "New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity," Permit No. GP-0-25-001, effective January 29, 2025 through January 28, 2030. The SWPPP and accompanying plans identify and detail pollution prevention, and erosion and sediment control measures necessary during and following completion of construction.

This SWPPP and the accompanying plans entitled "Buffalo Landfill Solar Project" have been submitted as a set. These engineering drawings are considered an integral part of this SWPPP. Therefore, this SWPPP is not considered complete without them. References made herein to "the plans" or to a specific "sheet" refer to these drawings.

This report considers the impacts associated with the intended development with the purpose of:

1. Mitigating potential stormwater quality impacts and preventing soil erosion and sedimentation resulting from stormwater runoff generated both during and after construction.

The design completed and documented in this report is intended to be part of the application made for a solar development project completed on behalf of the Owner/Operator.

1.1 Project Description

SUNN 1016 LLC is proposing the development project, on approximately 13.5 acres of land, part of a 18.92 acre parcel located on 1037 South Park Ave, Buffalo, NY. The parcel is owned by South Buffalo Development, LLC. and the tax number is 122.-16-1-10. The Buffalo Landfill Solar Project will include ballasted fixed tilt solar arrays. The system will include the necessary appurtenances, such as, new electrical equipment, a proposed battery energy storage system (BESS) and a BESS transformer, two concrete pads, new 25' gravel access road (consisting of a 5' wide slurry wall gravel protection extension), and new underground electrical equipment. There will also be a new proposed interconnection, including utility poles along the new gravel access road and proposed overhead wires to connect to an existing utility line. The project will disturb less than one (1) acre but NYSDEC has determined that a SPDES permit may be required and as such, preparation of this SWPPP has been prepared under GP-0-25-001. A Site Location Map has been provided in Appendix A, as Figure A-1.

This type of project is included in Table 1 of Appendix B of GP-0-25-001; and the project site is not located in one of the watersheds listed in Appendix C of GP-0-25-001. Therefore, this SWPPP only includes erosion and sediment controls.

This project is located within the City of Buffalo regulated, traditional land use control Municipal Separate Stormwater Sewer System (MS4), SWIS ID 140200. Therefore, an MS4 SWPPP Acceptance Form is required to accompany NOIs submitted to the NYSDEC.

Runoff from the project site will discharge to the Buffalo River, which is not included in the list of Section 303(d) water bodies included in Appendix D of GP-0-25-001.

Project construction activities will consist primarily of building construction, and the installation of public utility infrastructure necessary to support the proposed development project. Construction phase pollutant sources anticipated at the site are exposed soil, vehicle fuels and lubricants, chemicals associated with building construction, and building materials. Without adequate control there is the potential for each type of pollutant to be transported by stormwater.

1.2 Stormwater Pollution Controls

The stormwater pollution controls outlined herein have been designed and evaluated in accordance with the following standards and guidelines:

- New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016 (SSESC).

Stormwater quality will be enhanced through the implementation of temporary and permanent erosion and sediment control measures, and other construction-phase pollution controls outlined herein.

2.0 SITE CHARACTERISTICS

2.1 State Environmental Quality Review

The construction activity is subject to State Environmental Quality Review (SEQR). The project is considered a Type I action. As such, SEQR coordination has been initiated A copy of the SEQR documentation, in accordance with Part I.A.5. of GP-0-25-001, is provided in Appendix A, as Figure A-5 upon receipt.

2.2 Land Use and Topography

The project site is located within the Industrial zoning district. Large Scale Solar Projects are a permitted use subject to a special use permit within this district.

The overall site is slightly sloping, with slopes ranging from 0 to 20 percent. Site elevations range from approximately 574 feet above mean sea level (MSL) to 600 feet MSL.

The US Department of Agriculture (USDA) Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/) was used to obtain surficial soil conditions for the study area, as follows:

Table 1: USDA Soil Data

Map Symbol & Description	Hydrologic Soil Group	Permeability (inches/hour)	Erosion Factor K	Depth to Water Table (feet)	Depth to Bedrock (feet)
Ud - Urban Land	N/A	N/A	N/A	N/A	N/A
W - Water	N/A	N/A	N/A	N/A	N/A

Upon review of the soil data presented in Table 1, the project site contains soils with a soil slope phase of D with a map unit name that inclusive of slopes greater than 25%, and does not contain soils with a soil slope phase of E or F.

The project site is composed of HSG D soils, as shown in the table below. For the purposes of this report, "Ud – Urban Land" soils were considered HSG D soils to reflect the undrained condition.

Table 2: Project Site HSG Data

HSG A	HSG B	HSG C	HSG D
0%	0%	0%	87%

The Soil Conservation Service defines the hydrologic soil groups as follows:

- Type D Soils: Soils having a very low infiltration rate and high runoff potential when thoroughly wet. These soils consist chiefly of clays that have high shrink-swell potential, soils that have a permanent high water table, soils that have a clay pan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very low rate of water transmission.

The soils map for the study area is presented in Appendix A, as Figure A-2.

2.3 Watershed Designation

The project site is not located in a restricted watershed identified in Appendix C of GP-0-25-001.

2.4 Receiving Water Bodies

The nearest natural classified water body into which runoff from the project site will discharge is the Buffalo River. The Buffalo River is classified by NYSDEC as a Class C water course, and is not included in the Section 303(d) list of impaired waters found in Appendix D of GP-0-25-001.

2.5 Aquifer Designation

The project site is not located over a US EPA designated Sole Source aquifer; nor is it located over a Primary or Principal aquifer listed in the NYSDEC Technical and Operational Guidance Series (TOGS) 2.1.3 (1980).

2.6 Wetlands

In June 2025, LaBella wetland biologists evaluated the project site for the presence of regulated wetlands and it was determined that the project site does not contain NYSDEC or Federally Regulated Wetlands.

2.7 Flood Plains

According to the National Flood Insurance Program Flood Insurance Rate Map (FIRM), City of Buffalo, New York, Community Panel Number 36029C0326J, the project site lies within Flood Zone AE, areas inundated by 100-year flood with no base flood elevations determined The FEMA Flood Map has been provided in Appendix A, as Figure A-5.

2.8 Listed, Endangered, or Threatened Species

A search was performed on the NYSDEC Environmental Resource Mapper on August 15, 2025, and determined that the project site may contain threatened or endangered species, or critical habitat. An Environmental Resource Map has been provided in Appendix A, as Figure A-4.

2.9 Historic Places

A search on the New York State Cultural Resource Information System (CRIS) database, performed on August 15, 2025, revealed that the construction activity is not within an archaeological buffer area indicated on the sensitivity map, and that the construction activity is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the construction site within 20 feet from a building, structure, or object that is more than 50 years, in accordance with Part I.A.4 of GP-0-25-001. A printout of the historic places screening map is presented in Appendix A, as Figure A-3.

3.0 STORMWATER MANAGEMENT PLANNING

3.1 Climate Change Consideration

This report presents the consideration for future physical risks due to climate change, in accordance with Part III.A.2 of the permit. Overall site planning, control measures and practices, conveyance systems and detention systems were evaluated against the seven (7) physical risks identified by NYSDEC due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR 490, and associated guidance. Appendix C provides a description of each consideration, specific to the project.

4.0 CONSTRUCTION SEQUENCE

This project has not received written approval from NYSDEC and the City of Buffalo allowing the disturbance of more than five acres of land at any one time. Therefore, if the Contractor's construction sequence requires the disturbance of more than five acres at any one time, written approval must be

obtained from written approval from NYSDEC and the City of Buffalo prior to disturbing more than five acres at once.

- The SPDES permit identification number (Permit ID); and
- Full technical justification demonstrating why alternative methods of construction that would result in five acres of soil disturbance or less at any one time are not feasible; and
- The phasing plan for the project and sequencing plans for all phases from the SWPPP in accordance with Part III.B.1.d.; and
- Plans with locations and details of erosion and sediment control practices such that the heightened concern for erosion when disturbing greater than five acres at one time has been addressed; and
- Acknowledgement that the Owner/Operator will comply with the requirements in Part IV.C.2.b.; and
- Acknowledgement that the Owner/Operator will comply with the requirements in Part II.B.1.b.

The Owner/Operator must be in receipt of an Authorization Letter to Disturb Greater than Five Acres, which will include when the authorization begins and ends and indicate a maximum area (acres) of soil disturbance allowed at any one time from the NYSDEC OR the City of Buffalo. Should the request be denied, the contractor shall limit the area of disturbance to less than five acres of disturbance at any given time. The contractor shall prepare and submit to the Owner's/Operator's Engineer a sequencing plan that identifies the progression of construction through the site. This sequencing plan must be retained as part of the Site Log Book.

The "Erosion and Sediment Control Plan" and the "Erosion and Sediment Control Plan Prior to Construction" in the accompanying drawings and waiver request identifies the major construction activities that are the subject of this SWPPP. The order (or sequence) in which the major activities are expected to begin is presented on the accompanying drawings, though each activity will not necessarily be completed before the next begins. In addition, these activities could occur in a different order if necessary to maintain adequate erosion and sediment control. If this is the case, the contractor shall notify the Owner's/Operator's Engineer overseeing the implementation of the SWPPP.

The Contractor will be responsible for implementing the erosion and sediment control measures identified on the plans. The Contractor may designate these tasks to certain subcontractors as they see fit, but the ultimate responsibility for implementing these controls and ensuring their proper function remains with the Contractor.

In accordance with Part III.B.c.iv. a phasing plan for the project and sequencing plans for all phases have been provided. The plans address clearing and grubbing, excavation and grading, utility and infrastructure installation, final stabilization, and any other construction activity at the site that will result in soil disturbance. Refer to the plans for further information on the project phasing and sequencing.

5.0 CONSTRUCTION-PHASE POLLUTION CONTROL

The SWPPP and accompanying plans identify the temporary and permanent erosion and sediment control measures that have been incorporated into the design of this project. These measures will be implemented during construction, to minimize soil erosion and control sediment transport off-site, and after construction, to control the quality and quantity of stormwater runoff from the developed site.

Erosion control measures, designed to minimize soil loss, and sediment control measures, intended to retain eroded soil and prevent it from reaching water bodies or adjoining properties, have been developed in accordance with the following documents:

- NYSDEC SPDES General Permit for Stormwater Discharges From Construction Activity, Permit No. GP-0-25-001 (effective January 29, 2025 through January 28, 2030)
- New York State Standards and Specifications for Erosion and Sediment Control, NYSDEC (November 2016)
- Erie County Erosion and Sediment Control Manual
- City of Buffalo Erosion and Sediment Control Ordinance

The SWPPP and accompanying plans outline the construction scheduling for implementing the erosion and sediment control measures. These documents include limitations on the duration of soil exposure, criteria and specifications for placement and installation of the erosion and sediment control measures, a maintenance schedule, and specifications for the implementation of erosion and sediment control practices and procedures.

Temporary and permanent erosion and sediment control measures that shall be applied during construction generally include:

1. Minimizing soil erosion and sedimentation by stabilization of disturbed areas and by removing sediment from construction site discharges.
2. Preservation of existing vegetation to the greatest extent practical. Following the completion of construction activities in any portion of the site, permanent vegetation shall be established on all exposed soils.
3. Site preparation activities to minimize the area and duration of soil disruption.
4. Establishment of permanent traffic corridors to ensure that “routes of convenience” are avoided.

5.1 Temporary Erosion and Sediment Control Measures

The temporary erosion and sediment control measures described in the following sections are included as part of the construction documents.

5.1.1 Stabilized Construction Access

Prior to construction, stabilized construction access(es) will be installed, per accompanying plans, to reduce the tracking of sediment onto public roadways.

Construction traffic must enter and exit the site at the stabilized construction access(es). The intent is to trap dust and mud that would otherwise be carried off-site by construction traffic.

The access(es) shall be maintained in a condition, which will control tracking of sediment onto public rights-of-way or streets. When necessary, additional aggregate will be placed atop the filter fabric to assure the minimum thickness is maintained. All sediment and/or soil spilled, dropped, or washed onto public rights-of-way must be removed immediately. Periodic inspection and needed maintenance shall be provided after each substantial rainfall event.

5.1.2 Dust Control

Water trucks shall be used as needed during construction to reduce dust generated on-site. Dust control must be provided by the Contractor(s) to a degree that is acceptable to the Owner, and in compliance with the applicable local and state dust control requirements.

5.1.3 Temporary Soil Stockpile

Materials, such as topsoil, will be temporarily stockpiled (if necessary) on the site during the construction process. Stockpiles shall be located in an area away from storm drainage, water bodies and/or courses, and will be properly protected from erosion by a surrounding silt fence barrier.

5.1.4 Silt Fencing

Prior to the initiation of and during construction activities, a geotextile filter fabric (or silt fence) will be established downgradient of all disturbed areas. These barriers may extend into non-impact areas to provide adequate protection of adjacent lands.

Clearing and grubbing will be performed only as necessary for the installation of the sediment control barrier. To facilitate effectiveness of the silt fencing, daily inspections and inspections immediately after significant storm events will be performed by the Contractor(s). Maintenance of the fence will be performed as needed.

5.1.5 Temporary Seeding

For areas undergoing clearing, grading, and disturbance as part of construction activities, where work has temporarily ceased, temporary soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the soil disturbance activity has temporarily ceased.

ceased.

5.1.6 Erosion Control Blanket

Erosion control blankets shall be installed in accordance with manufacturer's requirements on all slopes exceeding 3:1. Erosion control blankets provide temporary erosion protection, rapid vegetative establishment, and long-term erosion resistance to shear stresses generated by high runoff flow velocities associated with steep slopes.

5.1.7 Temporary Sediment Trap

Temporary sediment traps shall be constructed to intercept sediment-laden runoff, reduce the amount of sediment leaving the disturbed areas, and protect drainage ways, properties, and rights-of-way.

Accumulated sediment shall be removed from the trap when it reaches no greater than 50 percent of the design capacity. Sediment shall not be placed downstream from the embankment, adjacent to a stream, or floodplain.

Temporary sediment traps depicted on the accompanying plans have been designed to provide 3,600 CF of storage per acre of tributary watershed.

5.1.8 Fiber Roll

Prior to the initiation of and during construction activities, fiber rolls (12" minimum diameter) will be established downgradient of all disturbed areas to reduce sheet flow on slopes. These rolls may extend into non-impact areas to provide adequate protection of adjacent lands. Spacing will conform to NYSDEC specification for straw bale dike.

Clearing and grubbing will be performed only as necessary for the installation of the fiber rolls. To facilitate effectiveness, daily inspections and inspections immediately after significant storm events will be performed by the Contractor(s) and maintenance will be performed as needed.

5.1.9 Compost Filter Sock

Prior to the initiation of and during construction activities, a compost filter sock (or silt sock) will be established downgradient of all disturbed areas. These filters may extend into non-impact areas to provide adequate protection of adjacent lands. The spacing of the compost filter sock, which will depend on the ground slope and diameter of the sock, shall be based upon New York State or EPA guidance.

Clearing and grubbing will be performed only as necessary for the installation of the sediment control filter; and unlike sediment control barriers, trenching is not required. The ends of the filter sock should be directed upslope, to prevent stormwater from running around the end of the sock. The preferred anchoring method is to drive stakes through the center of the sock at regular intervals; alternatively, stakes can be placed on the downstream side of the sock. To facilitate effectiveness of the compost filter sock, daily inspections and inspections immediately after significant storm events will be performed by the Contractor(s) to ensure that they are intact and the area behind the sock is not filled with sediment. Maintenance of the sock will be performed as needed.

5.2 Permanent Erosion and Sediment Control Measures

The permanent erosion and sediment control measures described in the following sections are included as part of the construction documents.

5.2.1 Establishment of Permanent Vegetation

Disturbed areas that will be vegetated must be seeded in accordance with the contract documents. The type of seed, mulch, and maintenance measures as described in the contract documents shall also be followed.

Permanent soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the soil disturbance activity has permanently ceased.

Final site stabilization is achieved when all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of 80 percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

5.2.2 Permanent Turf Reinforcement

Permanent turf reinforcement mats (TRMs) provide long-term erosion protection and vegetation establishment assistance while permanently reinforcing vegetation. TRMs shall be installed on slopes/channels where specified. TRM's provide two key advantages. First, their unique fiber shape and 3-D pattern create a thick matrix of voids that trap seed, soil, and water in place for quicker, thicker vegetation growth. Secondly, they provide additional reinforcement that doubles the vegetation's natural erosion protection abilities by remaining a permanent part of the application and anchoring mature plants to the soil for superior, long-term erosion resistance.

5.3 Other Pollutant Controls

Part I.C.1 of GP-0-25-001 prohibits discharges from construction material wastewater, pollutants used in vehicle and equipment operation and maintenance, vehicle and equipment washing and toxic or hazardous substances.

The following table identifies materials and/or chemicals commonly used and/or stored on construction sites and should be addressed in the site-specific spill prevention and response plan:

Table 3: Common Construction Pollutants

Material/Chemical	Physical Description	Stormwater Pollutants	Location*
Pesticides (insecticides, fungicides, herbicides, rodenticides)	Various colored to colorless liquid, powder, pellets, or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic	Herbicides used for noxious weed control
Fertilizer	Liquid or solid grains	Nitrogen, phosphorous	Newly seeded areas
Cleaning solvents	Colorless, blue, or yellow-green liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates	No equipment cleaning allowed in project limits
Asphalt	Black solid	Oil, petroleum distillates	Streets and roofing
Concrete	White solid/grey liquid	Limestone, sand, pH, chromium	Curb and gutter, building construction
Curing compounds	Creamy white liquid	Naphtha	Curb and gutter
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon	Mineral oil	Leaks or broken hoses from equipment
Gasoline	Colorless, pale brown or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE	Secondary containment / staging area
Diesel Fuel	Clear, blue-green to yellow liquid	Petroleum distillate, oil & grease, naphthalene, xylenes	Secondary containment / staging area
Kerosene	Pale yellow liquid petroleum hydrocarbon	Coal oil, petroleum distillates	Secondary containment / staging area
Antifreeze/coolant	Clear green/yellow liquid	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)	Leaks or broken hoses from equipment
Sanitary toilets	Various colored liquid	Bacteria, parasites, and viruses	Staging area
Construction materials			
Granular fill	Various colored solids	Sediment	Stockpile / fill areas
Subbase course	Gray/brown solid	Sediment, dust	Stockpile
Topsoil	Brown solid	Sediment	Stockpile
Mulch	Various colored solid	Sediment, debris	Staging area
Seed	Brown/yellow solid	Nutrients, debris	Staging area
HDPE Storm Pipe	Black solid		Staging area
SDR-35, SDR-21 PVC Pipe	Various colored solid		Staging area
Metals Frames and Grates	Gray solid		Staging area
Joint Sealant	Light gray viscous solid	Polyurethane	Staging area

*(Area where material/chemical is used on-site)

5.4 Construction Housekeeping Practices

During the construction phase, the Contractor(s) will implement the following measures:

5.4.1 Sediment Sweeping/Vacuuming

Any sediment that is tracked by construction vehicles or erosion onto adjacent public or private impervious surfaces must be swept or vacuumed, utilizing self-propelled and/or walk-behind equipment, and removed on a daily basis. Kick brooms and sweeper attachments are not an acceptable means of sweeping. Sweeping or vacuuming should not take place while tracked sediment is wet. If tracked sediment is compacted, the sediment must be scraped loose prior to sweeping or vacuuming.

5.4.2 Material Stockpiles

Material resulting from clearing and grubbing operations that will be stockpiled on-site, must be adequately protected with downgradient erosion and sediment controls.

5.4.3 Equipment Cleaning and Maintenance

The Contractor(s) will designate areas for equipment cleaning, maintenance, and repair. The Contractor(s) and subcontractor(s) will utilize those areas. The areas will be protected by a temporary perimeter berm.

5.4.4 Detergents

The use of detergents for large-scale washing is prohibited (i.e., vehicles, buildings, pavement surfaces, etc.)

5.4.5 Spill Prevention and Response

A Spill Prevention and Response Plan shall be developed, for the pollutants identified in Section 5.3, for the site by the Contractor(s) that addresses the following:

1. Reducing chance of spills
2. Stopping the source of spills
3. Containing and cleaning up spills
4. Disposing of materials contaminated by spills
5. Training personnel responsible for spill prevention/response
6. Material handling procedures
7. Material storage requirements

The plan shall detail the steps required in the event of an accidental spill and shall identify contact names and phone numbers of people and agencies that must be notified.

The plan shall include Safety Data Sheets (SDS) for all materials to be stored on-site. All workers on-site will be required to be trained on safe handling and spill prevention procedures for all materials used during construction. Regular tailgate safety meetings shall be held and all workers that are expected on the site during the week shall be required to attend.

5.4.6 Concrete Washout Areas

A temporary concrete washout area shall be provided for every project where concrete will be poured or otherwise formed on-site and shall consist of an excavated or above-ground lined construction pit

where concrete trucks or equipment can be washed out after their loads have been discharged. Waste generated from concrete wash water that shall not be allowed to flow into drainage ways, inlets, receiving waters, highway right-of-way, or any location other than the designated concrete washout area(s). Proper signage shall be placed adjacent to the facility to designate the "Concrete Washout Area". Locate the facility a minimum of 100-feet from drainage swales, storm drain inlets, wetlands, streams, and other surface waters. Prevent surface water from entering the washout area.

The hardened residue from the concrete wash areas will be disposed of in the same manner as other non-hazardous construction waste materials. Maintenance of the washout area shall include removal of hardened material when 75% of the storage capacity is filled, and a minimum freeboard of 12 inches shall be maintained. The Contractor will be responsible for seeing that these procedures are followed. The project may require the use of multiple concrete washout areas based on the frequency of concrete pours.

5.4.7 Material Storage

Construction materials shall be stored in a dedicated staging area. The staging area shall be located in an area that prevents negative impacts of construction materials on stormwater quality.

Chemicals, paints, solvents, fertilizers, and other toxic material must be stored in waterproof containers. Except during application, the contents must be kept in trucks or within storage facilities. Runoff containing such material must be collected, removed from the site, treated, and disposed of at an approved solid waste or chemical disposal facility.

6.0 INSPECTIONS, MAINTENANCE, AND REPORTING

6.1 Inspection and Maintenance Requirements

6.1.1 Pre-Construction Inspection and Certification

Prior to the commencement of construction, the Qualified Inspector/Qualified Professional shall conduct an assessment of the site and certify that the appropriate erosion and sediment control measures have been adequately installed and implemented. The Contractor shall contact the Qualified Inspector/Qualified Professional once the erosion and sediment control measures have been installed.

6.1.2 Construction Phase Inspections and Maintenance

A Qualified Inspector/Qualified Professional, as defined in Appendix A of the General Permit GP-0-25-001, shall conduct regular site inspections between the time this SWPPP is implemented and final site stabilization. Site inspections shall occur at an interval of at least once every seven (7) calendar days.

The purpose of site inspections is to assess performance of pollutant controls. Based on these inspections, the Qualified Inspector/Qualified Professional will decide whether it is necessary to modify this SWPPP, add or relocate sediment barriers, or whatever else may be needed in order to prevent pollutants from leaving the site via stormwater runoff. The general contractor has the duty to cause pollutant control measures to be repaired, modified, maintained, supplemented, or whatever else is necessary in order to achieve effective pollutant control.

Examples of particular items to evaluate during site inspections are listed below. This list is not intended to be comprehensive. During each inspection the inspector must evaluate overall pollutant

control system performance as well as particular details of individual system components. Additional factors should be considered as appropriate to the circumstances.

1. Locations where vehicles enter and exit the site must be inspected for evidence of off-site sediment tracking. A stabilized construction access will be constructed where vehicles enter and exit. This access will be maintained or supplemented as necessary to prevent sediment from leaving the site on vehicles.
2. Sediment barriers must be inspected and, if necessary, they must be enlarged or cleaned in order to provide additional capacity. All material from behind sediment barriers will be stockpiled on the up slope side. Additional sediment barriers must be constructed as needed.
3. Inspections will evaluate disturbed areas and areas used for storing materials that are exposed to rainfall for evidence of, or the potential for, pollutants entering the drainage system. If necessary, the materials must be covered or original covers must be repaired or supplemented. Also, protective berms must be constructed, if needed, in order to contain runoff from material storage areas.
4. Grassed areas will be inspected to confirm that a healthy stand of grass is maintained. The site has achieved final stabilization once all areas are covered with building foundation or pavement, or have a stand of grass with at least 80 percent density. The density of 80 percent or greater must be maintained to be considered as stabilized. Areas must be watered, fertilized, and reseeded as needed to achieve this goal.
5. All discharge points must be inspected to determine whether erosion control measures are effective in preventing significant impacts to receiving waters.

The inspection reports must be completed entirely and additional remarks should be included if needed to fully describe a situation. An important aspect of the inspection report is the description of additional measures that need to be taken to enhance plan effectiveness. The inspection report must identify whether the site was in compliance with the SWPPP at the time of inspection and specifically identify all incidents of non-compliance.

Within one (1) business day of the completion of an inspection, the *Qualified Inspector/Qualified Professional* shall notify the Owner/Operator and appropriate contractor or subcontractor of any corrective actions that need to be taken. For corrective actions not requiring engineering design, the contractor must begin implementing corrective actions within one business day and complete the corrective actions within five business days. For corrective actions requiring engineering design, the engineering design process must begin within five business days and the contractor must complete the corrective action in a reasonable time frame but no later than 60 calendar days.

In addition to the inspections performed by the *Qualified Inspector/Qualified Professional*, the Contractor shall perform routine inspections that include a visual check of all erosion and sediment control measures. All inspections and maintenance shall be performed in accordance with the inspection and maintenance schedule provided on the accompanying plans. Sediment removed from erosion and sediment control measures will be exported from the site, stockpiled for later use, or used immediately for general non-structural fill.

It is the responsibility of the general contractor to assure the adequacy of site pollutant discharge controls. Actual physical site conditions or contractor practices could make it necessary to install more structural controls than are shown on the accompanying plans. (For example, localized concentrations of runoff could make it necessary to install additional sediment barriers, sediment traps, etc.) Assessing the need for additional controls and implementing them or adjusting existing controls will be a continuing aspect of this SWPPP until the site achieves final stabilization.

6.1.3 Temporary Suspension of Construction Activities

For construction sites where soil disturbance activities have been temporarily suspended (e.g. Winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the frequency of Qualified Inspector/Qualified Professional inspections can be reduced to once every 30 calendar days. Prior to reducing the frequency of inspections, the Owner/Operator shall notify the NYSDEC Region 9 stormwater contact person and the City of Buffalo in writing.

6.1.4 Partial Project Completion

For construction sites where soil disturbance activities have been shut down with partial project completion, all areas disturbed as of the project shutdown date have achieved final stabilization, the inspections by the Qualified Inspector/Qualified Professional can stop. Prior to the shutdown, the Owner/Operator shall notify the NYSDEC Region 9 stormwater contact person and the City of Buffalo in writing.

If soil disturbance activities have not resumed within two years from the date of shutdown, a Notice of Termination (NOT) shall be properly completed and submitted to the NYSDEC.

6.2 Reporting Requirements

6.2.1 Inspection Reports

Pursuant to Part IV.C of GP-0-25-001, inspection reports shall be prepared for the duration of construction, as outlined herein, and shall be signed by the *Qualified Inspector* or *Qualified Professional*. A sample inspection form is provided in Appendix F.

At a minimum, each inspection report shall record the following information:

1. Permit identification number; and
2. Date and time of inspection; and
3. Name and title of person(s) performing inspection; and
4. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and
5. A description of the condition of the runoff at all points of discharge from the construction site. This must include identification of any discharges of sediment from the construction site. Include discharges from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and
6. A description of the condition of all surface waters of the State located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This must include identification of any discharges of sediment to the surface waters of the State; and
7. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and
8. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and

9. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and
10. Estimates, in square feet or acres, of the following areas:
    a. Total area with active soil disturbance (not requiring either temporary stabilization or final stabilization); and
    b. Total area with inactive soil disturbance (requiring either temporary stabilization or final stabilization); and
    c. Total area that has achieved temporary stabilization; and
    d. Total area that has achieved final stabilization; and
11. Current stage of construction of all SMPs and identification of all construction activity on site that is not in conformance with the SWPPP and technical standards; and
12. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and
13. Identification and status of all corrective actions that were required by previous inspection; and
14. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The qualified inspector must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The qualified inspector must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The qualified inspector must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

6.2.2 Site Log Book

Pursuant to Part I.E.3 of GP-0-25-001, the Owner/Operator shall retain a copy of the General Permit, NOI, NOI Acknowledgment Letter, MS4 SWPPP Acceptance Form (if applicable), inspection reports, contractor and subcontractor certification forms, and all documentation necessary to demonstrate eligibility under the permit, at the construction site from commencement of construction activity until the date that all areas of disturbance have achieved final stabilization and the Notice of Termination has been submitted to the NYSDEC.

The Site Log Book shall be maintained on-site in a secure location (i.e. job trailer, on-site construction office, or mailbox with lock) and must be accessible during normal business hours to an individual performing a compliance inspection.

6.2.3 Post Construction Records and Archiving

Following construction, the Owner/Operator shall retain copies of the SWPPP, the complete construction Site Log Book, and records of all data used to complete the NOI to be covered by this permit, for a period of at least five years from the date that the site is finally stabilized. This period may be extended by the NYSDEC, at its sole discretion, at any time upon written notification.

Records shall be maintained of all post construction inspections and maintenance work performed in accordance with the requirements outlined in Appendix G.

7.0 SWPPP IMPLEMENTATION RESPONSIBILITIES

A summary of the responsibilities and obligations of all parties involved with compliance with the NYSDEC SPDES General Permit GP-0-25-001 conditions is outlined in the subsequent sections. For a complete listing of the definitions, responsibilities, and obligations, refer to the SPDES General Permit GP-0-25-001 presented in Appendix J.

7.1 Owner's/Operator's Responsibilities

1. Ensure that control measures are selected, designed, installed, implemented and maintained to minimize the discharge of pollutants and prevent a violation of the water quality standards, meeting the non-numeric effluent limitations in Part II.B.1.(a)-(e) of the SPDES General Permit and in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.

2. Retain the services of a "Qualified Inspector" or "Qualified Professional" as defined under GP-0-25-001, to provide the services outlined in Section 7.5 "Qualified Inspector's/Qualified Professional's Responsibilities."

3. Retain the services of a "Qualified Professional," as defined under GP-0-25-001, to provide the services outlined in Section 2.3 "Owner's/Operator's Engineers Responsibilities."

4. Have an authorized corporate officer sign the Owner/Operator Certification Form to accompany the eNOI. A copy of the completed NOI is included in Appendix B.

5. Submit the electronic version of the NOI (eNOI) along with the MS4 SWPPP acceptance form using the NYSDEC's website (http://www.dec.ny.gov/chemical/43133.html).

6. Submit the electronic version of the NOI (eNOI) along with the MS4 No Jurisdiction Form using the NYSDEC's website (http://www.dec.ny.gov/chemical/43133.html).

7. Pay the required initial and annual fees upon receipt of invoices from NYSDEC. These invoices are generally issued in the fall of each year. The initial fee is calculated as $110.00 per acre disturbed plus $675.00 per acre of net increase in impervious cover, and the annual fee is $110.00.

8. Prior to the commencement of construction activity, identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion control practices included in the SWPPP and the contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the SWPPP. Each of the contractors and subcontractors must identify at least one person from their company to be the trained contractor that will be responsible for implementation of the SWPPP. Ensure that at least one trained contractor is on site daily when soil disturbance activities are being performed.

9. Schedule a pre-construction meeting which shall include the City of Buffalo representative, Owner's/Operator's Engineer, Qualified Inspector, Contractor, and their sub-contractors to discuss responsibilities as they relate to the implementation of this SWPPP.

10. Require the Contractor to fully implement the SWPPP prepared for the site by the Owner/Operator's Engineer to ensure that the provisions of the SWPPP are implemented from the commencement of construction activity until all areas of disturbance have achieved final stabilization and the Notice of Termination (NOT) has been submitted to the NYSDEC.

11. The Owner/Operator is authorized to commence construction activity as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.

12. Applies to projects within an MS4 with review authority Within five (5) business days of receipt of the LOA, send an electronic copy of the LOA to the MS4 operator(s) with review authority.

13. Forward a copy of the LOA received from DEC to the Owner's/Operator's Engineer for project records, and to the Contractor for display at the construction site.

14. As of the date the LOA is received, the Owner/Operator must make the eNOI, SWPPP and LOA available for review and copying in accordance with the requirements in Part VII.H. of GP-0-25-001. When applicable, as of the date an updated LOA is received, the Owner/Operator must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.

15. The Owner/Operator must ensure compliance with all requirements of GP-0-25-001 and that the provisions of the SWPPP, including any changes made to the SWPPP in accordance with Part III.A.5., are properly implemented and maintained from the commencement of construction activity until all area of disturbance have achieved final stabilization; and the Owner/Operator's coverage under the permit is terminated in accordance with Part V.A.5.a.

16. As of the date of the commencement of construction activities until Part I.E.2.a. and b. have been met, the Owner/Operator must maintain at the construction site, a copy of all documentation necessary to demonstrate eligibility with GP-0-25-001, a copy of GP-0-25-001, the SWPPP, the signed SWPPP Preparer Certification Form, the signed MS4 SWPPP Acceptance Form, NYCDEP SWPPP Acceptance/Approval Form, MS4 No Jurisdiction Form, signed Owner/Operator Certification Form, eNOI, and LOA, and LOA transmittal to the MS4 Operator in accordance with Part I.D.3.c.

17. The Owner/Operator must maintain at the construction site, until Part I.E.2.a and b. have been met, as of the date the documents become final or are received, a copy of the responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7, and inspection reports in accordance with Part IV.C.4. and 6., and Request to Disturb Greater than Five Acres and the Authorization Letter to Disturb Greater than Five Acres in accordance with Part I.E.6, Request to Continue Coverage and the Letter of Continued Coverage (LOCC) in accordance with Part I.F.2. and 4., and the updated LOA(s) in accordance with Part I.E.9.

18. The Owner/Operator must maintain the documents in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the Owner/Operator must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be red in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.

19. Upon finding a significant non-compliance with the practices described in the SWPPP or violation of GP-0-25-001, NYSDEC may order an immediate stop to all construction activity at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the Owner/Operator. Forward a copy of any stop work order received immediately to the Owner's/Operator's Engineer and to the Contractor.

20. If any human remains or archaeological remains are encountered during excavation, the Owner/Operator must immediately cease, or cause to cease, all construction activity in the area of the remains and notify the appropriate Regional Water Engineer (RWE). Construction activity shall not resume until written permission to do so has been received from the RWE.

21. To be authorized to implement modifications to the information previously submitted in the eNOI, the Owner/Operator must notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI, update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D., and receive an updated LOA.

22. The eNOI, SWPPP, LOA, updated LOAs, and inspection reports required by GP-0-25-001 are public documents that the Owner/Operator must make available for review and copying by any person within five (5) business days of the Owner/Operator receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

23. The Owner/Operator must terminate coverage when the project reaches total project completion, has a planned shutdown with partial project completion, is changing Owner/Operator or has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.

24. Have a qualified inspector perform a final site inspection prior to submitting the eNOT.

25. Have the MS4 sign the MS4 Acceptance statement on the eNOT in accordance with the requirements in Part VII.J.

26. Submit a complete Notice of Termination form electronically using the NYSDEC eNOT. Coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

27. Request and receive all SWPPP records from the Owner's/Operator's Engineer and archive those records, along with the LOT, for a period of at least five (5) years from the date that NYSDEC accepts a complete NOT submitted.

28. The Owner/Operator must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction. At a minimum, the Owner/Operator shall amend the SWPPP, including construction drawings:

    a) Whenever the current provisions prove to be ineffective in minimizing pollutants in stormwater discharges from the project site;

    b) Whenever there is a change in design, construction, or operation at the construction site that has or could have an effect on the discharge of pollutants; and

    c) To address issues or deficiencies identified during an inspection by the "Qualified Inspector," the Department, or other Regulatory Authority.

d) To document the final construction conditions.

29. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original owner or operator must notify the new owner or operator, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department, in conformance with Part I.G.. For construction activities subject to the requirements of a regulated, traditional land use control MS4, the original owner or operator must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.

7.2 Owner's/Operator's Engineer's Responsibilities

1. Prepare the SWPPP using good engineering practices, best management practices, and in compliance with all federal, state, and local regulatory requirements.

2. Prepare the electronic Notice of Intent (eNOI) (see Appendix B) and sign the "SWPPP Preparer Certification Form." Forward the Owner/Operator Certification Form to the Owner/Operator for signature.

3. Provide copies of the SWPPP to the City of Buffalo once all signatures and attachments are complete.

4. Enter Contractor's information in Section 7.5 "SWPPP Participants" once a Contractor is selected by the Owner/Operator.

5. Participate in a pre-construction meeting which shall include the City of Buffalo representative, Owner/Operator, Qualified Inspector, Contractor, and all subcontractors to discuss responsibilities as they relate to the implementation of this SWPPP.

6. Update the SWPPP each time there is a significant modification to the pollution prevention measures or a change of the principal Contractor working on the project who may disturb site soil.

7.3 Contractor's Responsibilities

1. Sign the SWPPP Contractor's Certification Form contained within Appendix B and forward to the Owner's/Operator's Engineer for inclusion in the Site Log Book.

2. Identify at least one Trained Contractor that will be responsible for implementation of this SWPPP. Ensure that at least one Trained Contractor is on site on a daily basis when soil disturbance activities are being performed. The Trained Contractor shall inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating conditions at all times. For corrective actions not requiring engineering design, the contractor must begin implementing corrective actions within one business day and complete the corrective actions within five business days. For corrective actions requiring engineering design, the engineering design process must begin within five business days and the contractor must complete the corrective action in a reasonable time frame but no later than 60 calendar days.

3. Provide the names and addresses of all subcontractors working on the project site. Require all subcontractors who will be involved with construction activities that will result in soil disturbance to identify at least one Trained Contractor that will be on site on a daily basis when soil disturbance activities are being performed; and to sign a copy of the Subcontractor's Certification Form contained within Appendix B, then forward to the Owner's/Operator's Engineer for inclusion into the Site Log Book. This information must be retained as part of the Site Log Book.

4. Maintain a Spill Prevention and Response Plan in accordance with requirements outlined in Section 5 of this SWPPP. This plan shall be provided to the Owner's/Operator's Engineer for inclusion in the Site Log Book, prior to mobilization on-site.

5. Participate in a pre-construction meeting which shall include the City of Buffalo representative, Owner/Operator, Owner's/Operator's Engineer, Qualified Inspector, and all subcontractors to discuss responsibilities as they relate to the implementation of this SWPPP.

6. If Contractor plans on utilizing adjacent properties for material, waste, borrow, or equipment storage areas, or if Contractor plans to engage in industrial activity other than construction (such as operating asphalt and/or concrete plants) at the site, Contractor shall submit appropriate documentation to the Owner's/Operator's Engineer so that the SWPPP can be modified accordingly.

7. Implement site stabilization, erosion and sediment control measures, and other requirements of the SWPPP.

8. In accordance with the requirements in the most current version of the NYS Standards and Specifications for Erosion and Sediment Control, conduct inspections of erosion and sediment control measures installed at the site to ensure that they remain in effective operating condition at all times. Prepare and retain written documentation of inspections as well as of all repairs/maintenance activities performed. This information must be retained as part of the Site Log Book.

9. Begin implementing corrective actions within one (1) business day of receipt of notification by the Qualified Inspector/Qualified Professional of any corrective actions. For corrective actions not requiring engineering design, the contractor must begin implementing corrective actions within one business day and complete the corrective actions within five business days. For corrective actions requiring engineering design, the engineering design process must begin within five business days and the contractor must complete the corrective action in a reasonable time frame but no later than 60 calendar days.

10. Maintain a record of the date(s) and location(s) that soil restoration is performed in accordance with the accompanying plans and NYSDEC Division of Water's publication "Deep-Ripping and Decompaction," dated April 2008. A copy of this publication is provided in Appendix H. The record that is to be maintained shall be a copy of the overall site grading plan delineating the area(s) and date(s) that the soil was restored.

11. Upon completion of all construction at the site, the contractor responsible for overall SWPPP Compliance shall sign the certification on their Contractor Certification Form indicating that: a.) all temporary erosion and sediment control measures have been removed from the site, b.) the on-site soils disturbed by construction activity have been restored in accordance with the SWPPP and the NYSDEC Division of Water's publication "Deep-Ripping and Decompaction".

7.4 Qualified Inspector's/Qualified Professional's Responsibilities

1. Participate in a pre-construction meeting with the City of Buffalo representative, Owner/Operator, Owner/Operator's Engineer, Contractor, and their subcontractors to discuss responsibilities as they relate to the implementation of this SWPPP.

2. Conduct an initial assessment of the site prior to the commencement of construction and certify in an inspection report that the appropriate erosion and sediment control measures described within this SWPPP have been adequately installed and implemented to ensure overall preparedness of the site.

3. Provide on-site inspections to determine compliance with the SWPPP. Site inspections shall occur at an interval of at least once every seven calendar days. A written inspection report shall be provided to the Owner/Operator and general contractor within one business day of the completion of the inspection, with any deficiencies identified. A sample inspection form is provided in Appendix F.

4. Prepare an inspection report subsequent to each and every inspection that shall include/address the items listed in Part IV.C.4 of GP-0-25-001. Sign all inspection reports and maintain on site with the SWPPP.

5. Notify the owner/operator and appropriate contractor or subcontractor of any corrective actions that need to be taken.

6. Prepare a construction Site Log Book to be used as a record of all inspection reports generated throughout the duration of construction. Ensure that the construction Site Log Book is maintained and kept up-to-date throughout the duration of construction.

7. Review the Contractor's SWPPP records on a periodic basis to ensure compliance with the requirements for daily reports, soil restoration, inspections, and maintenance logs.

8. Prepare the Notice of Termination (NOT). The Qualified Professional shall sign the NOT Certifications VI (Final Stabilization) and forward the NOT to the Owner/Operator for signature on Certification VIII (Owner/Operator Certification).

9. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

10. Transfer the SWPPP documents, along with all NOI's, LOA, permit certificates, NOT's, LOT, construction Site Log Book, and written records required by the General Permit to the Owner/Operator for archiving.

7.5 SWPPP Participants

1. Owner's/Operator's Engineer [2]:

Mufuta Tshimanga, PE
LaBella Associates, DPC
300 State Street, Suite 201
Rochester, NY 14614
Phone: (585) 454-6110

2. Owner/Operator [3]:

Andrew Van Doorn
SUNN 1016, LLC
700 West Metro Park
Rochester NY, 14623
Phone: 647-354-5425

3. Contractor[4,6]:

Name and Title: _____

Company Name: _____

Mailing Address: _____

_____

Phone: _____

Fax: _____

[2] Refer to Appendix B for the SWPPP Preparer Certification Form.
[3] Refer to Appendix B for the Owner/Operator Certification Form.
[5] Refer to Appendix B for Contractor and Subcontractor Certification Form.
[6] Contractor's information to be entered once the Contractor has been selected.

APPENDIX A: FIGURES

A-1: Site Location Map
A-2: Soils Map
A-3: Historic Places Screening Map
A-4: Environmental Resource Map
A-5: FEMA Firm Map

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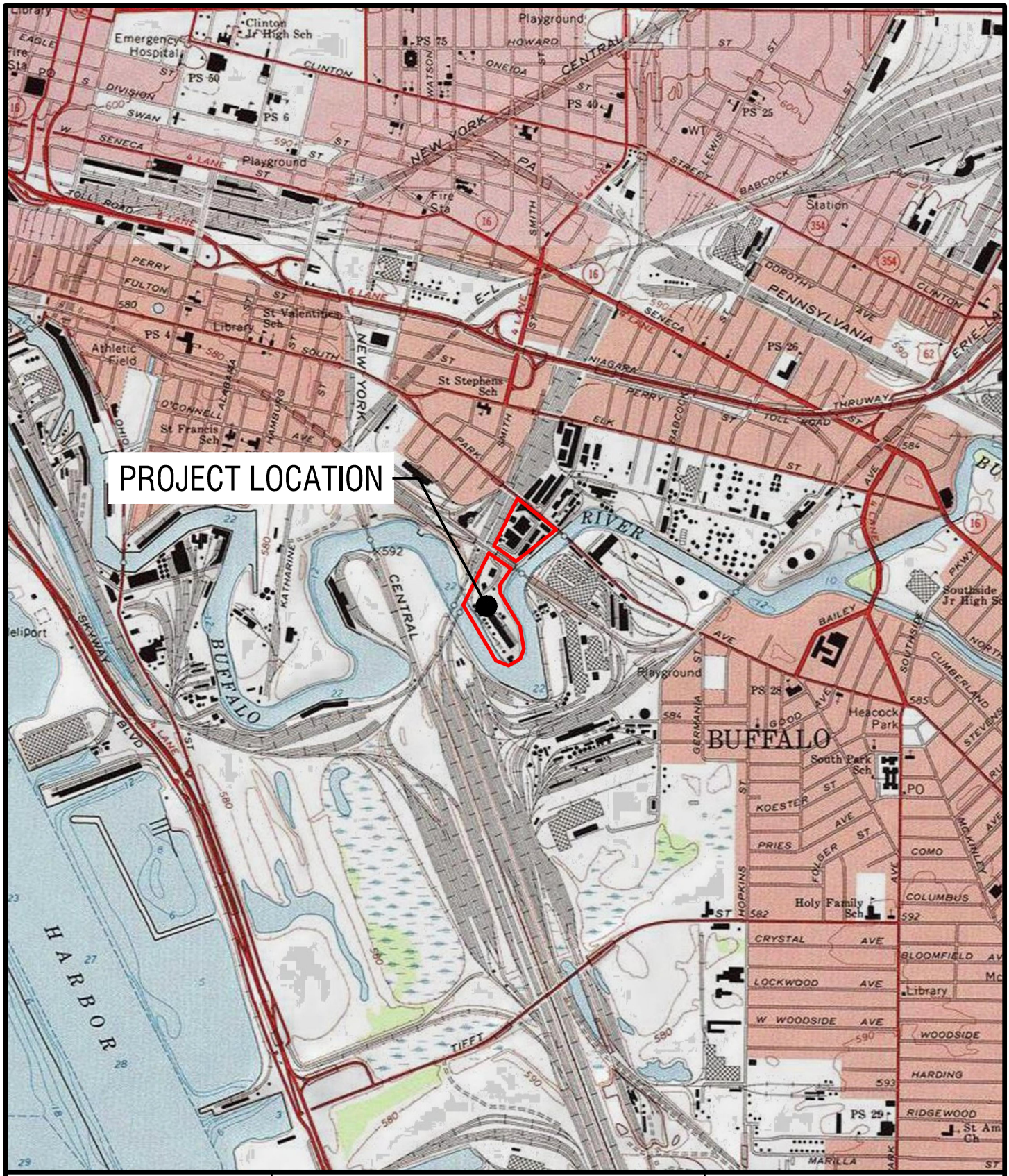

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ISSUED FOR:
PER FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME:
SITE LOCATION MAP

DRAWN BY:	DATE:	PROJECT NO.:
--	8/15/2025	2251176

PROJECT NAME:
BUFFALO LANDFILL SOLAR PROJECT
CITY OF BUFFALO, NY

DRAWING NUMBER:
A-1

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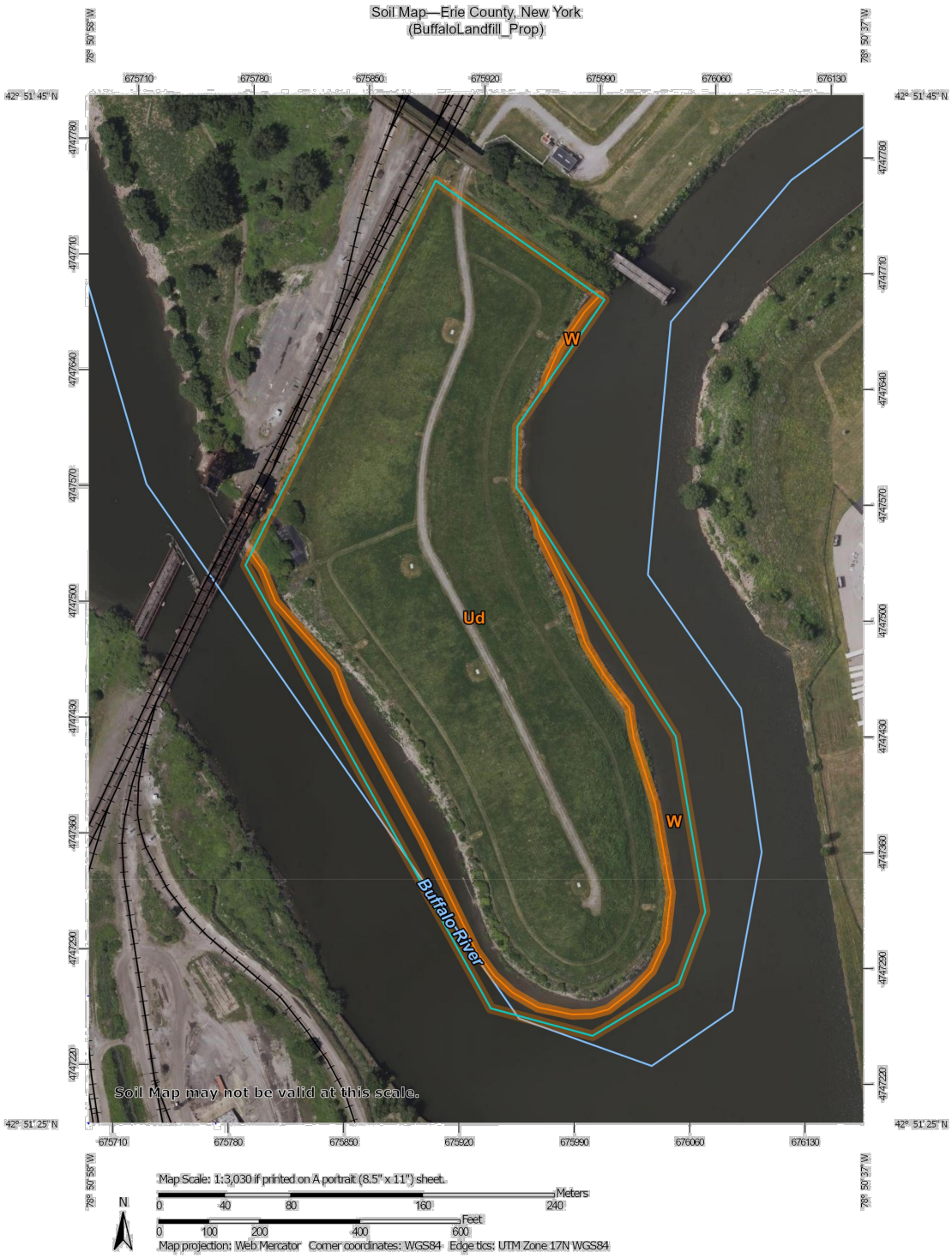

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ISSUED FOR:
PER FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME:
SOILS MAP

DRAWN BY:	DATE:	PROJECT NO.:
--	8/15/2025	2251176

PROJECT NAME:
BUFFALO LANDFILL SOLAR PROJECT
CITY OF BUFFALO, NY

DRAWING NUMBER:
A-2a

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ISSUED FOR: PER FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME: **SOILS LEGEND**

DRAWN BY:	DATE:	PROJECT NO.:
--	8/15/2025	2251176

PROJECT NAME: **BUFFALO LANDFILL SOLAR PROJECT**
CITY OF BUFFALO, NY

DRAWING NUMBER: **A-2b**

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ud	Urban land	16.5	87.0%
W	Water	2.5	13.0%
Totals for Area of Interest		**18.9**	**100.0%**

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ISSUED FOR: PER FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME: **SOILS LEGEND**

DRAWN BY:	DATE:	PROJECT NO.:
--	8/15/2025	2251176

PROJECT NAME: **BUFFALO LANDFILL SOLAR PROJECT**
CITY OF BUFFALO, NY

DRAWING NUMBER: **A-2c**

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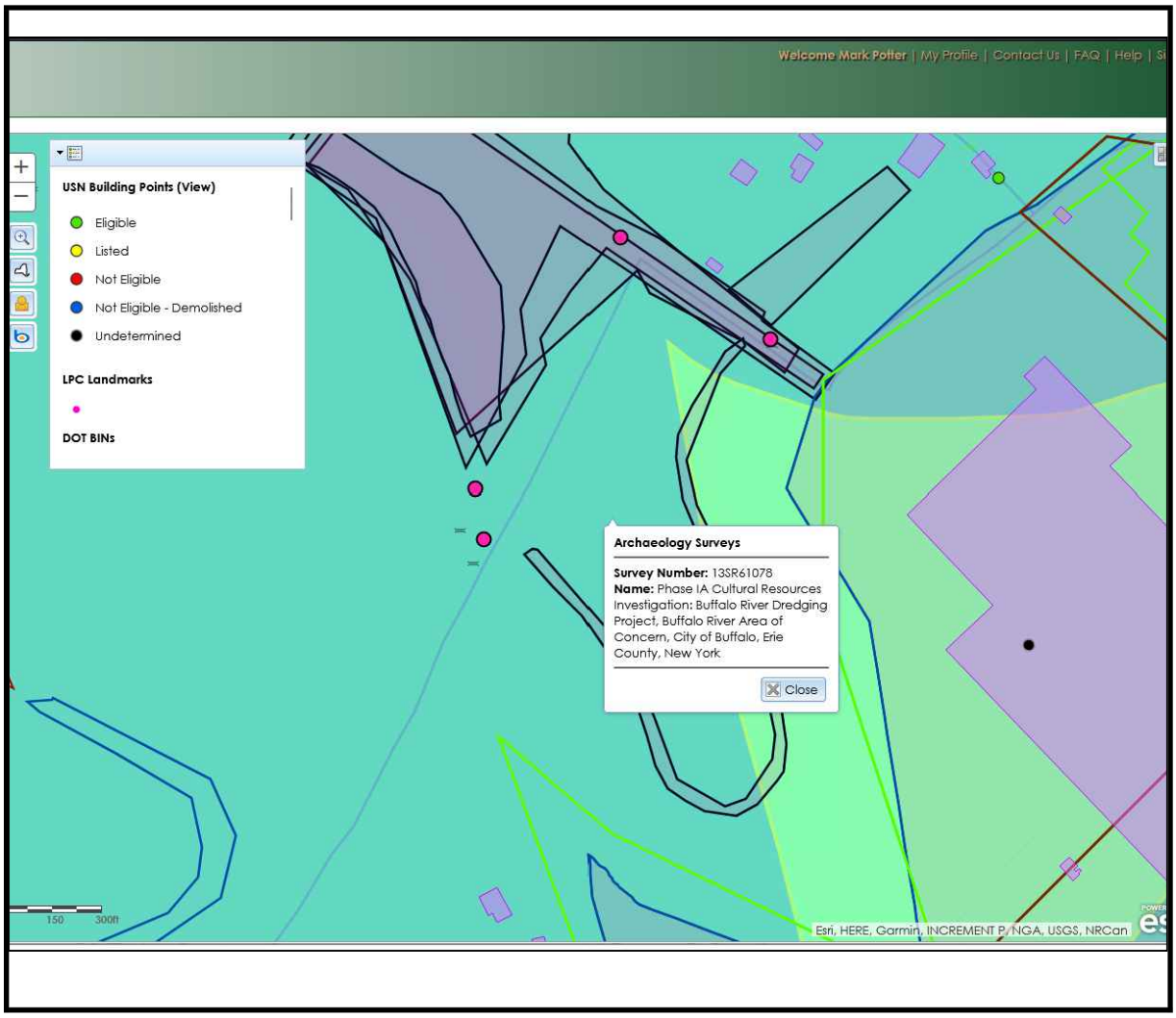

Consultation Projects (View)

Survey Archaeology Areas (View)

Survey Building Areas (View)

LPC Historic Districts

Archeologically Sensitive Areas

National Register Building Sites (View)

USN Building Districts (View)

LPC Landmarks

USN Building Points (View)

- Eligible
- Listed
- Not Eligible
- Not Eligible - Demolished
- Undetermined

Cemeteries

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ISSUED FOR: PER FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME: **HISTORIC PLACES SCREENING MAP**

DRAWN BY:	DATE:	PROJECT NO.:
--	8/15/2025	2251176

PROJECT NAME: **BUFFALO LANDFILL SOLAR PROJECT**
CITY OF BUFFALO, NY

DRAWING NUMBER: **A-3**

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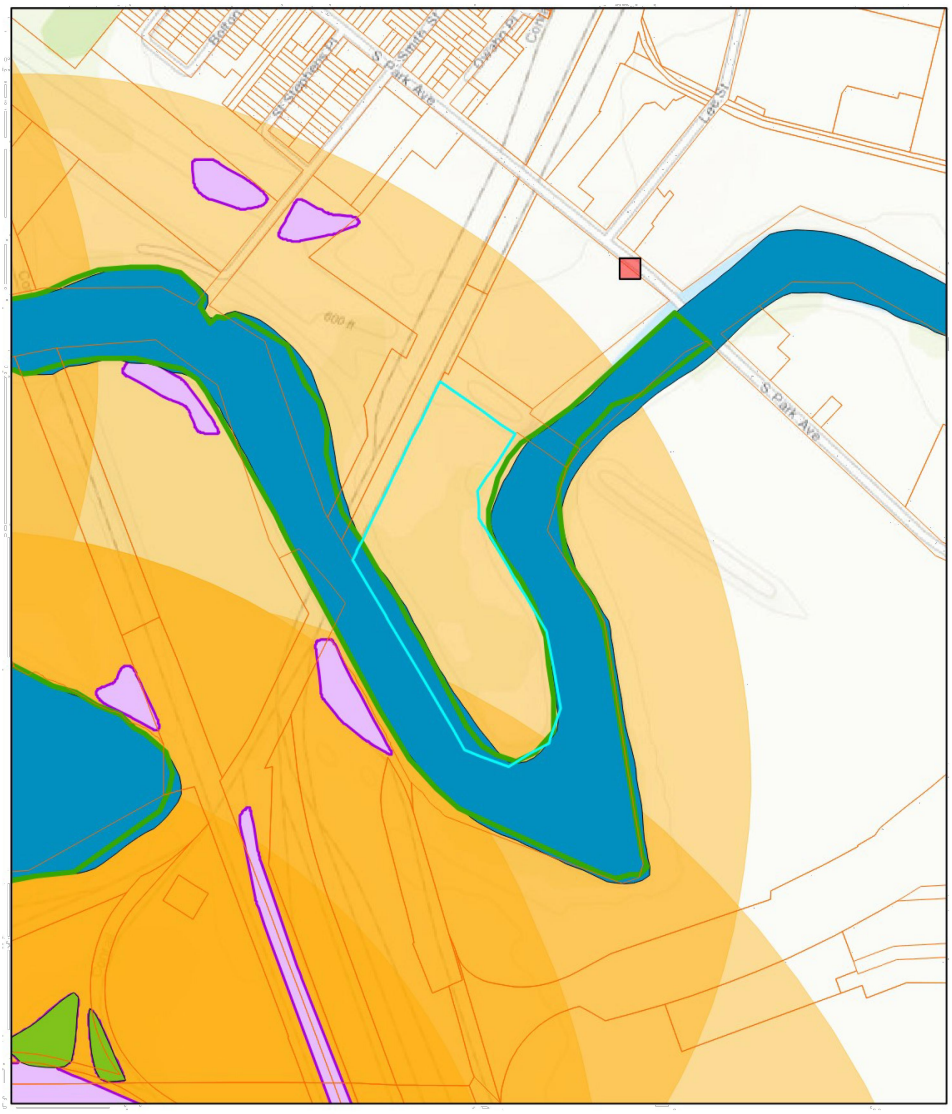
Buffalo Landfill Solar Project



August 18, 2025

1:9,028

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

- Unique Geological Features
- Waterbody Classifications for Rivers/Streams
- Waterbody Classifications for Lakes

Waterbody Inventory/Priority Waterbodies List
- Lakes and Reservoirs
- Estuaries
- Rivers and Streams
- Shorelines

- State Regulated Freshwater Wetlands (Outside of the Adirondack Park)
- State Regulated Wetland Checkzone
- Significant Natural Communities
- Natural Communities Near This Location
- Rare Plants or Animals

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

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ISSUED FOR: PER FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME: **ENVIRONMENTAL RESOURCE MAP**

DRAWN BY:	DATE:	PROJECT NO.:
--	8/15/2025	2251176

PROJECT NAME: **BUFFALO LANDFILL SOLAR PROJECT**
CITY OF BUFFALO, NY

DRAWING NUMBER: **A-4**

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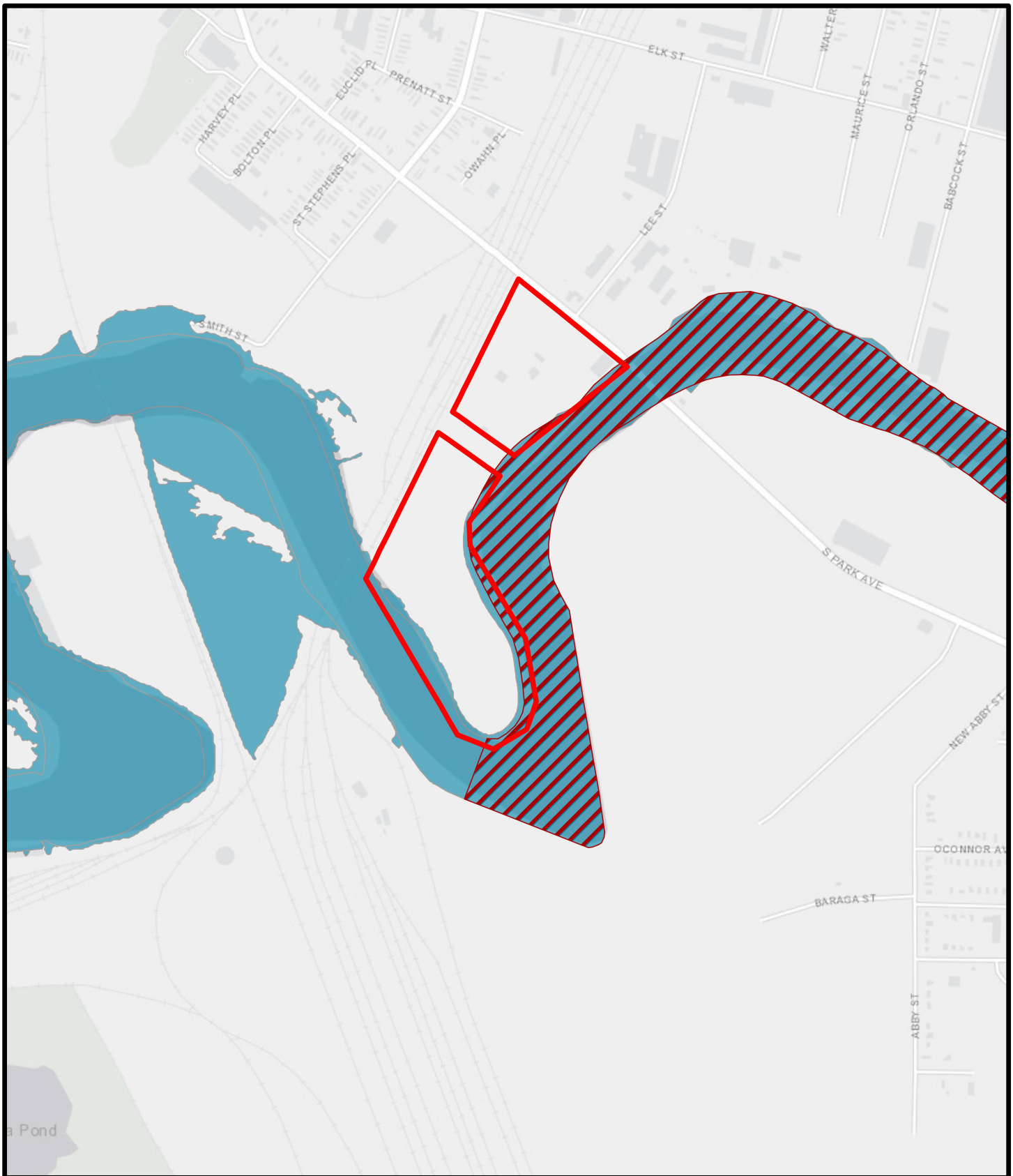

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ISSUED FOR:
PER FIGURE - NOT FOR CONSTRUCTION

DRAWING NAME:
FEMA FLOODPLAIN MAP

DRAWN BY:	DATE:	PROJECT NO.:
--	8/15/2025	2251176

PROJECT NAME:
BUFFALO LANDFILL SOLAR PROJECT
CITY OF BUFFALO, NY

DRAWING NUMBER:
A-5

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APPENDIX B:
FORMS

Notice of Intent (NOI)
MS4 SWPPP Acceptance Form
SWPPP Preparer Certification Form
Owner/Operator Certification Form
Contractor and Subcontractor Certification Forms
Notice of Termination (NOT)

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Construction General Permit (CGP) Electronic Notice of Intent (eNOI) GP-0-25-001

Submission HQE-YBG8-C36C3 Revision 1 Form Version 1.11

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SAVE PROGRESS

Eligibility
Owner/Operator Information
Site Information
Project Details
Required SWPPP Components
Erosion & Sediment Control Criteria
Other Permits
MS4 SWPPP Acceptance
Owner/Operator Certification
Additional Project Information
Review

Eligibility

CLEAR SECTION

Disturbance Threshold

1. Will the construction activity involve soil disturbances listed in Part I.A.1 of GP-0-25-001?

- ( ) Yes
- (•) No

This construction activity is not eligible for coverage under GP-0-25-001. If the construction activity will disturb less than the disturbance thresholds listed in Part I.A.1., coverage under GP-0-25-001 is not required when there is no expected water quality concern. Please contact the NYSDEC Regional Office for your Region if you have any questions.

Other SPDES Permits

2. Will the discharge from the construction activity meet all conditions listed in * Part I.A.2 of GP-0-25-001?

- ( ) Yes
- ( ) No

Threatened and Endangered Species

3. Will the construction activity potentially adversely affect a species that is

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information
8. SWPPP Reviewed by:
9. Title/Position:
10. Date Final SWPPP Reviewed and Accepted:
IV. Regulated MS4 Information
11. Name of MS4 Operator:
12. MS4 SPDES Permit Identification Number: NYR20A
13. Street Address:
14. City/State/Zip:
15. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name[1]:

Title/Position:

Signature:

Date:

VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

eNOI Submission ID:

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SWPPP Preparer First Name | MI | SWPPP Preparer Last Name

Signature

Date

Revised: January 2025

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: _____

eNOI Submission ID: _____

eNOI Submitted by: ☐ **Owner/Operator** ☐ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name MI Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

Stormwater Pollution Prevention Plan
Contractor Certification Statement
(Responsible for overall SWPPP Compliance)

Buffalo Landfill Solar Project
City of Buffalo, Erie County, New York

This is to certify that the following contracting firm will be responsible for installing, constructing, repairing, inspecting and/or maintaining the erosion and sediment control practices and post-construction stormwater management control practices required by the SWPPP.

Contracting Firm Information

Name: _____

Address: _____

Telephone & Fax: _____

Trained Contractor(s)[1] Responsible for SWPPP Implementation (Provide name, title, and date of last training)

_____

_____

Prior to commencement of construction activity, the following certification shall be issued:

I hereby certify under penalty of law that I understand and agree to comply with the requirements of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations

Printed Name: _____

Title/Position: _____

Signature: _____ Date: _____

Upon completion of construction activities, the following certification shall be issued, prior to issuance of the NOT:

I hereby certify that that all permanent stormwater management practices required by the SWPPP have been installed in accordance with the contract documents. I further certify that all temporary erosion and sediment control measures have been removed from the site, and that the on-site soils disturbed by construction activity have been restored in accordance with the SWPPP and the NYSDEC Division of Water's publication "Deep-Ripping and Decompaction".

Printed Name: _____

Title/Position: _____

Signature: _____ Date: _____

[1] "Trained Contractor" means an employee from a contracting (construction) company that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the "trained contractor" shall receive four (4) hours of training every three (3) years. It can also mean an employee from the contracting (construction) company that meets the "qualified inspector" qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity). The "Trained Contractor" will be responsible for the day to day implementation of the SWPPP.

Stormwater Pollution Prevention Plan
Subcontractor Certification Statement
(whose work involves soil disturbance)

Buffalo Landfill Solar Project
City of Buffalo, Erie County, New York

Each Subcontractor whose work will involve soil disturbance of any kind is required to complete and sign this Certification Statement before commencing any construction activity at the site. This completed Certification Statement(s) shall be maintained at the construction site in the Site Log Book.

Subcontracting Firm Information

Name: _____

Address: _____

_____

Telephone & Fax: _____

Trained Contractor(s)[2] Responsible for SWPPP Implementation (Provide name, title, and date of last training)

_____

_____

Prior to commencement of construction activities, the following certification shall be issued:

I hereby certify under penalty of law that I understand and agree to comply with the requirements of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations

Printed Name: _____

Title/Position: _____

Signature: _____ Date: _____

[2] "Trained Contractor" means an employee from a contracting (construction) company that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the "trained contractor" shall receive four (4) hours of training every three (3) years. It can also mean an employee from the contracting (construction) company that meets the "qualified inspector" qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity). The "Trained Contractor" will be responsible for the day to day implementation of the SWPPP.

eNOT Owner or Operator Certification

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I certify that I have met the requirements of CGP Part V.A.1., 2., 3., and 4. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Owner or Operator:

b. Title/Position:

c. Signature:

d. Date:

eNOT Qualified Inspector Certification – Final Stabilization

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.i., ii., and iii. or CGP Part V.A.1.b.i., ii., and iii. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector:

b. Title/Position:

c. Signature:

d. Date:

APPENDIX C:
PROJECT EVALUATION

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Construction General Permit (CGP) Electronic Notice of Intent (eNOI) GP-0-25-001

Submission HQE-YBG8-C36C3 Revision 1 Form Version 1.11

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SAVE PROGRESS

Eligibility
Owner/Operator Information
Site Information
Project Details
Required SWPPP Components
Erosion & Sediment Control Criteria
Other Permits
MS4 SWPPP Acceptance
Owner/Operator Certification
Additional Project Information
Review

Eligibility

CLEAR SECTION

Disturbance Threshold

1. Will the construction activity involve soil disturbances listed in Part I.A.1 of GP-0-25-001?

- ( ) Yes
- (•) No

This construction activity is not eligible for coverage under GP-0-25-001. If the construction activity will disturb less than the disturbance thresholds listed in Part I.A.1., coverage under GP-0-25-001 is not required when there is no expected water quality concern. Please contact the NYSDEC Regional Office for your Region if you have any questions.

Other SPDES Permits

2. Will the discharge from the construction activity meet all conditions listed in * Part I.A.2 of GP-0-25-001?

- ( ) Yes
- ( ) No

Threatened and Endangered Species

3. Will the construction activity potentially adversely affect a species that is

APPENDIX D:
SWPPP INSPECTION REPORT
(SAMPLE FORM)

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Prepared by:
LaBella Associates
Choose an item.
Choose an item.
Choose an item.

SWPPP INSPECTION REPORT NUMBER XX
CLIENT NAME
PROJECT NAME
PROJECT ADDRESS, TOWN OF X, X COUNTY, NY
PERMIT NUMBER

Performed: 2/1/2025 @ 12:00 AM
Report Issued: 2/1/2025

Status: SATISFACTORY (All erosion control measures are installed and in working order)

Qualified Inspector (name and title)	Qualified Professional (name and title)
Date	Date
Signature	Signature

NYSDEC Documentation and SWPPP Forms

5-Acre Waiver: 5-acre waiver approved by NYSDEC and > 5 acres disturbed

303d Status: Project does not directly discharge to a 303d impaired waterbody

Number of Inspections required: 1 / week

Location of SWPPP and Site Log Book on-site:

YES	NO	N/A	CONTAINED IN SITE LOG BOOK?
☐	☐	☐	Preconstruction Assessment
☐	☐	☐	Copy of eNOI
☐	☐	☐	Letter of Authorization
☐	☐	☐	SWPPP Preparer Certification Form
☐	☐	☐	Owner/Operator Certification Form
☐	☐	☐	MS4 SWPPP Acceptance Form
☐	☐	☐	MS4 No Jurisdiction Form
☐	☐	☐	NYCDEP SWPPP Acceptance Form
☐	☐	☐	Contractor and Subcontractor Certifications
☐	☐	☐	SPDES General Permit
☐	☐	☐	5 Acre Waiver Authorization
☐	☐	☐	NOT

Comments:

Site Conditions

Total area with active soil disturbance (not requiring either temporary or final stabilization): XX Acres
Total area with inactive soil disturbance (requiring either temporary or final stabilization): XX Acres
Total area that has achieved temporary stabilization: XX Acres
Total area that has achieved final stabilization: XX Acres

Allowable Disturbed Area Per NOI and/or 5-acre waiver: XX Acres

Current Status of Construction: Description

Weather Conditions: Conditions	**Temperature:** XX ºF	**Soil Conditions:** Choose an item.

Description of Discharge Point/Surface Waters of the State	Condition of Runoff	Sediment Discharge Noted Y / N	Corrective Action

Erosion and Sediment Control Deficiencies and Corrective Actions

SWPPP Component	Functional Y / N / NA	Deficiency (See Checklist and/or note)	Deficiency Location	Initial Date	Corrective Action	Corrected Y / N
General Site Conditions						
Silt Fence						
Stabilized Construction Access						
Compost Filter Sock						
Inlet Protection						
Soil Stockpiles						
Temporary Stabilization						
Permanent Stabilization						
Dewatering Operations						
Stone Check Dams						
Rock Outlet Protection						
Sediment Traps and Basins						
Temporary Stream Crossing						
Pavement Sweeping						
Concrete Washout						
Filter Strips						
Slope Protection Measures						
Temporary Swales and Berms						
Temporary Parking Areas						
Fiber Roll						
Permanent Turf Reinforcement						
Water Bars						
Flow Diffusers						
Other:						

SWPPP Inspection Checklist and Deficiency Numbers

1	General Site Conditions
1A	Adjoining properties are not protected from erosion and sediment deposition
1B	Downstream waterways are not protected from erosion and sediment deposition
1C	All E&SC measures have not been constructed as detailed in the SWPPP
1D	Dust is not adequately controlled
1E	Storage areas contain spills, leaks, or harmful materials
1F	Garbage and waste building materials are not being managed properly
1G	Temporary control measures that are no longer needed have not been removed
1H	Permanent SWM practices not constructed per plans

2	Silt Fence
2A	Silt fence not installed on contour
2B	Silt fence not across conveyance channels
2C	Silt fence not at least 10 feet from toe of slope
2D	Silt fence not at appropriate spacing intervals based on slope
2E	Silt fence ends are not wrapped for continuous support
2F	Silt fence fabric is loose or contains rips or frayed areas
2G	Silt fence posts are unstable
2H	Silt fence is not buried 6 inches minimum
2I	Silt fence contains bulges or material buildup

3	Stabilized Construction Access
3A	Temporary construction access not installed or not per NYS standards
3B	Other access areas have not been stabilized immediately as work takes place
3C	Sediment has tracked onto public streets and is not being cleaned daily
3D	Stone is not clean enough to effectively remove mud from vehicles
3E	Adequate drainage not provided to prevent ponding

4	Compost Filter Sock
4A	Filter sock not installed on contour
4B	Filter sock terminal ends do not extended 8' upslope at 45˚ angle
4C	Inappropriate diameter based on slope steepness and slope length
4D	Filter sock not anchored at 10' intervals
4E	More than 50% sediment has built up

5	Inlet Protection
5A	Inlet protection not installed or installation is not per SWPPP or Blue Book specifications
5B	Incorrect type(s) of inlet control installed or is inappropriate for location
5C	Drainage area for inlet protection is greater than 1 acre
5D	Sediment has not been removed when 50% of storage volume has been achieved
5E	A 2" x 4" wood frame and wood posts has not been installed
5F	Filter fabric is not buried a minimum of 1 foot below ground or secured to frame/posts
5G	Posts are unstable, fabric is loose, and contains rips or frayed areas
5H	Post spacing exceeds maximum 3' spacing

6	Soil Stockpiles
6A	No sediment controls at downhill slope

7	Temporary Stabilization
7A	Areas inactive for 14 days or more have not been stabilized (If <5 acres disturbed)
7B	Areas inactive for 7 days or more have not been stabilized (If >5 acres disturbed or 303d)
7C	Soil preparation has not been applied as specified in the SWPPP or the Blue Book
7D	Rolled EC products specified for steep slopes or channels have not been installed

8	Permanent Stabilization
8A	Lawn in disturbed areas has not been established to 80% germination
8B	Soil preparation has not been applied as specified in the SWPPP or the Blue Book
8C	Rolled EC products specified for steep slopes or channels have not been installed

9	Dewatering Operations
9A	Upstream and downstream berms are not installed or functioning poorly
9B	Clean water from upstream pool is not being pumped to the downstream pool
9C	Sediment laden water from work area is not being discharged to a silt-trapping device
9D	Groundwater from excavations managed improperly (No sumps/sediment control)

10	Stone Check Dam
10A	Not installed per standards
10B	Channel is unstable (flow is eroding soil underneath or around the structure)
10C	Check dam in poor condition (rocks not in place or lack of geotextile fabric)
10D	Sediment needs to be removed

11	Rock Outlet Protection
11A	Rock outlet protection not installed per plan or Blue Book
11B	Rock outlet protection not installed concurrently with pipe installation

12	Sediment Traps and Basins
12A	Outlet structure constructed improperly
12B	Geotextile fabric has not been placed beneath rock fill
12C	Depth of sediment in basin has exceeded allowable threshold
12D	Basin and outlet structure not constructed per the approved plan
12E	Basin side slopes are not stabilized with seed/mulch
12F	More than 50% capacity has built up

13	Temporary Stream Crossing
13A	Construction crossings at concentrated flow areas have not been culverted

14	Pavement Sweeping
14A	Pavement has not been swept daily and sediment has traveled into road

Stormwater Management Practice Deficiencies and Corrective Actions

Practice	Sign Y / N	Current Phase of Construction	Items Not in Conformance with SWPPP	Deficiency Location	Initial Date	Corrective Action	Corrected Y / N
Practice 1:							
Practice 2:							
Practice 3:							
Practice 4:							
Practice 5:							
Practice 6:							

Deficiencies and Corrective Action Photo Log

Photo 1 *Date – Deficiency in need of repair or maintenance:*	***Photo 1A*** *Date – Corrective Action:*
Photo 2 *Date – Deficiency in need of repair or maintenance:*	***Photo 2A*** *Date – Corrective Action:*
Photo 3 *Date – Deficiency in need of repair or maintenance:*	***Photo 3A*** *Date – Corrective Action:*

Deficiencies and Corrective Action Photo Log (continued)

Photo 4 *Date – Deficiency in need of repair or maintenance:*	***Photo 4A*** *Date – Corrective Action:*
Photo 5 *Date – Deficiency in need of repair or maintenance:*	***Photo 5A*** *Date – Corrective Action:*
Photo 6 *Date – Deficiency in need of repair or maintenance:*	***Photo 6A*** *Date – Corrective Action:*

APPENDIX E:
NYSDEC "DEEP-RIPPING AND DECOMPACTION," APRIL 2008

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New York State
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water

Deep-Ripping and Decompaction

April 2008

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New York State
Department of Environmental Conservation

Alternative Stormwater Management
Deep-Ripping and Decompaction

Description

The two-phase practice of 1) “Deep Ripping;” and 2) “Decompaction” (deep subsoiling), of the soil material as a step in the cleanup and restoration/landscaping of a construction site, helps mitigate the physically induced impacts of soil compression; i.e.: soil compaction or the substantial increase in the bulk density of the soil material.

Deep Ripping and Decompaction are key factors which help in restoring soil pore space and permeability for water infiltration. Conversely, the physical actions of cut-and-fill work, land grading, the ongoing movement of construction equipment and the transport of building materials throughout a site alter the architecture and structure of the soil, resulting in: the mixing of layers (horizons) of soil materials, compression of those materials and diminished soil porosity which, if left unchecked, severely impairs the soil’s water holding capacity and vertical drainage (rainfall infiltration), from the surface downward.

In a humid climate region, compaction damage on a site is virtually guaranteed over the duration of a project. Soil in very moist to wet condition when compacted, will have severely reduced permeability. Figure 1 displays the early stage of the deep-ripping phase (Note that all topsoil was stripped prior to construction access, and it remains stockpiled until the next phase – decompaction – is complete). A heavy-duty tractor is pulling a three-shank ripper on the first of several series of incrementally deepening passes through the construction access corridor's densely compressed subsoil material. Figure 2 illustrates the approximate volumetric composition of a loam surface soil when conditions are good for plant growth, with adequate natural pore space for fluctuating moisture conditions.

Fig. 1. A typical deep ripping phase of this practice, during the first in a series of progressively deeper “rips” through severely compressed subsoil.

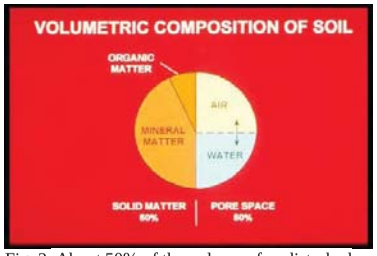

Fig. 2. About 50% of the volume of undisturbed loam surface soil is pore space, when soil is in good condition for plant growth. Brady, 2002.

Recommended Application of Practice

The objective of Deep Ripping and Decompaction is to effectively fracture (vertically and laterallly) through the thickness of the physically compressed subsoil material (see Figure 3), restoring soil porosity and permeability and aiding infiltration to help reduce runoff. Together with topsoil stripping, the “two-phase” practice of Deep Ripping and Decompaction first became established as a “best management practice” through ongoing success on commercial farmlands affected by heavy utility construction right-of-way projects (transmission pipelines and large power lines).

Fig. 3. Construction site with significant compaction of the deep basal till subsoil extends 24 inches below this exposed cut-and-fill work surface.

Soil permeability, soil drainage and cropland productivity were restored. For broader construction application, the two-phase practice of Deep Ripping and Decompaction is best adapted to areas impacted with significant soil compaction, on contiguous open portions of large construction sites and inside long, open construction corridors used as temporary access over the duration of construction. Each mitigation area should have minimal above-and-below-ground obstructions for the easy avoidance and maneuvering of a large tractor and ripping/decompacting implements. Conversely, the complete two-phase practice is not recommended in congested or obstructed areas due to the limitations on tractor and implement movement.

Benefits

Aggressive “deep ripping” through the compressed thickness of exposed subsoil before the replacement/respreading of the topsoil layer, followed by “decompaction,” i.e.: “sub-soiling,” through the restored topsoil layer down into the subsoil, offers the following benefits:

- Increases the project (larger size) area’s direct surface infiltration of rainfall by providing the open site’s mitigated soil condition and lowers the demand on concentrated runoff control structures
- Enhances direct groundwater recharge through greater dispersion across and through a broader surface than afforded by some runoff-control structural measures
- Decreases runoff volume generated and provides hydrologic source control
- May be planned for application in feasible open locations either alone or in

conjunction with plans for structural practices (e.g., subsurface drain line or infiltration basin) serving the same or contiguous areas

- Promotes successful long-term revegetation by restoring soil permeability, drainage and water holding capacity for healthy (rather than restricted) root-system development of trees, shrubs and deep rooted ground cover, minimizing plant drowning during wet periods and burnout during dry periods.

Feasibility/Limitations

The effectiveness of Deep Ripping and Decompaction is governed mostly by site factors such as: the original (undisturbed) soil's hydrologic characteristics; the general slope; local weather/timing (soil moisture) for implementation; the space-related freedom of equipment/implement maneuverability (noted above in **Recommended Application of Practice**), and by the proper selection and operation of tractor and implements (explained below in **Design Guidance**). The more notable site-related factors include:

Soil
In the undisturbed condition, each identified soil type comprising a site is grouped into one of four categories of soil hydrology, Hydrologic Soil Group A, B, C or D, determined primarily by a range of characteristics including soil texture, drainage capability when thoroughly wet, and depth to water table. The natural rates of infiltration and transmission of soil-water through the undisturbed soil layers for Group A is "high" with a low runoff potential while soils in Group B are moderate in infiltration and the transmission of soil-water with a moderate runoff potential, depending somewhat on slope. Soils in Group C have slow rates of infiltration and transmission of soil-water and a moderately high runoff potential influenced by soil texture and slope; while soils in Group D have exceptionally slow rates of infiltration and transmission of soil-water, and high runoff potential.

In Figure 4, the profile displays the undisturbed horizons of a soil in Hydrologic Soil Group C and the naturally slow rate of infiltration through the subsoil. The slow rate of infiltration begins immediately below the topsoil horizon (30 cm), due to the limited amount of macro pores, e.g.: natural subsoil fractures, worm holes and root channels. Infiltration after the construction-induced mixing and compression of such subsoil material is virtually absent; but can be restored back to this natural level with the two-phase practice of deep ripping and decompaction, followed by the permanent establishment of an appropriate, deep taproot

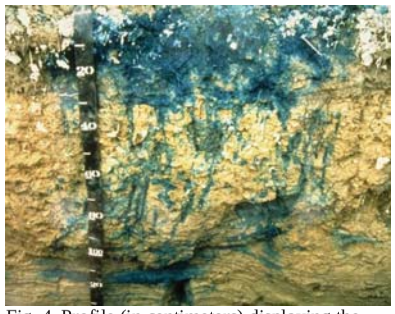

Fig. 4. Profile (in centimeters) displaying the infiltration test result of the natural undisturbed horizons of a soil in Hydrologic Soil Group C.

lawn/ground cover to help maintain the restored subsoil structure. Infiltration after construction-induced mixing and compression of such subsoil material can be notably rehabilitated with the Deep Ripping and Decompaction practice, which prepares the site for the appropriate long-term lawn/ground cover mix including deep taproot plants such as clover, fescue or trefoil, etc. needed for all rehabilitated soils.

Generally, soils in Hydrologic Soil Groups A and B, which respectively may include deep, well-drained, sandy-gravelly materials or deep, moderately well-drained basal till materials, are among the easier ones to restore permeability and infiltration, by deep ripping and decompaction. Among the many different soils in Hydrologic Soil Group C are those unique glacial tills having a natural fragipan zone, beginning about 12 to 18 inches (30 – 45cm), below surface. Although soils in Hydrologic Soil Group C do require a somewhat more carefully applied level of the Deep Ripping and Decompaction practice, it can greatly benefit such affected areas by reducing the runoff and fostering infiltration to a level equal to that of pre-disturbance.

Soils in Hydrologic Soil Group D typically have a permanent high water table close to the surface, influenced by a clay or other highly impervious layer of material. In many locations with clay subsoil material, the bulk density is so naturally high that heavy trafficking has little or no added impact on infiltration; and structural runoff control practices rather than Deep Ripping and Decompaction should be considered.

The information about Hydrologic Soil Groups is merely a general guideline. Site-specific data such as limited depths of cut-and-fill grading with minimal removal or translocation of the inherent subsoil materials (as analyzed in the county soil survey) or, conversely, the excavation and translocation of deeper, unconsolidated substratum or consolidated bedrock materials (unlike the analyzed subsoil horizons' materials referred to in the county soil survey) should always be taken into account.

Sites made up with significant quantities of large rocks, or having a very shallow depth to bedrock, are not conducive to deep ripping and decompation (subsoiling); and other measures may be more practical.

Slope
The two-phase application of 1) deep ripping and 2) decompaction (deep subsoiling), is most practical on flat, gentle and moderate slopes. In some situations, such as but not limited to temporary construction access corridors, inclusion areas that are moderately steep along a project's otherwise gentle or moderate slope may also be deep ripped and decompacted. For limited instances of moderate steepness on other projects, however, the post-construction land use and the relative alignment of the potential ripping and decompaction work in relation to the lay of the slope should be reviewed for safety and practicality. In broad construction areas predominated by moderately steep or steep slopes, the practice is generally not used.

Local Weather/Timing/Soil Moisture
Effective fracturing of compressed subsoil material from the exposed work surface, laterally and vertically down through the affected zone is achieved only when the soil material is moderately dry to moderately moist. Neither one of the two-phases, deep ripping nor decompaction (deep

subsoiling), can be effectively conducted when the soil material (subsoil or replaced topsoil) is in either a “plastic” or “liquid” state of soil consistency. Pulling the respective implements legs through the soil when it is overly moist only results in the “slicing and smearing” of the material or added “squeezing and compression” instead of the necessary fracturing. Ample drying time is needed for a “rippable” soil condition not merely in the material close to the surface, but throughout the material located down to the bottom of the physically compressed zone of the subsoil.

The “poor man’s Atterberg field test” for soil plasticity is a simple “hand-roll” method used for quick, on-site determination of whether or not the moisture level of the affected soil material is low enough for: effective deep ripping of subsoil; respreading of topsoil in a friable state; and final decompaction (deep subsoiling). Using a sample of soil material obtained from the planned bottom depth of ripping, e.g.: 20 - 24 inches below exposed subsoil surface, the sample is hand rolled between the palms down to a 1/8-inch diameter thread. (Use the same test for stored topsoil material before respreading on the site.) If the respective soil sample crumbles apart in segments no greater than 3/8 of an inch long, by the time it is rolled down to 1/8 inch diameter, it is low enough in moisture for deep ripping (or topsoil replacement), and decompaction. Conversely, as shown in Figure 5, if the rolled sample stretches out in increments greater than 3/8 of an inch long before crumbling, it is in a “plastic” state of soil consistency and is too wet for subsoil ripping (as well as topsoil replacement) and final decompaction.

Fig. 5. Augered from a depth of 19 inches below the surface of the replaced topsoil, this subsoil sample was hand rolled to a 1/8-inch diameter. The test shows the soil at this site stretches out too far without crumbling; it indicates the material is in a plastic state of consistence, too wet for final decompaction (deep subsoiling) at this time.

Design Guidance

Beyond the above-noted site factors, a vital requirement for the effective Deep Ripping and Decompaction (deep subsoiling), is implementing the practice in its distinct, two-phase process:

1) Deep rip the affected thickness of exposed subsoil material (see Figure 10 and 11), aggressively fracturing it before the protected topsoil is reapplied on the site (see Figure 12); and

2) Decompact (deep subsoil), simultaneously through the restored topsoil layer and the upper half of the affected subsoil (Figure 13). The second phase, “decompaction,” mitigates the partial recompaction which occurs during the heavy process of topsoil spreading/grading. Prior to deep ripping and decompacting the site, all construction activity, including construction equipment and material storage, site cleanup and trafficking (Figure 14), should be finished; and the site closed off to further disturbance. Likewise, once the practice is underway and the area’s soil permeability and

rainfall infiltration are being restored, a policy limiting all further traffic to permanent travel lanes is maintained.

The other critical elements, outlined below, are: using the proper implements (deep, heavy-duty rippers and subsoilers), and ample pulling-power equipment (tractors); and conducting the practice at the appropriate speed, depth and pattern(s) of movement.

Note that an appropriate plan for the separate practice of establishing a healthy perennial ground cover, with deep rooting to help maintain the restored soil structure, should be developed in advance. This may require the assistance of an agronomist or landscape horticulturist.

Implements

Avoid the use of all undersize implements. The small-to-medium, light-duty tool will, at best, only “scarify” the uppermost surface portion of the mass of compacted subsoil material. The term “chisel plow” is commonly but incorrectly applied to a broad range of implements. While a few may be adapted for the moderate subsoiling of non-impacted soils, the majority are less durable and used for only lighter land-fitting (see Figure 6).

Fig. 6. A light duty chisel implement, not adequate for either the deep ripping or decompaction (deep subsoiling) phase.

Fig. 7. One of several variations of an agricultural ripper. This unit has long, rugged shanks mounted on a steel V-frame for deep, aggressive fracturing through Phase 1.

Use a “heavy duty” agricultural-grade, deep ripper (see Figures 7,9,10 and 11) for the first phase: the lateral and vertical fracturing of the mass of exposed and compressed subsoil, down and through, to the bottom of impact, prior to the replacement of the topsoil layer. (Any oversize rocks which are uplifted to the subsoil surface during the deep ripping phase are picked and removed.) Like the heavy-duty class of implement for the first phase, the decompaction (deep subsoiling) of Phase 2 is conducted with the heavy-duty version of the deep subsoiler. More preferable is the angled-leg variety of deep subsoiler (shown in Figures 8 and 13). It minimizes the inversion of the subsoil and topsoil layers while laterally and vertically fracturing the upper half of the previously ripped subsoil layer and all of the topsoil layer by delivering a momentary, wave-like “lifting and shattering” action up through the soil layers as it is pulled.

Pulling-Power of Equipment
Use the following rule of thumb for tractor horsepower (hp) whenever deep ripping and decompacting a significantly impacted site: For both types of implement, have at least 40 hp of tractor pull available for each mounted shank/ leg.

Using the examples of a 3-shank and a 5-shank implement, the respective tractors should have 120 and 200 hp available for fracturing down to the final depth of 20-to-24 inches per phase. Final depth for the deep ripping in Phase 1 is achieved incrementally by a progressive series of passes (see Depth and Patterns of Movement, below); while for Phase 2, the full operating depth of the deep subsoiler is applied from the beginning.

The operating speed for pulling both types of implement should not exceed 2 to 3 mph. At this slow and managed rate of operating speed, maximum functional performance is sustained by the tractor and the implement performing the soil fracturing. Referring to Figure 8, the implement is the 6-leg version of the deep angled-leg subsoiler. Its two outside legs are "chained up" so that only four legs will be engaged (at the maximum depth), requiring no less than 160 hp, (rather than 240 hp) of pull. The 4-wheel drive, articulated-frame tractor in Figure 8 is 174 hp. It will be decompacting this unobstructed, former construction access area simultaneously through 11 inches of replaced topsoil and the upper 12 inches of the previously deep-ripped subsoil. In constricted areas of Phase 1) Deep Ripping, a medium-size tractor with adequate hp, such as the one in Figure 9 pulling a 3-shank deep ripper, may be more maneuverable.

Fig. 8. A deep, angled-leg subsoiler, ideal for Phase 2 decompaction of after the topsoil layer is graded on top of the ripped subsoil.

Fig. 9. This medium tractor is pulling a 3-shank deep ripper. The severely compacted construction access corridor is narrow, and the 120 hp tractor is more maneuverable for Phase 1 deep ripping (subsoil fracturing), here.

Some industrial-grade variations of ripping implements are attached to power graders and bulldozers. Although highly durable, they are generally not recommended. Typically, the shanks or "teeth" of these rippers are too short and stout; and they are mounted too far apart to achieve the well-distributed type of lateral and vertical fracturing of the soil materials necessary to restore soil permeability and infiltration. In addition, the power graders and bulldozers, as pullers, are far less maneuverable for turns and patterns than the tractor.

Depth and Patterns of Movement
As previously noted both Phase 1 Deep Ripping through significantly compressed, exposed subsoil and Phase 2 Decompaction (deep subsoiling) through the replaced topsoil and upper subsoil need to be performed at maximum capable depth of each implement. With an implement's guide wheels attached, some have a "normal" maximum operating depth of 18 inches, while others may go deeper. In many situations, however, the tractor/implement operator must first remove the guide wheels and other non essential elements from the implement. This adapts the ripper or the deep subsoiler for skillful pulling with its frame only a few inches above surface, while the shanks or legs, fracture the soil material 20-to-24 inches deep.

There may be construction sites where the depth of the exposed subsoil's compression is moderate, e.g.: 12 inches, rather than deep. This can be verified by using a ¾ inch cone penetrometer and a shovel to test the subsoil for its level of compaction, incrementally, every three inches of increasing depth. Once the full thickness of the subsoil's compacted zone is finally "pieced" and there is a significant drop in the psi measurements of the soil penetrometer, the depth/thickness of compaction is determined. This is repeated at several representative locations of the construction site. If the thickness of the site's subsoil compaction is verified as, for example, ten inches, then the Phase 1 Deep Ripping can be correspondingly reduced to the implement's minimum operable depth of 12 inches. However, the Phase 2 simultaneous Decompation (subsoiling) of an 11 inch thick layer of replaced topsoil and the upper subsoil should run at the subsoiling implements full operating depth.

Fig. 10. An early pass with a 3-shank deep ripper penetrating only 8 inches into this worksite's severely compressed subsoil.

Fig. 11. A repeat run of the 3-shank ripper along the same patterned pass area as Fig. 9; here, incrementally reaching 18 of the needed 22 inches of subsoil fracture.

Typically, three separate series (patterns) are used for both the Phase 1 Deep Ripping and the Phase 2 Decompaction on significantly compacted sites. For Phase 1, each series begins with a moderate depth of rip and, by repeat-pass, continues until full depth is reached. Phase 2 applies the full depth of Decompation (subsoiling), from the beginning.

Every separate series (pattern) consists of parallel, forward-and-return runs, with each progressive

pass of the implement's legs or shanks evenly staggered between those from the previous pass. This compensates for the shank or leg-spacing on the implement, e.g., with 24-to-30 inches between each shank or leg. The staggered return pass ensures lateral and vertical fracturing actuated every 12 to 15 inches across the densely compressed soil mass.

Large, Unobstructed Areas
For larger easy areas, use the standard patterns of movement:

- The first series (pattern) of passes is applied lengthwise, parallel with the longest spread of the site; gradually progressing across the site's width, with each successive pass.

- The second series runs obliquely, crossing the first series at an angle of about 45 degrees.

- The third series runs at right angle (or 90 degrees), to the first series to complete the fracturing and shattering on severely compacted sites, and avoid leaving large unbroken blocks of compressed soil material. (In certain instances, the third series may be optional, depending on how thoroughly the first two series loosen the material and eliminate large chunks/blocks of material as verified by tests with a ¾-inch cone penetrometer.)

Fig. 12. Moderately dry topsoil is being replaced on the affected site now that Phase 1 deep ripping of the compressed subsoil is complete.

Fig. 13. The same deep, angled-leg subsoiler shown in Fig. 7 is engaged at maximum depth for Phase 2, decompaction (deep soiling), of the replaced topsoil and the upper subsoil materials.

Corridors
In long corridors of limited width and less maneuverability than larger sites, e.g.: along compacted areas used as temporary construction access, a modified series of pattern passes are used.

- First, apply the same initial lengthwise, parallel series of passes described above.

- A second series of passes makes a broad "S" shaped pattern of rips, continually and gradually alternating the "S" curves between opposite edges inside the compacted corridor.

- The third and final series again uses the broad, alternating S pattern, but it is "flip-flopped" to continually cross the previous S pattern along the corridor's centerline. This final series of the S pattern curves back along the edge areas skipped by the second series.

Maintenance and Cost

Once the two-phase practice of Deep Ripping and Decompation is completed, two items are essential for maintaining a site's soil porosity and permeability for infiltration. They are: planting and maintaining the appropriate ground cover with deep roots to maintain the soil structure (see Figure 15); and keeping the site free of traffic or other weight loads.

Note that site-specific choice of an appropriate vegetative ground-cover seed mix, including the proper seeding ratio of one or more perennial species with a deep taproot system and the proper amount of lime and soil nutrients (fertilizer mix) adapted to the soil-needs, are basic to the final practice of landscaping, i.e: surface tillage, seeding/planting/fertilizing and culti-packing or mulching is applied. The "maintenance" of an effectively deep-ripped and decompacted area is generally limited to the successful perennial (long-term) landscape ground cover; as long as no weight-bearing force of soil compaction is applied.

Fig. 14. The severely compacted soil of a temporary construction yard used daily by heavy equipment for four months; shown before deep ripping, topsoil replacement, and decompaction.

Fig. 15. The same site as Fig. 14 after deep ripping of the exposed subsoil, topsoil replacement, decompaction through the topsoil and upper subsoil and final surface tillage and revegetation to maintain soil permeability and infiltration.

The Deep Ripping and Decompaction practice is, by necessity, more extensive than periodic subsoiling of farmland.The cost of deep ripping and decompacting (deep subsoiling), will vary according to the depth and severity of soil-material compression and the relative amount of tractor and implement time that is required. In some instances, depending on open maneuverability, two-to-three acres of compacted project area may be deep-ripped in one day. In other situations of more severe compaction and - or less maneuverability, as little as one acre may be fully ripped in a day. Generally, if the Phase 1) Deep Ripping is fully effective, the Phase 2) Decompaction should be completed in 2/3 to 3/4 of the time required for Phase 1.

Using the example of two acres of Phase 1) Deep Ripping in one day, at $1800 per day, the net cost is $900 per acre. If the Phase 2) Decompacting or deep subsoiling takes 3/4 the time as Phase 1, it costs $675 per acre for a combined total of $1575 per acre to complete the practice (these figures do not include the cost of the separate practice of topsoil stripping and replacement). Due to the many variables, it must be recognized that cost will be determined by the specific conditions or constraints of the site and the availability of proper equipment.

Resources

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- Union Gas Limited, Ontario, Canada. 1984. *Rehabilitation of Agricultural Lands, Dawn-Kerwood Loop Pipeline; Technical Report.* Ecological Services for Planning, Ltd.; Robinson, Merritt & Devries, Ltd. and Smith, Hoffman Associates, Ltd.
- US Department of Agriculture in cooperation with Cornell University Agricultural Experiment Station. Various years. *Soil Survey of (various names) County, New York.* USDA.

Internet Access:

- Examples of implements:

V-Rippers. Access by internet search of *John Deere Ag -New Equipment for 915* (larger-frame model) *V-Rippe*; and, *for 913* (smaller-frame model) *V-Ripper*. Deep, angled-leg subsoiler. Access by internet search of: B*igham Brothers Shear Bolt Paratill-Subsoiler.* http://salesmanual.deere.com/sales/salesmanual/en_NA/primary_tillage/2008/feature/rippers/915v_pattern_frame.html?sbu=ag&link=prodcat Last visited March 08.

- Soils data of USDA Natural Resources Conservation Service. *NRCS Web Soil Survey.* http://websoilsurvey.nrcs.usda.gov/app/ and *USDA-NRCS Official Soil Series Descriptions; View by Name.* http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdname.cgi . *Last visited Jan. 08.*
- Soil penetrometer information. Access by internet searches of: *Diagnosing Soil Compaction using a Penetrometer (soil compaction tester), PSU Extension;* as well as *Dickey-john Soil Compaction Tester.* http://www.dickey-johnproducts.com/pdf/SoilCompactionTest.pdf and http://cropsoil.psu.edu/Extension/Facts/uc178pdf Last visited Sept. 07

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APPENDIX F:
LABELLA CERTIFYING PROFESSIONALS LETTER

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February 21, 2025

RE: LaBella Certifying Professionals for NYSDEC SPDES GP-0-25-001

To Whom it May Concern:

In accordance with the NYSDEC SPDES General Permit GP-0-25-001, Part VII.J.2, Mufuta Tshimanga, PE, a New York State Qualified Professional employed by LaBella Associates, is duly authorized to sign and seal Stormwater Pollution Prevention Plans (SWPPPs), Notice of Intents (NOIs) and Notice of Terminations (NOTs).

Respectfully submitted,

LaBella Associates

Timothy Webber
Vice President, Civil Division Director

Mufuta Tshimanga, PE
Senior Civil Engineer
Renewable Market Leader

APPENDIX G:
NYSDEC SPDES GENERAL PERMIT GP-0-25-001

LaBella
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NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL
CONSERVATION (NYSDEC)

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-25-001

Construction General Permit (CGP)

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2025 Expiration Date: January 28, 2030

Scott E. Sheeley

Chief Permit Administrator

Scott E. Sheeley JAN. 29, 2025

Authorized Signature Date

Address: NYSDEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act (CWA), and 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), *stormwater discharges* from certain *construction activities* are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or by a state permit program. New York State administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7 and 8, and Article 70, as well as 6 NYCRR Parts 621 and 750.

Construction activities constitute construction of a *point source* and, therefore, pursuant to ECL sections 17-0505, 17-0701, and 17-0803, the *owner or operator* must have coverage under a SPDES permit prior to *commencement of construction activities*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES CONSTRUCTION GENERAL PERMIT (CGP) GP-0-25-001
FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

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Part I. How to Obtain Coverage and General Requirements

To be covered under this permit, the *owner or operator* must meet all eligibility requirements in Part I.A. and follow the requirements for obtaining permit coverage in Part I.D., F., or G.

A. Eligibility Requirements

For a *common plan of development or sale*, the *phase(s)* that meet the eligibility requirements in Part I.A. may obtain coverage under this permit even if other *phase(s)* of the same *common plan of development or sale* do not meet the eligibility requirements and require an individual SPDES permit.

1. The *owner's or operator's construction activities* involve soil disturbances of:
    a. one or more acres; or
    b. less than one acre which are part of a *common plan of development or sale* that will ultimately disturb one or more acres; or
    c. less than one acre where NYSDEC has determined that a SPDES permit is required for *stormwater discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of pollutants to *surface waters of the State*.
        i. 5,000 square feet or more, but less than one acre, and are in the New York City Watershed located east of the Hudson River, Appendix C Figure 1; or
        ii. 20,000 square feet or more, but less than one acre, within the municipal boundaries of the City of New York (NYC); or
        iii. less than 20,000 square feet which are part of a *common plan of development or sale* that will ultimately disturb 20,000 square feet or more, but less than one acre, within the municipal boundaries of NYC; or
        iv. that creates 5,000 square feet or more of *impervious area* within the municipal boundaries of NYC.

2. *Discharges* from the *owner's or operator's construction activities* are/were not:
    a. already covered by a different SPDES permit; or
    b. covered under a different SPDES permit that was denied, terminated, or revoked; or
    c. identified in an expired individual SPDES permit that was not renewed; or
    d. required to obtain an individual SPDES permit or another general SPDES permit in accordance with Part VII.K.
3. If *construction activities* may adversely affect a species that is endangered or threatened, the *owner or operator* must obtain a:
    a. permit issued pursuant to 6 NYCRR Part 182 for the project; or
    b. letter issued by NYSDEC of non-jurisdiction pursuant to 6 NYCRR Part 182 for the project.
4. If *construction activities* have the potential to affect an *historic property*, the *owner or operator* must obtain one of the following:
    a. documentation that the *construction activity* is not within an archeological buffer area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:
        i. 1-5 acres of disturbance - 20 feet; or
        ii. 5-20 acres of disturbance - 50 feet; or

iii. 20+ acres of disturbance - 100 feet.

b. NYSDEC consultation form sent to OPRHP,[1] and copied to NYSDEC's Agency Historic Preservation Officer (APO), and

i. the State Environmental Quality Review Act (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or

ii. documentation from OPRHP that the *construction activity* will result in No Impact; or

iii. documentation from OPRHP providing a determination of No Adverse Impact; or

iv. a Letter of Resolution signed by the *owner or operator*, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA).

c. documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

i. No Affect; or

ii. No Adverse Affect; or

iii. Executed Memorandum of Agreement.

d. documentation that SHPA Section 14.09 has been completed by NYSDEC or another state agency.

5. If *construction activities* are subject to SEQR, the *owner or operator* must obtain documentation that SEQR has been satisfied.

6. If *construction activities* are not subject to SEQR, but subject to the equivalent environmental review from another New York State or federal agency, the

[1] The consultation form can be submitted, along with other project information, through OPRHP's Cultural Resource Information System (CRIS) portal. If submitted through CRIS, paper copies of the consultation form need not be mailed.

owner or operator must obtain documentation that project review, pursuant to a process equivalent to SEQR from another New York State or federal agency, has been satisfied.

7. If *construction activities* require Uniform Procedures Act (UPA) Permits (see 6 NYCRR Part 621) from NYSDEC, or the equivalent from another New York State or federal agency, the *owner or operator* must:

a. obtain all such necessary permits; or

b. receive notification from NYSDEC pursuant to 6 NYCRR 621.3(a)(4) excepting Part I.A.7.a.

8. *Construction activities* are not eligible if they meet the following criteria in Part I.A.8.a. or b.:

a. For linear transportation and linear utility project types, the *construction activities*:

i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

ii. are undertaken on land with no existing *impervious cover*; and

iii. disturb two or more acres of *steep slope*.

b. For all other project types, the *construction activities*:

i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

ii. are undertaken on land with no existing *impervious cover*; and

iii. disturb one or more acres of *steep slope*.

B. Types of *Discharges* Authorized

1. The following *stormwater discharges* are authorized under this permit:

   a. *Stormwater discharges*, including *stormwater* runoff, snowmelt runoff, and surface runoff and drainage, associated with *construction activity*, are authorized under this permit provided that appropriate *stormwater* controls are designed, installed, and maintained in accordance with Part **II.** and Part **III.**

   b. *Stormwater discharges* from construction support activities at the *construction site* (including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) if the following requirements are met:

      i. The support activity is directly related to the *construction site* required to have permit coverage for *stormwater discharges*; and

      ii. The support activity is not a commercial operation, nor does it serve multiple unrelated *construction sites*; and

      iii. The support activity does not continue to operate beyond the completion of the *construction activity* at the site it supports; and

      iv. *Stormwater* controls are implemented in accordance with Part **II.** and Part **III.** for *discharges* from the support activity areas.

2. The following non-*stormwater discharges* associated with *construction activity* are authorized under this permit:

   a. Non-*stormwater discharges* listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "*Discharges* from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; and

   b. Non-*stormwater discharges* of waters to which other components have not been added that are used in accordance with the *SWPPP* to control dust or irrigate vegetation in stabilized areas; and

   c. Uncontaminated *discharges* from *dewatering* operations

3. Authorized *discharges* of *stormwater* or authorized *discharges* of non-*stormwater*, commingled with a *discharge* authorized by a different SPDES permit and/or a *discharge* that does not require SPDES permit authorization, are also authorized under this permit.

C. Prohibited *Discharges*

1. Non-*stormwater discharges* prohibited under this permit include but are not limited to:

   a. Wastewater from washout of concrete; and

   b. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials; and

   c. Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance; and

   d. Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and

   e. Toxic or hazardous substances from a spill or other release.

D. Electronic Notice of Intent (eNOI) Submittal

To receive authorization in accordance with Part I.D.3.b., the *owner or operator* must submit a complete eNOI in accordance with the requirements in Part **I.D.** The eNOI contains questions to: ensure eligibility requirements in Part I.A. have been met; obtain *owner or operator* contact information; obtain the total area to be disturbed and the existing/future *impervious areas* (rounded to the nearest tenth of an acre); confirm *Traditional Land Use Control MS4 Operator* jurisdiction over construction projects; satisfy the EPA eRule requirements; confirm that the Water Quality-Based Effluent Limitations in Part **II.** have been met; demonstrate consideration of the future risks due to climate change in accordance with Part **III.**A.2.; and confirm that the other *Stormwater Pollution Prevention Plan (SWPPP)* requirements in Part **III.** have been met.

1. An eNOI may be submitted for:

   a. *construction activities* that are not part of a *common plan of development or sale*; or

b. an entire *common plan of development or sale*; or

c. separate *phase(s)* of a *common plan of development or sale* if the following requirements are met:

   i. the *common plan of development or sale* meets the eligibility requirements of Part I.A.5. or 6.; and

   ii. the *phase(s)* meet(s) all other eligibility requirements of Part I.A.; and

   iii. Part III.C. Required *SWPPP* Components by Project Type is based on the *common plan of development or sale*, not the *phase(s)*; or

d. *tree clearing* that is associated with, or will support, a *renewable energy* generation, transmission, or storage project that meets Part I.A.5. and 6., if the *tree clearing*:

   i. meets all other eligibility requirements of Part I.A.; and

   ii. will occur in NYSDEC's Regions 3-9; and

   iii. is not within ¼ mile of a bat hibernaculum protected pursuant to 6 NYCRR Part 182; and

   iv. will occur between November 1st and March 31st.

2. As prerequisites for submitting an eNOI, the *owner or operator* must:

   a. prepare a *SWPPP* for Part I.D.1.a., b., c., or d. in accordance with Part III.; and

   b. based on the following criteria, upload the following signature forms signed in accordance with Part VII.J. to the eNOI prior to submission:

      i. for all eNOIs:

         1. the SWPPP Preparer Certification Form, Appendix F, signed by the *SWPPP* preparer; and

         2. the Owner/Operator Certification Form, Appendix J, signed by the *owner or operator*; and

      ii. if an eNOI includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that will *discharge* to the *MS4(s)*:

         1. determine if the *Traditional Land Use Control MS4 Operator(s)* have review authority. A *Traditional Land Use Control MS4 Operator* does not have review authority where:

            a. the *owner or operator* of the *construction activities* in Part I.D.2.b.ii. is the same entity as the *Traditional Land Use Control MS4 Operator* identified in Part I.D.2.b.ii.; or

            b. there is a statute exempting the *owner or operator* from zoning review by the *Traditional Land Use Control MS4 Operator*; or

            c. there is no such statute per Part I.D.2.b.ii.1.b., the *Traditional Land Use Control MS4 Operator* concludes, after public hearing, that it does not have zoning review authority in accordance with Legal Memorandum LU14 Updated January 2020 "Governmental Immunity from Zoning and Other Legislation"; and

         2. if the *Traditional Land Use Control MS4 Operator(s)* have review authority, submit the *SWPPP* to the *Traditional Land Use Control MS4 Operator(s)* for review and have:

            a. if outside the municipal boundaries of NYC: the MS4 SWPPP Acceptance Form, Appendix G, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.; or

b. if within the municipal boundaries of NYC: The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval Form, Appendix H, signed by the principal executive officer or ranking elected official from the Traditional Land Use Control MS4 Operator, or by a duly authorized representative of that person in accordance with Part VII.J.2.; and

3. if the *Traditional Land Use Control MS4 Operator* does not have review authority, have the MS4 No Jurisdiction Form, Appendix I, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.

3. Submitting an eNOI:

   a. The *owner or operator* must submit a complete Notice of Intent electronically using a NYSDEC approved form.[2]

   b. The *owner or operator* is authorized to *commence construction activity* as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.

      i. If an eNOI is received for a *SWPPP* that deviates from one of the technical standards but demonstrates *equivalence* in accordance with Part III.B.1.a.ii. or Part III.B.2.b.ii., if the *SWPPP* includes *construction activities* that are not within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)*, and/or if the *SWPPP* includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that do not have review authority in accordance with Part I.D.2.b.ii.1., the authorization date indicated in the LOA will be 60 business days after the eNOI submission date.

[2] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

c. If *Traditional Land Use Control MS4 Operator(s)* have review authority in accordance with Part I.D.2.b.ii.2., the *owner or operator* must, within five business days of receipt of the LOA, send an electronic copy of the LOA to the *Traditional Land Use Control MS4 Operator(s)* with review authority.

E. General Requirements for *Owners or Operators* with Permit Coverage

1. As of the date the LOA is received, the *owner or operator* must make the eNOI, *SWPPP*, and LOA available for review and copying in accordance with the requirements in Part VII.H. When applicable, as of the date an updated LOA is received, the *owner or operator* must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.

2. The *owner or operator* must ensure compliance with all requirements of this permit and that the provisions of the *SWPPP*, including any changes made to the *SWPPP* in accordance with Part III.A.5., are properly implemented and maintained from the *commencement of construction activity* until:

   a. all areas of disturbance have achieved *final stabilization;* and

   b. the owner's or operator's coverage under this permit is terminated in accordance with Part V.A.5.a.

3. As of the date of the *commencement of construction activities* until Part I.E.2.a. and b. have been met, the *owner or operator* must maintain at the *construction site*, a copy of:

   a. all documentation necessary to demonstrate eligibility with this permit; and

   b. this permit; and

   c. the *SWPPP*; and

   d. the signed SWPPP Preparer Certification Form; and

   e. the signed MS4 SWPPP Acceptance Form or signed NYCDEP SWPPP Acceptance/Approval Form or signed MS4 No Jurisdiction Form (when applicable); and

   f. the signed Owner/Operator Certification Form; and

g. the eNOI; and

h. the LOA; and

i. the LOA transmittal to the Traditional Land Use Control MS4 Operator in accordance with Part I.D.3.c. (when applicable).

4. The *owner or operator* must maintain at the *construction site*, until Part I.E.2.a. and b. have been met, as of the date the documents become final or are received, a copy of the:

   a. responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7.; and

   b. inspection reports in accordance with Part IV.C.4. and 6.; and

   c. Request to Disturb Greater Than Five Acres and the Authorization Letter to Disturb Greater Than Five Acres in accordance with Part I.E.6. (when applicable); and

   d. Request to Continue Coverage and the Letter of Continued Coverage (LOCC) in accordance with Part I.F.2. and 4. (when applicable); and

   e. The updated LOA(s) in accordance with Part I.E.9. (when applicable).

5. The *owner or operator* must maintain the documents in Part I.E.3. and 4. in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the *owner or operator* must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.

6. The *owner or operator* must meet the following requirements prior to disturbing greater than five acres of soil at any one time:

   a. The *owner or operator* must submit a written Request to Disturb Greater Than Five Acres to:

   i. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, if a *Traditional Land Use Control MS4 Operator* does not have review authority in accordance with Part I.D.2.b.ii.1.; or

   ii. the *Traditional Land Use Control MS4 Operator*, if a *Traditional Land Use Control MS4 Operator* has review authority in accordance with Part I.D.2.b.ii.1.; or

   iii. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, and each involved *Traditional Land Use Control MS4 Operator*, if the project spans multiple municipalities with more than one *Traditional Land Use Control MS4 Operator* involved with review authority in accordance with Part I.D.2.b.ii.1.

   b. The written Request to Disturb Greater Than Five Acres must include:

      i. The SPDES permit identification number (Permit ID); and

      ii. Full technical justification demonstrating why alternative methods of construction that would result in five acres of soil disturbance or less at any one time are not feasible; and

      iii. The phasing plan for the project and sequencing plans for all *phases* from the *SWPPP* in accordance with Part III.B.1.d.; and

      iv. Plans with locations and details of erosion and sediment control practices such that the heightened concern for erosion when disturbing greater than five acres at one time has been addressed; and

      v. Acknowledgment that "the *owner or operator* will comply with the requirements in Part IV.C.2.b."; and

      vi. Acknowledgment that "the *owner or operator* will comply with the requirements in Part II.B.1.b."

   c. The *owner or operator* must be in receipt of an Authorization Letter to Disturb Greater Than Five Acres, which will include when the

authorization begins and ends and indicate a maximum area (acres) of soil disturbance allowed at any one time, from:

i. NYSDEC, if Part I.E.6.a.i. or iii. apply; or

ii. the *Traditional Land Use Control MS4 Operator*, if Part I.E.6.a.ii. applies.

7. Upon a finding of significant non-compliance with the practices described in the *SWPPP* or violation of this permit, NYSDEC may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

8. If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE).[3] *Construction activity* shall not resume until written permission to do so has been received from the RWE.

9. To be authorized to implement modifications to the information previously submitted in the eNOI, the *owner or operator* must:

   a. notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI; and

   b. update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D.; and

   c. receive an updated LOA.

10. The eNOI, *SWPPP*, LOA, updated LOAs (when applicable), and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

[3] The Regional Water Manager where a DEC Region does not have a RWE.

F. Permit Coverage for *Discharges* Authorized Under GP-0-20-001

When applicable:

1. Upon the effective date of this permit, an *owner or operator* of *a construction activity*, with coverage under GP-0-20-001, will have interim coverage under GP-0-25-001 for 45 calendar days starting on the effective date of GP-0-25-001 so long as the *owner or operator* maintains compliance with all applicable requirements of this permit.

2. Within 30 calendar days of the effective date of this permit, the *owner or operator*, with coverage under GP-0-20-001, must submit a complete Request to Continue Coverage electronically using a NYSDEC approved form,[4] which contains the information identified in Part I.F.3. below, if:

   a. the *owner or operator* continues to implement the SMP component in conformance with the technical standards in place at the time of initial project authorization; and

   b. the *owner or operator* will comply with all non-design requirements of GP-0-25-001.

3. The Request to Continue Coverage form contains questions to: ensure eligibility requirements in Part I.A. have been met; verify *owner or operator* contact information; verify the permit identification number; verify the original eNOI submission ID, if applicable; verify Part I.F.2.a. and b.; verify the version of the Design Manual that the technical/design components conform to; and receive an updated Owner/Operator Certification Form, Appendix I.

4. The *owner or operator* has obtained continued coverage under GP-0-25-001 as of the date indicated in the LOCC, which is sent by NYSDEC after a complete Request to Continue Coverage form is submitted.

5. If the owner or operator does not submit the Request to Continue Coverage form in accordance with Part I.F.2. and 3., coverage under this permit is automatically terminated after interim coverage expires.

[4] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

G. Change of *Owner or Operator*

When applicable:

1. When property ownership changes, or when there is a change in operational control over the construction plans and specifications, the following process applies:

   a. The new *owner or operator* must meet the applicable prerequisites for submitting an eNOI in accordance with Part I.D.2.; and

   b. The new *owner or operator* must submit an eNOI in accordance with Part I.D.3.; and

   c. Permit coverage for the new *owner or operator* will be effective upon receipt of the LOA in accordance with Part I.D.3.b.; and

   d. The new *owner or operator*, upon receipt of their LOA, must provide their Permit ID to the original *owner or operator*; and

   e. If the original *owner or operator* will no longer be the *owner or operator* of the *construction activity* identified in the original *owner's or operator's* eNOI, the original *owner or operator*, upon receipt of the new *owner's or operator's* Permit ID in accordance with Part I.G.1.d., must submit to NYSDEC a completed eNOT in accordance with Part V. that includes the name and Permit ID of the new *owner or operator*; or

   f. If the original *owner or operator* maintains ownership of a portion of the *construction activity*, the original *owner or operator* must maintain their coverage under the permit by modifying their eNOI; modifications to the eNOI must include:

      i. the revised area of disturbance and/or *impervious area(s)*; and

      ii. the revised SMP information, if applicable; and

      iii. a narrative description of what has changed; and

      iv. the new *owner's or operator's* Permit ID for the portion of the project removed from the eNOI.

   Owners or operators must follow Part I.E.9. to modify the eNOI.

Part II. Water Quality-Based Effluent Limitations

A. Maintaining Water Quality

NYSDEC expects that compliance with the requirements of this permit will control *discharges* necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any *discharge* to either cause or contribute to a violation of the following *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York:

1. There must be no increase in turbidity that will cause a substantial visible contrast to natural conditions; and

2. There must be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There must be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the *stormwater discharges* authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standard,* the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this permit and document in accordance with Part IV.C.4. of this permit. To address the *water quality standard* violation the *owner or operator* must include and implement appropriate controls in the *SWPPP* to correct the problem or obtain an individual SPDES permit.

If, despite compliance with the requirements of this permit, it is demonstrated that the *stormwater discharges* authorized by this permit are causing or contributing to a violation of *water quality standards*, or if NYSDEC determines that a modification of this permit is necessary to prevent a violation of *water quality standards*, the authorized *discharges* will no longer be eligible for coverage under this permit, and the *owner or operator* must obtain an individual SPDES permit prior to further *discharges* from the *construction site*.

B. Effluent Limitations Applicable to *Discharges* from *Construction Activities*

Discharges authorized by this permit must achieve, at a minimum, the effluent limitations in Part II.B.1.a., b., c., d., and e. These limitations represent the

degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement, and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part II.B.1.a., b., c., d., and e. and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (BB), dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in *SWPPP* the reason(s) for the deviation, or alternative design, and provide information in the *SWPPP* demonstrating that the deviation or alternative design is *equivalent* to the technical standard.

   a. **Erosion and Sediment Controls.** At a minimum, erosion and sediment controls must be selected, designed, installed, implemented, and maintained to:

      i. *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharges*; and

      ii. Control *stormwater discharges*, including both peak flow rates and total *stormwater* volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points; and

      iii. *Minimize* the amount of soil exposed during *construction activity*; and

      iv. *Minimize* the disturbance of *steep slope*; and

      v. *Minimize* sediment *discharges* from the site; and

      vi. Provide and maintain *natural buffers* around surface waters, direct *stormwater* to vegetated areas and maximize *stormwater* infiltration to reduce *pollutant discharges*, unless *infeasible*; and

      vii. *Minimize* soil compaction. *Minimizing* soil compaction is not required

      where the intended function of a specific area of the site dictates that it be compacted; and

      viii. Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and

      ix. *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of *pollutants* that could be discharged from the site.

   b. **Soil Stabilization.** In areas where soil disturbance activity has ceased, whether permanently or *temporarily ceased*, the application of soil stabilization measures must be initiated by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. For *construction sites* that *directly discharge* to one of the 303(d) segments listed in Appendix D, or are located in one of the watersheds listed in Appendix C, or are authorized to disturb greater than five acres in accordance with Part I.E.5.a.viii., the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven calendar days from the date the soil disturbance activity ceased.

   c. **Dewatering.** *Discharges* from *dewatering* activities, including *discharges* from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

   d. **Pollution Prevention Measures.** Select, design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be selected, designed, installed, implemented, and maintained to:

      i. *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. Soaps, detergents and solvents cannot be used; and

      ii. *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation

and to *stormwater*. *Minimization* of exposure is not required in cases where the exposure to precipitation and to *stormwater* will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of *stormwater* contamination (such as final products and materials intended for outdoor use); and

iii. Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Surface Outlets.** When discharging from basins and impoundments, the surface outlets must be designed, constructed, and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-Construction Stormwater Management Practice (SMP) Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction SMPs, in accordance with Part III.C., must select, design, install, implement, and maintain the SMPs to meet the *performance criteria* in the New York State Stormwater Management Design Manual, dated July 31, 2024 (DM), using sound engineering judgment. Where SMPs are not designed in conformance with the *performance criteria* in the DM, the *owner or operator* must include in the *SWPPP* the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity*, that requires SMPs in accordance with Part III.C., must design the practices to meet the applicable *sizing criteria* in Part II.C.2.a., b., c., or d.

a. Sizing Criteria for *New Development*

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the total WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv must be calculated in accordance with the criteria in Section 4.2 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the requirements in Part II.C.2.a.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.4 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs without detention or velocity controls; or

3. The site *directly discharges* into a fifth order or larger water body (stream, river, or lake), or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

b. *Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watersheds

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24-hour design storm over the post-developed watershed and must be calculated in accordance with the criteria in Section 4.3 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part II.C.2.b.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include

documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.5 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs; or

3. The site *directly discharges* to tidal waters, or a fifth order or larger water body (stream, river, or lake) where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

c. *Sizing Criteria* for *Redevelopment Activity*

i. Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* must be addressed by one of the following options, as outlined in Section 9.2.1. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C) must calculate the WQv in accordance with Section 4.3 of the DM. All other *redevelopment activities* must calculate the WQv in accordance with Section 4.2 of the DM.

1. Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the DM must be applied to all newly created pervious areas; or

2. Capture and treat 100% of the required WQv, for a minimum of 25% of the disturbed redevelopment *impervious area*, by implementation of standard SMPs or reduced by application of runoff reduction techniques; or

3. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a volume-based alternative SMP, as defined in Section 9.4 of the DM; or

4. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm; or

5. Application of a combination of 1 through 4 above that provide a weighted average of at least two of the above methods. Application of this method must be in accordance with the criteria in Section 9.2.1(A)(V) of the DM; or

6. If there is an existing SMP located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 through 5 above.

ii. Channel Protection Volume (CPv) is not required if there is 0% change to hydrology that increases the *discharge* rate and volume from the project site.

iii. *Overbank* Flood Control (Qp) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

iv. Extreme Flood Control (Qf) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

d. *Sizing Criteria* for Combination of *Redevelopment Activity* and *New Development*

Construction projects, that include both *new development* and *redevelopment activity*, must use SMPs that meet the *sizing criteria* calculated as an aggregate of the *sizing criteria* in Part II.C.2.a. or b. for the *new development* portion of the project and Part II.C.2.c. for the *redevelopment activity* portion of the project.

Part III. Stormwater Pollution Prevention Plan (SWPPP)

A. General *SWPPP* Requirements

1. A *SWPPP* must be prepared and implemented by the *owner or operator* of all *construction activity* covered by this permit. All authorized *discharges* must be identified in the *SWPPP*. The *SWPPP* must document the selection, design, installation, implementation and maintenance of the control measures and

practices that will be used to meet the effluent limitations in Part II.B. and, where applicable, the SMP requirements in Part II.C.

2. The *SWPPP* must demonstrate consideration in narrative format of the future physical risks due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490, and associated guidance.

   a. The owner or operator must consider:

      i. the following physical risks due to climate change:

         (i) increasing temperature; and

         (ii) increasing precipitation; and

         (iii) increasing variability in precipitation, including chance of drought; and

         (iv) increasing frequency and severity of flooding; and

         (v) rising sea level; and

         (vi) increasing storm surge; and

         (vii) shifting ecology.

      ii. for each of the following:

         (i) overall site planning; and

         (ii) location, elevation, and sizing of:

            a. control measures and practices; and

            b. conveyance system(s); and

            c. detention system(s).

3. The *SWPPP* must describe the erosion and sediment control practices and where required, SMPs that will be used and/or constructed to reduce the *pollutants* in *stormwater discharges* and to assure compliance with the

requirements of this permit. In addition, the *SWPPP* must identify potential sources of pollution which may reasonably be expected to affect the quality of *stormwater discharges*.

4. All *SWPPPs*, that require the SMP component in accordance with Part III.B.2., must be prepared by a *qualified professional*.

5. The *owner or operator* must keep the *SWPPP* current so that, at all times, it accurately documents the erosion and sediment control practices that are being used or will be used during construction, and all SMPs that will be constructed on the site. At a minimum, the *owner or operator* must modify the *SWPPP*, including construction drawings:

   a. whenever the current provisions prove to be ineffective in *minimizing pollutants* in *stormwater discharges* from the site; and

   b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*; and

   c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* NYSDEC, or other regulatory authority; and

   d. to document the final construction conditions in an as-built drawing.

6. NYSDEC may notify the *owner or operator* at any time that the *SWPPP* does not meet one or more of the minimum requirements of this permit. The notification must be in writing and identify the provisions of the *SWPPP* that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by NYSDEC, the *owner or operator* must make the required changes to the *SWPPP* and submit written notification to NYSDEC that the changes have been made. If the *owner or operator* does not respond to NYSDEC's comments in the specified time frame, NYSDEC may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4.

7. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion and sediment control practices included in the *SWPPP* and the

contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the *SWPPP*. The *owner or operator* must have each of the contractors and subcontractors identify at least one person from their company to be *trained contractor* that will be responsible for implementation of the *SWPPP*. The *owner or operator* must ensure that at least one *trained contractor* is on site daily when soil disturbance activities are being performed.

The *owner or operator* must have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before the *commencement of construction activities*:

> "I hereby certify under penalty of law that I understand and agree to comply with the requirements of the *SWPPP* and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the *SWPPP* that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for *SWPPP* implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* must attach the certification statement(s) to the copy of the *SWPPP* that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the *SWPPP* after the *commencement of construction activities*, they must also sign the certification statement and provide the information listed above prior to performing *construction activities*.

B. Required *SWPPP* Contents

1. Erosion and sediment control component - The *owner or operator* must prepare a *SWPPP* that includes erosion and sediment control practices.

   a. Erosion and sediment control practices must be designed:

      i. in conformance with the BB; or

      ii. *equivalent* to the BB if deviating from Part III.B.1.a.i.

   b. If the erosion and sediment control practices are designed in conformance with Part III.B.1.a.ii., the *SWPPP* must include a demonstration of *equivalence* to the BB.

   c. At a minimum, the erosion and sediment control component of the *SWPPP* must include the following:

      i. Background information about the scope of the project, including the location, type and size of project; and

      ii. A site map/construction drawing(s) with north arrows for the project, including a general location map. At a minimum, the site map must show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the *stormwater discharge*(s) and receiving surface water(s); and

      iii. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG); and

      iv. A phasing plan for the project and sequencing plans for all *phases*, both of which must address clearing and grubbing, excavation and grading, utility and infrastructure installation, *final stabilization*,

and any other *construction activity* at the site that will result in soil disturbance.

1. The phasing plan must include:

    a. a map delineating and labeling the limits of soil disturbance for all *phases* of a project; and

    b. a table identifying the order and intended schedule of when each *phase* will begin and end its sequencing plan. The table must identify the total disturbed area for each *phase* at any one time and the total disturbed area for the overall project at any one time all on one timeline showing all overlapping quantities of disturbed area at any one time; and

2. A sequencing plan for a specific *phase* must include:

    a. a table indicating the order and intended schedule of *construction activities* within a *phase*, and corresponding construction drawings with a description of the work to be performed; and

    b. all permanent and *temporary stabilization* measures; and

v. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented; and

vi. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice; and

vii. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any

temporary sediment basins and structural practices that will be used to divert flows from exposed soils; and

viii. A maintenance inspection schedule for the contractor(s) and subcontractor(s) identified in Part III.A.7. to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule must be in accordance with the requirements in the BB technical standard; and

ix. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the *stormwater discharges*; and

x. A description and location of any *stormwater discharges* associated with industrial activity other than construction at the site, including, but not limited to, *stormwater discharges* from asphalt plants and concrete plants located on the *construction site*; and

xi. Identification of any elements of the design that are not in conformance with the design criteria in the BB technical standard. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. SMP component – The *owner or operator* of *construction activity* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs.

    a. SMPs must be designed in conformance with the applicable *sizing criteria* in Part II.C.2.a., c., or d.; and

    b. SMPs must be designed in conformance with the *performance criteria*:

        i. in the DM; or

        ii. *equivalent* to the DM if deviating from Part III.B.2.b.i.; or

        iii. in the New York State Stormwater Management Design Manual, dated January 2015 (2015 Design Manual), or *equivalent* to it, if the following criteria are met:

1. The eNOI is submitted in accordance with Part I.D. before January 29, 2027 for *construction activities* that are either:

    a. subject to governmental review and approval:

        i. where the *owner or operator* made any application to that governmental entity prior to the effective date of this permit; and

        ii. such application included a *SWPPP* developed using the 2015 Design Manual or *equivalent* to it; or

    b. not subject to governmental review and approval:

        i. where a fiscal allocation for the *construction activities* has been developed and approved by a governmental entity; and

        ii. the *SWPPP* was developed using the 2015 Design Manual or *equivalent* to it; and

c. If SMPs are designed in conformance with Part III.B.2.b.ii., the *SWPPP* must include the reason(s) for the deviation or alternative design and a demonstration of *equivalence* to the DM; and

d. If SMPs are designed in conformance with Part III.B.2.b.iii., the *SWPPP* must include supporting information or documentation demonstrating that Part III.B.2.b.iii.1.a. or b. apply; and

e. The SMP component of the *SWPPP* must include the following:

    i. Identification of all SMPs to be constructed as part of the project, including which option the SMP designs conform to, either Part III.B.2.b.i., ii., or iii. Include the dimensions, material specifications and installation details for each SMP; and

    ii. A site map/construction drawing(s) showing the specific location and size of each SMP; and

iii. A Stormwater Modeling and Analysis Report that includes:

    (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points; and

    (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and SMPs; and

    (iii) Results of *stormwater* modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre- and post-development runoff rates and volumes for the different storm events; and

    (iv) Summary table, with supporting calculations, which demonstrates that each SMP has been designed in conformance with the *sizing criteria* included in the DM; and

    (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part II.C.; and

    (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the DM. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the DM.

iv. Soil testing results and locations (test pits, borings); and

v. Infiltration test results, when required in accordance with Part III.B.2.a.; and

vi. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each SMP. The plan must identify the entity

that will be responsible for the long-term operation and maintenance of each practice; and

3. Enhanced Phosphorus Removal Standards - The *owner or operator* of *construction activity* identified in Table 2 of Appendix B that is located in a watershed identified in Appendix C must prepare a *SWPPP* that includes SMPs designed in conformance with the applicable *sizing criteria* in Part II.C.2.b., c., or d. and the *performance criteria* Enhanced Phosphorus Removal Standards included in the DM. At a minimum, the SMP component of the *SWPPP* must meet the requirements of Part III.B.2.

C. Required *SWPPP* Components by Project Type

Owners or operators of *construction activities*, identified in Table 1 of Appendix B, are required to prepare a *SWPPP* that only includes erosion and sediment control practices designed in accordance with Part III.B.1. *Owners or operators* of the *construction activities*, identified in Table 2 of Appendix B, must prepare a *SWPPP* that also includes SMPs designed in accordance with Part III.B.2 or 3.

For the entire area of disturbance, including the entire *common plan of development or sale* if applicable, the owner or operator must evaluate every bullet from Appendix B Table 1 and Table 2 separately. If bullets from both Table 1 and Table 2 apply, the *SWPPP* must include erosion and sediment control practices for all *construction activities* but SMPs for only those portions of the *construction activities* that fall under Table 2 bullet(s).

Part IV. Inspection and Maintenance Requirements

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures), and all SMPs identified in the *SWPPP*, are inspected and maintained in accordance with Part IV.B. and C.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity*, identified in Tables 1 and 2 of Appendix B, must have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being

implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor must:

a. if the corrective action does not require engineering design:

   i. begin implementing corrective actions within one business day; and

   ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

   i. begin the engineering design process within five business days; and

   ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

2. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. The *trained contractor* must begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.

3. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational.

C. *Qualified Inspector* Inspection Requirements

1. With the exception of the following *construction activities* identified in Tables 1 and 2 of Appendix B, a *qualified inspector* must conduct site inspections for all other *construction activities* identified in Tables 1 and 2 of Appendix B:

   a. the construction of a single-family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than or equal to five (5) acres and is

not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

b. the construction of a single-family home that involves soil disturbances of one (1) or more acres but less than or equal to five (5) acres and is not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

c. construction on *agricultural property* that involves soil disturbances of one (1) or more acres but less than five (5) acres; and

d. *construction activities* located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances of 5,000 square feet or more, but less than one acre.

2. The *qualified inspector* must conduct site inspections in accordance with the following timetable:

a. For *construction sites* where soil disturbance activities are on-going, the *qualified inspector* must conduct a site inspection at least once every seven (7) calendar days; or

b. For *construction sites* where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part I.E.6. to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days; or

c. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* must conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas under the jurisdiction of a *Traditional Land Use Control MS4 Operator,* the *Traditional Land Use Control MS4 Operator* (provided the *Traditional Land Use Control MS4 Operator* is not the *owner or operator* of the *construction activity*) by hard copy or email prior to reducing the inspections to this frequency and again by hard copy or email prior to re-commencing construction; or

d. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the requirement to have the *qualified inspector* conduct inspections ceases if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1., the *Traditional Land Use Control MS4 Operator(s)* (provided the *Traditional Land Use Control MS4 Operator(s)* are not the *owners or operators* of the *construction activity*) in writing prior to the shutdown and again in writing prior to resuming *construction activity*. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* must terminate coverage by meeting the requirements of Part V; or

e. For *construction sites* involving soil disturbance of one (1) or more acres that *directly discharge* to one of the 303(d) segments listed in Appendix D or is located in one of the watersheds listed in Appendix C, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* must inspect:

a. all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness; and

b. all SMPs under construction to ensure that they are constructed in conformance with the *SWPPP*; and

c. all areas of disturbance that have not achieved *final stabilization*; and

d. all points of *discharge* to *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site*; and

e. all points of *discharge* from the *construction site*.

4. The *qualified inspector* must prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report must include and/or address all of the following, for all *construction activities* except those listed in Part IV.C.1.:

   a. Permit identification number; and

   b. Date and time of inspection; and

   c. Name and title of person(s) performing inspection; and

   d. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and

   e. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This must include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and

   f. A description of the condition of all *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This must include identification of any *discharges* of sediment to the *surface waters of the State*; and

   g. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and

   h. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and

   i. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and

   j. Estimates, in square feet or acres, of the following areas:

      i. Total area with active soil disturbance (not requiring either *temporary stabilization* or *final stabilization*); and

      ii. Total area with inactive soil disturbance (requiring either *temporary stabilization* or *final stabilization*); and

      iii. Total area that has achieved *temporary stabilization*; and

      iv. Total area that has achieved *final stabilization*; and

   k. Current stage of construction of all SMPs and identification of all *construction activity* on site that is not in conformance with the *SWPPP* and technical standards; and

   l. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the SMP(s); and

   m. Identification and status of all corrective actions that were required by previous inspection; and

   n. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* must notify the *owner or operator*, and appropriate contractor or subcontractor identified in Part III.A.7., of any corrective actions that need to be taken. The contractor or subcontractor must:

   a. if the corrective action does not require engineering design:

i. begin implementing corrective actions within one business day; and

ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

i. begin the engineering design process within five business days; and

ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

6. All inspection reports must be signed by the *qualified inspector.* In accordance with Part I.E.3., the inspection reports must be maintained on site with the *SWPPP*.

Part V. How to Terminate CGP Coverage

A. Electronic Notice of Termination (eNOT) Submittal

The eNOT contains questions to ensure requirements in Part V.A. have been met.

1. An *owner or operator* must terminate coverage when one or more of the following requirements have been met:

a. Total project completion:

i. all *construction activity* identified in the *SWPPP* has been completed; and

ii. all areas of disturbance have achieved *final stabilization*; and

iii. all temporary, structural erosion and sediment control measures have been removed; and

iv. all SMPs have been constructed in conformance with the *SWPPP* and are operational; and

v. an as-built drawing has been prepared; or

b. Planned shutdown with partial project completion:

i. all soil disturbance activities have ceased; and

ii. all areas disturbed as of the project shutdown date have achieved *final stabilization*; and

iii. all temporary, structural erosion and sediment control measures have been removed; and

iv. all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational; and

v. an as-built drawing has been prepared; or

c. In accordance with Part I.G. Change of Owner or Operator; or

d. The *owner or operator* has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.

2. For *construction activities* that require *qualified inspector* inspections in accordance with Part IV.C.1. and have met Part V.A.1.a. or b., the *owner or operator* must have the *qualified inspector* perform a final site inspection prior to submitting the eNOT. The *qualified inspector* must, by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice(s)" certification statements on the eNOT, certify that all the requirements in Part V.A.1.a. or b. have been achieved.

3. For *construction activities* that are subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1. and meet Part V.A.1.a. or b., the *owner or operator* must have the *Traditional Land Use Control MS4 Operator(s)* sign the "MS4 Acceptance" statement on the eNOT in accordance with the requirements in Part VII.J. A *Traditional Land Use Control MS4 Operator* official, by signing this statement, determined that it is acceptable for the *owner or operator* to submit the eNOT in accordance with the requirements of this Part. A *Traditional Land Use Control MS4 Operator* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) when required in Part V.A.2.

4. For *construction activities* that require SMPs and meet Part V.A.1.a. or b., the *owner or operator* must, prior to submitting the eNOT, ensure one of the following:

   a. for SMP(s) that were constructed by a private entity, but will be owned, operated, and maintained by a public entity, the SMP(s) and any right-of-way(s) needed to operate and maintain such practice(s) have been deeded to the municipality in which the practice(s) is located; or

   b. for SMP(s) that are privately owned, but will be operated and maintained by a public entity, an executed operation and maintenance agreement is in place with the municipality that will operate and maintain the SMP(s); or

   c. for SMP(s) that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record; or

   d. for SMP(s) that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility, the *owner or operator* has policies and procedures in place that ensure operation and maintenance of the practices in accordance with the operation and maintenance plan.

5. An *owner or operator* that has met the requirements of Part V.A.1., 2., 3., and 4. must request termination of coverage under this permit by submitting a complete Notice of Termination form electronically using a NYSDEC approved form.[5]

   a. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

[5] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

Part VI. Record Retention and Reporting

A. Record Retention

The *owner or operator* must retain a copy of the documents listed in Part I.E.3. and a copy of the LOT for a period of at least five years from the date that NYSDEC accepts a complete NOT submitted in accordance with Part V.

B. Reporting

Except for the eNOI, the signature forms associated with the eNOI, and the eNOT, all other written correspondence requested by NYSDEC, including individual permit applications, must be sent to the address of the appropriate DOW (SPDES) Program contact at the Regional Office listed in Appendix E.

Part VII. Standard Permit Requirements

For the purposes of this permit, examples of contractors and subcontractors include: third-party maintenance and construction contractors.

A. Duty to Comply

The *owner or operator*, and all contractors or subcontractors, must comply with all requirements of this permit. Any non-compliance with the requirements of this permit constitutes a violation of the New York State Environmental Conservation Law (ECL), and its implementing regulations, and is grounds for enforcement action. Filing of a request for termination of coverage under this permit, or a notification of planned changes or anticipated non-compliance, does not limit, diminish or stay compliance with any requirements of this permit.

B. Need to Halt or Reduce Activity Not a Defense

The necessity to halt or reduce the *construction activity* regulated by this permit, in order to maintain compliance with the requirements of this permit, must not be a defense in an enforcement action.

C. Penalties

There are substantial criminal, civil, and administrative penalties associated with violating the requirements of this permit. Fines of up to $37,500 per day for each

violation and imprisonment for up to 15 years may be assessed depending upon the nature and degree of the offense.

D. False Statements

Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance must, upon conviction, be punished in accordance with ECL §71-1933 and or New York State Penal Law Articles 175 and 210.

E. Re-Opener Clause

Upon issuance of this permit, a determination has been made on the basis of a submitted Notice of Intent, plans, or other available information, that compliance with the specified permit requirements will reasonably protect classified water use and assure compliance with applicable *water quality standards*. Satisfaction of the requirements of this permit notwithstanding, if operation pursuant to this permit causes or contributes to a condition in contravention of State *water quality standards* or guidance values, or if NYSDEC determines that a modification is necessary to prevent impairment of the best use of the waters or to assure maintenance of *water quality standards* or compliance with other provisions of ECL Article 17 or the Clean Water Act (CWA), or any regulations adopted pursuant thereto, NYSDEC may require such modification and the Commissioner may require abatement action to be taken by the *owner or operator* and may also prohibit such operation until the modification has been implemented.

F. Duty to Mitigate

The *owner or operator*, and its contractors and subcontractors, must take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

G. Requiring Another General Permit or Individual SPDES Permit

NYSDEC may require any *owner or operator* authorized to *discharge* in accordance with this permit to apply for and obtain an individual SPDES permit or apply for authorization to *discharge* in accordance with another general SPDES permit.

1. Cases where an individual SPDES permit or authorization to discharge in accordance with another general SPDES permit may be required include, but is not limited to the following:

   a. the *owner or operator* is not in compliance with the conditions of this permit or does not meet the requirements for coverage under this permit; and

   b. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of *pollutants* applicable to the *point source*; and

   c. new effluent limitation guidelines or new source performance standards are promulgated that are applicable to *point sources* authorized to *discharge* in accordance with this permit; and

   d. existing effluent limitation guidelines or new source performance standards that are applicable to *point sources* authorized to *discharge* in accordance with this permit are modified; and

   e. a water quality management plan containing requirements applicable to such *point sources* is approved by NYSDEC; and

   f. circumstances have changed since the time of the request to be covered so that the *owner or operator* is no longer appropriately controlled under this permit, or either a temporary or permanent reduction or elimination of the authorized *discharge* is necessary; and

   g. the *discharge* is in violation of section 17-0501 of the ECL; and

   h. the *discharge(s)* is a significant contributor of *pollutants*. In making this determination, NYSDEC may consider the following factors:

      i. the location of the *discharge(s)* with respect to *surface waters of the State*; and

      ii. the size of the *discharge(s)*; and

      iii. the quantity and nature of the *pollutants discharged* to *surface waters of the State*; and

      iv. other relevant factors including compliance with other provisions of ECL Article 17, or the CWA.

2. When NYSDEC requires any *owner or operator* authorized by this permit to apply for an individual SPDES permit as provided for in this subdivision, it must notify the *owner or operator* in writing that a permit application is required. This notice must include a brief statement of the reasons for this decision, an application

form, a statement setting a time for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from the *owner's or operator's* receipt of the notification letter, whereby the authorization to *discharge* under this permit must be terminated. NYSDEC may grant additional time upon demonstration, to the satisfaction of the RWE,[6] that additional time to apply for an alternative authorization is necessary or where NYSDEC has not provided a permit determination in accordance with 6 NYCRR Part 621.

3. When an individual SPDES permit is issued to an *owner or operator* authorized to *discharge* under this permit for the same *discharge(s)*, this permit authorization for *construction activities* authorized under the individual SPDES permit is automatically terminated on the effective date of the individual SPDES permit unless termination is earlier in accordance with 6 NYCRR Part 750.

H. Duty to Provide Information

The *owner or operator* must furnish to NYSDEC, within five business days, unless otherwise set forth by NYSDEC, any information that NYSDEC may request to determine whether cause exists to determine compliance with this permit or to determine whether cause exists for requiring an individual SPDES permit in accordance with 6 NYCRR 750-1.21(e) (see Part VII.G. Requiring Another General Permit or Individual Permit).

The *owner or operator* must make available to NYSDEC, for inspection and copying, or furnish to NYSDEC within 25 business days of receipt of a NYSDEC request for such information, any information retained in accordance with this permit.

Except for Part I.D.4. and 5. and Part I.G., the following applies: where the *owner or operator* becomes aware that it failed to submit any relevant facts on the Notice of Intent, or submitted incorrect information in a Notice of Intent or in any report to NYSDEC, the *owner or operator* must submit such facts or corrected information to NYSDEC within five business days.

I. Extension

In the event a new permit is not issued and effective prior to the expiration of this permit, and this permit is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, then the *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the requirements of this permit until a new permit is issued and effective.

[6] The Regional Water Manager where a DEC Region does not have a RWE.

J. Signatories and Certification

The Notice of Intent, Notice of Termination, and reports required by this permit must be signed as provided in 40 CFR §122.22.

1. All Notices of Intent and Notices of Termination must be signed as follows:

   a. For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

      (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

      (ii) the manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for Notice of Intent or Notice of Termination requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

      Note: NYSDEC does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR §122.22(a)(1)(i). NYSDEC will presume that these responsible corporate officers have the requisite authority to sign the Notice of Intent or Notice of Termination unless the corporation has notified NYSDEC to the contrary. Corporate procedures governing authority to sign a Notice of Intent or Notice of Termination may provide for assignment or delegation to applicable corporate positions under 40 CFR §122.22(a)(1)(ii) rather than to specific individuals.

   b. For a partnership or sole proprietorship. By a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

   1. the chief executive officer of the agency; or

   2. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. All reports required by this permit, and other information requested by NYSDEC, must be signed by a person described in Part VII.J.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Part VII.J.1. or using the Duly Authorized Form, found on the DEC website; and

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

   c. The written authorization is submitted to NYSDEC.

3. Changes to authorization. If an authorization under Part VII.J.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the *construction activity*, a new authorization satisfying the requirements of Part VII.J.2. must be submitted to NYSDEC prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under Part VII.J.1. or 2. must make the following certification:

   I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who

manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

5. Electronic reporting. If documents described in Part VII.J.1. or 2. are submitted electronically by or on behalf of the *construction activity* with coverage under this permit, any person providing the electronic signature for such documents must meet all relevant requirements of this section, and must ensure that all of the relevant requirements of 40 CFR Part 3 (including, in all cases, subpart D to Part 3) (Cross-Media Electronic Reporting) and 40 CFR Part 127 (NPDES Electronic Reporting Requirements) are met for that submission.

K. Inspection and Entry

The *owner or operator* must allow NYSDEC, the USEPA Regional Administrator, the applicable county health department, or any authorized representatives of those entities, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the *discharge*, upon the presentation of credentials and other documents as may be required by law, to:

1. enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the requirements of this permit; and

2. have access to and copy at reasonable times, any records that must be kept under the requirements of this permit, including records required to be maintained for purposes of operation and maintenance; and

3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. sample or monitor at reasonable times, for the purposes of assuring general SPDES permit compliance or as otherwise authorized by the CWA or ECL, any substances or parameters at any location; and

5. enter upon the property of any contributor to the regulated facility or activity under authority of the *owner or operator*.

L. Confidentiality of Information

The following must not be held confidential: this permit, the fact sheet for this permit, the name and address of any *owner or operator*, effluent data, the Notice of Intent, and information regarding the need to obtain an individual permit or an alternative general SPDES permit. This includes information submitted on forms themselves and any attachments used to supply information required by the forms (except information submitted on usage of substances). Upon the request of the *owner or operator*, NYSDEC must make determinations of confidentiality in accordance with 6 NYCRR Part 616, except as set forth in the previous sentence. Any information accorded confidential status must be disclosed to the Regional Administrator upon his or her written request. Prior to disclosing such information to the Regional Administrator, NYSDEC will notify the Regional Administrator of the confidential status of such information.

M. Other Permits May Be Required

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

N. NYSDEC Orders or Civil Decrees/Judgments

The issuance of this permit by the NYSDEC, and the coverage under this permit by the *owner or operator*, does not supersede, revoke, or rescind any existing order on consent or civil Decree/Judgment, or modification to any such documents or to any order issued by the Commissioner, or any of the terms, conditions, or requirements contained in such order or modification therefore, unless expressly noted.

O. Property Rights

Coverage under this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations, nor does it obviate the necessity of obtaining the assent of any other jurisdiction as required by law for the *discharge* authorized.

P. Compliance with Interstate Standards

If the *construction activity* covered by this permit originates within the jurisdiction of an interstate water pollution control agency, then the *construction activity* must also comply with any applicable effluent standards or *water quality standards* promulgated by that interstate agency and as set forth in this permit for such *construction activities*.

Q. Oil and Hazardous Substance Liability

Coverage under this permit does not affect the imposition of responsibilities upon, or the institution of any legal action against, the *owner or operator* under section 311 of the CWA, which must be in conformance with regulations promulgated pursuant to section 311 governing the applicability of section 311 of the CWA to *discharges* from facilities with *NPDES* permits, nor must such issuance preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties to which the *owner or operator* is or may be subject pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. section 9601 et seq. (CERCLA).

R. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, must not be affected thereby.

S. NYSDEC Approved Forms

The *owner or operator* must provide all relevant information that is requested by NYSDEC, and required by this permit, on all NYSDEC approved forms.

APPENDIX A – Abbreviations and Definitions

Abbreviations

APO – Agency Preservation Officer
BB – New York State Standards and Specifications for Erosion and Sediment Control (Blue Book), dated November 2016
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
CPv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DM – New York State Stormwater Management Design Manual (Design Manual), dated July 31, 2024
DOW – Division of Water
EAF – Environmental Assessment Form
ECL – chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law
EPA – U.S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NYC – The City of New York
NYCDEP – The City of New York Department of Environmental Protection
NYSDEC – The New York State Department of Environmental Conservation
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RR – Runoff Reduction
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SMP – Post-Construction Stormwater Management Practice
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit. If a word is not italicized in the permit, use its common definition.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023).

Alter Hydrology from Pre- to Post-Development Conditions – the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer System – a sewer system which conveys sewage and *stormwater* through a single pipe system to a publicly owned treatment works.

Commence (Commencement of) Construction Activities – the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the *SWPPP*. See definition for "*Construction Activity(ies)*" also.

Common Plan of Development or Sale – a contiguous area where multiple separate and distinct *construction activities* are occurring, or may occur, under one plan. The "common plan" of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQR) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating *construction activities* may occur on a specific plot. A *common plan of development or sale* is comprised of two or more *phases*.

Common plan of development or sale does not include separate and distinct *construction activities* that are occurring, or may occur, under one plan that are at least 1/4 mile apart provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Construction Activity(ies) – identified within 40 CFR 122.26(b)(14)(x), 122.26(b)(15)(i), and 122.26(b)(15)(ii), any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, mechanized logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal.

Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, which is excluded from the calculation of the soil disturbance for a project. Routine maintenance includes, but is not limited to:

- Re-grading of gravel roads or parking lots; and
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of the ditch; and
- Replacement of existing culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of a ditch; and
- Replacement of existing bridges that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity beneath the bridges; and
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch); and
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*; and
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material; and
- Long-term use of equipment storage areas at or near highway maintenance facilities; and
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*; and
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts; and
- Maintenance of ski trails including brush hog use and mowing; and
- Above ground snowmaking pipe replacement; and
- Replacement of existing utility poles; etc.

Construction Site – the land area where *construction activity(ies)* will occur. See also the definitions for "*Commence (Commencement of) Construction Activities"* and "*Common Plan of Development or Sale."*

Dewatering – the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Directly Discharge(s)(ing) (to a specific surface waterbody) – runoff flows from a *construction site* by overland flow and the first point of *discharge* is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system and the first point of *discharge* from the separate storm sewer system is the specific surface waterbody.

Discharge(s)(d) – any addition of any *pollutant* to waters of the State through an outlet or *point source*.

Embankment – an earthen or rock slope that supports a road/highway.

Equivalent (Equivalence) – the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization – all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other *equivalent* stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

Historic Property – any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) – all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and compacted gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – not technologically possible, or not economically practicable and achievable considering best industry practices.

Minimize(ing)(ation) – reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. owned or operated by a State, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, *stormwater*, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA, that *discharges* to *surface waters of the State*; and

2. designed or used for collecting or conveying *stormwater*; and

3. which is not a *combined sewer system*; and

4. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Natural Buffer(s) – an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – any land disturbance that does not meet the definition of *Redevelopment Activity* included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

Nonpoint Source(s) – any source of water pollution or *pollutants* which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank – flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator – the person, persons, or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit requirements.

Performance Criteria – the six performance criteria for each group of SMPs in Chapters 5 and 6 of the technical standard, New York State Stormwater Management Design Manual (DM), dated July 31, 2024. These include feasibility, conveyance, pretreatment, treatment, landscaping, and maintenance. It does not include the *Sizing Criteria* (i.e. WQv, RRv, CPv, Qp and Qf) in Part I.C.2. of the permit.

Phase – a defined area in which *construction activities* are occurring or will occur separate from other defined area(s).

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be *discharged*.

Pollutant(s) – dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast *discharged* into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq.

Qualified Inspector – a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder or other NYSDEC endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any SMPs that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional – a person that is knowledgeable in the principles and practices of *stormwater* management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other NYSDEC endorsed individual(s). Individuals preparing *SWPPPs* that require the SMP component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the *SWPPP* that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – the disturbance and reconstruction of existing *impervious area*, including *impervious areas* that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Renewable Energy – electricity or thermal energy generated by renewable energy systems through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.

Site Limitations – site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical *site limitations* include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of *site limitations* shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – the criteria included in Part I.C.2 of the permit that are used to size SMPs. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

Steep Slope – land area designated on the current United States Department of Agriculture (USDA) Soil Survey as Soil Slope Phase D, (provided the map unit name or description is inclusive of slopes greater than 25%), or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Stormwater – that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the State.

Streambank – the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – a project specific report, including construction drawings, that among other things: describes the *construction activity(ies)*, identifies the potential sources of pollution at the *construction site*; describes and shows the *stormwater* controls that will be used to control the *pollutants* (i.e. erosion and sediment controls; for many projects, includes SMPs); and identifies procedures the *owner or operator* will implement to comply with the requirements of the permit. See Part III of the permit for a complete description of the information that must be included in the *SWPPP*.

Surface Waters of the State – shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization – exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Load (TMDL) – the sum of the allowable loads of a single *pollutant* from all contributing point and *nonpoint sources*. It is a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet *water quality standards*, and an allocation of that amount to the *pollutant's* sources. A TMDL stipulates Waste Load Allocations (WLA) for *point source discharges*, Load Allocations (LA) for *nonpoint sources*, and a margin of safety (MOS).

Traditional Land Use Control MS4 Operator – a city, town, or village with land use control authority that is authorized to *discharge* under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Trained Contractor – an employee from the contracting (construction) company, identified in Part III.A.7., that has received four (4) hours of NYSDEC endorsed training

in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.7., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity).

The *trained contractor* is responsible for the day-to-day implementation of the *SWPPP*.

Tree Clearing – *construction activities* limited to felling and removal of trees.

Tree clearing does not include hand felling and leaving the trees in place with no support from mechanized equipment, which is not considered *construction activity* requiring coverage under this permit.

Water Quality Standard – such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1

***CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS**

The following *construction activities* that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres: • Single-family home not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D • Single-family residential subdivisions with 25% or less *impervious cover* at total site build-out and not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D • Construction of a barn or other *agricultural building*, silo, stock yard or pen. • Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that include construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
The following *construction activities* that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land: • All construction activities located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
Within the municipal boundaries of NYC: • Stand-alone road reconstruction, where the total soil disturbance from only that road construction, is less than one (1) acre of land.
The following *construction activities*: • Installation of underground linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains • Environmental enhancement projects, such as wetland mitigation, *stormwater* retrofits, stream restoration, and resiliency projects that reconstruct shoreline areas to address sea level rise • Pond construction • Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an *impervious cover* • Cross-country ski trails, walking/hiking trails, and mountain biking trails, including a de minimis parking lot (maximum 10 spaces total, sized for passenger cars) with 35 feet minimum preservation of undisturbed area downgradient from the parking lot • Dam rehabilitation (the structure of the dam itself) • Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are not part of residential, commercial, or institutional development; • Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path, or walking path.

Table 1 (Continued)
CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP
THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities*:

- Slope stabilization
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Vegetated open space (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) that do not *alter hydrology from pre- to post-development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions
- Demolition where vegetation will be established, and no *redevelopment activity* is planned[1]
- Installation or replacement of either an overhead electric transmission line or a ski lift tower that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*.
- Solar array field areas that have tables elevated off the ground, spaced one table width apart, do not *alter hydrology from pre- to post-development conditions*, and address water quality volume and runoff reduction volume by maintaining sheet flow on slopes less than 8%.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that do not include construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions.
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary *impervious areas* that will be restored to pre-construction conditions once the *construction activity* is complete (in this context, "temporary" means the *impervious area* will be in place for two years or less)
- Other *construction activities* that do not include the construction or reconstruction of *impervious area*, and do not *alter hydrology from pre- to post-development* conditions, and are not listed in Table 2.

1. If the site is redeveloped in the future, a new eNOI must be submitted.

Table 2
***CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES**
POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Single-family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family home that disturbs five (5) or more acres of land
- Single-family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of between 20,000 square feet and one (1) acre of land within the municipal boundaries of NYC with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single-family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a *common plan of development or sale* that will ultimately disturb five (5) or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Creation of 5,000 square feet or more of *impervious area* in the municipal boundaries of NYC
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) that involves soil disturbance greater than five acres.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that involves soil disturbance greater than five acres and include the construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
- Facility buildings, including ski lodges, restroom buildings, pumphouses, ski lift terminals, and maintenance and groomer garages
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills; including creation of landfills or capping landfills.
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTWs, water treatment plants, and water storage tanks
- Golf courses
- Office complexes

Table 2 (Continued)

***CONSTRUCTION ACTIVITIES* THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPs)**

The following *construction activities*:

- Permanent laydown yards and equipment storage lots
- Playgrounds that include the construction or reconstruction of *impervious area*
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surfaces
- Road construction or reconstruction, outside the municipal boundaries of NYC
- Road construction within the municipal boundaries of NYC
- Stand-alone road reconstruction, within the municipal boundaries of NYC where the total soil disturbance from that road reconstruction involves soil disturbance of one (1) acre or more of land
- Parking lot construction or reconstruction (as with all Table 2 bullets, this includes parking lots constructed as part of the *construction activities* listed in Table 1, unless a Table 1 bullet specifies otherwise)
- Athletic fields (natural grass) that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations, and well drilling pads, surfaced with *impervious cover,* and constructed as part of an overhead electric transmission line, wind-power, cell tower, oil or gas well drilling, sewer or water main, ski lift, or other linear utility project
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of a residential, commercial or institutional development
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of highway construction or reconstruction
- Solar array field areas on slopes greater than 8% that cannot maintain sheet flow using management practices identified in the BB or the DM
- Solar array field areas on slopes less than 8% that will *alter the hydrology from pre- to post-development* conditions
- Solar array field areas with tables that are not elevated high enough to achieve *final stabilization* beneath the tables
- Traditional *impervious areas* associated with solar development (e.g. roads, buildings, transformers)
- Utility pads surfaced with *impervious cover*, including electric vehicle charging stations
- All other *construction activities* that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre- to post-development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of *construction activities* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs designed in conformance with the Enhanced Phosphorus Removal Standards included in the DM technical standard.

- Entire New York City Watershed located east of the Hudson River – Figure 1
- Onondaga Lake Watershed – Figure 2
- Greenwood Lake Watershed – Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

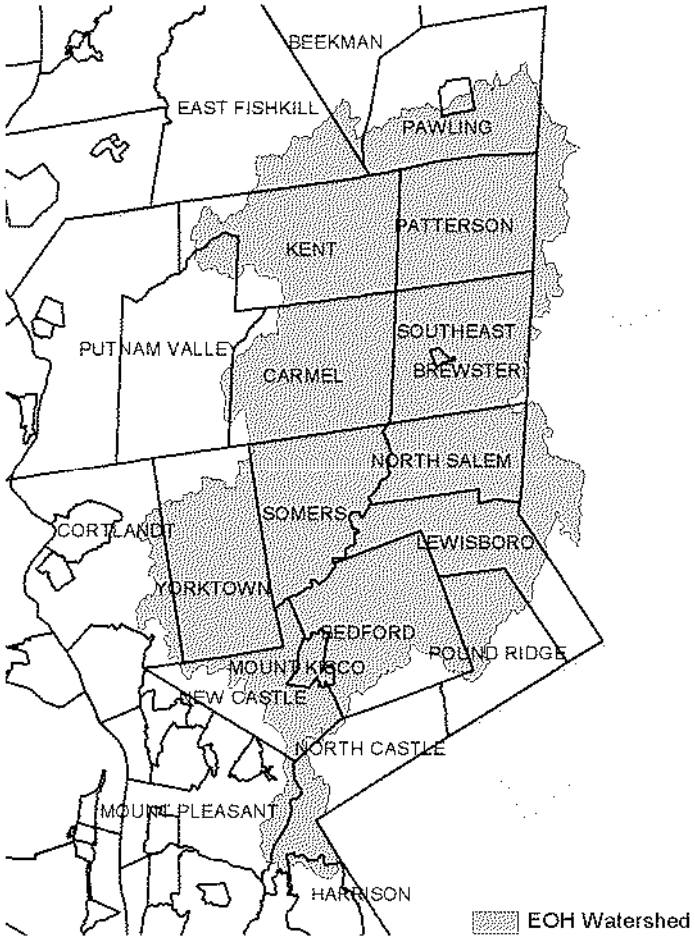


Figure 2 - Onondaga Lake Watershed

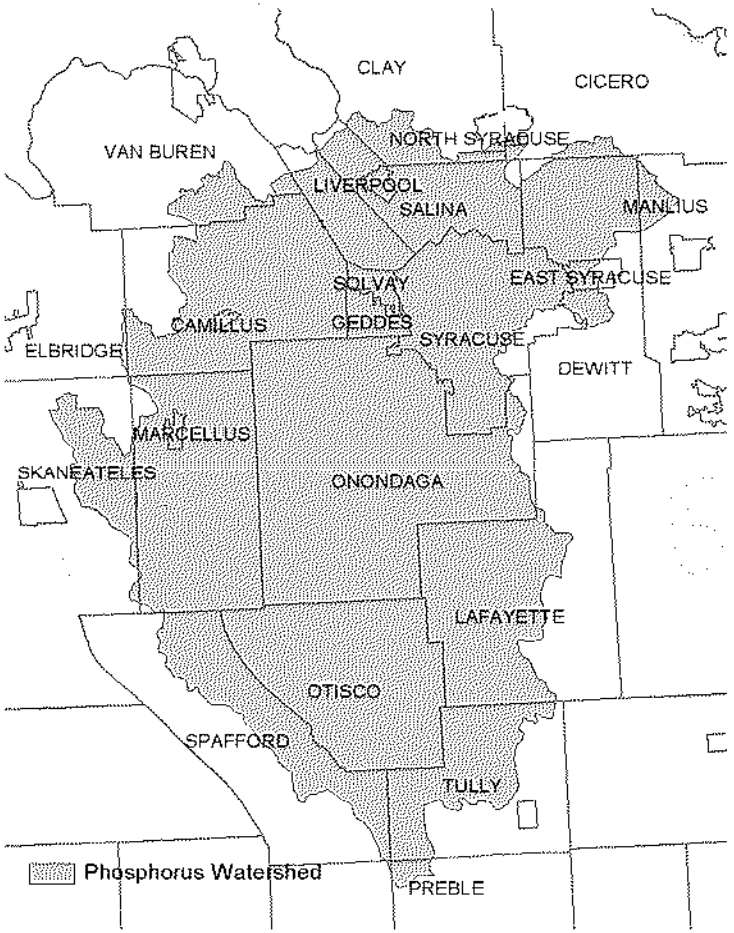


Figure 3 - Greenwood Lake Watershed

Figure 4 - Oscawana Lake Watershed

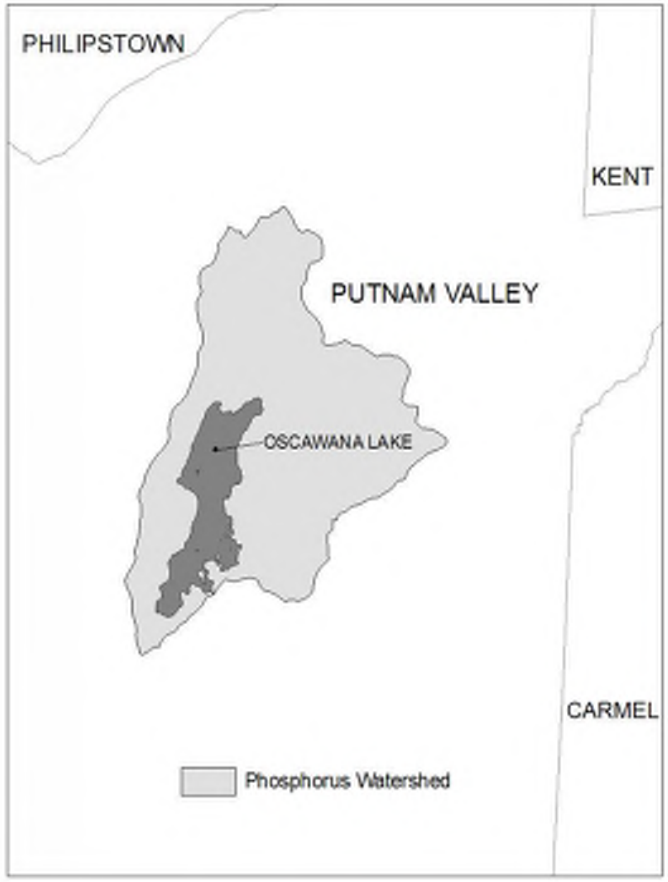
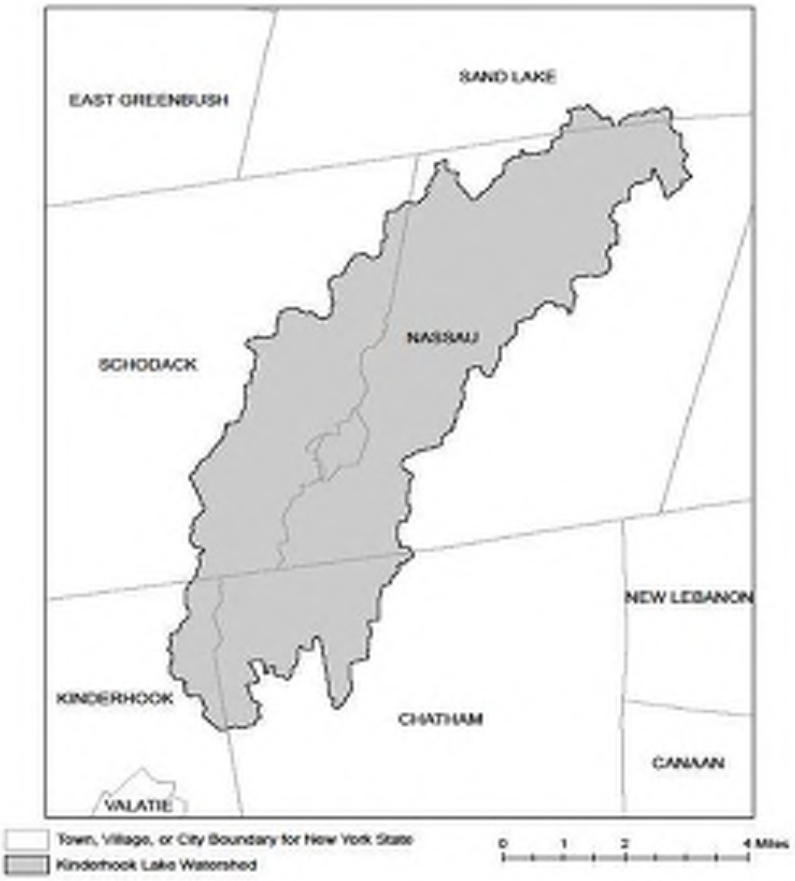


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants)

List of waterbodies impaired by *pollutants* related to *construction activity*, including turbidity, silt/sediment, and nutrients (e.g. nitrogen, phosphorus). This list is a subset of "The Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL" dated June 2020.

County	Waterbody	Pollutant
Albany	Ann Lee (Shakers) Pond, Stump Pond (1201-0096)	Phosphorus
Albany	Lawsons Lake (1301-0235)	Phosphorus
Allegany	Amity Lake, Saunders Pond (0403-0054)	Phosphorus
Allegany	Andover Pond (0403-0056)	Phosphorus
Bronx	Reservoir No.1/Lake Isle (1702-0075)	Phosphorus
Bronx	Van Cortlandt Lake (1702-0008)	Phosphorus
Broome	Blueberry, Laurel Lakes (1404-0033)	Phosphorus
Broome	Fly Pond, Deer Lake (1404-0038)	Phosphorus
Broome	Minor Tribs to Lower Susquehanna (0603-0044)	Phosphorus
Broome	Whitney Point Lake/Reservoir (0602-0004)	Phosphorus
Cattaraugus	Allegheny River/Reservoir (0201-0023)	Phosphorus
Cattaraugus	Beaver Lake/Alma Pond (0201-0073)	Phosphorus
Cattaraugus	Case Lake (0201-0020)	Phosphorus
Cattaraugus	Linlyco/Club Pond (0201-0035)	Phosphorus
Cayuga	Duck Lake (0704-0025)	Phosphorus
Cayuga	Owasco Inlet, Upper, and tribs (0706-0014)	Nutrients
Chautauqua	Chadakoin River and tribs (0202-0018)	Phosphorus
Chautauqua	Hulburt/Clymer Pond (0202-0079)	Phosphorus
Chautauqua	Middle Cassadaga Lake (0202-0002)	Phosphorus
Clinton	Great Chazy River, Lower, Main Stem (1002-0001)	Silt/Sediment
Columbia	Robinson Pond (1308-0003)	Phosphorus
Cortland	Dean Pond (0602-0077)	Phosphorus
Dutchess	Fallkill Creek (1301-0087)	Phosphorus
Dutchess	Hillside Lake (1304-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Silt/Sediment
Erie	Beeman Creek and tribs (0102-0030)	Phosphorus
Erie	Delaware Park Pond (0101-0026)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Silt/Sediment
Erie	Green Lake (0101-0038)	Phosphorus
Erie	Little Sister Creek, Lower, and tribs (0104-0045)	Phosphorus
Erie	Murder Creek, Lower, and tribs (0102-0031)	Phosphorus

Erie	Rush Creek and tribs (0104-0018)	Phosphorus
Erie	Scajaquada Creek, Lower, and tribs (0101-0023)	Phosphorus
Erie	Scajaquada Creek, Middle, and tribs (0101-0033)	Phosphorus
Erie	Scajaquada Creek, Upper, and tribs (0101-0034)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Silt/Sediment
Genesee	Bigelow Creek and tribs (0402-0016)	Phosphorus
Genesee	Black Creek, Middle, and minor tribs (0402 0028)	Phosphorus
Genesee	Black Creek, Upper, and minor tribs (0402-0048)	Phosphorus
Genesee	Bowen Brook and tribs (0102-0036)	Phosphorus
Genesee	LeRoy Reservoir (0402-0003)	Phosphorus
Genesee	Mill Pond (0402-0050)	Phosphorus
Genesee	Oak Orchard Cr, Upper, and tribs (0301-0014)	Phosphorus
Genesee	Oatka Creek, Middle, and minor tribs (0402-0031)	Phosphorus
Genessee	Tonawanda Cr, Middle, Main Stem (0102-0002)	Phosphorus
Greene	Schoharie Reservoir (1202-0012)	Silt/Sediment
Greene	Sleepy Hollow Lake (1301-0059)	Silt/Sediment
Herkimer	Steele Creek tribs (1201-0197)	Phosphorus
Herkimer	Steele Creek tribs (1201-0197)	Silt/Sediment
Kings	Hendrix Creek (1701-0006) 18	Nitrogen
Kings	Prospect Park Lake (1701-0196)	Phosphorus
Lewis	Mill Creek/South Branch, and tribs (0801-0200)	Nutrients
Livingston	Christie Creek and tribs (0402-0060)	Phosphorus
Livingston	Conesus Lake (0402-0004)	Phosphorus
Livingston	Mill Creek and minor tribs (0404-0011)	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs (0402-0033)	Phosphorus
Monroe	Buck Pond (0301-0017)	Phosphorus
Monroe	Cranberry Pond (0301-0016)	Phosphorus
Monroe	Durand, Eastman Lakes (0302-0037)	Phosphorus
Monroe	Lake Ontario Shoreline, Western (0301-0069) 9	Phosphorus
Monroe	Long Pond (0301-0015)	Phosphorus
Monroe	Mill Creek and tribs (0302-0025)	Phosphorus 2
Monroe	Mill Creek/Blue Pond Outlet and tribs (0402-0049)	Phosphorus
Monroe	Minor Tribs to Irondequoit Bay (0302-0038)	Phosphorus
Monroe	Rochester Embayment - East (0302-0002) [9]	Phosphorus
Monroe	Rochester Embayment - West (0301-0068) 9	Phosphorus
Monroe	Shipbuilders Creek and tribs (0302-0026)	Phosphorus 2
Monroe	Thomas Creek/White Brook and tribs (0302-0023)	Phosphorus

Nassau	Bannister Creek/Bay (1701-0380)	Nitrogen
Nassau	Beaver Lake (1702-0152)	Phosphorus
Nassau	Browswere Bay (1701-0383)	Nitrogen
Nassau	Camaans Pond (1701-0052)	Phosphorus
Nassau	East Meadow Brook, Upper, and tribs (1701-0211)	Silt/Sediment
Nassau	East Rockaway Channel (1701-0381)	Nitrogen
Nassau	Glen Cove Creek, Lower, and tribs (1702-0146)	Silt/Sediment
Nassau	Grant Park Pond (1701-0054)	Phosphorus
Nassau	Hempstead Bay, Broad Channel (1701-0032)	Nitrogen
Nassau	Hempstead Lake (1701-0015)	Phosphorus
Nassau	Hewlett Bay (1701-0382)	Nitrogen
Nassau	Hog Island Channel (1701-0220)	Nitrogen
Nassau	Massapequa Creek, Upper, and tribs (1701-0174)	Phosphorus
Nassau	Milburn/Parsonage Creeks, Upp, and tribs (1701-0212)	Phosphorus
Nassau	Reynolds Channel, East (1701-0215) [12]	Nitrogen
Nassau	Reynolds Channel, West (1701-0216) 12	Nitrogen
Nassau	Tidal Tribs to Hempstead Bay (1701-0218)	Nitrogen
Nassau	Tribs (fresh) to East Bay (1701-0204)	Silt/Sediment
Nassau	Tribs (fresh) to East Bay (1701-0204)	Phosphorus
Nassau	Tribs to Smith Pond/Halls Pond (1701-0221)	Phosphorus
Nassau	Woodmere Channel (1701-0219)	Nitrogen
New York	Harlem Meer (1702-0103)	Phosphorus
New York	The Lake in Central Park (1702-0105)	Phosphorus
Niagara	Bergholtz Creek and tribs (0101-0004)	Phosphorus
Niagara	Hyde Park Lake (0101-0030)	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0053) 9	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0072) 9	Phosphorus
Oneida	Ballou, Nail Creeks (1201-0203)	Phosphorus
Onondaga	Ley Creek and tribs (0702-0001) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nitrogen (NH3, NO2)
Onondaga	Onondaga Creek, Lower (0702-0023) 10	Nutrients (phosphorus)
Onondaga	Onondaga Creek, Lower, and tribs (0702-0023)	Turbidity
Onondaga	Onondaga Creek, Middle, and tribs (0702-0004)	Turbidity
Onondaga	Onondaga Creek, Upper, and tribs (0702-0024)	Turbidity
Ontario	Great Brook and minor tribs (0704-0034)	Phosphorus 2
Ontario	Great Brook and minor tribs (0704-0034)	Silt/Sediment

Ontario	Hemlock Lake Outlet and minor tribs (0402-0013)	Phosphorus
Ontario	Honeoye Lake (0402-0032)	Phosphorus
Orange	Brown Pond Reservoir (1303-0013)	Phosphorus
Orange	Lake Washington (1303-0012)	Phosphorus
Orange	Minor Tribs to Middle Wallkill (1306-0061)	Phosphorus
Orange	Monhagen Brook and tribs (1306-0074)	Phosphorus
Orange	Orange Lake (1301-0008) [16]	Phosphorus
Orange	Quaker Creek and tribs (1306-0025)	Phosphorus
Orange	Wallkill River, Middle, Main Stem (1306-0038)	Phosphorus
Orange	Wallkill River, Upper, and Minor tribs (1306-0017)	Phosphorus
Orleans	Glenvwood Lake (0301-0041)	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0070) 9	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0071) 9	Phosphorus
Oswego	Lake Neatahwanta (0701-0018)	Nutrients (phosphorus)
Oswego	Pleasant Lake (0703-0047)	Phosphorus
Putnam	Lost Lake, Putnam Lake (1302-0053)	Phosphorus
Putnam	Minor Tribs to Croton Falls Reservoir (1302-0001)	Phosphorus
Queens	Bergen Basin (1701-0009) 18	Nitrogen
Queens	Jamaica Bay, Eastern, and tribs, Queens (1701-0005) 18	Nitrogen
Queens	Kissena Lake (1702-0258)	Phosphorus
Queens	Meadow Lake (1702-0030)	Phosphorus
Queens	Shellbank Basin (1701-0001) 18	Nitrogen
Queens	Willow Lake (1702-0031)	Phosphorus
Rensselaer	Nassau Lake (1310-0001)	Phosphorus
Rensselaer	Snyders Lake (1301-0043)	Phosphorus
Richmond	Grassmere Lake/Bradys Pond (1701-0357)	Phosphorus
Rockland	Congers Lake, Swartout Lake (1501-0019)	Phosphorus
Rockland	Rockland Lake (1501-0021)	Phosphorus
Saratoga	Ballston Lake (1101-0036)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Silt/Sediment
Saratoga	Lake Lonely (1101-0034)	Phosphorus
Saratoga	Round Lake (1101-0060)	Phosphorus
Saratoga	Tribs to Lake Lonely (1101-0001)	Phosphorus
Schenectady	Collins Lake (1201-0077)	Phosphorus
Schenectady	Duane Lake (1311-0006)	Phosphorus
Schenectady Lake	Mariaville Lake (1201-0113)	Phosphorus
Schuyler	Cayuta Lake (0603-0005)	Phosphorus

Seneca	Reeder Creek and tribs (0705-0074)	Phosphorus
St.Lawrence	Black Lake Outlet, Black Lake (0906-0001)	Phosphorus
St.Lawrence	Fish Creek and minor tribs (0906-0026)	Phosphorus
Steuben	Smith Pond (0502-0012)	Phosphorus
Suffolk	Agawam Lake (1701-0117)	Phosphorus
Suffolk	Big/Little Fresh Ponds (1701-0125)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Silt/Sediment
Suffolk	Fresh Pond (1701-0241)	Phosphorus
Suffolk	Great South Bay, East (1701-0039)	Nitrogen
Suffolk	Great South Bay, Middle (1701-0040)	Nitrogen
Suffolk	Great South Bay, West (1701-0173)	Nitrogen
Suffolk	Lake Ronkonkoma (1701-0020)	Phosphorus
Suffolk	Mattituck/Marratooka Pond (1701-0129)	Phosphorus
Suffolk	Mill and Seven Ponds (1701-0113)	Phosphorus
Suffolk	Millers Pond (1702-0013)	Phosphorus
Suffolk	Moriches Bay, East (1701-0305)	Nitrogen
Suffolk	Moriches Bay, West (1701-0038)	Nitrogen
Suffolk	Quantuck Bay (1701-0042)	Nitrogen
Suffolk	Shinnecock Bay and Inlet (1701-0033)	Nitrogen
Suffolk	Tidal Tribs to West Moriches Bay (1701-0312)	Nitrogen
Sullivan	Bodine, Mongomery Lakes (1401-0091)	Phosphorus
Sullivan	Davies Lake (1402-0047)	Phosphorus
Sullivan	Evens Lake (1402-0004)	Phosphorus
Sullivan	Pleasure Lake (1402-0055)	Phosphorus
Sullivan	Swan Lake (1401-0063)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Silt/Sediment
Ulster	Ashokan Reservoir (1307-0004)	Silt/Sediment
Ulster	Esopus Creek, Lower, Main Stem (1307-0010) [17]	Turbidity
Ulster	Esopus Creek, Middle, Main Stem (1307-0003) 17	Turbidity
Ulster	Esopus Creek, Upper, and minor tribs (1307-0007)[3]	Silt/Sediment
Ulster	Wallkill River, Lower, Main Stem (1306-0027)	Phosphorus
Warren	Hague Brook and tribs (1006-0006)	Silt/Sediment
Warren	Huddle/Finkle Brooks and tribs (1006-0003)	Silt/Sediment
Warren	Indian Brook and tribs (1006-0002)	Silt/Sediment
Warren	Lake George (1006-0016) and tribs	Silt/Sediment
Warren	Tribs to Lake George, East Shore (1006-0020)	Silt/Sediment
Warren	Tribs to Lake George, Lk.George Village (1006-0008)	Silt/Sediment

Washington	Wood Cr/Champlain Canal and tribs (1005-0036)	Phosphorus
Westchester	Lake Katonah (1302-0136)	Phosphorus
Westchester	Lake Lincolndale (1302-0089)	Phosphorus
Westchester	Lake Meahagh (1301-0053)	Phosphorus
Westchester	Lake Mohegan (1301-0149)	Phosphorus
Westchester	Lake Shenorock (1302-0083)	Phosphorus
Westchester	Mamaroneck River, Lower (1702-0071)	Silt/Sediment
Westchester	Mamaroneck River, Upp, & minor tribs (1702-0123)	Silt/Sediment
Westchester	Saw Mill River (1301-0007)	Phosphorus
Westchester	Saw Mill River, Middle, and tribs (1301-0100)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Silt/Sedimnt
Westchester	Silver Lake (1702-0040)	Phosphorus
Westchester	Teatown Lake (1302-0150)	Phosphorus
Westchester	Truesdale Lake (1302-0054)	Phosphorus
Westchester	Wallace Pond (1301-0140)	Phosphorus

APPENDIX E – List of NYSDEC Regional Offices

Region	Covering the following counties:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) Permit Administrators	DIVISION OF WATER (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	220 White Plains Road, Suite 110 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7438	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7165	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7070

APPENDIX F – SWPPP Preparer Certification Form

The SWPPP Preparer Certification Form required by this permit begins on the following page.

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

eNOI Submission ID:

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SWPPP Preparer First Name | MI | SWPPP Preparer Last Name

Signature | Date

Revised: January 2025

APPENDIX G – MS4 SWPPP Acceptance Form

The MS4 SWPPP Acceptance Form required by this permit begins on the following page.

NEW YORK STATE | Department of Environmental Conservation

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information
8. SWPPP Reviewed by:
9. Title/Position:
10. Date Final SWPPP Reviewed and Accepted:
IV. Regulated MS4 Information
11. Name of MS4 Operator:
12. MS4 SPDES Permit Identification Number: NYR20A
13. Street Address:
14. City/State/Zip:
15. Telephone Number:

MS4 SWPPP Acceptance Form - continued
V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative
I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.
Printed Name[1]:
Title/Position:
Signature:
Date:
VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

APPENDIX H – NYCDEP SWPPP Acceptance/Approval Form

The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval form required by this permit begins on the following page.

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

SWPPP Acceptance/Approval

Application Number:

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance/Approval
8. SWPPP Reviewed by:
9. Title/Position: /
10. Date Final SWPPP Reviewed and Accepted:
11. Acceptance/Approval Expiration Date:
IV. Regulated MS4 Information for projects that require coverage under the NY State Pollution Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity
12. Name of MS4: *CITY OF NEW YORK*
13. MS4 SPDES Permit Identification Number: *NY-0287890*
14. Contact Person:
15. Street Address: *59-17 Junction Blvd. 9th Floor*
16. City/State/Zip: *Flushing, NY 11373*
17. Telephone Number:

Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative
I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.
Printed Name:
Title/Position:
Signature:
Date:
VI. Conditions of Acceptance/Approval and Additional Information

Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

APPENDIX I – MS4 No Jurisdiction Form

The MS4 No Jurisdiction Form required by this permit begins on the following page.

NEW YORK STATE | Department of Environmental Conservation

MS4 No Jurisdiction Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. eNOI Submission ID:

III. Traditional Land Use Control MS4 Operator Information

a. Name of MS4 Operator:

b. MS4 SPDES Permit ID Number: NYR20A

c. Street Address:

d. City/State/Zip:

e. Telephone Number:

IV. Certification Statement

In accordance with CGP Part I.D.2.b.ii.3., I hereby certify that the Traditional Land Use Control MS4 Operator identified in section III. of this form does not have review authority over the construction project identified in section II. of this form, which is owned/operated by the entity identified in section I. of this form. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.:

b. Title/Position:

c. Signature:

d. Date:

APPENDIX J – Owner/Operator Certification Form

The Owner/Operator Certification Form required by this permit begins on the following page.

NEW YORK STATE | Department of Environmental Conservation

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: _____

eNOI Submission ID: _____

eNOI Submitted by: ☐ **Owner/Operator** ☐ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name MI Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

ATTACHMENT 4:

PCMM CONTINGENCY PLAN (CONTINGENCY PLAN)

Prepared For:

Abundant Solar Energy, Inc.
2235 Sheppard Ave, Suite 900
Toronto, ON M2J 5B4

Submitted by:

LaBella Associates, D.P.C.
300 State Street, Suite 201
Rochester, NY 14614

LaBella
Powered by partnership.

BUFFALO LANDFILL SOLAR FARM
IN THE CITY OF BUFFALO, NEW YORK

NYSDEC SITE NO. 9-15-012

POST CONSTRUCTION MONITORING AND MAINTENANCE CONTINGENCY PLAN

APRIL 2026

PROJECT NO. 2251176

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I. INTRODUCTION

LaBella Associates, D.P.C. has developed this Post-Construction Monitoring and Maintenance (PCMM) Contingency Plan (Contingency Plan) for the proposed solar array installation at the Buffalo Color Area "D" (New York State Department of Environmental Conservation [NYSDEC] State Superfund Site No. 9-15-012) at 1337 South Park Avenue, Buffalo, New York 14210 hereinafter referred to as the "Site". This Contingency Plan has been prepared on behalf of Abundant Solar Power, Inc. (Abundant)/SUNN 1016, LLC (SUNN 1016) for submission to NYSDEC. This Contingency Plan is specific to the solar array and does not supersede the Site Management Plan (MACTEC Engineering and Consulting, 2015). All activities under this Contingency Plan will be reported in the annual Periodic Review Reports for Area D.

The photovoltaic (PV) Solar Array System will be located on approximately 13.5 acres (delineated on the project drawings by the area inside the perimeter fence, referred to as the "Lease Area" or "Project Area" in this Plan) of the Site with all arrays located on what is known as the "landfill cap boundary" or "cover system". The Site cover was constructed in 1999 (Parsons, 2000) in accordance with an approved design (Parsons, 1996). The final cover construction included installation of a low permeability geomembrane barrier to minimize infiltration, the construction of a permanent stormwater drainage system, installation of a groundwater extraction and treatment system to address impacted site groundwater, and the restoration as a meadow.

This Post-Closure Monitoring and Maintenance Plan (Plan) is for the approximately 13.5-acre solar array footprint overlying the final cover system and describes the operations to be conducted during construction and the operational period. It has been prepared to address, among other site-specific requirements, the post-closure care requirements for industrial solid waste landfills set forth in 6NYCRR Part 360, with a focus on solar-specific inspections and maintenance. It is recognized that Area D is not a MSW Landfill, and the requirements specific to the superfund closure are addressed in the Site Management Plan (SMP).

This Contingency Plan details inspections and maintenance procedures that are to take place within the Lease Area for solar array construction and operation and is intended to comply with the existing SMP for the Site (MACTEC, 2015), all updates to the SMP and all OM&M plans as approved by the NYSDEC, during the lease period. The SMP will need to be updated following solar array completion. This Contingency Plan provides a schedule to maintain the integrity of the final cover system through routine inspection, maintenance, repair, monitoring, and reporting procedures within the Lease Area. The approximate limits of the Final Cover System are provided in Attachment 1, Sheet C202, "Site Plan".

South Buffalo Development, LLC (SBD) has entered into an agreement with SUNN 1016 to install and operate a 13.5-acre Photovoltaic (PV) Solar Array system within the final cover system and property limits at the Site. Refer to the Project Area (Attachment 1) for additional information. The PV Operator (SUNN 1016) of the PV system will be responsible for the operation and maintenance of the solar array system and the cover within the limits

of the security fence for the duration of the agreement. The PV System Engineering Drawings are provided in Attachment 1. No less than 60 days prior to the expiration of the lease, SUNN 1016 shall provide a removal and site restoration plan for NYSDEC review and approval. SUNN 1016 is responsible for restoration of the site at the termination of the lease.

This Contingency Plan provides monitoring and maintenance programs for the following:

- The solar photovoltaic (PV) system (approximately 13.50 acres) inclusive of the 19 acres of the Final Cover;
- The stormwater management within the Lease Area;
- Vegetative cover within the lease area; and
- Maintenance of security, including the perimeter fence.

SUNN 1016, will execute the programs listed above. Responsibilities are detailed in Section VII. The PV System Engineering Drawings included as Attachment 1 depict the areas of responsibility designated to SUNN 1016 (within the Lease Area) and SBD (outside the Lease Area). The procedures described below require timely and accurate reporting of inspections, maintenance, and repair actions to SBD.

All contractors, consultants and operational personnel will be notified that onsite activities are on a state superfund site and that no disturbance of the cover is allowed. No SUNN 1016 personnel, consultants, or contractors will have the potential to come into contact with the Area D materials below the cover system, and therefore no health and safety plan is required. SUNN 1016 is solely responsible for the safety of all personnel working on their behalf on Area D and on or near their electrical equipment.

II.FINAL COVER SYSTEM

The Site was closed under an Order on Consent (#B9-0014-84-01RD) dated June 28, 1993, and final cover was installed in 1998..

A. Final Cover

This section provides a description of the final cover as a reference for post-closure monitoring and maintenance activities. Subsequent sections present the final cover post-solar array construction inspection schedule and procedures; maintenance and repair procedures; and equipment requirements.

The final cover system consists of the following components (from the top down):

- Vegetated topsoil (6-inches thick)
- Unclassified fill soil layer (24-inches thick)
- Drainage net with geotextile on one side (plateau portion supporting solar array)
- 60-mil high density polyethylene (HDPE) smooth flexible membrane liner (FML)

- 6-ounce non-woven geotextile

Additionally, the final cover system includes access features required to maintain the Site and the stormwater management system during the post-closure period. Monitoring and maintenance of the final cover stormwater management system is discussed in Section IV.

B. Inspection Schedule and Procedures

Routine inspections of the Final Cover System are conducted to identify areas requiring additional maintenance to minimize the effect and extent of the conditions listed below. SBD will conduct inspections under the supervision of a New York State Licensed Professional Engineer or a Qualified Environmental Professional (QEP) quarterly within the Lease Area in accordance with the SMP.

In addition to the semiannual inspections by SBD, SUNN 1016 shall perform inspections within the Lease Agreement Area following all significant precipitation, seiche, or snowmelt events to identify the presence of any of, but not limited to, the following conditions:

- Visible debris, litter, and waste
- Vegetative cover layer of the Site:
  - Sparse or distressed vegetation
  - Surficial slumping on slopes
  - Intrusion of Japanese knotweed (Reynoutria japonica, Fallopia japonica and Polygonum cuspidatum) or giant hogweed (Heracleum mantegazzianum)
- Vertical and sub-vertical cracking
- Ponding
- Surface drainage interruptions, surface erosion conditions (e.g., rills, gullies)
- Indications of vectors (e.g., burrows)
- Gas vents: signs of blockage or damage
- Perimeter access road: signs of rutting, drainage issues, and erosion
- Perimeter fence: damage, breaks, or abnormalities, such as loose fence tension, or malfunctioning gates and locks
- Movement or damage to the perimeter security fence

If any of the conditions listed above are identified, photo-documentation will be collected and attached to the inspection form (Attachment 2).

The main access gate will be inspected as it is opened whenever access is required. In addition, the cover system will be inspected following unusual events such as Site fires, vehicle accidents, and major rainstorms (five-year storms), seiche events, or significant snow melt.

All inspections will be documented on the Inspection Form provided as Attachment 2. Inspection forms will be submitted to SBD.

C. Maintenance and Repair Procedures

It is anticipated that the vegetative cover and granular base layers will require periodic maintenance throughout the post-construction lease maintenance period. Maintenance of the vegetative cover and gravel pads below the solar arrays is necessary to promote long-term erosion control and to protect the final cover. The conditions that may contribute to the need for maintenance of the vegetative cover correspond to those outlined above, which include both routine maintenance and event/condition-based maintenance. Any condition-based maintenance and repairs (i.e. Sections II.C.3 – II.C.6) require notification of the Department and will be documented and submitted to the Department after the repairs are completed.

1. Litter and Debris

   Litter and debris identified during inspections will be removed and disposed.

2. Mowing

   Mowing of the grasses on the plateaus and side slopes shall be performed to assist in keeping unwanted vegetation (e.g., woody species or noxious weeds) from becoming established. Mowing shall be conducted annually, at a minimum. In the event that despite periodic mowing, noxious weeds (Japanese knotweed (Reynoutria japonica, Fallopia japonica and Polygonum cuspidatum) or giant hogweed (Heracleum mantegazzianum)) or other undesirable vegetation are observed on the Site cover, such unwanted vegetation will either be removed by hand with appropriate hand tools or will be controlled through use of an appropriate herbicide. SUNN 1016 will be responsible for mowing of the Lease Area at an interval that is appropriate for vegetation established on the cap; SBD will be responsible for mowing required outside the Lease Area (refer to Attachment 1). Mowing shall be completed annually after the second week of September, in accordance with the SMP.

3. Repairs to the Vegetative Cover Layer

   Condition-based maintenance will be performed in response to any detrimental condition identified during inspections. Repairs to the vegetative cover layer will be performed in a manner consistent with the original vegetative cover layer construction procedures. Prior to any import of fill, the materials will be sampled in accordance with NYSDEC DER-10 and an Import request form will be submitted to SBD for review and subsequent submission to the NYSDEC. Approved fill, brought in from off-site, will be placed in loose lifts of no more than 6 to 8 inches and compacted to re-establish grade to restore the existing elevations shown on Sheet

C101. Placement and compaction of vegetative cover layer soil lifts will be performed using low ground pressure equipment or wheeled construction equipment. Following placement of soil fill, the disturbed area will be properly prepared, seeded, fertilized, and covered with mulch. The area will be monitored until the vegetation has established.

If it is suspected that rodents are threatening the integrity of the vegetative cover layer or the final cover, a licensed pest control professional will be contracted to perform the necessary removal services. Animal burrows will be repaired by filling the holes with approved fill and reseeded, as necessary.

Reseeding of the vegetative cover layer will be performed as needed. Reseeding with an approved seed mix may be necessary if surface erosion has occurred, plateau or side slope reworking was performed, or if weed growth or removal has caused the death or sparseness of the existing vegetation. The reseeding efforts shll be consistent with the original final cover construction procedures.

All repairs to the vegetative cover within the Lease Area will be the responsibility of SUNN 1016. Repairs outside the Lease Area will be the responsibility of SBD (refer to Attachment 1). If typical maintenance repairs are required, SBD will be notified of the repairs prior to the start of work. If atypical repairs are required, a short work plan detailing the work will be prepared and submitted to SBD for review and approval prior to the start of work.

4. Gas Vents/Wells

A total of five gas vents/wells are installed in the final cover. Any damage to the vents that cannot be repaired and renders them inoperative will result in replacement with a new vent of similar construction and depth. Inspection and repair of gas vents at the Site will be the responsibility of SBD and will be performed in accordance with the current SMP. Any repairs required as a result of actions by SUNN 1016, will be completed by SBD at SUNN 1016's cost.

5. Access Road

A portion of the access road will be improved to allow year-round access around the Lease Area for maintenance and inspection during the post-construction period (Attachment 1, Sheets C402 and C702). Following solar construction, SBD will be responsible for maintenance and repairs to the access road within the fence.

6. Site Perimeter Fence and Gate

A 7' high chain-link fence shall be constructed on the boundary of the lease Area to comply with the National Electrical Code. Fence inspections and repairs will be performed as necessary to maintain site security. SUNN 1016 will be responsible

for inspections, maintenance, and repairs to the perimeter fencing and gate. SUNN 1016 will notify SBD of all planned repairs.

III. PHOTOVOLTAIC SYSTEM

A fixed-tilt Solar Photovoltaic (PV) System utilizing Remote Net Metering (RNM) (PV System) will be constructed on approximately 13.5 acres (Lease Area). The PV System will be installed and maintained by the PV Operator (SUNN 1016). SUNN 1016 will inspect the electrical components once per year, and the physical system (i.e., where the ballasted system meets the ground) including all mounting hardware on and off the cap no less than twice per year. The inspection reports will be provided to SBD within 2 weeks of each inspection.

The PV System will consist of approximately 5,434 580Wp solar modules affixed to panels supported by a non-penetrating surface-mounted ballast racking system (see Attachment 1, PV Solar Array Engineering Drawings. Electrical service to the PV System will be provided via interconnection to the existing electrical infrastructure.

A. Inspection Schedule and Procedures

Inspections of the PV System will be conducted by the PV Operator.

1. Photovoltaic Array System

   The PV system will be situated within the approximately 13.5 -acre Site surrounded by the NEC compliant perimeter fence. Periodic inspections of the array system will include the following:

   - Perimeter fence inspection for continuity
   - Signs and placards, visible and properly installed
   - Visible debris, litter, and waste
   - Vegetation growth within the Lease Area
   - Confirm electrical enclosures are only accessible to authorized personnel, are properly secured, and have proper signage
   - Check for corrosion on the enclosures and racking system
   - Check for hanging or loose wires in the array
   - Check inverter/electrical concrete pads to make sure no excessive cracking or signs of wear are present.

B. Maintenance and Repair Procedures

1. Vegetative Cover System, Access Road, Gas Vents, Perimeter Fence

   Maintenance and repair of the cover system, access road, gas vents, and perimeter fence within the boundary of the Lease Area will be conducted in accordance with the procedures in Section II.C of this Contingency Plan.

2. Stormwater Management Features

There are perimeter underdrains located within the footprint of the Lease Area which drain stormwater from the cover system. Erosion of the final cover system within the Lease Area will be repaired in accordance with Section II.C of this Contingency Plan. If typical maintenance repairs are required, SUNN 1016 will notify SBD within 24-hours of identifying the area to be repaired.

3. Ballast, Rack System, and PV Panels

SUNN 1016's ground ballasts, rack systems, and PV panel maintenance process is designed to identify and prevent failures that can occur over the long-term operation of the PV System. Maintenance of the components focuses on the following standard steps:

- Inspection for preventative maintenance
- Array Checks
- Mechanical Checks
- Electrical Checks
- Cleanliness
- Erosion of the gravel supporting the ballast
- Erosion of the soil cover caused by flow concentrated by the gravel or ballast systems

Any disturbance of the final cover system during PV System maintenance activities will be repaired in accordance with Section II.C of this Contingency Plan.

4. PV Electrical System

SUNN 1016 will be responsible for maintenance and repair, if necessary, of the PV electrical system. The PV electrical system consists of the transformer, inverter, electrical interconnection up to the point of coupling with National Grid distribution feeder, and meters. Inspections will include the following:

- Visual Checks
- Mechanical Checks
- Electrical Checks
- Operational Checks
- Cleanliness

IV.STORMWATER MANAGEMENT SYSTEM

A. Inspection Schedule and Procedures

Stormwater management for the final cover of the Site area is provided by perimeter underdrains on landfill designed to collect and convey clean, non-contact stormwater in a controlled manner. The stormwater management system consists of passive components; there are no active operations. In general, stormwater is managed by one distinct feature:

- Perimeter Underdrains

All elements of the stormwater management system will be maintained throughout the lease period. Inspections will be performed in accordance with Section 6.1 of the SMP for the Site (MACTEC, 2015) to verify the structures are intact and undisturbed and that channels and underdrains are free of obstructions that would impair the free flow of surface water runoff.

SBD will remain responsible for stormwater feature inspections. Repairs will be conducted by SBD at SUNN 1016's expense.

B. Maintenance and Repair Procedures

The stormwater system will be maintained in accordance with the current NYSDEC approved SMP.

V. GROUNDWATER MONITORING SYSTEM

A. Maintenance and Repair Procedures

A groundwater monitoring system is associated with the Site for long-term monitoring. SBD will remain responsible for conducting required groundwater monitoring at the Site in accordance with the existing or current SMP. Groundwater sampling for shallow groundwater (including Area "D") is conducted annually.

VI.CONTINGENCY PLAN

This Contingency Plan has been presented to satisfy the requirements of NYCRR Part 360-2.15(k)(7)(v). As required by NYCRR 360-2.15(k)(7)(v)(a), the contingency plan should include responses to "problems that have a reasonable likelihood of occurrence". At the Site these likely occurrences include erosion and/or vector damage to the cap system, construction related damage to the final cover system, erosion and/or blockages of the stormwater management system, and action levels experienced in the groundwater monitoring system.

A. General Cover System

As discussed in Sections II.B and II.C above, inspections of the final cover will be performed on a routine basis. If any erosion and/or vector damage to the cap system is noted during these inspections, then the personnel identified in Section VII below

must be notified of the condition. Required action(s) will be conducted in accordance with the SMP.

B. Photovoltaic System Construction

SUNN 1016 will conduct periodic inspections during the construction of the Photovoltaic System. Inspection duties will focus on ensuring all construction activities are conducted in accordance with the Engineering Report and Design Drawings which have been prepared to ensure the integrity of the cover system is maintained. The inspector will immediately notify the personnel listed in Section VII below if either the construction activities deviate from the approved design or if the activities in compliance with design cause any damage to the cover system.

C. Stormwater Management System

As discussed in Section IV above, inspections of the Stormwater Management System will be performed on a routine basis. If any damage to the system is noted during these inspections then the personnel identified in Section VII below must be notified of the condition.

D. Groundwater Monitoring System

SBD performs semi-annual monitoring of the groundwater at the Site. If any damage to the system is noted during these inspections, then the personnel identified in Section VII below must be notified of the condition.

VII. ROLES AND RESPONSIBLITIES

This Contingency Plan will be implemented by SUNN 1016. The responsible parties for the post-closure maintenance period are as follows:

Buffalo Landfill Solar Farm Contact Information		
Name	Organization	Phone No.
South Buffalo Development, Inc. Lawrence Pirrone	South Buffalo Development (Senior Remediation Manager)	(716) 418-4204
SUNN 1016 Dennis Stainton	PV Solar System Site Operator	(647) 233-9052

Buffalo Landfill Responsibilities		
Task	**SBD**	**SUNN 1016**
Cover System Inspection	Outside Lease Area	Within Lease Area
Mowing	Outside Lease Area	Within Lease Area
Vegetative Cover Repairs	Outside Lease Area	Within Lease Area
Gas Vent Inspection/ Repairs	Responsible for all gas vents	None
Groundwater/Leachate Pump and Treat System	Responsible for all system components and maintenance	Responsible for costs associated with repairs from any damage sustained during construction
Access Road Maintenance/ Repairs	Responsible for all access road maintenance/ repairs	During solar array construction
Fence Maintenance/ Repairs	None	Responsible for all fence maintenance/ repairs
PV System Inspections/ Maintenance/ Repairs	None	Annual inspection of electrical components and semi-annual inspections of ballasted system.
SWPPP Inspections	Responsible for all inspections and maintenance of existing stormwater controls	During construction of solar array
Groundwater monitoring	Responsible for monitoring and reporting.	None

VIII. Post-Lease/Operation Land Use

The primary land use expected for the site after the closure/decommissioning of the solar array will be as open dormant land.

IX. Training

Personnel responsible for performing site inspections and maintaining the site will be competent individuals trained in the skills necessary to perform their job. Personnel will

continue to receive training as new programs become available. All onsite personnel shall receive awareness training:

- Contact/notification requirements;
- Area D site specific requirements (no excavation, immediate reporting of any damage to venting wells, monitoring/observation wells, any damage to the extraction well vaults, wells or conveyance piping, any compromise of the cap);
- Electrical safety requirements;
- Inspection requirements; and
- Security requirements.

X. Records

Records of all PCMM monitoring events, inspections, repairs and maintenance activities shall be maintained and kept on file by SBD and SUNN 1016.

XI.References

1. NYSDEC, 1993. *Order on Consent (Index #D7-0001-00-12), Site Number 9-15-012 Buffalo Color Area "D" Site*. New York State Department of Environmental Conservation, June 28, 1993.
2. NYSDEC, 2010, DER-10 Technical Guidance for Site Investigation and Remediation.
3. Parsons, 1996. *Final Remedial Design Report: Buffalo Color Corporation Area "D" Site*. Prepared for Allied Signal by Parsons, February 1996
4. Parsons, 2000. *Closure Certification Report: Buffalo Color Area "D", Remedial Construction Project No. F0119ZA50.* Prepared for Allied Signal, by Parsons, August 2000.
5. MACTEC, 2015. *Former Buffalo Color Corporation Site – Area D Site Management Plan.* Prepared for Honeywell, by MACTEC Engineering and Consulting, P.C., April 2015.

Attachment 1

BUFFALO LANDFILL SOLAR PROJECT

2 BUFFALO CREEK RAILROAD, BUFFALO, NY 14210

CITY OF BUFFALO, ERIE COUNTY

BUFFALO COLOR AREA "D"
NYSDEC SITE NO.: 915012
NYSDEC SITE ADDRESS: 2 BUFFALO CREEK RAILROAD
BUFFALO, NY 14210

PROJECT DATA	
PARCEL INFORMATION	
APPLICANT	SUNN 1016, LLC
OWNER	SOUTH BUFFALO DEVELOPMENT, LLC
PARCEL ADDRESS	1037 SOUTH PARK AVE, BUFFALO, NY 14210
SYSTEM SIZE (MWDC)	2.227
SYSTEM SIZE (MWAC)	1.50
PARCEL AREA (TOTAL)	18.92 AC
TOTAL PROJECT AREA	13.90 AC
PROPOSED IMPERVIOUS WITHIN PROJECT AREA	0.09 AC
GROUND MOUNT PV SYSTEM SUMMARY	
DC SIZE (MW)	2.227
AC SIZE (MW)	1.50
MAX PANEL HEIGHT (FT)	12
MODULE POWER (W)	580
MODULE QUANTITY	3,840
RACKING TYPE / TILT ANGLE	FIXED / 30°

LOCATION MAP
1" = 600'

DRAWING INDEX

C001 GENERAL NOTES & LEGEND
C101 EXISTING CONDITIONS& DEMOLITION PLAN
C201 OVERALL SITE PLAN
C202 SITE PLAN
C401 OVERALL GRADING PLAN
C402 GRADING PLAN
C501 EROSION & SEDIMENT CONTROL PLAN
C701 CONSTRUCTION DETAILS
C702 CONSTRUCTION DETAILS
C703 CONSTRUCTION DETAILS

ABUNDANT SOLAR POWER, INC.

700 WEST METRO PARK
ROCHESTER, NY 14623
AUGUST 15, 2025
REVISED: MAY 5, 2026

ABUNDANT
Solar Power Inc.

LaBella
Powered by partnership.

300 State Street, Suite 201
Rochester, NY 14614
585-454-6110

labellapc.com

ISSUED FOR PERMIT
AUGUST 15, 2025

SUNN 1016 LLC
PROJECT NO: 2251176

BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, CITY OF BUFFALO, NY 14210

GENERAL NOTES

1. THE CONTRACTOR ALONE SHALL BE RESPONSIBLE TO LOCATE UTILITIES OUTSIDE THE RIGHT-OF-WAY INCLUDING PRIVATE ROADS.
2. SITE DRAINAGE, INCLUDING THE PROJECT SITE AND ADJACENT PRIVATE AND PUBLIC ROADWAYS, DRIVES, PARKING AREAS OR PROPERTIES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL MATERIALS, TOOLS AND EQUIPMENT, INCLUDING SPECIAL CUTTING DEVICES, NECESSARY TO PERFORM THE WORK CONTAINED IN THIS CONTRACT.
4. THE CONTRACTOR SHALL PROTECT ALL EXISTING SITE AMENITIES.
5. UNLESS OTHERWISE INDICATED ON THE PLANS OR DIRECTED BY THE ARCHITECT/ENGINEER, THE CONTRACTOR IS RESPONSIBLE FOR PRESERVING AND PROTECTING FROM DAMAGE ALL TREES, THE LANDFILL COVER, THE SLOPES ABOVE THE BUFFALO RIVER, SHRUBS AND PLANTS IN THE VICINITY OF THE PROPOSED WORK.
6. THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL EXISTING UTILITIES.
7. ANY SITE AMENITY, UTILITY, STREET APPURTENANCE, OR OTHER ITEM WHICH BECOMES DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED IN-KIND BY THE CONTRACTOR AS DETERMINED BY THE PROJECT MANAGER OR ARCHITECT/ENGINEER AND AT NO ADDITIONAL COST TO THE OWNER. REPAIR WORK IS ALSO TO BE COORDINATED WITH NYSDEC.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SAMPLING OR OTHER COSTS ASSOCIATED WITH ANY OFFSITE SOILS DISPOSAL. SBD NEEDS FINAL APPROVAL OF ALL WASTE MANIFESTS.

SURVEY NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. NO ALLOWANCE WILL BE MADE FOR ADDITIONAL COSTS DUE TO CONTRACTOR'S FAILURE TO VERIFY EXISTING CONDITIONS,
2. THE CONTRACTOR SHALL LOCATE, MARK, SAFEGUARD AND PRESERVE ALL SURVEY MARKERS AND RIGHT-OF-WAY MARKERS IN THE AREA OF CONSTRUCTION.
3. ANY IRON PINS, MONUMENTS OR OTHER ITEMS DEFINING PROPERTY LINES WHICH ARE DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE PROPERLY TIED AND ACCURATELY RESET BY A NYS LICENSED SURVEYOR UPON COMPLETION OF THE WORK.
4. HORIZONTAL DATUM BASED OFF NY83-WF.
5. ELEVATIONS BASED ON NAD'83 DATUM US FT.

DEMOLITION NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. NO ALLOWANCE WILL BE MADE FOR ADDITIONAL COSTS DUE TO CONTRACTOR'S FAILURE TO VERIFY EXISTING CONDITIONS AND DIMENSIONS. COULD BE SUBSTANTIAL IF THE NYSDEC DETERMINES THE CONTRACTOR DISTURBED THE CAP. CONTRACTOR SHALL OBTAIN PHOTOS AT ONSET OF CONSTRUCTION TO DEMONSTRATE PRE-CONSTRUCTION CONDITIONS OF COVER SYSTEM.
2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY DIG SAFELY NEW YORK AT 811 TO REQUEST UTILITY STAKEOUT OF ALL PUBLIC UTILITIES.
3. THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING ABOVE GROUND AND BELOW GROUND UTILITIES, STRUCTURES, AND APPURTENANCES SHOWN ON THE PLANS ARE APPROXIMATE AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES, STRUCTURES, AND APPURTENANCES IN THE PATH OF AND ADJACENT TO THE PROPOSED WORK.
4. SITE DRAINAGE, INCLUDING THE PROJECT SITE AND ADJACENT PRIVATE AND PUBLIC ROADWAYS, DRIVES, PARKING AREAS OR PROPERTIES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
5. CONTRACTOR SHALL PROTECT AND SUPPORT ALL EXISTING UTILITIES.
6. THE CONTRACTOR SHALL FIRST COORDINATE WITH THE PROPERTY OWNER BEFORE ANY CONTACT WITH THE CITY OR NYSDEC. THE CONTRACTOR SHALL THEN NOTIFY THE LOCAL GOVERNMENT, LOCAL FIRE DEPARTMENT, THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) AND THE U.S. ARMY CORPS OF ENGINEERS (USACOE) AS NECESSARY AND SHALL OBTAIN ANY REQUIRED PERMITS PRIOR TO BEGINNING WORK. COPIES OF ANY REQUIRED PERMITS SHALL BE PROVIDED TO THE OWNER PRIOR TO BEGINNING THE WORK.
7. CONTRACTOR SHALL REMOVE FROM SITE, CONSTRUCTION MATERIALS NOT INDICATED TO BE SALVAGED INCLUDING ALL DEBRIS. ALL REMOVED MATERIALS SHALL BECOME THE PROPERTY OF CONTRACTOR WHO SHALL LEGALLY DISPOSE OF SAME. CONTRACTOR SHALL NOT REMOVE ANY SOIL FROM THE SITE.
8. ALL TREES, SHRUBS AND PLANTS DESIGNATED TO REMAIN AND DISTURBED BY CONSTRUCTION OPERATIONS, SHALL BE REPLACED IN-KIND AS DIRECTED BY THE ARCHITECT/ENGINEER AND/OR OWNER'S DESIGNATED REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.
9. THE CONTRACTOR SHALL MAINTAIN SAFE VEHICULAR AND PEDESTRIAN ACCESS TO THE EXISTING BUILDINGS FOR THE DURATION OF THE CONTRACT.
10. WHEN EXISTING CONSTRUCTION WHICH IS TO REMAIN IS DAMAGED DURING THE COURSE OF CONSTRUCTION AS A RESULT OF CONTRACTORS WORK, IT SHALL BE REPAIRED AND/OR REPLACED TO SATISFY THE PROPERTY OWNER AND THE NYSDEC, AT NO COST TO THE OWNER. ALL REPAIRS AND/OR REPLACEMENTS WILL BE SUBJECT TO OWNERS APPROVAL.
11. COORDINATE LOCATION OF TEMPORARY CONSTRUCTION FENCE AND TEMPORARY STONE STAGING AREA WITH PROPERTY OWNER AND NYSDEC. NYSDEC MUST APPROVE ALL IMPORT BEFORE IT IS TRANSPORTED TO THE PROPERTY.

SITE NOTES

1. GENERAL NOTE: ALL SUBGRADE MATERIAL IMPORTED REQUIRES NYSDEC APPROVAL.
2. WELL COMPACTED SUBGRADE SHALL BE UTILIZED UNDERNEATH CONSTRUCTION OF PAVEMENT AND CONCRETE BASES. COMPACTION OF SUBGRADE IS NOT APPLICABLE UNDER THE PERVIOUS GRAVEL ROAD AREAS.
3. ALL STAKEOUT FOR THE PROPOSED SITE IMPROVEMENTS SHALL BE COMPLETED BY A NEW YORK STATE LICENSED LAND SURVEYOR.
4. IF ANY DISCREPANCIES ARE NOTED BETWEEN THESE CONSTRUCTION DOCUMENTS AND INFORMATION PROVIDED OR AN ERROR IS SUSPECT, IT SHALL BE IMMEDIATELY REPORTED TO THE CONSTRUCTION MANAGER AND LABELLA ASSOCIATES PROJECT MANAGER IN WRITING.
5. ANY PROOF-ROLLING OF EXPOSED SUBBASE BY A MINIMUM 10 TON SMOOTH DRUM ROLLER SHALL BE DONE UNDER THE GUIDANCE OF, AND OBSERVED BY, QUALIFIED ENGINEERING PERSONNEL PRIOR TO PLACEMENT OF SUBBASE MATERIAL. THE ROLLER SHOULD BE OPERATED IN THE STATIC MODE AND COMPLETE AT LEAST TWO (2) PASSES OVER THE EXPOSED SUBGRADES. PERVIOUS GRAVEL ACCESS ROAD AREAS SHALL NOT PROOF-ROLL THE SUBGRADE, BUT MUST MAINTAIN A 10:1 OR LESS SLOPE ALONG ALL AREAS OF THE ROAD.

GRADING NOTES

1. THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF OSHA, AND ANY OTHER AGENCY HAVING JURISDICTION WITH REGARD TO SAFETY PRECAUTIONS WITH TRENCHING OPERATIONS. THE REQUIREMENTS SET FORTH HEREIN ARE INTENDED TO SUPPLEMENT REQUIREMENTS ESTABLISHED BY THESE AGENCIES. IN THE CASE OF A CONFLICT BETWEEN REQUIREMENTS OF OTHER JURISDICTIONAL AGENCIES AND THESE DOCUMENTS, THE MORE STRINGENT REQUIREMENT ON THE CONTRACTOR SHALL APPLY.
2. THE CONTRACTOR SHALL PLACE AT MINIMUM 6 INCHES OF CLEANED SCREENED TOPSOIL IN ALL DISTURBED AREAS PRIOR TO SEEDING

SCHEDULE OF CONSTRUCTION ACTIVITIES

1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE CITY OF BUFFALO OFFICIALS, OWNER, PROPERTY OWNER REPRESENTATIVES, NYSDEC, EMERGENCY SERVICES, UTILITY & OTHER AGENCIES IN ATTENDANCE.
2. SUBMIT EROSION CONTROL MEASURES AND SEQUENCING FOR REVIEW AND APPROVAL BY THE QUALIFIED INSPECTOR AND THE SMP.
3. STAKEOUT AND FLAG THE LIMITS OF THE BUFFALO RIVER.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
5. INSTALL PERIMETER SEDIMENT CONTROLS, SUCH AS SEDIMENT COMPOST FILTER SOCK.
6. INSTALL TEMPORARY CONSTRUCTION MEASURE SUCH AS CONSTRUCTION ROAD, LAYDOWN AREA, CONSTRUCTION AREA, DESIGNATED TOPSOIL STOCKPILE AREA, STAGING AREA FENCING, ETC.
7. PROTECT EXISTING VEGETATION AND OTHER ENVIRONMENTAL FEATURES TO BE PRESERVED WITH ORANGE CONSTRUCTION FENCE OR TREE PROTECTION.
8. CLEAR AND GRUB BRUSH, SHRUBS, AND OTHER DEBRIS WITHIN DESIGNATED AREAS.
9. INSPECT, CLEAN, AND MAINTAIN EROSION CONTROL MEASURES AS NECESSARY AND AS ORDERED BY THE QUALIFIED INSPECTOR. SWEEP PUBLIC OR PRIVATE ROADWAYS, DRIVES AND PARKING AREAS AS NECESSARY TO MAINTAIN CLEAN FROM DEBRIS. RELOCATED AND RESET EROSION CONTROL MEASURES AND CONSTRUCTION FENCING AS REQUIRED TO COMPLETE WORK. ALL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONAL BEFORE COMMENCEMENT OF CONSTRUCTION OF ANY SEGMENT OF THE PROJECT THAT REQUIRES SUCH MEASURES.
10. STABILIZE DISTURBED AREAS AND STOCKPILES WITHIN 14 DAYS OF LAST CONSTRUCTION ACTIVITY IN EACH AREA. (7 DAYS IF GREATER THAN 5 ACRES DISTURBED).
11. INSTALL UTILITES. EXCESS MATERIALS NOT BACKFILLED IN UTILITY TRENCHES SHALL BE REMOVED FROM THE SITE OR SPOILED IN AREAS APPROVED BY THE PROPERTY OWNER AND NYSDEC. EROSION CONTROL MEASURES ARE NOT REQUIRED AROUND SOILS (EARTHEN MATERIALS) EXCAVATED, SIDE CAST AND BACKFILLED INTO THE TRENCH WITHIN THE SAME DAY.
12. RESTORE TO EXISTING GRADE AS TRENCH BACKFILLING PROGRESSING. MAINTAIN PROPER SITE DRAINAGE TO PROTECT WORK AREA, ADJACENT PROPERTIES, SWALES, AND OTHER WATERCOURSES.
13. BOX OUT AREAS FOR PERVIOUS ACCESS ROADS AND EQUIPMENT PADS. AS UTILITY REPLACEMENTS ARE COMPLETE, PREPARE THE SUBGRADE AS REQUIRED.
14. INSTALL CONCRETE WASHOUT AREA. NO WET OR FRESH CONCRETE, WASHINGS FROM CONCRETE TRUCKS, MIXERS, OR OTHER DEVICES, OR CONCRETE LEACHATE SHALL BE ALLOWED TO ESCAPE INTO ANY WETLANDS OR WATERS.
15. INSTALL CONCRETE ELECTRICAL EQUIPMENT PADS AND THE APPROPRIATE STORMWATER MANAGEMENT FACILITIES.
16. INSTALL THE DEC APPROVED LIMITED USE PERVIOUS GRAVEL ACCESS ROAD ONCE ALL AREAS SUBJECT TO RUNOFF ONTO THE PERVIOUS ACCESS ROAD HAVE ACHIEVED FINAL STABILIZATION.
17. INSTALL PERMANENT SEEDING, FERTILIZER, AND MULCH.
18. COMPLETE GRADING IF REQUIRED, REAPPLY TOPSOIL, INSTALL PERMANENT SEEDING, FERTILIZER, AND MULCH.
19. CAPTURE, REMOVE, AND DISPOSE OF ACCUMULATED SILT OR SEDIMENT FROM SILT FENCE, CHECK DAMS, INLET PROTECTION, AND SEDIMENT BASINS.
20. CLEAN THE SITE OF ALL INCIDENTAL CONSTRUCTION MATERIALS THAT ARE NOT INCORPORATED INTO THE WORK, AND PROPERLY DISPOSE OFFSITE.
21. SEED, MULCH, AND FERTILIZE TO ESTABLISH VEGETATION AT DISTURBED AREAS NOT DESIGNATED FOR PAVEMENT OR OTHER SURFACES. WHERE SEED DOES NOT GERMINATE OR WHERE WASHOUT, EROSION, RUTTING, OR OTHER DAMAGE OCCURS, REPAIR DAMAGE, RE-SEED AND RE-FERTILIZE AS NECESSARY TO ACHIEVE 80% GERMINATION OVER 100% OF THE SITE.
22. REMOVE ALL TEMPORARY EROSION CONTROL PRACTICES UPON APPROVAL OF FINAL STABILIZATION BY THE QUALIFIED INSPECTOR.

LEGEND

EXISTING	PROPOSED	DESCRIPTION
△		PROJECT BENCHMARK / CONTROL POINTS
		WETLAND
		WETLAND BUFFER
	⌀	TREE REMOVAL
		DECIDUOUS TREE
		CONIFEROUS TREE
		ASPHALT ACCESS ROAD
		PERVIOUS GRAVEL ACCESS ROAD
		AGRICULTURAL FENCE
		BALLASTED FENCE
		TREE/VEGETATION LIMIT
		PROPERTY LINE
		SETBACK LINE
ROW		RIGHT-OF-WAY
		UTILITY POLE
		UNDERGROUND ELECTRIC
	OE	OVERHEAD ELECTRIC
ST	ST	STORM LINE
		UNDERDRAIN
510	510	MAJOR CONTOUR
509	509	MINOR CONTOUR
		FLOW DIRECTION
		EROSION FENCE
		CONSTRUCTION FENCE
		SILT SOCK INLET PROTECTION
		CHECK DAM
		CONCRETE WASHOUT
		STABILIZED CONSTRUCTION ENTRANCE (TEMPORARY)
	TOPSOIL STOCKPILE	TOPSOIL STOCKPILES
		TEMPORARY CONSTRUCTION LAY DOWN AREA

EROSION & SEDIMENT CONTROL NOTES

1. ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH NEW YORK STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, AND LOCAL GOVERNING SOIL AND WATER CONSERVATION AGENCY RECOMMENDATIONS AND STANDARDS. CONTRACTOR SHALL SUBMIT PROPOSED EROSION CONTROL PLAN INCLUDING SEQUENCING OF WORK TO THE ENGINEER FOR REVIEW PRIOR TO START OF WORK.
2. UTILIZE CONSTRUCTION METHODS/TECHNIQUES, WHICH WILL LIMIT THE EXPOSED EARTHEN AREAS AND MINIMIZE THE EFFECT OF EARTH DISTURBANCE ACTIVITIES ON SOIL EROSION.
3. RESTRICT DISTURBANCE TO UNDER 5 AC WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.
4. ALL SEDIMENTATION BARRIERS AND OTHER TEMPORARY OR PERMANENT MEASURES SHALL BE IN PLACE PRIOR TO THE START OF CONSTRUCTION. PLANS SHOW THE SUGGESTED MINIMUM MEASURES REQUIRED. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE ADJUSTED IN THE FIELD AS NEEDED DEPENDING ON CONSTRUCTION SEQUENCE. LOCATIONS TO BE VERIFIED BY STORMWATER INSPECTOR.
5. REMOVAL OF ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE COMPLETED AT THE APPROVAL OF THE OWNER AND ENGINEER. THE COST OF REMOVING THESE MEASURES SHALL ALSO BE INCLUDED IN THE BID PRICE.
6. FOR THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL PROTECT ALL ON-SITE, ADJACENT AND/OR DOWNSTREAM STORM/SANITARY SEWERS, AND/OR OTHER WATER COURSES FROM CONTAMINATION BY WATER BORNE SILTS, SEDIMENTS, FUELS, SOLVENTS, LUBRICANTS OR OTHER POLLUTANTS ORIGINATING FROM ANY WORK DONE ON, OR IN SUPPORT OF THIS PROJECT.
7. DURING CONSTRUCTION NO WET OR FRESH CONCRETE OR LEACHATE SHALL BE ALLOWED TO ESCAPE INTO STORM/SANITARY SEWERS, DITCHES OR OTHER WATERS OF NEW YORK STATE, NOR SHALL WASHINGS FROM CONCRETE TRUCKS, MIXERS OR OTHER DEVICES BE ALLOWED TO ENTER ANY STORM/SANITARY SEWERS, DITCHES, RIVERS, OR WATER COURSES.
8. ALL EXCAVATED OR IMPORTED EARTHEN STOCKPILES SHALL BE SUITABLY STABILIZED AND PROTECTED BY SILT FENCE SO THAT IT CANNOT REASONABLY ENTER ANY WATER BODY, OR STORM OR SANITARY SEWER.
9. ALL METHODS AND EQUIPMENT PROPOSED BY THE CONTRACTOR TO ACCOMPLISH THE WORK FOR EROSION AND POLLUTION CONTROL SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER OR STORMWATER INSPECTOR.
10. THE CONTRACTOR SHALL BE REQUIRED TO TREAT TRAVELED AREAS TO CONTROL DUST. WATER SHALL BE APPLIED TO SUCH TRAVELED AREAS AS THE ARCHITECT/ENGINEER OR OWNER'S DESIGNATED REPRESENTATIVE MAY DESIGNATE. THE NUMBER OF APPLICATIONS AND THE AMOUNT OF WATER SHALL BE BASED UPON FIELD AND WEATHER CONDITIONS.
11. ALL AREAS OF SOIL DISTURBANCE RESULTING FROM THIS PROJECT WHICH WILL NOT BE SUBJECT TO FURTHER EARTHWORK OR CONSTRUCTION ACTIVITIES SHALL BE PERMANENTLY SEEDED TO ESTABLISH GRASS, AND MULCHED WITH HAY OR STRAW WITHIN ONE WEEK OF FINAL DISTURBANCE. MULCH SHALL BE MAINTAINED UNTIL A SUITABLE VEGETATIVE COVER IS ESTABLISHED.
12. CONTRACTOR IS REQUIRED TO SURVEY ALL DISTURBED AREAS AFTER COMPLETION OF THE WORK TO DOCUMENT COVER SYSTEM COMPLIANCE.
13. CONTRACTOR STAGING AREAS AND CONSTRUCTION ENTRANCE LOCATIONS SHALL BE COORDINATED WITH THE OWNER PRIOR TO START OF CONSTRUCTION. STABILIZED CONSTRUCTION ENTRANCE(S), AS SHOWN ON THE PLANS SHALL BE PROVIDED. ALL DISTURBED AREAS SHALL BE RESTORED.
14. UPON COMPLETION OF THE PROJECT THE SOIL UNDERNEATH THE CONSTRUCTION STAGING AREA SHALL BE DISKED AND RESEEDED TO A DEPTH OF AT LEAST 6" BELOW EXISTING GRADE TO HELP REESTABLISH VEGETATIVE GROWTH.
15. CONTRACTOR TO PROVIDE 3-4 STAKEOUT LATHES DELINEATING THE WETLAND IN RELATION TO THE ORANGE CONSTRUCTION FENCE.
16. CONTRACTOR SHALL PROTECT VEGETATION SCHEDULED TO REMAIN WITH ORANGE CONSTRUCTION FENCING.

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STATE OF NEW YORK — MICHAEL D. PRATT — 102063 — LICENSED PROFESSIONAL ENGINEER

NOT FOR CONSTRUCTION

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 102063

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700 WEST METRO PARK
ROCHESTER, NY 14623

ABUNDANT
Solar Power Inc.

BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, BUFFALO, NY

NO:	DATE:	DESCRIPTION:
4	05/05/2026	PER DEC COMMENTS
3	04/10/2026	PER DEC COMMENTS
2	02/18/2026	SITE LAYOUT CHANGES
1	12/01/2025	SETBACK ADDITION
Revisions		

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

GENERAL NOTES, LEGEND, AND DRAWING INDEX

DRAWING NUMBER:

C001

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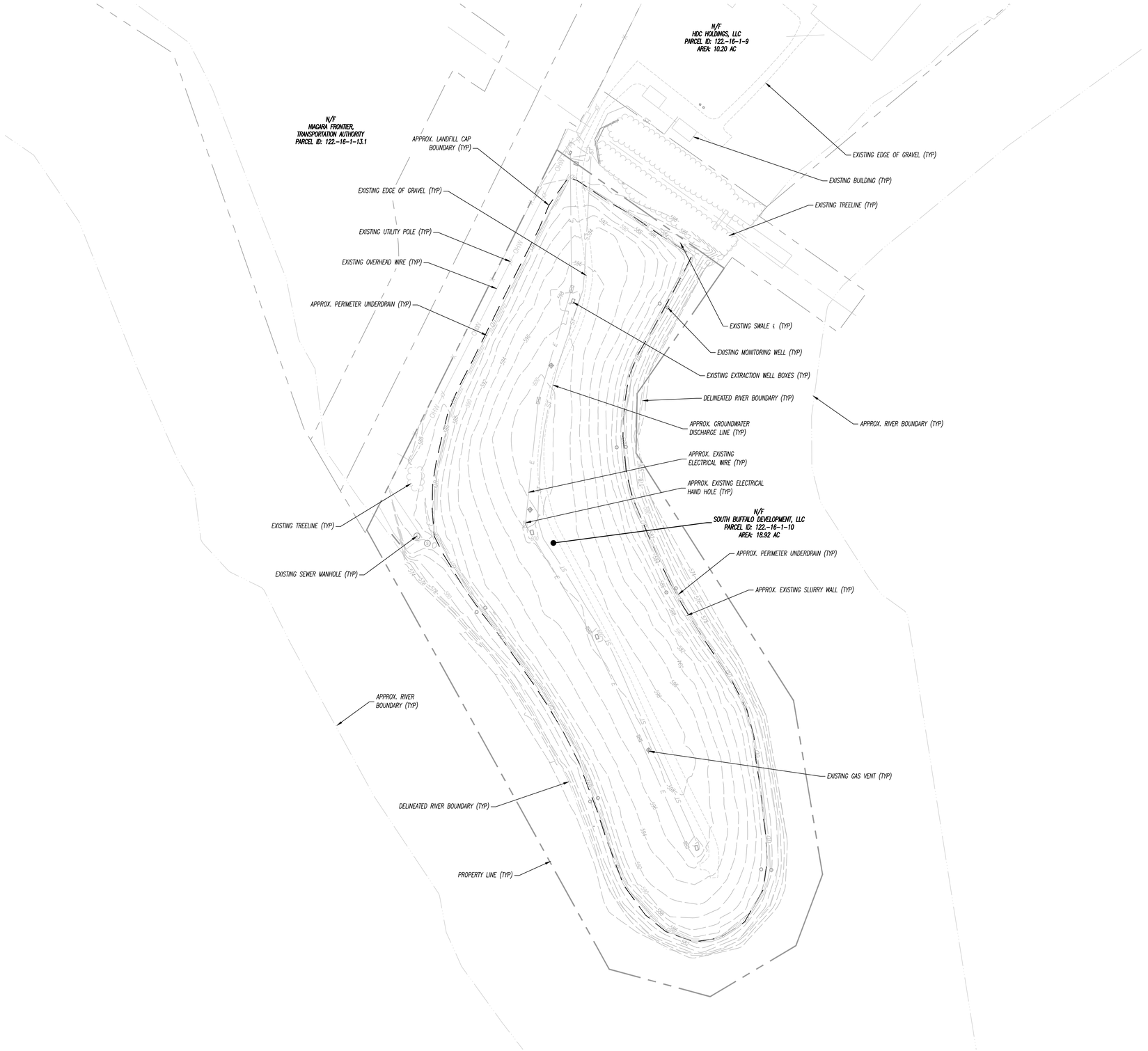

1 C101 EXISTING CONDITIONS PLAN

SCALE: 1" = 100'

N

0' 100' 200' 300'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BUFFALO RIVER BOUNDARY
		GRAVEL LANDFILL ACCESS ROAD
		FENCE
		PROPERTY LINE
		SETBACK LINE
		UTILITY POLE
		CABLE TRAY
		OVERHEAD ELECTRIC
		STORM LINE
		UNDERDRAIN LINE
		GAS VENT
		MONITORING WELL
		MAJOR CONTOUR
		MINOR CONTOUR

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Revisions

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DATE: 08/15/2025
DRAWING NAME:

EXISTING CONDITIONS PLAN

DRAWING NUMBER:

C101

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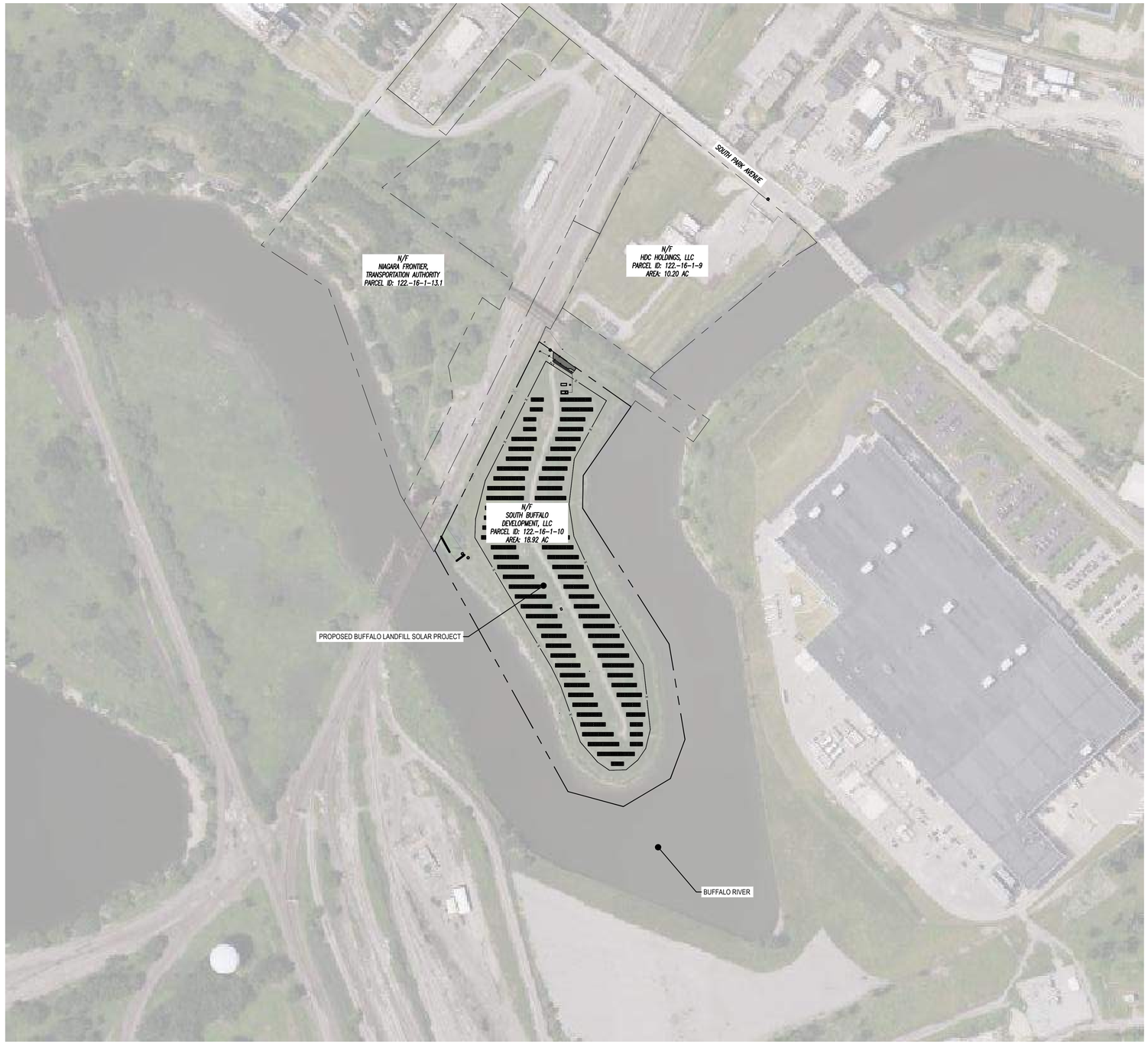

1 / C201 OVERALL SITE PLAN

SCALE: 1" = 200'

N

0' 200' 400' 600'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BUFFALO RIVER BOUNDARY
		GRAVEL LANDFILL ACCESS ROAD
x	x	FENCE
		PROPERTY LINE
		SETBACK LINE
		UTILITY POLE
E	E	CABLE TRAY
OHE	OHE	OVERHEAD ELECTRIC
ST		STORM LINE
UD		UNDERDRAIN LINE
		GAS VENT
		MONITORING WELL
510	510	MAJOR CONTOUR
509	509	MINOR CONTOUR

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MATTHEW D. PIERCE
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Revisions		

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

OVERALL SITE PLAN

DRAWING NUMBER:

C201

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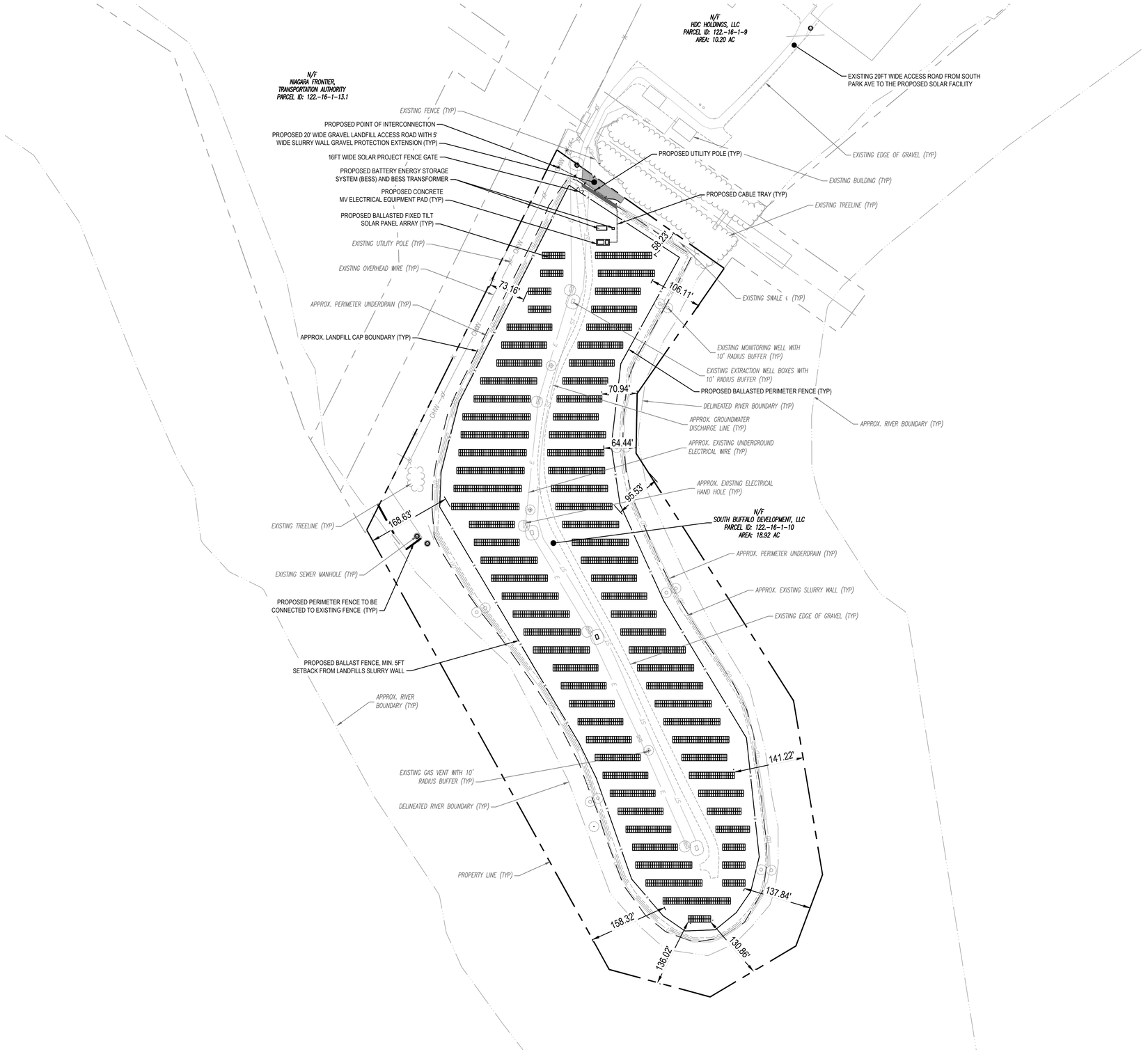

1 C202 SITE PLAN

SCALE: 1" = 100'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BUFFALO RIVER BOUNDARY
		GRAVEL LANDFILL ACCESS ROAD
x	x	FENCE
		PROPERTY LINE
		SETBACK LINE
		UTILITY POLE
E	E	CABLE TRAY
OHW	OHW	OVERHEAD ELECTRIC
ST	ST	STORM LINE
UD	UD	UNDERDRAIN LINE
		GAS VENT
		MONITORING WELL
510	510	MAJOR CONTOUR
509	509	MINOR CONTOUR

SITE PLAN NOTES

1. A 5-FOOT WIDE SLURRY WALL PROTECTION STRIP CONSISTING OF GRAVEL OVERLAIN WITH GEOTEXTILE SHALL BE INSTALLED DIRECTLY ADJACENT TO THE UTILITY POLE ACCESS AREA, AS SHOWN. TRAFFIC IS NOT PERMITTED ON THIS PROTECTION STRIP.
2. FOLLOWING INSTALLATION OF THE SLURRY WALL PROTECTION STRIP, PLACE A MINIMUM OF 6-INCHES OF TOPSOIL OVER STONE AND SEED TO CLEARLY MARK THAT THIS AREA DOES NOT FALL WITHIN THE ROAD BOUNDARIES.
3. NO PANELS WILL BE LOCATED WITHIN A 10' RADIUS OF GROUNDWATER EXTRACTION WELLS OR LANDFILL GAS VENTS.
4. GROUND PRESSURE FROM CONSTRUCTION EQUIPMENT OR SOLAR ARRAY FEATURES SHALL NOT EXCEED 10 POUNDS PER SQUARE INCH (PSI) AT ANY TIME.
5. CONSTRUCTION EQUIPMENT SHALL NOT BE PERMITTED TO TRAVERSE THE SLURRY WALL AT ANY TIME.
6. GROUND-INTRUSIVE WORK (I.E. EXCAVATION OR COVER SYSTEM PENETRATIONS) ARE NOT PERMITTED WITHIN THE COVER SYSTEM AT ANY TIME.

PROJECT DATA	
PARCEL INFORMATION	
APPLICANT	SUNN 1016, LLC
OWNER	SOUTH BUFFALO DEVELOPMENT, LLC
PARCEL ADDRESS	1037 SOUTH PARK AVE, BUFFALO, NY 14210
SYSTEM SIZE (MWDC)	2.227
SYSTEM SIZE (MWAC)	1.50
PARCEL AREA (TOTAL)	18.92 AC
TOTAL PROJECT AREA	13.90 AC
PROPOSED IMPERVIOUS WITHIN PROJECT AREA	0.09 AC
GROUND MOUNT PV SYSTEM SUMMARY	
DC SIZE (MW)	2.227
AC SIZE (MW)	1.50
MAX PANEL HEIGHT (FT)	12
MODULE POWER (W)	580
MODULE QUANTITY	3,840
RACKING TYPE / TILT ANGLE	FIXED / 30°

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ABUNDANT Solar Power Inc.

BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, BUFFALO, NY

NO:	DATE:	DESCRIPTION:
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1	12/01/2025	SETBACK ADDITION

Revisions

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

SITE PLAN

DRAWING NUMBER:

C202

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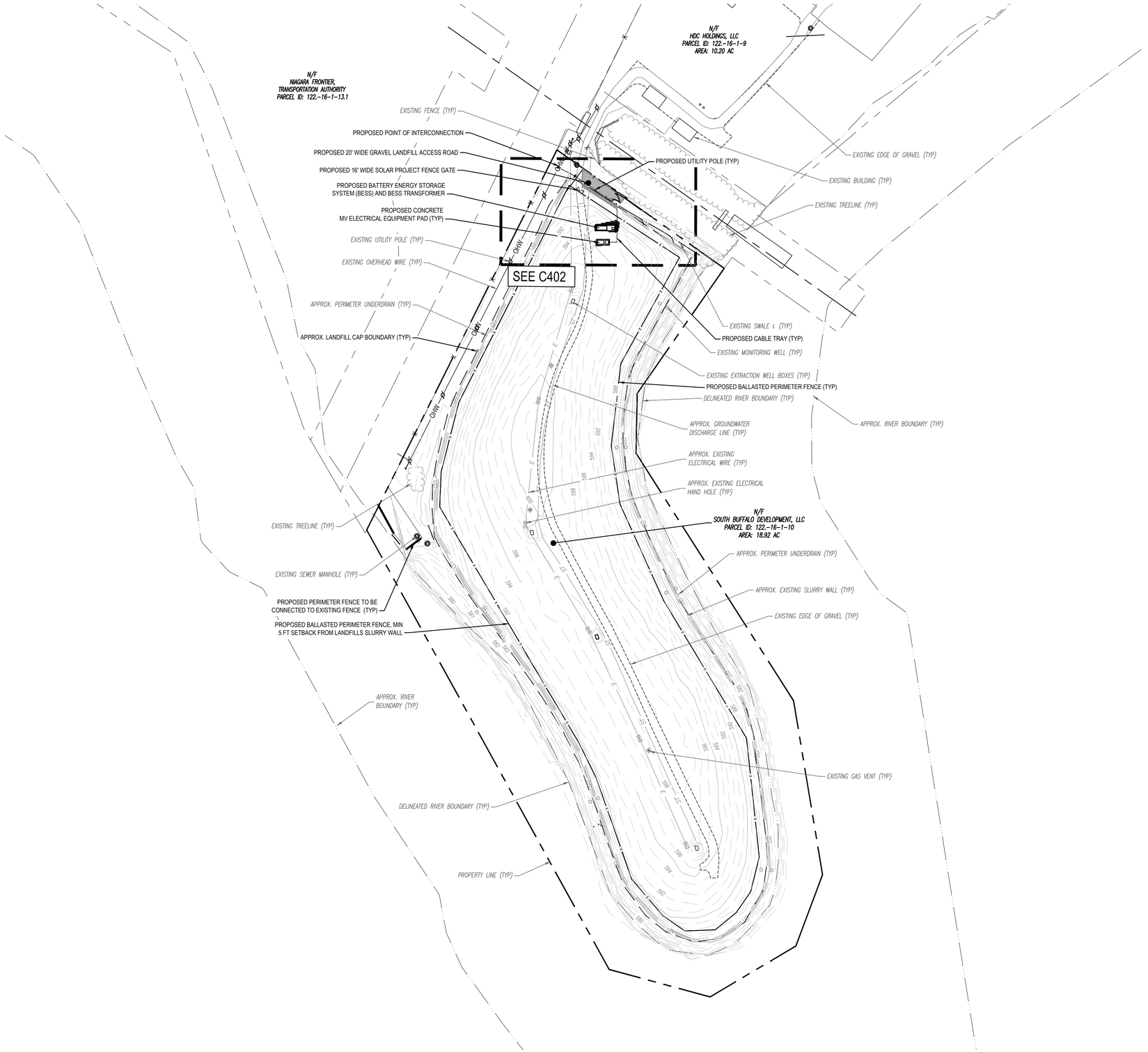

1 C401 OVERALL GRADING PLAN

SCALE: 1" = 100'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BUFFALO RIVER BOUNDARY
		GRAVEL LANDFILL ACCESS ROAD
X	X	FENCE
		PROPERTY LINE
		SETBACK LINE
		UTILITY POLE
E	E	CABLE TRAY
OHW	OHW	OVERHEAD ELECTRIC
ST		STORM LINE
UD		UNDERDRAIN LINE
		GAS VENT
		MONITORING WELL
510	510	MAJOR CONTOUR
509	509	MINOR CONTOUR

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STATE OF NEW YORK — MATTHEW D. PIERCE — 102063

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REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

OVERALL GRADING PLAN

DRAWING NUMBER:

C401

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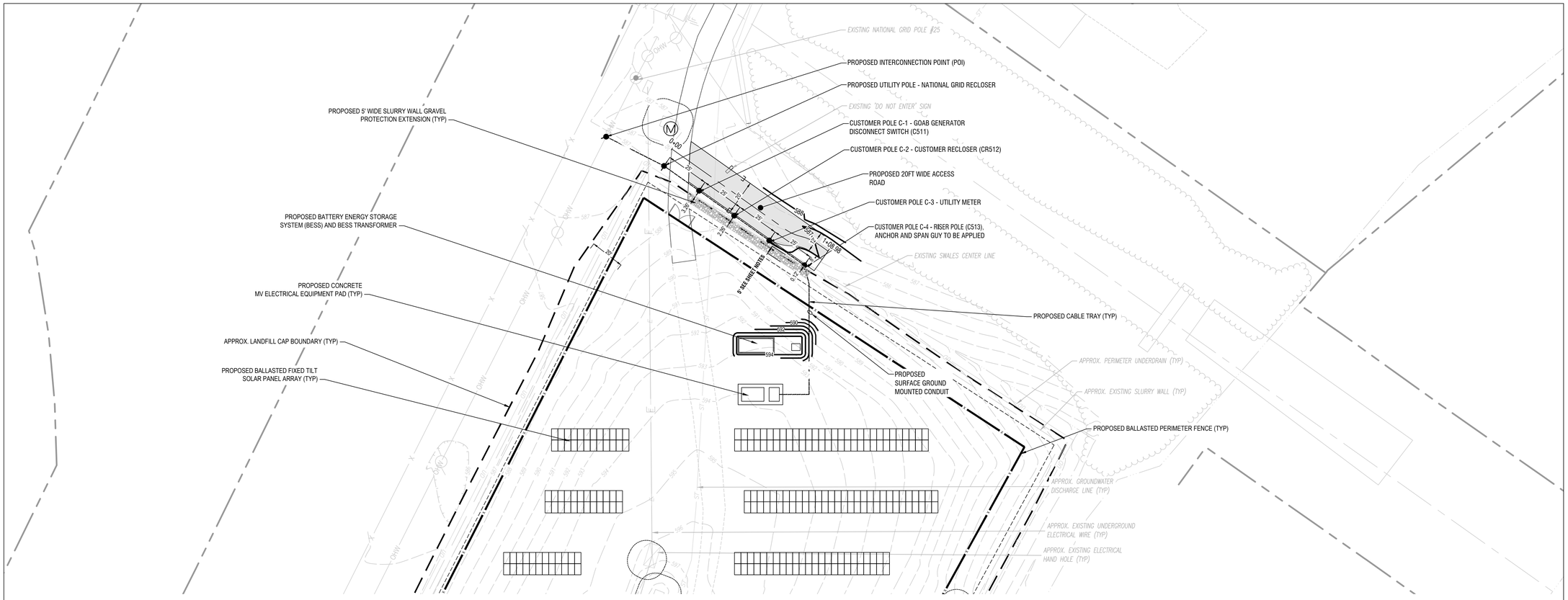
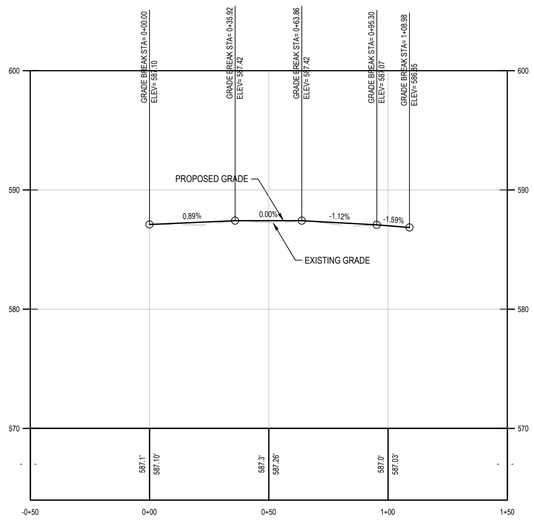


1 C402 GRADING PLAN
SCALE: 1" = 30'

N

0' 30' 60' 90'



1 C402 ACCESS ROAD PROFILE
SCALE: 1"= 30'

0' 30' 60' 90'

SHEET NOTES:

1. THE GEOTEXTILE AND GRAVEL MUST EXTEND ACROSS THE SLURRY WALL FOR MINIMUM 5FT TO PROTECT THE SLURRY WALL.
2. THE 5-FEET-WIDE EXTENDED GRAVEL OVER THE SLURRY WALL IS NOT PART OF THE ROAD. ALTERNATIVELY, TO ADD TOPSOIL AND SEED ON THE PROTECTIVE 5-FOOT-WIDE AREA AFTER PLACING THE GEOTEXTILE AND STONE PROTECTIVE LAYER TO CLEARLY MARK THIS AREA DOES NOT FALL WITHIN THE ROAD BOUNDARIES.

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CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 102063

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700 WEST METRO PARK
ROCHESTER, NY 14623

ABUNDANT
Solar Power Inc.

BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, BUFFALO, NY

NO:	DATE:	DESCRIPTION:
4	05/05/2026	PER DEC COMMENTS
3	04/10/2026	PER DEC COMMENTS
2	02/18/2026	SITE LAYOUT CHANGES
1	12/01/2025	SETBACK ADDITION
Revisions		

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

GRADING PLAN

DRAWING NUMBER:

C402

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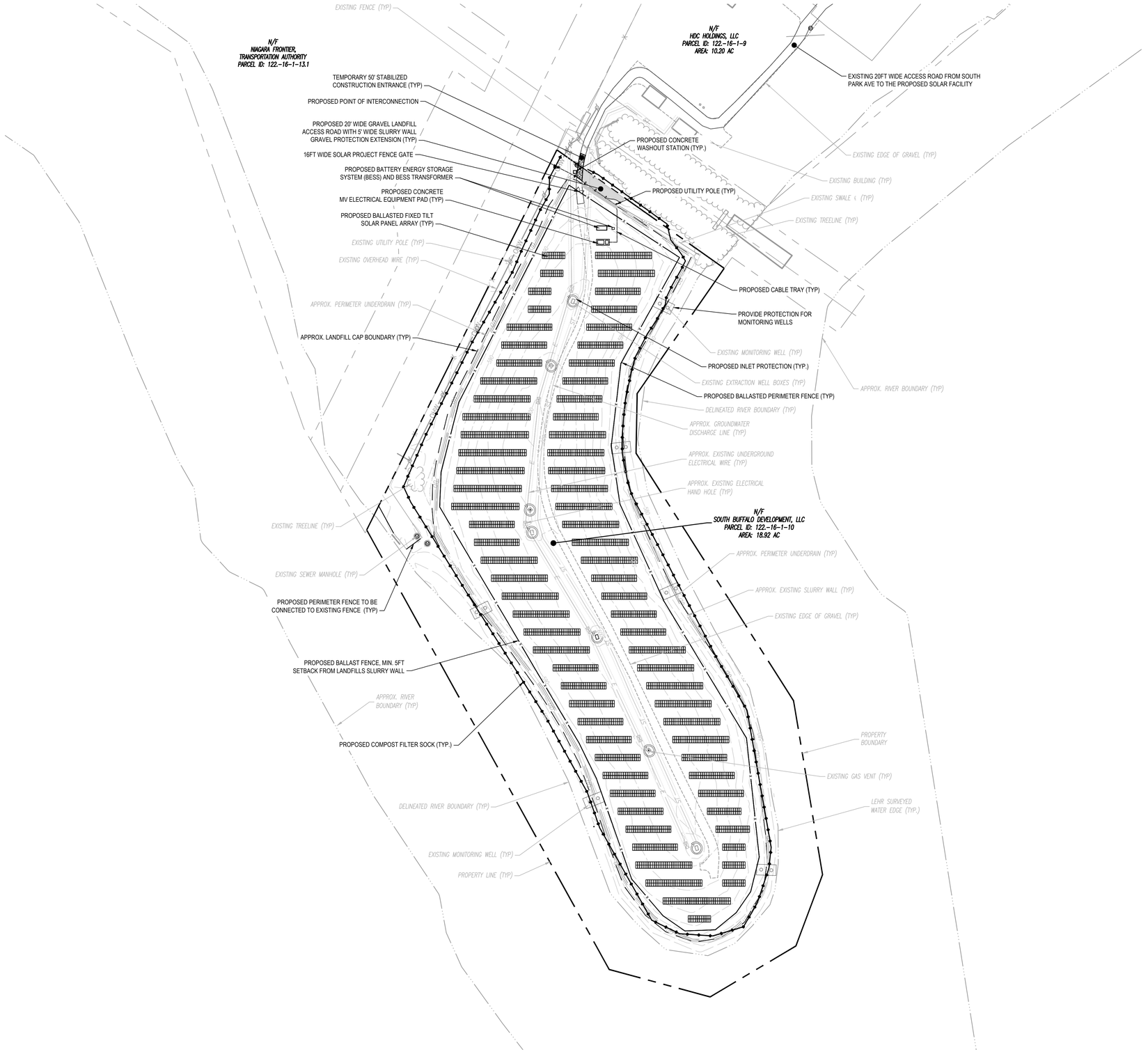

1 C501 EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 100'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BUFFALO RIVER
		PERVIOUS GRAVEL ACCESS ROAD
x x x		FENCE
		PROPERTY LINE
		SETBACK LINE
		UTILITY POLE
E	E	CABLE TRAY
OHE	OHE	OVERHEAD ELECTRIC
ST	ST	STORM LINE
UD	UD	UNDERDRAIN LINE
		GAS VENT
510	510	MAJOR CONTOUR
509	509	MINOR CONTOUR
		COMPOST FILTER SOCK
		CONSTRUCTION FENCE
		SILT SOCK INLET PROTECTION
		CHECK DAM
		CONCRETE WASHOUT
		STABILIZED CONSTRUCTION ENTRANCE (TEMPORARY)

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STATE OF NEW YORK — MATTHEW D. PRUSINOWSKI — 102063 — PROFESSIONAL ENGINEER

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Revisions		

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DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

EROSION & SEDIMENT CONTROL PLAN

DRAWING NUMBER:

C501

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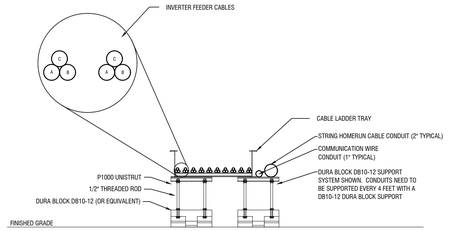


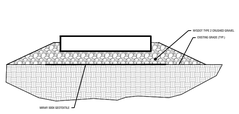
SECTION VIEW

NOTES:

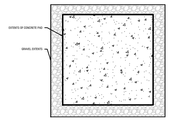
1. REFER TO THE ELECTRICAL DRAWINGS FOR ALL DEPTHS AND DIMENSIONS.
2. REFER TO THE ELECTRICAL DRAWINGS FOR THE FINAL ELECTRICAL TRENCH DESIGN.

1 C701 TYPICAL CABLE TRAY DETAIL

N.T.S.



SECTION VIEW



EQUIPMENT PAD NOTES:

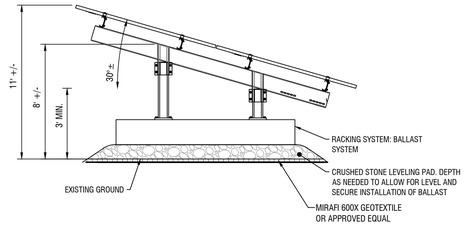
1. ALL ELECTRICAL EQUIPMENT TO BE SITUATED ON A CONCRETE PAD AS SHOWN PER EQUIPMENT PAD LAYOUT SHEET.
2. PAD DIMENSIONS, CHASES, AND CONDUIT STUB-UPS TO BE PER EQUIPMENT PAD LAYOUT SHEET.
3. ANCHOR BOLTS SHALL BE DRILLED AND SET IN FIELD AFTER INSTALLATION ON SLAB AS PER MANUFACTURER'S SPECIFICATIONS.
4. BOUND REBAR TO GROUNDING RING. REFER TO GROUNDING DIAGRAM SHEET FOR DETAILS.

NOTES:

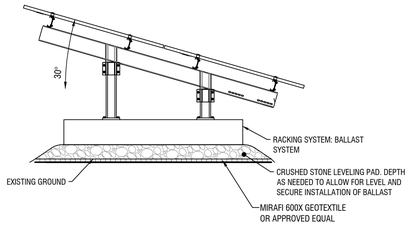
1. REFER TO THE ELECTRICAL DRAWINGS FOR ALL DEPTHS AND DIMENSIONS.
2. REFER TO THE ELECTRICAL DRAWINGS FOR THE FINAL ELECTRICAL TRENCH DESIGN.

2 C701 TYPICAL ELECTRICAL EQUIPMENT PAD DETAIL

N.T.S.



SIDE VIEW - BALLAST SYSTEM

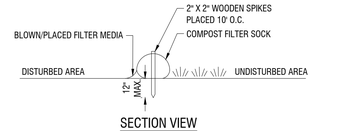


NOTES:

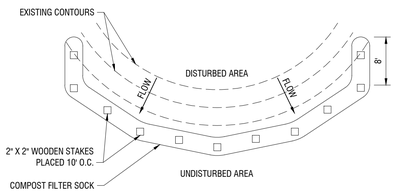
1. TYPICAL BALLAST DETAIL SHOWN FOR REFERENCE ONLY. BALLAST SYSTEM SHALL BE DESIGNED BY RACKING MANUFACTURER.
2. EXISTING VEGETATION TO BE STRIPPED ONLY WITHIN THE BALLAST FOOTPRINT.

3 C701 TYPICAL BALLAST SYSTEM

N.T.S.



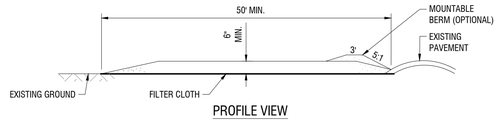
SECTION VIEW



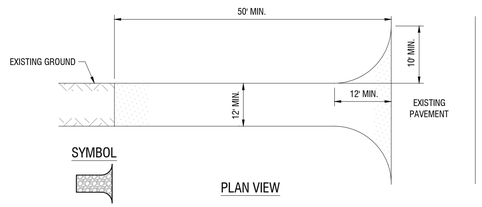
PLAN VIEW

4 C701 COMPOST FILTER SOCK

NYS DEC DETAIL: COMPOST FILTER SOCK



PROFILE VIEW



SYMBOL

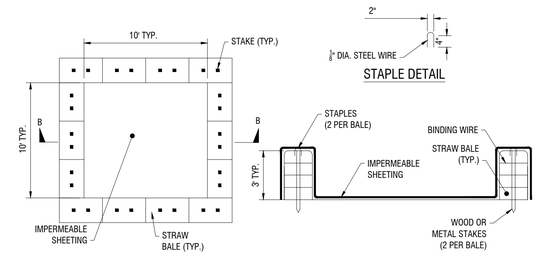
PLAN VIEW

CONSTRUCTION SPECIFICATIONS:

1. STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ACCESS SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT.

5 C701 STABILIZED CONSTRUCTION ENTRANCE

N.YS DEC DETAIL: STABILIZED CONSTRUCTION ACCESS



PLAN

SECTION B-B

NOTE:

CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP. FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.
6. STAKES SHALL NOT BE INSERTED INTO THE GROUND DEEPER THAN 6".

6 C701 CONCRETE WASHOUT AREA WITH STRAW BALES

N.T.S.

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ABUNDANT
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BUFFALO LANDFILL SOLAR PROJECT
2 BUFFALO CREEK RAILROAD, BUFFALO, NY

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Revisions

PROJECT NUMBER: 2251176
DRAWN BY: MDP
REVIEWED BY: MDP
ISSUED FOR: PERMIT
DATE: 08/15/2025
DRAWING NAME:

CONSTRUCTION DETAILS

DRAWING NUMBER:

C701

5/5/2026 8:31:00 AM
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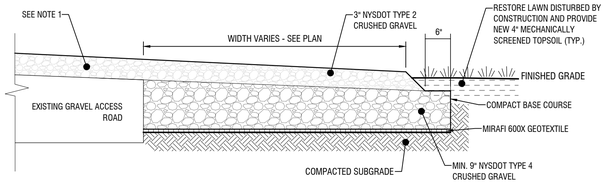
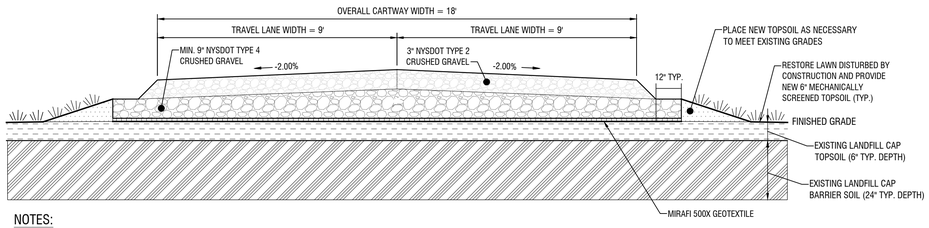


NOTE:

1. CONTRACTOR TO PLACE 3" OF NYSDOT TYPE 2 CRUSHED GRAVEL OVER THE ENTIRE 12' OR 20' WIDE ACCESS ROAD, SEE PLAN.
2. ACCESS ROAD ELEVATION TO BE SET 3" HIGHER THAN EXISTING GRADE TO PROMOTE POSITIVE DRAINAGE.

1 / C702 — EXISTING GRAVEL ACCESS ROAD IMPROVEMENT

N.T.S.

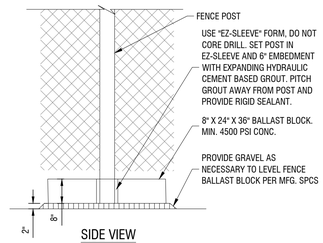


NOTES:

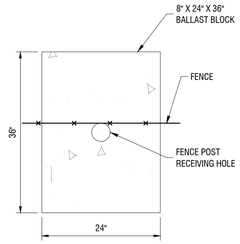
1. CAREFULLY REMOVE EXISTING LANDFILL TOPSOIL TO LANDFILL BARRIER SOIL. DO NOT DISTURB LANDFILL BARRIER SOIL.

2 / C702 — PROPOSED GRAVEL LANDFILL ACCESS ROAD

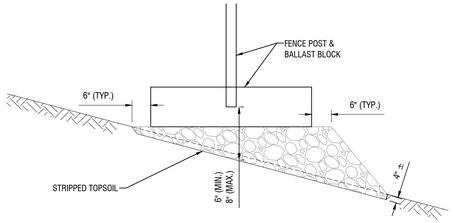
N.T.S.



SIDE VIEW



TOP VIEW



SECTION VIEW

NOTES:
1. CRITTER- GAP SHALL BE MAINTAINED AT FENCE LINE.
2. LEVELING PADS SHALL BE INSTALLED WHERE EXISTING GRADES EXCEED 5%.

3 / C702 — CONCRETE FENCE BALLAST DETAIL

N.T.S.

NOTES:

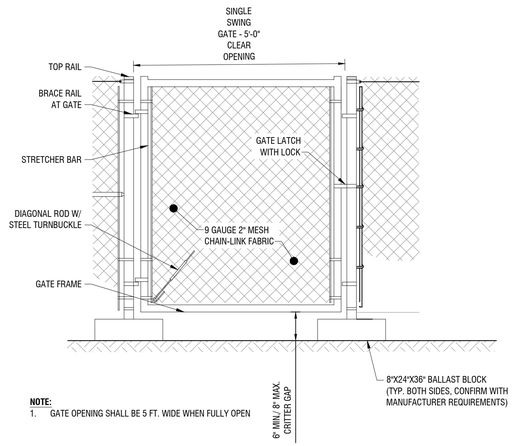
1. MAXIMUM FENCE POST SPACING SHALL BE 8'.
2. ALL SUPPORTS SHALL BE BALLASTED TYPE.

4 / C702 — 7' HIGH BALLASTED FENCE

N.T.S.

5 / C702 — 7' TALL 20' WIDE DOUBLE SWING GATE (BALLASTED)

N.T.S.



NOTE:
1. GATE OPENING SHALL BE 5 FT. WIDE WHEN FULLY OPEN

6 / C702 — SINGLE SWING GATE (BALLASTED)

N.T.S.

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ISSUED FOR: PERMIT
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DRAWING NAME:

CONSTRUCTION DETAILS

DRAWING NUMBER:

C702

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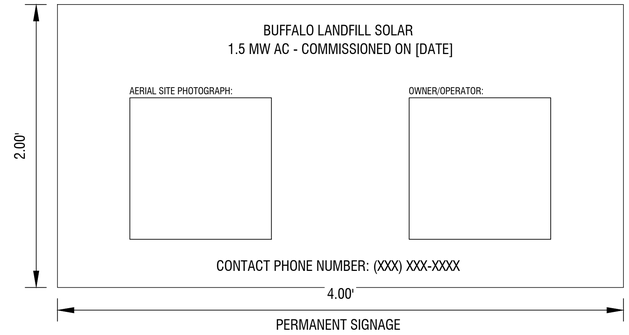
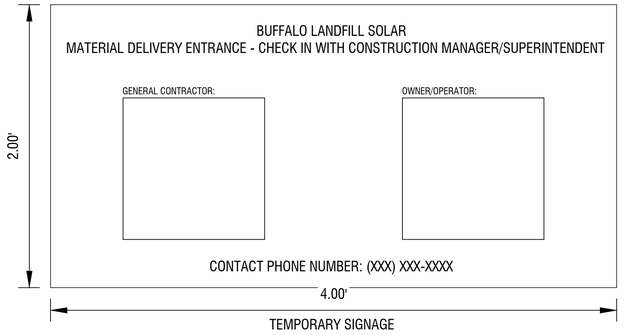




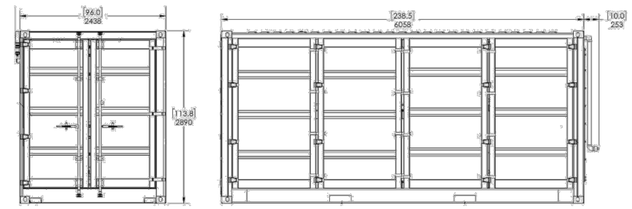
NOTES:

1. TEMPORARY SIGNAGE TO BE INSTALLED ALONG GRAVEL DRIVE PRIOR TO CONSTRUCTION.
2. TEMPORARY SIGNAGE TO BE REMOVED AFTER ARRAY HAS BEEN COMMISSIONED AND BEFORE PERMANENT SIGNAGE IS INSTALLED.
3. PERMANENT SIGNAGE TO BE INSTALLED ON GATE AFTER ARRAY HAS BEEN COMMISSIONED.

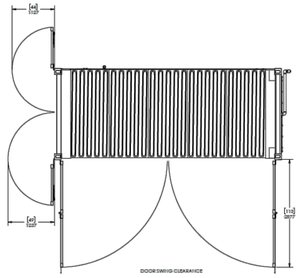
1 C703 TEMPORARY AND PERMANENT SIGNAGE

N.T.S.

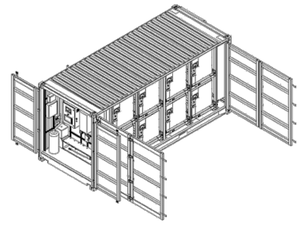
Dimension	English	Metric
Length	238.5 inch	6057.9 mm
Width	96.0 Inch	2438.4 mm
Height	113.8 Inch	2890.5 mm
Weight	42,000 pounds	19,050 Kg



Overall Dimensioning



Top View Dimensioning with Access Doors Opened



Isometric View

2 C703 BATTERY ENERGY SYSTEM BESS DETAIL

N.T.S.

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C703

5/5/2026 8:32:14 AM
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Attachment 2

POST-CLOSURE INSPECTION REPORT
BUFFALO COLOR AREA "D"

I. SITE INFORMATION			
Site Name	BUFFALO COLOR AREA "D"	**Acreage**	18.921
Site Address	1337 South Park Avenue Buffalo, NY 14210	**Cap Thickness**	30"
Permitte Name / Address	South Buffalo Development, LLC	**Inspection Date**	
Contact Person / Phone / Email		**Inspection Completed By**	
NYSDEC Facility ID	915012	**Weather**	

II. CAP OBSERVATIONS		**YES/NO**	**Explanation**
a)	Is vegetation in good condition?		
b)	Has vegetation been recently mowed?		
c)	Is stressed vegetation present?		
d)	Are there any depressions/ settling in the cap?		
e)	Is there any water ponding on the cap?		
f)	Is there any damage to the cap?		
g)	Has there been any activity on the cap other than post-closure monitoring?		
h)	Is cap in good condition overall?		
i)	General Notes / Recommendations		

III. OTHER OBSERVATIONS		YES/NO	Explanation
a)	Are monitoring wells present and in good condition?		
b)	Is fencing/ barriers adequate and in good condition?		
c)	Are signs present and in good condition?		
d)	Is gas management/ venting system components in good condition?		
e)	Is access road in good condition?		
f)	Are catch basins in good condition?		
g)	Are Dry Swales in good condition?		
h)	Check Dams and Compost Filter Socks in good condition?		
i)	Any leachate observed?		
j)	Landfill odors observed?		
k)	Has there been any activity off the cap other than post-closure monitoring?		
l)	General Notes / Recommendations		

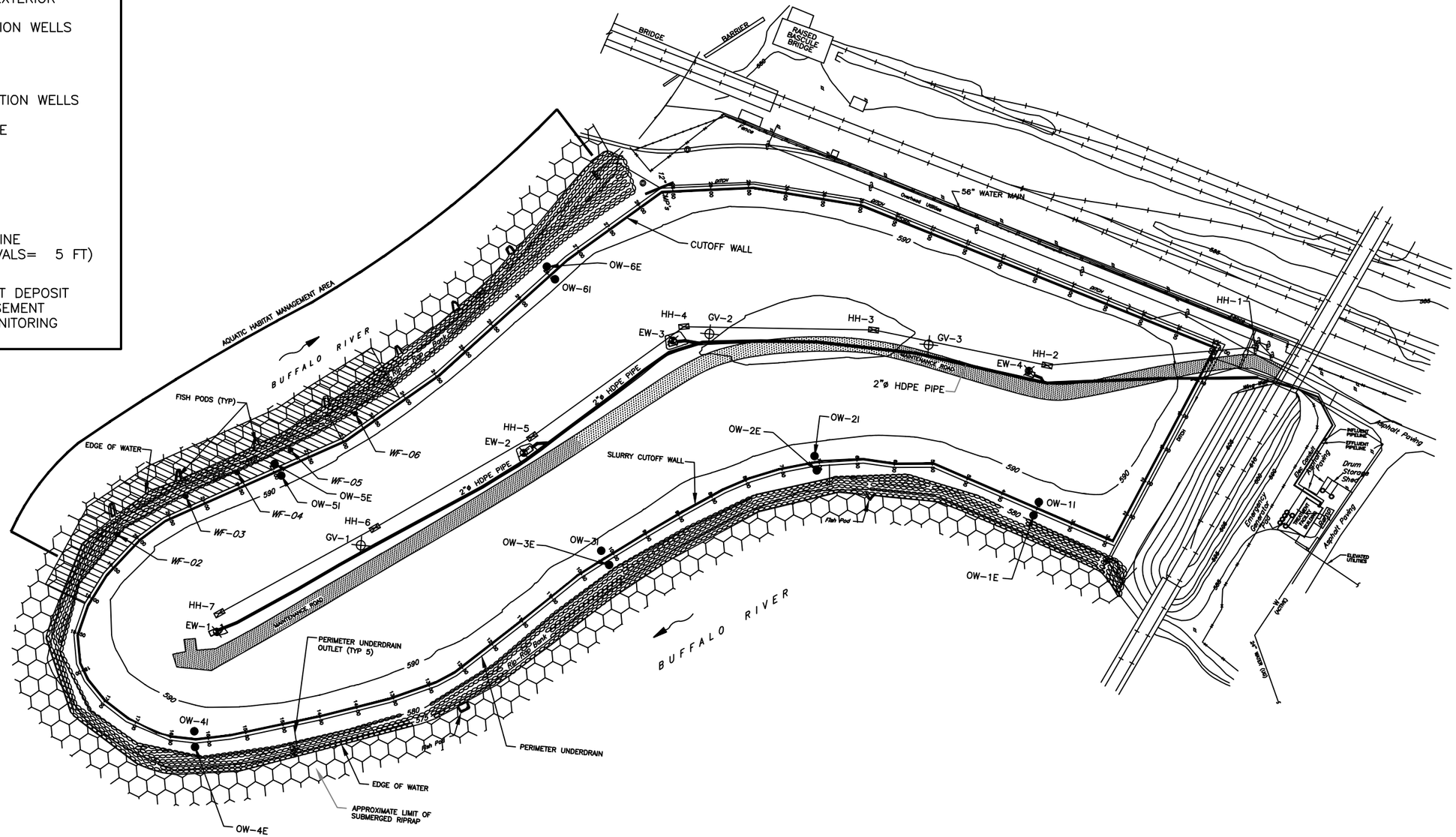
IV. Site Sketch (note locations of observations listed above and include photos)

Attachment 3

DRAWN BY: NEL 5-3-2012 APPROVED BY: ESW 5-24-2012

LEGEND

- SUBSURFACE GW COLLECTION PIPE
- SLURRY CUTOFF WALL
- OW-6E — PERIMETER INTERIOR/EXTERIOR
- OW-61 — MONITORING OBSERVATION WELLS
- GV-2 — GAS VENT
- EW-1 — GROUNDWATER EXTRACTION WELLS
- ELECTRICAL HAND HOLE
- RIPRAP
- SUBMERGED RIPRAP
- 580 — CONTOUR ELEVATION LINE (CONTOUR LINE INTERVALS= 5 FT)
- APPROXIMATE SEDIMENT DEPOSIT AREA SUBJECT TO EASEMENT RESTRICTIONS AND MONITORING



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SCALE: 1"=150'

HONEYWELL INTERNATIONAL INC.
BUFFALO, NEW YORK

Project No.: 3410100794

amec MACTEC Engineering & Consulting Inc.
Environment & Infrastructure - Pittsburgh
800 North Bell Avenue, Carnegie, Pennsylvania 15106
2200 Georgetown Drive, Sewickley, Pennsylvania 15143

SITE PLAN
BUFFALO COLOR AREA D

Figure: 2

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